Motor protection selectivity

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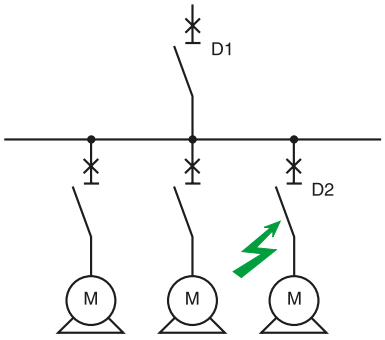
Using the tables
Two circuit breakers offer total selectivity when the corresponding box in the selectivity table is shaded or contains the letter T.
When selectivity is partial for the combination, the corresponding box indicates the maximum value of the fault current for which selectivity is provided.
For fault currents above this value, the two circuit breakers trip simultaneously.



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Selectivity between circuit breakers used for motor protection.

How to use the selectivity tables

■ **For selectivity between a circuit breaker and a motor control and protection assembly**
If selectivity is partial, the table indicates the maximum fault current value for which selectivity is ensured. For fault currents above this value, the 2 devices trip simultaneously.

Requisite conditions

The values indicated in the tables (for 220, 380, 415 and 440 V) are guaranteed if the following conditions are respected:

Upstream	Downstream	Thermal protection Ir up/Ir down	Magnetic protection Im up/Im down
TM	MA + separate therm. relay	≥ 3	≥ 2
	Thermal-magnetic motor type	≥ 3	≥ 2
Micrologic	MA + separate therm. relay	≥ 3	≥ 1.5
	Thermal-magnetic motor type	≥ 3	≥ 1.5

Motor protection selectivity

Upstream: Compact NSX100 to 250 TM-D

Downstream: GV2, GV3, GV4, LUB12, LUB32, Integral 63, Compact NSX100 to 250

Ue ⩽ 440 V AC

Upstream				NSX100B/F/N/H/S/L/R								NSX160B/F/N/H/S/L				NSX250B/F/N/H/S/L/R		
Trip unit				TM-D														
Downstream			Rating (A)	16	25	32	40	50	63	80	100	80	100	125	160	160	200	250
			Setting (Ir)	16	25	32	40	50	63	80	100	80	100	125	160	160	200	250
	Trip unit or rating	Th Relay	Setting range	Selectivity limit (kA)														
GV2 ME/P	01	Integrated	0.1/0.16	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 ME/P	02	Integrated	0.16/0.25	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 ME/P	03	Integrated	0.25/0.40	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 ME/P	04	Integrated	0.40/0.63	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 ME/P	05	Integrated	0.63/1	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 ME/P	06	Integrated	1/1.6	0.19	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 ME/P	07	Integrated	1.6/2.5	0.19	0.25	0.4	T	T	T	T	T	T	T	T	T	T	T	T
GV2 ME/P	08	Integrated	2.5/4	0.19	0.25	0.4	0.5	0.5	0.5	0.63	0.8	0.63	0.8	T	T	T	T	T
GV2 ME/P	10	Integrated	4/6.3		0.25	0.4	0.5	0.5	0.5	0.63	0.8	0.63	0.8	T	T	T	T	T
GV2 ME/P	14	Integrated	06/10			0.4	0.5	0.5	0.5	0.63	0.8	0.63	0.8	T	T	T	T	T
GV2 ME/P	16	Integrated	9/14					0.5	0.5	0.63	0.8	0.63	0.8	T	T	T	T	T
GV2 ME/P	20	Integrated	13/18							0.63	0.8	0.63	0.8	T	T	T	T	T
GV2 ME/P	21	Integrated	17/23							0.63	0.8	0.63	0.8	T	T	T	T	T
GV2 ME/P	22	Integrated	20/25							0.63	0.8	0.63	0.8	T	T	T	T	T
GV2 ME/P	32	Integrated	24/32							0.63	0.8	0.63	0.8	T	T	T	T	T
GV3 P	13	Integrated	01/13				0.5	0.5	0.5	0.63	0.8	0.63	0.8	1.25	1.25	1.25	T	T
GV3 P	18	Integrated	12/18					0.5	0.5	0.63	0.8	0.63	0.8	1.25	1.25	1.25	T	T
GV3 P	25	Integrated	17/25						0.5	0.63	0.8	0.63	0.8	1.25	1.25	1.25	T	T
GV3 P	32	Integrated	23/32							0.63	0.8	0.63	0.8	1.25	1.25	1.25	T	T
GV3 P	40	Integrated	30/40											1.25	1.25	1.25	T	T
GV3 P	50	Integrated	37/50												1.25	1.25	T	T
GV3 P	65	Integrated	48/65															T
GV4P/PE/PEM	02	Integrated	0,8/2	0.19	0.25	0.4	0.5	0.5	0.5	0.63	0.8	0.63	0.8	1.25	1.25	1.25	T	T
GV4P/PE/PEM	03	Integrated	1,4/3,5		0.25	0.4	0.5	0.5	0.5	0.63	0.8	0.63	0.8	1.25	1.25	1.25	T	T
GV4P/PE/PEM	07	Integrated	2,9/7		0.25	0.4	0.5	0.5	0.5	0.63	0.8	0.63	0.8	1.25	1.25	1.25	T	T
GV4P/PE/PEM	12	Integrated	5/12,5				0.5	0.5	0.5	0.63	0.8	0.63	0.8	1.25	1.25	1.25	T	T
GV4P/PE/PEM	25	Integrated	10/25							0.63	0.8	0.63	0.8	1.25	1.25	1.25	T	T
GV4P/PE/PEM	50	Integrated	20/50												1.25	1.25	T	T
GV4P/PE/PEM	80	Integrated	40/80															T
GV4P/PE/PEM	115	Integrated	65/115															
LUB12		LUC*X6	0.15/0.6	0.19	0.3	0.4	0.5	0.5	0.5	0.63	0.8	0.63	0.8	T	T	T	T	T
LUB12		LUC*1X	0.35…1.4	0.19	0.3	0.4	0.5	0.5	0.5	0.63	0.8	0.63	0.8	T	T	T	T	T
LUB12		LUC*05	1.25…5	0.19	0.3	0.4	0.5	0.5	0.5	0.63	0.8	0.63	0.8	T	T	T	T	T
LUB12		LUC*12	3…12				0.5	0.5	0.5	0.63	0.8	0.63	0.8	T	T	T	T	T
LUB32		LUC*X6	0.15…0.6	0.19	0.3	0.4	0.5	0.5	0.5	0.63	0.8	0.63	0.8	5	5	5	T	T
LUB32		LUC*1X	0.35…1.4	0.19	0.3	0.4	0.5	0.5	0.5	0.63	0.8	0.63	0.8	5	5	5	T	T
LUB32		LUC*05	1.25…5	0.19	0.3	0.4	0.5	0.5	0.5	0.63	0.8	0.63	0.8	5	5	5	T	T
LUB32		LUC*12	3…12				0.5	0.5	0.5	0.63	0.8	0.63	0.8	5	5	5	T	T
LUB32		LUC*18	4.5…18						0.5	0.63	0.8	0.63	0.8	5	5	5	T	T
LUB32		LUC*32	8…32								0.8		0.8	5	5	5	T	T
Integral 63		LB1-LD03M16	1/13				0.5	0.5	0.5	0.63	0.8	0.63	0.8	1	1	1	T	T
Integral 63		LB1-LD03M21	13/18						0.5	0.63	0.8	0.63	0.8	1	1	1	T	T
Integral 63		LB1-LD03M22	18/25							0.63	0.8	0.63	0.8	1	1	1	T	T
Integral 63		LB1-LD03M53	23/32									0.8	0.8	1	1	1	T	T
Integral 63		LB1-LD03M55	28/40											1	1	1	T	T
Integral 63		LB1-LD03M57	35/50												1	1	T	T
NSX100 F/N/H/S/L/R		Mic. 2.2M or 6.2EM	25/50									0.8	0.8	1	1	1	36	36
			100															36
NSX160 F/N/H/S/L/R		Mic. 2.2M or 6.2EM	100											1	1	1	2	2.5
			150															2.5
NSX250 F/N/H/S/L/R		Mic. 2.2M or 6.2EM	150											1	1	1	2	2.5
			220															2.5

T — Total selectivity, up to the breaking capacity of the downstream circuit breaker.

4 — Selectivity limit = 4 kA.

No selectivity.

Note: respect the basic rules of selectivity, in terms of overload, short-circuit, ground fault and earth leakage when applicable see page 6, or check curves with Schneider Electric online “Electrical calculation tools”.

Motor protection selectivity

Upstream: Compact NSX100 to 250 TM-D
Downstream: iC60L MA, NG125L MA, GV2, GV3, GV4, Compact NSX100

Ue ≤ 440 V AC

Upstream	NSX100B/F/N/H/S/L/R										NSX160B/F/N/H/S/L					NSX250B/F/N/H/S/L/R	
Trip unit	TM-D																

Downstream			Rating (A)	16	25	32	40	50	63	80	100	80	100	125	160	160	200	250
			Setting (Ir)	16	25	32	40	50	63	80	100	80	100	125	160	160	200	250
CB	Rating	Th Relay	Setting range	Selectivity limit (kA)														
iC60L MA	1.6	LRD6	1/1.6	0.19	T	T	T	T	T	T	T	T	T	T	T	T	T	T
iC60L MA	2.5	LRD7	1.6/2.5	0.19	0.3	0.4	T	T	T	T	T	T	T	T	T	T	T	T
iC60L MA	4	LRD8	2.5/4	0.19	0.3	0.4	0.5	0.5	0.5	0.63	T	0.63	T	T	T	T	T	T
iC60L MA	6.3	LRD10	4/6.3		0.3	0.4	0.5	0.5	0.5	0.63	5	0.63	5	T	T	T	T	T
iC60L MA	10	LRD12	5.5/8		0.3	0.4	0.5	0.5	0.5	0.63	2	0.63	2	T	T	T	T	T
iC60L MA	10	LRD14	07/10			0.4	0.5	0.5	0.5	0.63	0.8	0.63	0.8	T	T	T	T	T
iC60L MA	12.5	LRD16	9/13				0.5	0.5	0.5	0.63	0.8	0.63	0.8	T	T	T	T	T
iC60L MA	16	LRD21	12/18						0.5	0.63	0.8	0.63	0.8	T	T	T	T	T
iC60L MA	25	LRD22	17/25							0.63	0.8	0.63	0.8	T	T	T	T	T
iC60L MA	40	LRD32	23/32								0.8		0.8	T	T	T	T	T
iC60L MA	40	LRD3355	30/40											T	T	T	T	T
NG125L MA	1.6	LRD6	1/1.6	0.19	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NG125L MA	2.5	LRD7	1.6/2.5	0.19	0.3	0.4	T	T	T	T	T	T	T	T	T	T	T	T
NG125L MA	4	LRD8	2.5/4	0.19	0.3	0.4	0.5	0.5	0.5	0.63	T	0.63	T	T	T	T	T	T
NG125L MA	6.3	LRD10	4/6.3		0.3	0.4	0.5	0.5	0.5	0.63	5	0.63	5	T	T	T	T	T
NG125L MA	10	LRD12	5.5/8		0.3	0.4	0.5	0.5	0.5	0.63	2	0.63	2	T	T	T	T	T
NG125L MA	10	LRD14	07/10			0.4	0.5	0.5	0.5	0.63	0.8	0.63	0.8	T	T	T	T	T
NG125L MA	12.5	LRD16	9/13				0.5	0.5	0.5	0.63	0.8	0.63	0.8	T	T	T	T	T
NG125L MA	16	LRD21	12/18						0.5	0.63	0.8	0.63	0.8	T	T	T	T	T
NG125L MA	25	LRD22	17/25							0.63	0.8	0.63	0.8	T	T	T	T	T
NG125L MA	40	LRD32	23/32								0.8		0.8	T	T	T	T	T
NG125L MA	40	LRD3355	30/40											T	T	T	T	T
NG125L MA	63	LRD3357	37/50												T	T	T	T
NG125L MA	63	LRD3359	48/65														T	T
GV2 L/LE	03	LRD3	0.25/0.40	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 L/LE	04	LRD4	0.40/0.63	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 L/LE	05	LRD5	0.63/1	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 L/LE	06	LRD6	1/1.6	0.19	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 L/LE	07	LRD7	1.6/2.5	0.19	0.25	0.4	T	T	T	T	T	T	T	T	T	T	T	T
GV2 L/LE	08	LRD8	2.5/4	0.19	0.25	0.4	0.5	0.5	0.5	0.63	0.8	0.63	0.8	T	T	T	T	T
GV2 L/LE	10	LRD10	4/6.3		0.25	0.4	0.5	0.5	0.5	0.63	0.8	0.63	0.8	T	T	T	T	T
GV2 L/LE	14	LRD14	07/10			0.4	0.5	0.5	0.5	0.63	0.8	0.63	0.8	T	T	T	T	T
GV2 L/LE	16	LRD16	9/13					0.5	0.5	0.63	0.8	0.63	0.8	T	T	T	T	T
GV2 L/LE	20	LRD21	12/18							0.63	0.8	0.63	0.8	T	T	T	T	T
GV2 L/LE	22	LRD22	17/25							0.63	0.8	0.63	0.8	T	T	T	T	T
GV2 L/LE	32	LRD32	23/32								0.8		0.8	T	T	T	T	T
GV3 L	25	LRD22	20/25							0.63	0.8	0.63	0.8	1.25	1.25	1.25	T	T
GV3 L	32	LRD32	23/32								0.8		0.8	1.25	1.25	1.25	T	T
GV3 L	40	LRD340	30/40											1.25	1.25	1.25	T	T
GV3 L	50	LRD350	37/50												1.25	1.25	T	T
GV3 L	65	LRD365	48/65														T	T
GV4 L/LE	02	LRD-07	1,6/2,5	0.19	0.25	0.4	0.5	0.5	0.5	0.63	0.8	0.63	0.8	1.25	1.25	1.25	T	T
GV4 L/LE	03	LRD-08	2,5/4		0.25	0.4	0.5	0.5	0.5	0.63	0.8	0.63	0.8	1.25	1.25	1.25	T	T
GV4 L/LE	07	LRD-12	5,5/8		0.25	0.4	0.5	0.5	0.5	0.63	0.8	0.63	0.8	1.25	1.25	1.25	T	T
GV4 L/LE	12	LRD-313	9/13				0.5	0.5	0.5	0.63	0.8	0.63	0.8	1.25	1.25	1.25	T	T
GV4 L/LE	25	LRD-325	17/25							0.63	0.8	0.63	0.8	1.25	1.25	1.25	T	T
GV4 L/LE	50	LRD-350	37/50												1.25	1.25	T	T
GV4 L/LE	80	LRD-33 63	63/80															T
GV4 L/LE	115	LR9D-5369 LR9-F5369	90/150															
NSX100 [1]	MA2.5	LRD6	1/1.6	0.19	0.3	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX100 [1]	MA2.5	LRD7	1.6/2.5	0.19	0.3	0.4	0.5	0.5	0.5	T	T	T	T	T	T	T	T	T
NSX100 [1]	MA6.3	LRD8	2.5/4	0.19	0.3	0.4	0.5	0.5	0.5	0.63	0.8	0.63	0.8	T	T	T	T	T
NSX100 [1]	MA6.3	LRD10	4/6.3		0.3	0.4	0.5	0.5	0.5	0.63	0.8	0.63	0.8	T	T	T	T	T
NSX100 [1]	MA12.5	LRD12	5.5/8		0.3	0.4	0.5	0.5	0.5	0.63	0.8	0.63	0.8	1	1	1	T	T
NSX100 [1]	MA12.5	LRD14	9/13			0.4	0.5	0.5	0.5	0.63	0.8	0.63	0.8	1	1	1	T	T
NSX100 [1]	MA12.5	LRD16	12/18				0.5	0.5	0.5	0.63	0.8	0.63	0.8	1	1	1	T	T
NSX100 [1]	MA25	LRD21	17/25						0.5	0.63	0.8	0.63	0.8	1	1	1	T	T
NSX100 [1]	MA25	LRD22	17/25							0.63	0.8	0.63	0.8	1	1	1	T	T
NSX100 [1]	MA50	LRD32	23/32								0.8		0.8	1	1	1	36	36
NSX100 [1]	MA50	LRD340	30/40											1	1	1	36	36
NSX100 [1]	MA50	LRD350	37/50												1	1	36	36
NSX100 [1]	MA100	LRD365	48/65														36	36
NSX100 [1]	MA100	LRD3363	63/80														36	36

T	Total selectivity, up to the breaking capacity of the downstream circuit breaker.
4	Selectivity limit = 4 kA.
	No selectivity.

Note: respect the basic rules of selectivity, in terms of overload, short-circuit, ground fault and earth leakage when applicable see page 6, or check curves with Schneider Electric online "Electrical calculation tools".

[1] F/N/H/S/L/R

Motor protection selectivity

Upstream: Compact NSX100 to 160 Micrologic
Downstream: GV2, GV3, GV4, LUB12, LUB32, Integral 63, Compact NSX100

Ue ⩽ 440 V AC

Upstream				NSX100B/F/N/H/S/L/R							NSX160B/F/N/H/S/L				
Trip unit				Micrologic [1]											
Downstream			Rating (A)	40			100				160				
			Setting Ir	16	25	40	40	63	80	100	63	80	100	125	160
	Trip unit or rating	Th Relay	Setting range	Selectivity limit (kA)											
GV2 ME/P	01	Integrated	0.1/0.16	T	T	T	T	T	T	T	T	T	T	T	T
GV2 ME/P	02	Integrated	0.16/0.25	T	T	T	T	T	T	T	T	T	T	T	T
GV2 ME/P	03	Integrated	0.25/0.40	T	T	T	T	T	T	T	T	T	T	T	T
GV2 ME/P	04	Integrated	0.40/0.63	T	T	T	T	T	T	T	T	T	T	T	T
GV2 ME/P	05	Integrated	0.63/1	T	T	T	T	T	T	T	T	T	T	T	T
GV2 ME/P	06	Integrated	1/1.6	0.6	0.6	0.6	T	T	T	T	T	T	T	T	T
GV2 ME/P	07	Integrated	1.6/2.5	0.6	0.6	0.6	T	T	T	T	T	T	T	T	T
GV2 ME/P	08	Integrated	2.5/4	0.6	0.6	0.6	T	T	T	T	T	T	T	T	T
GV2 ME/P	10	Integrated	4/6.3		0.6	0.6	T	T	T	T	T	T	T	T	T
GV2 ME/P	14	Integrated	06/10			0.6	T	T	T	T	T	T	T	T	T
GV2 ME/P	16	Integrated	9/14					T	T	T	T	T	T	T	T
GV2 ME/P	20	Integrated	13/18					T	T	T	T	T	T	T	T
GV2 ME/P	21	Integrated	17/23							T	T	T	T	T	T
GV2 ME/P	22	Integrated	20/25							T	T	T	T	T	T
GV2 ME/P	32	Integrated	24/32									T	T	T	T
GV3 P	13	Integrated	01/13			0.6	1.5	1.5	1.5	1.5	T	T	T	T	T
GV3 P	18	Integrated	12/18					1.5	1.5	1.5	T	T	T	T	T
GV3 P	25	Integrated	17/25							1.5	1.5	T	T	T	T
GV3 P	32	Integrated	23/32									1.5	T	T	T
GV3 P	40	Integrated	30/40											2.4	2.4
GV3 P	50	Integrated	37/50												2.4
GV3 P	65	Integrated	48/65												
GV4P/PE/PEM	02	Integrated	0,8/2	T	T	T	T	T	T	T	T	T	T	T	T
GV4P/PE/PEM	03	Integrated	1,4/3,5	25	25	25	T	T	T	T	T	T	T	T	T
GV4P/PE/PEM	07	Integrated	2,9/7		2	2	2	2	2	2	4	4	4	4	4
GV4P/PE/PEM	12	Integrated	5/12,5					1.5	1.5	1.5	2.4	2.4	2.4	2.4	2.4
GV4P/PE/PEM	25	Integrated	10/25						1.5	1.5		2.4	2.4	2.4	2.4
GV4P/PE/PEM	50	Integrated	20/50												2.4
GV4P/PE/PEM	80	Integrated	40/80												
GV4P/PE/PEM	115	Integrated	65/115												
LUB12		LUC*X6	0.15/0.6	0.6	0.6	0.6	1.5	1.5	1.5	1.5	T	T	T	T	T
LUB12		LUC*1X	0.35…1.4	0.6	0.6	0.6	1.5	1.5	1.5	1.5	T	T	T	T	T
LUB12		LUC*05	1.25…5	0.6	0.6	0.6	1.5	1.5	1.5	1.5	T	T	T	T	T
LUB12		LUC*12	3…12				1.5	1.5	1.5	1.5	T	T	T	T	T
LUB32		LUC*X6	0.15…0.6	0.6	0.6	0.6	1.5	1.5	1.5	1.5	T	T	T	T	T
LUB32		LUC*1X	0.35…1.4	0.6	0.6	0.6	1.5	1.5	1.5	1.5	T	T	T	T	T
LUB32		LUC*05	1.25…5	0.6	0.6	0.6	1.5	1.5	1.5	1.5	T	T	T	T	T
LUB32		LUC*12	3…12				1.5	1.5	1.5	1.5	T	T	T	T	T
LUB32		LUC*18	4.5…18					1.5	1.5	1.5	T	T	T	T	T
LUB32		LUC*32	8…32							1.5			T	T	T
Integral 63		LB1-LD03M16	1/13			0.6	1.5	1.5	1.5	1.5	2.4	2.4	2.4	2.4	2.4
Integral 63		LB1-LD03M21	13/18					1.5	1.5	1.5	2.4	2.4	2.4	2.4	2.4
Integral 63		LB1-LD03M22	18/25							1.5	1.5	2.4	2.4	2.4	2.4
Integral 63		LB1-LD03M53	23/32									1.5	2.4	2.4	2.4
Integral 63		LB1-LD03M55	28/40											2.4	2.4
Integral 63		LB1-LD03M57	35/50												2.4
Integral 63		LB1-LD03M61	45/63												
NSX100 F/N/H/S/L/R		Mic. 2.2M or 6.2EM	25/50							1,5			2,4	2,4	2,4
			100												
NSX160 F/N/H/S/L/R		Mic. 2.2M or 6.2EM	100										2,4	2,4	2,4
			150												
NSX250 F/N/H/S/L/R		Mic. 2.2M or 6.2EM	150												
			220												

T	Total selectivity, up to the breaking capacity of the downstream circuit breaker.
4	Selectivity limit = 4 kA.
	No selectivity.

Note: respect the basic rules of selectivity, in terms of overload, short-circuit, ground fault and earth leakage when applicable see page 6, or check curves with Schneider Electric online “Electrical calculation tools”.

[1] Valid for all "Distribution" Micrologic of Compact NSX : 2.2, 4.2, 5.2, 6.2, 7.2. Valid for Generators (and Service connection (G and AB type) Micrologic of Compact NSX but curves shall be checked. Not Valid for "Motor" Micrologic of Compact NSX ("M" type).

Motor protection selectivity

Upstream: Compact NSX100 to 160, Micrologic
Downstream: iC60L MA, NG125L MA, GV2, GV3, GV4, Compact NSX100

Ue ≤ 440 V AC

Upstream				NSX100B/F/N/H/S/L/R							NSX160B/F/N/H/S/L				
Trip unit				Micrologic [1]											
Downstream			Rating (A)	40			100				160				
			Setting Ir	16	25	40	40	63	80	100	63	80	100	125	160
CB	Rating	Th Relay	Setting range	Selectivity limit (kA)											
iC60L MA	1.6	LRD6	1/1.6	T	T	T	T	T	T	T	T	T	T	T	T
iC60L MA	2.5	LRD7	1.6/2.5	1	1	1	T	T	T	T	T	T	T	T	T
iC60L MA	4	LRD8	2.5/4	0,6	0,6	0,6	T	T	T	T	T	T	T	T	T
iC60L MA	6.3	LRD10	4/6.3	0,6	0,6	0,6	5	5	5	5	T	T	T	T	T
iC60L MA	10	LRD12	5.5/8		0,6	0,6	2	2	2	2	T	T	T	T	T
iC60L MA	10	LRD14	07/10			0,6	1,5	1,5	1,5	1,5	T	T	T	T	T
iC60L MA	12.5	LRD16	9/13			0,6	1,5	1,5	1,5	1,5	T	T	T	T	T
iC60L MA	16	LRD21	12/18					1,5	1,5	1,5	T	T	T	T	T
iC60L MA	25	LRD22	17/25						1,5	1,5		T	T	T	T
iC60L MA	40	LRD32	23/32							1,5			T	T	T
iC60L MA	40	LRD3355	30/40											T	T
NG125L MA	1.6	LRD6	1/1.6	T	T	T	T	T	T	T	T	T	T	T	T
NG125L MA	2.5	LRD7	1.6/2.5	1	1	1	T	T	T	T	T	T	T	T	T
NG125L MA	4	LRD8	2.5/4	0,6	0,6	0,6	T	T	T	T	T	T	T	T	T
NG125L MA	6.3	LRD10	4/6.3	0,6	0,6	0,6	5	5	5	5	T	T	T	T	T
NG125L MA	10	LRD12	5.5/8		0,6	0,6	2	2	2	2	T	T	T	T	T
NG125L MA	10	LRD14	07/10			0,6	1,5	1,5	1,5	1,5	T	T	T	T	T
NG125L MA	12.5	LRD16	9/13			0,6	1,5	1,5	1,5	1,5	T	T	T	T	T
NG125L MA	16	LRD21	12/18					1,5	1,5	1,5	T	T	T	T	T
NG125L MA	25	LRD22	17/25						1,5	1,5		T	T	T	T
NG125L MA	40	LRD32	23/32							1,5			T	T	T
NG125L MA	40	LRD3355	30/40										T	T	T
NG125L MA	63	LRD3357	37/50											T	T
NG125L MA	63	LRD3359	48/65												T
GV2 L/LE	03	LRD3	0.25/0.40	T	T	T	T	T	T	T	T	T	T	T	T
GV2 L/LE	04	LRD4	0.40/0.63	T	T	T	T	T	T	T	T	T	T	T	T
GV2 L/LE	05	LRD5	0.63/1	T	T	T	T	T	T	T	T	T	T	T	T
GV2 L/LE	06	LRD6	1/1.6	0.6	0.6	0.6	T	T	T	T	T	T	T	T	T
GV2 L/LE	07	LRD7	1.6/2.5	0.6	0.6	0.6	T	T	T	T	T	T	T	T	T
GV2 L/LE	08	LRD8	2.5/4	0.6	0.6	0.6	T	T	T	T	T	T	T	T	T
GV2 L/LE	10	LRD10	4/6.3		0.6	0.6	T	T	T	T	T	T	T	T	T
GV2 L/LE	14	LRD14	07/10			0.6	T	T	T	T	T	T	T	T	T
GV2 L/LE	16	LRD16	9/13					T	T	T	T	T	T	T	T
GV2 L/LE	20	LRD21	12/18						T	T	T	T	T	T	T
GV2 L/LE	22	LRD22	17/25						T	T	T	T	T	T	T
GV2 L/LE	32	LRD32	23/32							T	T	T	T	T	T
GV3 L	25	LRD22	20/25							1.5	1.5	T	T	T	T
GV3 L	32	LRD32	23/32									1.5	T	T	T
GV3 L	40	LRD340	30/40											2.4	2.4
GV3 L	50	LRD350	37/50												2.4
GV3 L	65	LRD365	48/65												
GV4 L/LE	02	LRD-07	1,6/2,5	T	T	T	T	T	T	T	T	T	T	T	T
GV4 L/LE	03	LRD-08	2,5/4	25	25	25	T	T	T	T	T	T	T	T	T
GV4 L/LE	07	LRD-12	5,5/8		2	2	2	2	2	2	4	4	4	4	4
GV4 L/LE	12	LRD-313	9/13					1.5	1.5	1.5	2.4	2.4	2.4	2.4	2.4
GV4 L/LE	25	LRD-325	17/25						1.5	1.5		2.4	2.4	2.4	2.4
GV4 L/LE	50	LRD-350	37/50												2.4
GV4 L/LE	80	LRD-33 63	63/80												
GV4 L/LE	115	LR9D-5369 LR9-F5369	90/150												
NSX100	MA2.5	LRD6	1/1.6	T	T	T	T	T	T	T	T	T	T	T	T
NSX100	MA2.5	LRD7	1.6/2.5	1	1	1	T	T	T	T	T	T	T	T	T
NSX100	MA6.3	LRD8	2.5/4	0,6	0,6	0,6	1,5	1,5	1,5	1,5	T	T	T	T	T
NSX100	MA6.3	LRD10	4/6.3		0,6	0,6	1,5	1,5	1,5	1,5	T	T	T	T	T
NSX100	MA12.5	LRD12	5.5/8		0,6	0,6	1,5	1,5	1,5	1,5	2,4	2,4	2,4	2,4	2,4
NSX100	MA12.5	LRD14	9/13			0,6	1,5	1,5	1,5	1,5	2,4	2,4	2,4	2,4	2,4
NSX100	MA12.5	LRD16	12/18			0,6	1,5	1,5	1,5	1,5	2,4	2,4	2,4	2,4	2,4
NSX100	MA25	LRD21	17/25					1,5	1,5	1,5	2,4	2,4	2,4	2,4	2,4
NSX100	MA25	LRD22	17/25						1,5	1,5		2,4	2,4	2,4	2,4
NSX100	MA50	LRD32	23/32							1,5			2,4	2,4	2,4
NSX100	MA50	LRD340	30/40											2,4	2,4
NSX100	MA50	LRD350	37/50												2,4
NSX100	MA100	LRD365	48/65												
NSX100	MA100	LRD3363	63/80												

T	Total selectivity, up to the breaking capacity of the downstream circuit breaker.
4	Selectivity limit = 4 kA.
	No selectivity.

Note: respect the basic rules of selectivity, in terms of overload, short-circuit, ground fault and earth leakage when applicable see page 6, or check curves with Schneider Electric online “Electrical calculation tools”.

[1] Valid for all "Distribution" Micrologic of Compact NSX : 2.2, 4.2, 5.2, 6.2, 7.2. Valid for Generators (and Service connection (G and AB type) Micrologic of Compact NSX but curves shall be checked. Not Valid for "Motor" Micrologic of Compact NSX ("M" type).

Motor protection selectivity

Upstream: Compact NSX250 to 630 Micrologic
Downstream: GV2, GV3, GV4, LUB12, LUB32, Integral 63, Compact NSX100 to 250

Ue ≤ 440 V AC

Upstream				NSX250B/F/N/H/S/L/R					NSX400F/N/H/S/L/R					NSX630F/N/H/S/L/R				
Trip unit				Micrologic [1]														
Downstream			Rating (A)	250					400					630				
			Ir setting	100	125	160	200	250	160	200	250	320	400	250	320	400	500	630
CB	Rating	Th Relay	Setting range	Selectivity limit (kA)														
GV2 ME/P	01	Integrated	0.1/0.16	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 ME/P	02	Integrated	0.16/0.25	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 ME/P	03	Integrated	0.25/0.40	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 ME/P	04	Integrated	0.40/0.63	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 ME/P	05	Integrated	0.63/1	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 ME/P	06	Integrated	1/1.6	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 ME/P	07	Integrated	1.6/2.5	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 ME/P	08	Integrated	2.5/4	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 ME/P	10	Integrated	4/6.3	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 ME/P	14	Integrated	06/10	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 ME/P	16	Integrated	9/14	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 ME/P	20	Integrated	13/18	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 ME/P	21	Integrated	17/23	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 ME/P	22	Integrated	20/25	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 ME/P	32	Integrated	24/32	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV3 P	13	Integrated	01/13	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV3 P	18	Integrated	12/18	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV3 P	25	Integrated	17/25	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV3 P	32	Integrated	23/32	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV3 P	40	Integrated	30/40		T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV3 P	50	Integrated	37/50			T	T	T	T	T	T	T	T	T	T	T	T	T
GV3 P	65	Integrated	48/65				T	T	T	T	T	T	T	T	T	T	T	T
GV4P/PE/PEM	02	Integrated	0,8/2	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV4P/PE/PEM	03	Integrated	1,4/3,5	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV4P/PE/PEM	07	Integrated	2,9/7	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV4P/PE/PEM	12	Integrated	5/12,5	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV4P/PE/PEM	25	Integrated	10/25	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV4P/PE/PEM	50	Integrated	20/50			T	T	T	T	T	T	T	T	T	T	T	T	T
GV4P/PE/PEM	80	Integrated	40/80					T			T	T	T	T	T	T	T	T
GV4P/PE/PEM	115	Integrated	65/115									T	T	T	T	T	T	T
LUB12		LUC*X6	0.15/0.6	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
LUB12		LUC*1X	0.35…1.4	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
LUB12		LUC*05	1.25…5	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
LUB12		LUC*12	3…12	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
LUB32		LUC*X6	0.15…0.6	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
LUB32		LUC*1X	0.35…1.4	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
LUB32		LUC*05	1.25…5	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
LUB32		LUC*12	3…12	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
LUB32		LUC*18	4.5…18	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
LUB32		LUC*32	8…32	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
Integral 63		LB1-LD03M16	1/13	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
Integral 63		LB1-LD03M21	13/18	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
Integral 63		LB1-LD03M22	18/25	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
Integral 63		LB1-LD03M53	23/32	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
Integral 63		LB1-LD03M55	28/40		T	T	T	T	T	T	T	T	T	T	T	T	T	T
Integral 63		LB1-LD03M57	35/50			T	T	T	T	T	T	T	T	T	T	T	T	T
Integral 63		LB1-LD03M61	45/63				T	T	T	T	T	T	T	T	T	T	T	T
NSX100 F/N/H/S/L/R		Mic. 2.2M or 6.2EM	25/50	36	36	36	36	36	T	T	T	T	T	T	T	T	T	T
			100					36			T	T	T	T	T	T	T	T
NSX160 F/N/H/S/L/R		Mic. 2.2M or 6.2EM	100					3			T	T	T	T	T	T	T	T
			150										4,8			T	T	T
NSX250 F/N/H/S/L/R		Mic. 2.2M or 6.2EM	150													T	T	T
			220															T

T	Total selectivity, up to the breaking capacity of the downstream circuit breaker.
4	Selectivity limit = 4 kA.
	No selectivity.

Note: respect the basic rules of selectivity, in terms of overload, short-circuit, ground fault and earth leakage when applicable see page 6, or check curves with Schneider Electric online “Electrical calculation tools”.

[1] Valid for all "Distribution" Micrologic of Compact NSX : 2.2/3, 4.2/3 5.2/3, 6.2/3, 7.2/3. Valid for Generators (and Service connection (G and AB type) Micrologic of Compact NSX but curves shall be checked. Not Valid for “Motor” Micrologic of Compact NSX ("M" type).

Motor protection selectivity

Upstream: Compact NSX250 to 630 Micrologic
Downstream: iC60L MA, NG125L MA, GV2, GV3, GV4, Compact NSX100 to 250

Ue ≤ 440 V AC

Upstream				NSX250B/F/N/H/S/L/R					NSX400F/N/H/S/L/R					NSX630F/N/H/S/L/R				
Trip unit				Micrologic [1]														
Downstream			Rating (A)	250					400					630				
			Ir setting	100	125	160	200	250	160	200	250	320	400	250	320	400	500	630
CB	Rating	Th Relay	Setting range	Selectivity limit (kA)														
iC60L MA	1.6	LRD6	1/1.6	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
iC60L MA	2.5	LRD7	1.6/2.5	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
iC60L MA	4	LRD8	2.5/4	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
iC60L MA	6.3	LRD10	4/6.3	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
iC60L MA	10	LRD12	5.5/8	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
iC60L MA	10	LRD14	07/10	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
iC60L MA	12.5	LRD16	9/13	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
iC60L MA	16	LRD21	12/18	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
iC60L MA	25	LRD22	17/25	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
iC60L MA	40	LRD32	23/32	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
iC60L MA	40	LRD3355	30/40		T	T	T	T	T	T	T	T	T	T	T	T	T	T
NG125L MA	1.6	LRD6	1/1.6	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NG125L MA	2.5	LRD7	1.6/2.5	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NG125L MA	4	LRD8	2.5/4	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NG125L MA	6.3	LRD10	4/6.3	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NG125L MA	10	LRD12	5.5/8	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NG125L MA	10	LRD14	07/10	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NG125L MA	12.5	LRD16	9/13	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NG125L MA	16	LRD21	12/18	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NG125L MA	25	LRD22	17/25	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NG125L MA	40	LRD32	23/32	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NG125L MA	40	LRD3355	30/40		T	T	T	T	T	T	T	T	T	T	T	T	T	T
NG125L MA	63	LRD3357	37/50			T	T	T	T	T	T	T	T	T	T	T	T	T
NG125L MA	63	LRD3359	48/65				T	T	T	T	T	T	T	T	T	T	T	T
GV2 L/LE	03	LRD3	0.25/0.40	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 L/LE	04	LRD4	0.40/0.63	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 L/LE	05	LRD5	0.63/1	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 L/LE	06	LRD6	1/1.6	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 L/LE	07	LRD7	1.6/2.5	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 L/LE	08	LRD8	2.5/4	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 L/LE	10	LRD10	4/6.3	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 L/LE	14	LRD14	07/10	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 L/LE	16	LRD16	9/13	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 L/LE	20	LRD21	12/18	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 L/LE	22	LRD22	17/25	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 L/LE	32	LRD32	23/32	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV3 L	25	LRD22	20/25	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV3 L	32	LRD32	23/32	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV3 L	40	LRD340	30/40		T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV3 L	50	LRD350	37/50			T	T	T	T	T	T	T	T	T	T	T	T	T
GV3 L	65	LRD365	48/65				T	T	T	T	T	T	T	T	T	T	T	T
GV4 L/LE	02	LRD-07	1,6/2,5	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV4 L/LE	03	LRD-08	2,5/4	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV4 L/LE	07	LRD-12	5,5/8	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV4 L/LE	12	LRD-313	9/13	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV4 L/LE	25	LRD-325	17/25	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV4 L/LE	50	LRD-350	37/50			T	T	T	T	T	T	T	T	T	T	T	T	T
GV4 L/LE	80	LRD-33 63	63/80					T			T	T	T	T	T	T	T	T
GV4 L/LE	115	LR9/F-5369	90/150									T	T			T	T	T
NSX100	MA2.5	LRD6	1/1.6	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX100	MA2.5	LRD7	1.6/2.5	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX100	MA6.3	LRD8	2.5/4	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX100	MA6.3	LRD10	4/6.3	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX100	MA12.5	LRD12	5.5/8	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX100	MA12.5	LRD14	9/13	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX100	MA12.5	LRD16	12/18	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX100	MA25	LRD21	17/25	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX100	MA25	LRD22	17/25	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX100	MA50	LRD32	23/32	36	36	36	36	36	T	T	T	T	T	T	T	T	T	T
NSX100	MA50	LRD340	30/40		36	36	36	36	T	T	T	T	T	T	T	T	T	T
NSX100	MA50	LRD350	37/50			36	36	36	T	T	T	T	T	T	T	T	T	T
NSX100	MA100	LRD365	48/65				36	36		T	T	T	T	T	T	T	T	T
NSX100	MA100	LRD3363	63/80					36			T	T	T	T	T	T	T	T
NSX160	MA150	LR9D/F 5369	90/150										T				T	T
NSX250	MA220	LR9D/F 5371	132/220															T

T — Total selectivity, up to the breaking capacity of the downstream circuit breaker.

4 — Selectivity limit = 4 kA.

No selectivity.

Note: respect the basic rules of selectivity, in terms of overload, short-circuit, ground fault and earth leakage when applicable see page 6, or check curves with Schneider Electric online “Electrical calculation tools”.

[1] Valid for all "Distribution" Micrologic of Compact NSX : 2.2/3, 4.2/3 5.2/3, 6.2/3, 7.2/3. Valid for Generators (and Service connection (G and AB type) Micrologic of Compact NSX but curves shall be checked. Not Valid for “Motor” Micrologic of Compact NSX ("M" type).

Motor protection selectivity

Upstream: Compact NS630b to 1600 N/H
Downstream: iC60L MA, NG125L MA, TeSys U, GV2, GV3, GV4, Compact NSX100 to 630

Ue ≤ 440 V AC

Upstream	NS630b 800 1000 1250 1600 N/H							NS630b 800 1000 1250 1600 N/H							NS630b 800 1000 1250 1600 N/H						
Trip unit	Micrologic 2.0							Micrologic 5.0 - 6.0 - 7.0 Inst...In							Micrologic 5.0 - 6.0 - 7.0 Inst OFF						
Downstream / Rating	630			800	1000	1250	1600	630			800	1000	1250	1600	630			800	1000	1250	1600
Setting Ir	250	400	630	800	1000	1250	1600	250	400	630	800	1000	1250	1600	250	400	630	800	1000	1250	1600
Selectivity limit (kA)																					
iC60 L MA1.6…MA40 + LRD	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NG125L MA2.5...MA63 + LRD	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
LUB12 + LUCx6..12	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
LUB32 + LUCx6..32	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 ME01..ME32	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 P01...P32	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 L03..L32 + LRD	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV3 P13...P65	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV3 L25..L65 + LRD	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV4 P/PE/PEM 02-115	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV4 L/LE 02-115 +LRD	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX100 F/N/H/S/L MA 2.5...MA6.3 + LRD	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX100 F/N/H/S/L/R MA12.5...MA100 + LRD	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX160 F/N/H/S/L MA150 + LR9D/F 150		T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX250 F/N/H/S/L/R MA220 + LR9D/F 220			T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX400 F/N/H/S/L/R Mic. 1.3M +LR9F 320					T	T	T					T	T	T					T	T	T
NSX630 F/N Mic. 1.3M +LR9F 500							T							T							T
NSX630 H/S/L/R Mic. 1.3M +LR9F 500							65							65							65
NSX100 F/N/H/S/L/R Mic. 2.2M 6.2M 25	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
50	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
100 (80)	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX160 F/N/H/S/L Mic. 2.2M 6.2M ≤ 100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
150		T	T	T	T	T	T		T	T	T	T	T	T		T	T	T	T	T	T
NSX250 F/N/H/S/L/R Mic. 2.2M 6.2M ≤ 150		T	T	T	T	T	T		T	T	T	T	T	T		T	T	T	T	T	T
220			T	T	T	T	T			T	T	T	T	T			T	T	T	T	T
NSX400 F/N/H/S/L/R Mic. 2.3M 6.3M 320					T	T	T					T	T	T					T	T	T
NSX630 F/N Mic. 2.3M 6.3M 500							T							T							T
NSX630H/S/L/R Mic. 2.3M 6.3M 500							65							65							65

T	Total selectivity, up to the breaking capacity of the downstream circuit breaker.
4	Selectivity limit = 4 kA.
	No selectivity.

Note: respect the basic rules of selectivity, in terms of overload, short-circuit, ground fault and earth leakage when applicable see page 6, or check curves with Schneider Electric online “Electrical calculation tools”.

Motor protection selectivity

Upstream: Compact NS630b to 1000 L
Downstream: iC60L MA, NG125L MA, TeSys U, GV2, GV3, GV4, Compact NSX100 to 630

Ue ≤ 440 V AC

Upstream		NS630b 800 1000 L														
Trip Unit		Micrologic 2.0					Micrologic 5.0 - 6.0 - 7.0 Inst 15 In					Micrologic 5.0 - 6.0 - 7.0 Inst OFF				
Downstream	Rating	630			800	1000	630			800	1000	630			800	1000
	Setting Ir	250	400	630	800	1000	250	400	630	800	1000	250	400	630	800	1000
Selectivity limit (kA)																
iC60 L MA1.6 … MA40 + LRD		T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NG125L MA2.5 .. MA63 + LRD		T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
LUB12 + LUCx6..12		T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
LUB32 + LUCx6..32		T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 ME01..ME32		T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 P01 .. P32		T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 L03..L32 + LRD		T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV3 P13 .. P65		T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV3 L25..L65 + LRD		T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV4 P/PE/PEM 02-115		T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV4 L/LE 02-115 +LRD		T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX100 F/N/H/S/L MA 2.5 .. MA6.3 + LRD		T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX100 F/N/H/S/L/R MA12.5 .. MA100 + LRD		T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX160 F MA150 + LR9D/F	150		T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX160N/H/S/L MA150 + LR9D/F	150		36	36	T	T		36	36	T	T		36	36	T	T
NSX250 F/N/H/S/L/R MA220 + LR9D/F	220			20	T	T	20	20	20	T	T	20	20	20	T	T
NSX400F/N/H/S/L/R Micrologic 1.3M +LR9F	320					15										15
NSX630 F/N/H/S/L/R Micrologic 1.3M +LR9F	500															
NSX100 FN/H/S/L/R Micrologic 2.2M 6.2M	25	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	50	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	100 (80)	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX160 F/N/H/S/L Micrologic 2.2M 6.2M	≤ 100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	150		T	T	T	T		T	T	T	T		T	T	T	T
NSX250 F/N/H/S/L/R Micrologic 2.2M 6.2M	≤ 150		20	20	T	T		20	20	T	T		20	20	T	T
	220			20	T	T			20	T	T			20	T	T
NSX400F/N/H/S/L/R Micrologic 2.3M 6.3M	320				15	15				15	15				15	15
NSX630F/N/H/S/L/R Micrologic 2.3M 6.3M	500					10					10					10

T	Total selectivity, up to the breaking capacity of the downstream circuit breaker.
4	Selectivity limit = 4 kA.
	No selectivity.

Note: respect the basic rules of selectivity, in terms of overload, short-circuit, ground fault and earth leakage when applicable see page 6, or check curves with Schneider Electric online “Electrical calculation tools”.

Motor protection selectivity

Upstream: Compact NS1600b - 3200 N
Downstream: iC60L MA, NG125L MA, TeSys U, GV2, GV3, GV4, Compact NSX100 to 630

Ue ≤ 440 V AC

Upstream		NS1600 2000 2500 3200 N											
Trip Unit		Micrologic 2.0				Micrologic 5.0 - 6.0 - 7.0 Inst 15In				Micrologic 5.0 - 6.0 - 7.0 Inst OFF			
Downstream	Rating	1600	2000	2500	3200	1600	2000	2500	3200	1600	2000	2500	3200
Selectivity limit (kA)													
iC60 L MA1.6 … MA40 + LRD		T	T	T	T	T	T	T	T	T	T	T	T
NG125L MA2.5 .. MA63 + LRD		T	T	T	T	T	T	T	T	T	T	T	T
LUB12 + LUCx6..12		T	T	T	T	T	T	T	T	T	T	T	T
LUB32 + LUCx6..32		T	T	T	T	T	T	T	T	T	T	T	T
GV2 ME01..ME32		T	T	T	T	T	T	T	T	T	T	T	T
GV2 P01 .. P32		T	T	T	T	T	T	T	T	T	T	T	T
GV2 L03..L32 + LRD		T	T	T	T	T	T	T	T	T	T	T	T
GV3 P13 .. P65		T	T	T	T	T	T	T	T	T	T	T	T
GV3 L25..L65 + LRD		T	T	T	T	T	T	T	T	T	T	T	T
GV4 P/PE/PEM 02-115		T	T	T	T	T	T	T	T	T	T	T	T
GV4 L/LE 02-115 +LRD		T	T	T	T	T	T	T	T	T	T	T	T
NSX100 F/N/H/S/L MA 2.5 .. MA6.3 + LRD		T	T	T	T	T	T	T	T	T	T	T	T
NSX100 F/N/H/S/L/R MA12.5 .. MA100 + LRD		T	T	T	T	T	T	T	T	T	T	T	T
NSX160 F/N/H/S/L MA150 + LR9D/F	150	T	T	T	T	T	T	T	T	T	T	T	T
NSX250 F/N/H/S/L/R MA220 + LR9D/F	220	T	T	T	T	T	T	T	T	T	T	T	T
NSX400F/N/H/S/L/R Micrologic 1.3M +LR9F	320	T	T	T	T	T	T	T	T	T	T	T	T
NSX630 F/N/H/S/L/R Micrologic 1.3M +LR9F	500	T	T	T	T	T	T	T	T	T	T	T	T
NSX100 F/N/H/S/L/R Micrologic 2.2M 6.2M	25	T	T	T	T	T	T	T	T	T	T	T	T
	50	T	T	T	T	T	T	T	T	T	T	T	T
	100 (80)	T	T	T	T	T	T	T	T	T	T	T	T
NSX160 F/N/H/S/L Micrologic 2.2M 6.2M	≤ 100	T	T	T	T	T	T	T	T	T	T	T	T
	150	T	T	T	T	T	T	T	T	T	T	T	T
NSX250 F/N/H/S/L/R Micrologic 2.2M 6.2M	≤ 150	T	T	T	T	T	T	T	T	T	T	T	T
	220	T	T	T	T	T	T	T	T	T	T	T	T
NSX400 F/N/H/S/L/R Micrologic 2.3M 6.3M	320	T	T	T	T	T	T	T	T	T	T	T	T
NSX630 F/N/H/S/L/R Micrologic 2.3M 6.3M	320	T	T	T	T	T	T	T	T	T	T	T	T
	500	T	T	T	T	T	T	T	T	T	T	T	T

T Total selectivity, up to the breaking capacity of the downstream circuit breaker.

No selectivity.

Note: respect the basic rules of selectivity, in terms of overload, short-circuit, ground fault and earth leakage when applicable see page 6, or check curves with Schneider Electric online “Electrical calculation tools”.

Motor protection selectivity

Upstream: Masterpact MTZ1 06-16 H1/H2/H3
Downstream: iC60L MA, NG125L MA, TeSys U, GV2, GV3, GV4, Compact NSX100 to 630

Ue ≤ 440 V AC

Upstream	Masterpact MTZ1 06/08/10/12/16 H1/H2/H3																				
Trip Unit	Micrologic 2.0X							Micrologic 5.0X - 6.0X - 7.0X Inst 15 In							Micrologic 5.0X - 6.0X - 7.0X Inst OFF						
Downstream / Rating	630			800	1000	1250	1600	630			800	1000	1250	1600	630			800	1000	1250	1600
Setting Ir	250	400	630	800	1000	1250	1600	250	400	630	800	1000	1250	1600	250	400	630	800	1000	1250	1600
Selectivity limit (kA)																					
iC60 L MA1.6…MA40 + LRD	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NG125L MA2.5...MA63 + LRD	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
LUB12 + LUCx6...12	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
LUB32 + LUCx6...32	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 ME01...ME32	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 P01...P32	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 L03...L32 + LRD	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV3 P13...P65	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV3 L25...L65 + LRD	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV4 P/PE/PEM 02-115	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV4 L/LE 02-115 +LRD	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX100 F/N/H/S/L MA 2.5...MA6.3 + LRD	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX100 F/N/H/S/L/R MA12.5...MA100 + LRD	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX160 F/N/H/S/L MA150 + LR9D/F — 150		T	T	T	T	T	T		T	T	T	T	T	T		T	T	T	T	T	T
NSX250 F/N/H/S/L/R MA220 + LR9D/F — 220			T	T	T	T	T			T	T	T	T	T			T	T	T	T	T
NSX400F/N/H/S/L/R Micrologic 1.3M +LR9F — 320					T	T	T					T	T	T					T	T	T
NSX630 F/N/H/S/L/R Micrologic 1.3M +LR9F — 500																					T
NSX100 FN/H/S/L/R Micrologic 2.2M 6.2M — 25	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
50	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
100 (80)		T	T	T	T	T	T		T	T	T	T	T	T		T	T	T	T	T	T
NSX160 F/N/H/S/L Micrologic 2.2M 6.2M — ≤ 100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
150		T	T	T	T	T	T		T	T	T	T	T	T		T	T	T	T	T	T
NSX250 F/N/H/S/L/R Micrologic 2.2M 6.2M — ≤ 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
220		T	T	T	T	T	T		T	T	T	T	T	T		T	T	T	T	T	T
NSX400 F/N/H/S/L/R Micrologic 2.3M 6.3M — 320						T	T						T	T						T	T
NSX630 F/N/H/S/L/R Micrologic 2.3M 6.3M — 400						T	T						T	T						T	T
500							T							T							T

T	Total selectivity, up to the breaking capacity of the downstream circuit breaker.
4	Selectivity limit = 4 kA.
	No selectivity.

Note: respect the basic rules of selectivity, in terms of overload, short-circuit, ground fault and earth leakage when applicable see page 6, or check curves with Schneider Electric online “Electrical calculation tools”.

Motor protection selectivity

Upstream: Masterpact MTZ1 06-10 L1
Downstream: iC60L MA, NG125L MA, TeSys U, GV2, GV3, GV4, Compact NSX100 to 630

Ue ≤ 440 V AC

Upstream		Masterpact MTZ1 06/08/10 L1														
Trip Unit		Micrologic 2.0X					Micrologic 5.0X - 6.0X - 7.0X Inst 15 In					Micrologic 5.0X - 6.0X - 7.0X Inst OFF				
Downstream	Rating	630			800	1000	630			800	1000	630			800	1000
	Setting Ir	250	400	630	800	1000	250	400	630	800	1000	250	400	630	800	1000
Selectivity limit (kA)																
iC60 L MA1.6…MA40 + LRD		T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NG125L MA2.5...MA63 + LRD		T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
LUB12 + LUCx6...12		T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
LUB32 + LUCx6...32		T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 ME01...ME32		T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 P01...P32		T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 L03...L32 + LRD		T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV3 P13...P65		T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV3 L25...L65 + LRD		T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV4 P/PE/PEM 02-115		T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV4 L/LE 02-115 +LRD		T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX100 F/N/H/S/L MA 2.5...MA6.3 + LRD		T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX100 F/N/H/S/L/R MA12.5...MA100 + LRD		T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX160 F MA150 + LR9D/F	150		T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX160 N/H/S/L MA150 + LR9D/F	150		36	36	T	T		36	36	T	T		36	36	T	T
NSX250 F/N/H/S/L/R MA220 + LR9D/F	220			20	T	T			20	T	T			20	T	T
NSX400 F/N/H/S/L/R Mic. 1.3M + LR9F	320					15					15					15
NSX630 F/N/H/S/L/R Mic. 1.3M +LR9F	500															
NSX100 F/N/H/S/L/R Mic. 2.2M 6.2M	25	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	50	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	100 (80)	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX160 F Mic. 2.2M 6.2M	≤ 100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	150		T	T	T	T		T	T	T	T		T	T	T	T
NSX160 N/H/S/L Mic. 2.2M 6.2M	≤ 100	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
	150		36	36	36	36		36	36	36	36		36	36	36	36
NSX250 F/N/H/S/L/R Mic. 2.2M 6.2M	≤ 150		20	20	T	T		20	20	T	T		20	20	T	T
	220			20	T	T			20	T	T			20	T	T
NSX400 F/N/H/S/L/R Mic. 2.3M 6.3M	320				15	15				15	15				15	15
NSX630 F/N/H/S/L/R Mic. 2.3M 6.3M	500					10					10					10

T	Total selectivity, up to the breaking capacity of the downstream circuit breaker.
4	Selectivity limit = 4 kA.
	No selectivity.

Note: respect the basic rules of selectivity, in terms of overload, short-circuit, ground fault and earth leakage when applicable see page 6, or check curves with Schneider Electric online “Electrical calculation tools”.

Motor protection selectivity

Upstream: Masterpact MTZ2 08/10/12/16/20 N1/H1/H2/L1
Downstream: iC60L MA, NG125L MA, TeSys U, GV2, GV3, GV4, Compact NSX100 to 630

Ue ≤ 440 V AC

Upstream	Masterpact MTZ2 08/10/12/16/20 N1/H1/H2/L1																				
Trip Unit	Micrologic 2.0X							Micrologic 5.0X - 6.0X - 7.0X Inst 15 In							Micrologic 5.0X - 6.0X - 7.0X Inst OFF						
Downstream / Rating	800			1000	1250	1600	2000	800			1000	1250	1600	2000	800			1000	1250	1600	2000
Setting Ir	320	630	800	1000	1250	1600	2000	320	630	800	1000	1250	1600	2000	320	630	800	1000	1250	1600	2000
Selectivity limit (kA)																					
iC60 L MA1.6…MA40 + LRD	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NG125L MA2.5...MA63 + LRD	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
LUB12 + LUCx6...12	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
LUB32 + LUCx6...32	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 ME01...ME32	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 P01...P32	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 L03...L32 + LRD	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV3 P13...P65	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV3 L25...L65 + LRD	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV4 P/PE/PEM 02-115	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV4 L/LE 02-115 +LRD	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX100 F/N/H/S/L MA 2.5 .. MA6.3 + LRD	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX100 F/N/H/S/L/R MA12.5 .. MA100 + LRD	T	T	T	T	T	T	T		T	T	T	T	T	T		T	T	T	T	T	T
NSX160 F/N/H/S/L MA150 + LR9D/F — 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX250 F/N/H/S/L/R MA220 + LR9D/F — 220		T	T	T	T	T	T		T	T	T	T	T	T		T	T	T	T	T	T
NSX400F/N/H/S/L/R Micrologic 1.3M +LR9F — 320				T	T	T	T				T	T	T	T				T	T	T	T
NSX630 F/N/H/S/L/R Micrologic 1.3M +LR9F — 500						T	T						T	T						T	T
NSX100 FN/H/S/L/R Micrologic 2.2M 6.2M — 25	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
50	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
100 (80)	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX160 F/N/H/S/L Micrologic 2.2M 6.2M — ≤ 100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
150		T	T	T	T	T	T		T	T	T	T	T	T		T	T	T	T	T	T
NSX250 F/N/H/S/L/R Micrologic 2.2M 6.2M — ≤ 150		T	T	T	T	T	T		T	T	T	T	T	T		T	T	T	T	T	T
220		T	T	T	T	T	T		T	T	T	T	T	T		T	T	T	T	T	T
NSX400F/N/H/S/L/R Micrologic 2.3 6.3M — 320				T	T	T	T				T	T	T	T				T	T	T	T
NSX630F/N/H/S/L/R Micrologic 2.3 6.3M — 500						T	T						T	T						T	T

T	Total selectivity, up to the breaking capacity of the downstream circuit breaker.
4	Selectivity limit = 4 kA.
	No selectivity.

Note: respect the basic rules of selectivity, in terms of overload, short-circuit, ground fault and earth leakage when applicable see page 6, or check curves with Schneider Electric online “Electrical calculation tools”.

Motor protection selectivity

Upstream: Masterpact MTZ2 25/32/40 H1/H2, MTZ3 40/50/63 H1
Downstream: iC60L MA, NG125L MA, TeSys U, GV2, GV3, GV4, Compact NSX100 to 630

Ue ≤ 440 V AC

Upstream		MTZ2 25/32/40 H1/H2			MTZ3 40/50/63 H1			MTZ2 25/32/40 H1/H2			MTZ3 40/50/63 H1			MTZ2 25/32/40 H1/H2			MTZ3 40/50/63 H1		
Trip Unit		Micrologic 2.0X						Micrologic 5.0X - 6.0X - 7.0X Inst 15 In						Micrologic 5.0X - 6.0X - 7.0X Inst OFF					
Downstream	Rating	2500	3200	4000	4000	5000	6300	2500	3200	4000	4000	5000	6300	2500	3200	4000	4000	5000	6300
Selectivity limit (kA)																			
iC60 L MA1.6…MA40 + LRD		T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NG125L MA2.5...MA63 + LRD		T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
LUB12 + LUCx6...12		T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
LUB32 + LUCx6...32		T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 ME01...ME32		T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 P01...P32		T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 L03...L32 + LRD		T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV3 P13...P65		T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV3 L25...L65 + LRD		T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV4 P/PE/PEM 02-115		T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV4 L/LE 02-115 +LRD		T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX100 F/N/H/S/L MA 2.5 .. MA6.3 + LRD		T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX100 F/N/H/S/L/R MA12.5 .. MA100+LRD		T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX160 F/N/H/S/L MA150 + LR9D/F	150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX250 F/N/H/S/L/R MA220 + LR9D/F	220	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX400 F/N/H/S/L/R Micrologic 1.3M+LR9F	320	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX630 F/N/H/S/L/R Micrologic 1.3M+LR9F	500	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX100 FN/H/S/L/R Micrologic 2.2M 6.2M	25/50/100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX160 F/N/H/S/L Micrologic 2.2M 6.2M	150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX250 F/N/H/S/L/R Micrologic 2.2M 6.2M	≤ 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	220	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX400 F/N/H/S/L/R Micrologic 2.3 6.3M	320	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX630 F/N/H/S/L/R Micrologic 2.3 6.3M	500	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T

T Total selectivity, up to the breaking capacity of the downstream circuit breaker.

Note: respect the basic rules of selectivity, in terms of overload, short-circuit, ground fault and earth leakage when applicable see page 6, or check curves with Schneider Electric online “Electrical calculation tools”.

Motor protection selectivity

Upstream: Masterpact MTZ2 20/25/32/40 H3, MTZ3 40/50/63 H2
Downstream: iC60L MA, NG125L MA, TeSys U, GV2, GV3, GV4, Compact NSX100 to 630

Ue ≤ 440 V AC

Upstream	MTZ2 20/25/32/40				MTZ3 40/50/63			MTZ2 20/25/32/40				MTZ3 40/50/63			MTZ2 20/25/32/40				MTZ3 40/50/63		
	H3				H2			H3				H2			H3				H2		
Trip Unit	Micrologic 2.0X							Micrologic 5.0X - 6.0X - 7.0X Inst 15 In							Micrologic 5.0X - 6.0X - 7.0X Inst OFF						
Downstream	2000	2500	3200	4000	4000	5000	6300	2000	2500	3200	4000	4000	5000	6300	2000	2500	3200	4000	4000	5000	6300
Selectivity limit (kA)																					
iC60 L MA1.6…MA40 + LRD	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NG125L MA2.5...MA63 + LRD	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
LUB12 + LUCx6...12	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
LUB32 + LUCx6...32	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 ME01...ME32	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 P01...P32	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV2 L03...L32 + LRD	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV3 P13...P65	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV3 L25...L65 + LRD	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV4 P/PE/PEM 02-115	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
GV4 L/LE 02-115 +LRD	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX100 F/N/H/S/L MA 2.5...MA6.3 + LRD	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX100 F/N/H/S/L/R MA12.5...MA100 + LRD	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX160 F/N/H/S/L MA150 + LR9D/F	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX250 F/N/H/S/L/R MA220 + LR9D/F	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX400 F/N/H/S/L/R Micrologic 1.3M + LR9F	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX630 F/N/H/S/L/R Micrologic 1.3M + LR9F	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX100 FN/H/S/L/R Micrologic 2.2M 6.2M	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX160 F/N/H/S/L Micrologic 2.2M 6.2M	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX250 F/N/H/S/L/R Micrologic 2.2M 6.2M	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX400 F/N/H/S/L/R Micrologic 2.3 6.3M 320	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NSX630 F/N/H/S/L/R Micrologic 2.3 6.3M 500	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T

T	Total selectivity, up to the breaking capacity of the downstream circuit breaker.
4	Selectivity limit = 4 kA.
	No selectivity.

Note: respect the basic rules of selectivity, in terms of overload, short-circuit, ground fault and earth leakage when applicable see page 6, or check curves with Schneider Electric online “Electrical calculation tools”.

Motor protection cascading

Upstream: NG125, Compact NSXm, NSX100, NSX160, NSX250, NSX400, NSX630
Downstream: iC60L MA, NG125L MA, TeSys U, GV2, GV3, GV4

Ue ≤ 380/415V AC
Ph/N 220/240V AC

Upstream CB			NG125			NSXm					NSX100					
			N	H	L	E	B	F	N	H	B	F	N	H	S	L
Icu (kA)			25	36	50	16	25	36	50	70	25	36	50	70	100	150
Downstream			**Reinforced breaking capacity (kA)**													
	Rating (A)	Icu (kA)														
iC60L MA	1,6-16	20	25	36	50		25	36	36	36	25	36	40	40	40	40
	25-60	15	25	36	36	16	25	30	30	30	25	30	30	30	30	30
NG125L MA	1,6-80	50										70		70	100	150
GV2 ME	01-14	100														
	16-32	15									25	36	40	50	50	50
GV2 P	01-16	100														
	20-32	50								70				70	100	150
GV2 L	01-16	100														
	20-32	50								70				70	100	150
GV3 P	40-65	50								70				70	100	150
GV3 L	40-65	50								70				70	100	150
TeSys U LUB12	0,15-12	50								70				70	100	150
TeSys U LUB32	0,15-32	50								70				70	100	150
GV4L& LE B	2-115A	25						36	36	50		36	36	50	50	50
GV4L& LE N	2-115A	50								70				70	100	100
GV4L& LE S	2-115A	100														150
GV4P,PE,PEM B	2-115A	25						36	36	50		36	36	50	50	50
GV4P,PE,PEM N	2-115A	50								70				70	100	100
GV4P,PE,PEM S	2-115A	100														150

Upstream CB			NSX160						NSX250					
			B	F	N	H	S	L	B	F	N	H	S	L
Icu (kA)			25	36	50	70	100	150	25	36	50	70	100	150
Downstream			**Reinforced breaking capacity (kA)**											
	Rating (A)	Icu (kA)												
iC60L MA	1,6-16	20	25	36	40	40	40	40	25	30	30	30	30	30
	25-60	15	25	30	30	30	30	30	25	25	25	25	25	25
NG125L MA	1,6-80	50				70	100	150				70	100	150
GV2 ME	01-14	100												
	16-32	15	25	36	40	50	50	50	25	36	40	50	50	50
GV2 P	01-16	100												
	20-32	50				70	100	150				70	100	150
GV2 L	01-16	100												
	20-32	50				70	100	150				70	100	150
GV3 P	40-65	50				70	100	150				70	100	150
GV3 L	40-65	50				70	100	150				70	100	150
TeSys U LUB12	0,15-12	50				70	100	150				70	100	150
TeSys U LUB32	0,15-32	50				70	100	150				70	100	150
GV4L& LE B	2-115A	25		36	36	50	50	50		36	36	50	50	50
GV4L& LE N	2-115A	50				70	100	100				70	100	100
GV4L& LE S	2-115A	100						150						150
GV4P,PE,PEM B	2-115A	25		36	36	50	50	50		36	36	50	50	50
GV4P,PE,PEM N	2-115A	50				70	100	100				70	100	100
GV4P,PE,PEM S	2-115A	100						150						150

Upstream CB			NSX400					NSX630				
			F	N	H	S	L	F	N	H	S	L
Icu (kA)			25	36	50	70	100	150	25	36	100	150
Downstream			**Reinforced breaking capacity (kA)**									
	Rating (A)	Icu (kA)										
GV4L& LE B	2-115A	25	36	36	50	50	50	36	36	50	50	50
GV4L& LE N	2-115A	50			70	100	100			70	100	100
GV4L& LE S	2-115A	100					150					150
GV4P,PE,PEM B	2-115A	25	36	36	50	50	50	36	36	50	50	50
GV4P,PE,PEM N	2-115A	50			70	100	100			70	100	100
GV4P,PE,PEM S	2-115A	100					150					150

Note: respect the basic rules of selectivity, in terms of overload, short-circuit, ground fault and earth leakage when applicable see page 6,
or check curves with Schneider Electric online “Electrical calculation tools”.
For Compact NSX with motor trip unit donwstream: use Electrical distribution tables.

Motor protection cascading

Upstream: NG125, Compact NSXm, NSX100, NSX160, NSX250, NSX400, NSX630
Downstream: GV4

Ue ≤ 440V AC

Upstream CB			NSXm					NSX100					
			E	B	F	N	H	B	F	N	H	S	L
Icu (kA)			10	20	35	50	65	20	35	50	65	90	130
Downstream			Reinforced breaking capacity (kA)										
	Rating (A)	Icu (kA)											
GV4L, LE B	2-115	20			35	35	50		35	35	50	50	50
GV4L, LE N	2-115	50					65				65	90	100
GV4L, LE S	2-115	70										90	130
GV4P, PE, PEM B	2-115	20			35	35	50		35	35	50	50	50
GV4P, PE, PEM N	2-115	50					65				65	90	100
GV4P, PE, PEM S	2-115	70										90	130

Upstream CB			NSX160						NSX250					
			B	F	N	H	S	L	B	F	N	H	S	L
Icu (kA)			20	35	50	65	90	130	20	35	50	65	90	130
Downstream			Reinforced breaking capacity (kA)											
	Rating (A)	Icu (kA)												
GV4L, LE B	2-115A	20		35	35	50	50	50		35	35	50	50	50
GV4L, LE N	2-115A	50				65	90	100				65	90	100
GV4L, LE S	2-115A	70					90	130					90	130
GV4P, PE, PEM B	2-115A	20		35	35	50	50	50		35	35	50	50	50
GV4P, PE, PEM N	2-115A	50				65	90	100				65	90	100
GV4P, PE, PEM S	2-115A	70					90	130					90	130

Upstream CB			NSX400					NSX630				
			F	N	H	S	L	F	N	H	S	L
Icu (kA)			35	50	65	90	130	35	50	65	90	130
Downstream			Reinforced breaking capacity (kA)									
	Rating (A)	Icu (kA)										
GV4L, LE B	2-115A	20	35	35	50	50	50	35	35	50	50	50
GV4L, LE N	2-115A	50			65	90	100			65	90	100
GV4L, LE S	2-115A	70				90	130				90	130
GV4P, PE, PEM B	2-115A	20	35	35	50	50	50	35	35	50	50	50
GV4P, PE, PEM N	2-115A	50			65	90	100			65	90	100
GV4P, PE, PEM S	2-115A	70				90	130				90	130

Note: respect the basic rules of selectivity, in terms of overload, short-circuit, ground fault and earth leakage when applicable see page 6, or check curves with Schneider Electric online “Electrical calculation tools”.

Motor protection cascading

Upstream: NG125, Compact NSXm, NSX100, NSX160, NSX250, NSX400, NSX630
Downstream: iC60L MA, NG125L MA, TeSys U, GV2, GV3, GV4

Ue ≤ 220-240V AC
Ph/N 110-130V AC

Upstream CB			NG125			NSXm						NSX100					
			N	H	L	E	B	F	N	H		B	F	N	H	S	L
Icu (kA)			50	70	100	25	50	85	90	100		40	85	90	100	120	150
Downstream			**Reinforced breaking capacity (kA)**														
	Rating (A)	Icu (kA)															
iC60L MA	1,6-16	40	50	70	100								65	80	80	80	80
	25-60	30	50	70	70							40	80	80	80	80	80
NG125L MA	1,6-80	100														120	150
GV2 ME	01-14	100															
	16-32	50											85	90	100	100	100
GV2 P	01-16	100															
	20-32	100															
GV2 L	01-16	100															
	20-32	50						85	85	100			85	90	100	100	100
GV3 P	40-65	100															
GV3 L	40-65	100															
TeSys U LUB12	0,15-12	50						85	85	100						120	150
TeSys U LUB32	0,15-32	50						85	85	100						120	150
GV4L, LE B	2-115A	50						85	85	100			85	85	100	100	100
GV4L, LE N	2-115A	100														120	150
GV4L, LE S	2-115A	120															150
GV4P, PE, PEM B	2-115A	50						85	85	100			85	85	100	100	100
GV4P, PE, PEM N	2-115A	100														120	150
GV4P, PE, PEM S	2-115A	120															150

Upstream CB			NSX160						NSX250					
			B	F	N	H	S	L	B	F	N	H	S	L
Icu (kA)			40	85	90	100	120	150	40	85	90	100	120	150
Downstream			**Reinforced breaking capacity (kA)**											
	Rating (A)	Icu (kA)												
iC60L MA	1,6-16	40		65	80	80	80	80		65	80	80	80	80
	25-60	30	40	80	80	80	80	80	40	50	65	65	65	65
NG125L MA	1,6-80	100					120	150					120	150
GV2 ME	01-14	100												
	16-32	50		85	90	100	100	100		85	90	100	100	100
GV2 P	01-16	100												
	20-32	100												
GV2 L	01-16	100												
	20-32	50		85	90	100	100	100		85	90	100	100	100
GV3 P	40-65	100												
GV3 L	40-65	100												
TeSys U LUB12	0,15-12	50		85	85	100	100	100		85	85	100	100	100
TeSys U LUB32	0,15-32	50					120	150					120	150
GV4L, LE B	2-115A	50						150						150
GV4L, LE N	2-115A	100		85	85	100	100	100		85	85	100	100	100
GV4L, LE S	2-115A	120					120	150					120	150
GV4P, PE, PEM B	2-115A	50		85	85	100	100	100		85	85	100	100	100
GV4P, PE, PEM N	2-115A	100					120	150					120	150
GV4P, PE, PEM S	2-115A	120						150						150

Upstream CB			NSX400					NSX630				
			F	N	H	S	L	F	N	H	S	L
Icu (kA)			40	85	100	120	150	40	85	100	120	150
Downstream												
	Rating (A)	Icu (kA)										
GV4L, LE B	2-115A	50		85	100	100	100		85	100	100	100
GV4L, LE N	2-115A	100				120	150				120	150
GV4L, LE S	2-115A	120					150					150
GV4P, PE, PEM B	2-115A	50		85	100	100	100		85	100	100	100
GV4P, PE, PEM N	2-115A	100				120	150				120	150

Note: For Compact NSX with motor trip unit donwstream: use Electrical distribution tables.

Selectivity enhanced by cascading

Upstream: Compact NSX160, NSX250, NSX400, NSX630
Downstream: TeSys U, Integral 63

Ue: 380-415 V AC

Upstream			NSX160H		NSX160S		NSX160L			NSX250H		NSX250S		NSX250L
Breaking capacity			70 kA		100 kA		150 kA			70 kA		100 kA		150 kA
Trip unit			TM-D											
Downst.	**Thermal relay**	**Rating (A)**	**80/100**	**125/160**	**80/100**	**125/160**	**80/100**	**125/160**	**160**	**200/250**	**160**	**200/250**	**160**	**200/250**
TeSys U LUB12	LUC*X6	0.15/0.6		70/70		100/100		150/150	70/70	70/70	100/100	100/100	100/100	100/100
	LUC*1X	0.35/1.4		70/70		100/100		150/150	70/70	70/70	100/100	100/100	100/100	100/100
	LUC*05	1.25/5		70/70		100/100		150/150	70/70	70/70	100/100	100/100	100/100	100/100
	LUC*12	3/12		70/70		100/100		150/150	70/70	70/70	100/100	100/100	100/100	100/100
TeSys U LUB32	LUC*X6	0.15/0.6		5/70		5/100		5/150	5/70	70/70	5/100	100/100	5/100	100/100
	LUC*1X	0.35/1.4		5/70		5/100		5/150	5/70	70/70	5/100	100/100	5/100	100/100
	LUC*05	1.25/5		5/70		5/100		5/150	5/70	70/70	5/100	100/100	5/100	100/100
	LUC*12	3/12		5/70		5/100		5/150	5/70	70/70	5/100	100/100	5/100	100/100
	LUC*18	4.5/18		5/70		5/100		5/150	5/70	70/70	5/100	100/100	5/100	100/100
	LUC*32	8/32		5/70		5/100		5/150	5/70	70/70	5/100	100/100	5/100	100/100
Integral 63	LB1-LD03M16	10/13								70/70		100/100		150/150
LD1-LD030	LB1-LD03M21	11/18								70/70		100/100		150/150
LD4-LD130	LB1-LD03M22	18/25								70/70		100/100		150/150
LD4-LD030	LB1-LD03M53	23/32								70/70		100/100		150/150
	LB1-LD03M55	28/40								70/70		100/100		150/150
	LB1-LD03M57	35/ 50								70/70		100/100		150/150
	LB1-LD03M61	45/63								70/70		100/100		150/150

Upstream			NSX160H	NSX160L	NSX160L	NSX250H	NSX250S	NSX250L	NSX400H	NSX400S	NSX400L
Breaking capacity			70 kA	100 kA	150 kA	70 kA	100 kA	150 kA	70 kA	100 kA	150 kA
Trip unit			Micrologic								
Downst.	**Thermal relay**	**Rating (A)**	**160**	**160**	**160**	**250**	**250**	**250**	**400**	**400**	**400**
TeSys U LUB12	LUC*X6	0.15/0.6	70/70	100/100	150/150	70/70	100/100	100/100			
	LUC*1X	0.35/1.4	70/70	100/100	150/150	70/70	100/100	100/100			
	LUC*05	1.25/5	70/70	100/100	150/150	70/70	100/100	100/100			
	LUC*12	3/12	70/70	100/100	150/150	70/70	100/100	100/100			
TeSys U LUB32	LUC*X6	0.15/0.6	5/70	5/100	5/150	70/70	100/100	100/100			
	LUC*1X	0.35/1.4	5/70	5/100	5/150	70/70	100/100	100/100			
	LUC*05	1.25/5	5/70	5/100	5/150	70/70	100/100	100/100			
	LUC*12	3/12	5/70	5/100	5/150	70/70	100/100	100/100			
	LUC*18	4.5/18	5/70	5/100	5/150	70/70	100/100	100/100			
	LUC*32	8/32	5/70	5/100	5/150	70/70	100/100	100/100			
Integral 63	LB1-LD03M16	10/13	70/70	100/100	150/150	70/70	100/100	150/150	70/70	100/100	150/150
LD1-LD030	LB1-LD03M21	11/18				70/70	100/100	150/150	70/70	100/100	150/150
LD4-LD130	LB1-LD03M22	18/25				70/70	100/100	150/150	70/70	100/100	150/150
LD4-LD030	LB1-LD03M53	23/32				70/70	100/100	150/150	70/70	100/100	150/150
	LB1-LD03M55	28/40				70/70	100/100	150/150	70/70	100/100	150/150
	LB1-LD03M57	35/50				70/70	100/100	150/150	70/70	100/100	150/150
	LB1-LD03M61	45/63				70/70	100/100	150/150	70/70	100/100	150/150

Note: respect the basic rules of selectivity, in terms of overload, short-circuit, ground fault and earth leakage when applicable see page 6, or check curves with Schneider Electric online “Electrical calculation tools”.

Selectivity enhanced by cascading

Upstream: Compact NSX160
Downstream: GV2 ME

Ue: 380-415 V AC

Upstream			NSX160B								NSX160F								
Breaking capacity			25 kA								36 kA								
Trip unit			TM-D																
Downst.	**Thermal relay**	**Rating (A)**	**16**	**25**	**40**	**63**	**80**	**100**	**125**	**160**	**16**	**25**	**32**	**40/50**	**63**	**80**	**100**	**125**	**160**
GV2 ME01	**Integrated**	**0.1/0.16**	25/25	25/25	25/25	25/25	25/25	25/25	25/25	25/25	36/36	36/36	36/36	36/36	36/36	36/36	36/36	36/36	36/36
GV2 ME02	**Integrated**	**0.16/0.25**	25/25	25/25	25/25	25/25	25/25	25/25	25/25	25/25	36/36	36/36	36/36	36/36	36/36	36/36	36/36	36/36	36/36
GV2 ME03	**Integrated**	**0.25/0.40**	25/25	25/25	25/25	25/25	25/25	25/25	25/25	25/25	36/36	36/36	36/36	36/36	36/36	36/36	36/36	36/36	36/36
GV2 ME04	**Integrated**	**0.40/0.63**	25/25	25/25	25/25	25/25	25/25	25/25	25/25	25/25	36/36	36/36	36/36	36/36	36/36	36/36	36/36	36/36	36/36
GV2 ME05	**Integrated**	**0.63/1**	25/25	25/25	25/25	25/25	25/25	25/25	25/25	25/25	36/36	36/36	36/36	36/36	36/36	36/36	36/36	36/36	36/36
GV2 ME06	**Integrated**	**1/1.6**		25/25	25/25	25/25	25/25	25/25	25/25	25/25		36/36	36/36	36/36	36/36	36/36	36/36	36/36	36/36
GV2 ME07	**Integrated**	**1.6/2.5**			25/25	25/25	25/25	25/25	25/25	25/25			36/36	36/36	36/36	36/36	36/36	36/36	36/36
GV2 ME08	**Integrated**	**2.5/4**							25/25	25/25								36/36	36/36
GV2 ME10	**Integrated**	**4/6.3**							25/25	25/25								36/36	36/36
GV2 ME14	**Integrated**	**6/10**							25/25	25/25								36/36	36/36
GV2 ME16	**Integrated**	**9/14**							25/25	25/25								36/36	36/36
GV2 ME20	**Integrated**	**13/18**							25/25	25/25								36/36	36/36
GV2 ME21	**Integrated**	**17/23**							25/25	25/25								36/36	36/36
GV2 ME22	**Integrated**	**20/25**							25/25	25/25								36/36	36/36
GV2 ME32	**Integrated**	**24/32**							25/25	25/25								36/36	36/36

Upstream			NSX160N/H/S/L									
Breaking capacity			50/70/100/150 kA									
Trip unit			TM-D									
Downst.	**Thermal relay**	**Rating (A)**	**16**	**25**	**32**	**40**	**50**	**63**	**80**	**100**	**125**	**160**
GV2 ME01	**Integrated**	**0.1/0.16**	50/50	50/50	50/50	50/50	50/50	50/50	50/50	50/50	50/50	50/50
GV2 ME02	**Integrated**	**0.16/0.25**	50/50	50/50	50/50	50/50	50/50	50/50	50/50	50/50	50/50	50/50
GV2 ME03	**Integrated**	**0.25/0.40**	50/50	50/50	50/50	50/50	50/50	50/50	50/50	50/50	50/50	50/50
GV2 ME04	**Integrated**	**0.40/0.63**	50/50	50/50	50/50	50/50	50/50	50/50	50/50	50/50	50/50	50/50
GV2 ME05	**Integrated**	**0.63/1**	50/50	50/50	50/50	50/50	50/50	50/50	50/50	50/50	50/50	50/50
GV2 ME06	**Integrated**	**1/1.6**		50/50	50/50	50/50	50/50	50/50	50/50	50/50	50/50	50/50
GV2 ME07	**Integrated**	**1.6/2.5**			50/50	50/50	50/50	50/50	50/50	50/50	50/50	50/50
GV2 ME08	**Integrated**	**2.5/4**									50/50	50/50
GV2 ME10	**Integrated**	**4/6.3**									50/50	50/50
GV2 ME14	**Integrated**	**6/10**									50/50	50/50
GV2 ME16	**Integrated**	**9/14**									50/50	50/50
GV2 ME20	**Integrated**	**13/18**									50/50	50/50
GV2 ME21	**Integrated**	**17/23**									50/50	50/50
GV2 ME22	**Integrated**	**20/25**									50/50	50/50
GV2 ME32	**Integrated**	**24/32**									50/50	50/50

Upstream			NSX160B	NSX160F	NSX160F
Breaking capacity			25 kA	36 kA	50/70/100/150 kA
Trip unit			Micrologic		
Downst.	**Thermal relay**	**Rating (A)**	**160**	**160**	**160**
GV2 ME01	**Integrated**	**0.1/0.16**	25/25	36/36	50/50
GV2 ME02	**Integrated**	**0.16/0.25**	25/25	36/36	50/50
GV2 ME03	**Integrated**	**0.25/0.40**	25/25	36/36	50/50
GV2 ME04	**Integrated**	**0.40/0.63**	25/25	36/36	50/50
GV2 ME05	**Integrated**	**0.63/1**	25/25	36/36	50/50
GV2 ME06	**Integrated**	**1/1.6**	25/25	36/36	50/50
GV2 ME07	**Integrated**	**1.6/2.5**	25/25	36/36	50/50
GV2 ME08	**Integrated**	**2.5/4**	25/25	36/36	50/50
GV2 ME10	**Integrated**	**4/6.3**	25/25	36/36	50/50
GV2 ME14	**Integrated**	**6/10**	25/25	36/36	50/50
GV2 ME16	**Integrated**	**9/14**	25/25	36/36	50/50
GV2 ME20	**Integrated**	**13/18**	25/25	36/36	50/50
GV2 ME21	**Integrated**	**17/23**	25/25	36/36	50/50
GV2 ME22	**Integrated**	**20/25**	25/25	36/36	50/50
GV2 ME32	**Integrated**	**24/32**	25/25	36/36	50/50

Note: respect the basic rules of selectivity, in terms of overload, short-circuit, ground fault and earth leakage when applicable see page 6, or check curves with Schneider Electric online “Electrical calculation tools”.

Selectivity enhanced by cascading

Upstream: Compact NSX160
Downstream: GV2 P

Ue: 380-415 V AC

Upstream			NSX160H				NSX160S			
Breaking capacity			70 kA				100 kA			
Trip unit			TM-D							
Downst.	**Thermal relay**	**Rating (A)**	**80**	**100**	**125**	**160**	**80**	**100**	**125**	**160**
GV2 P01	Integrated	0.1/0.16	70/70	70/70	70/70	70/70	100/100	100/100	100/100	100/100
GV2 P02	Integrated	0.16/0.25	70/70	70/70	70/70	70/70	100/100	100/100	100/100	100/100
GV2 P03	Integrated	0.25/0.40	70/70	70/70	70/70	70/70	100/100	100/100	100/100	100/100
GV2 P04	Integrated	0.40/0.63	70/70	70/70	70/70	70/70	100/100	100/100	100/100	100/100
GV2 P05	Integrated	0.63/1	70/70	70/70	70/70	70/70	100/100	100/100	100/100	100/100
GV2 P06	Integrated	1/1.6	70/70	70/70	70/70	70/70	100/100	100/100	100/100	100/100
GV2 P07	Integrated	1.6/2.5	70/70	70/70	70/70	70/70	100/100	100/100	100/100	100/100
GV2 P08	Integrated	2.5/4			70/70	70/70	100/100	100/100	100/100	100/100
GV2 P10	Integrated	4/6.3			70/70	70/70	100/100	100/100	100/100	100/100
GV2 P14	Integrated	6/10			70/70	70/70	100/100	100/100	100/100	100/100
GV2 P16	Integrated	9/ 14			70/70	70/70	100/100	100/100	100/100	100/100
GV2 P20	Integrated	13/18			70/70	70/70	100/100	100/100	100/100	100/100
GV2 P21	Integrated	17/23			70/70	70/70	100/100	100/100	100/100	100/100
GV2 P22	Integrated	20/25			70/70	70/70	100/100	100/100	100/100	100/100

Upstream			NSX160L				NSX160H	NSX160S	NSX160L
Breaking capacity			150 kA				70 kA	100 kA	150 kA
Trip unit			TM-D				Micrologic		
Downst.	**Thermal relay**	**Rating (A)**	**80**	**100**	**125**	**160**	**160**	**160**	**160**
GV2 P01	Integrated	0.1/0.16	150/150	150/150	150/150	150/150	70/70	100/100	150/150
GV2 P02	Integrated	0.16/0.25	150/150	150/150	150/150	150/150	70/70	100/100	150/150
GV2 P03	Integrated	0.25/0.40	150/150	150/150	150/150	150/150	70/70	100/100	150/150
GV2 P04	Integrated	0.40/0.63	150/150	150/150	150/150	150/150	70/70	100/100	150/150
GV2 P05	Integrated	0.63/1	150/150	150/150	150/150	150/150	70/70	100/100	150/150
GV2 P06	Integrated	1/1.6	150/150	150/150	150/150	150/150	70/70	100/100	150/150
GV2 P07	Integrated	1.6/2.5	150/150	150/150	150/150	150/150	70/70	100/100	150/150
GV2 P08	Integrated	2.5/4			150/150	150/150	70/70	100/100	150/150
GV2 P10	Integrated	4/6.3			150/150	150/150	70/70	100/100	150/150
GV2 P14	Integrated	6/10			150/150	150/150	70/70	100/100	150/150
GV2 P16	Integrated	9/14			150/150	150/150	70/70	100/100	150/150
GV2 P20	Integrated	13/18			150/150	150/150	70/70	100/100	150/150
GV2 P21	Integrated	17/23			150/150	150/150	70/70	100/100	150/150
GV2 P22	Integrated	20/25			150/150	150/150	70/70	100/100	150/150

Note: respect the basic rules of selectivity, in terms of overload, short-circuit, ground fault and earth leakage when applicable see page 6, or check curves with Schneider Electric online “Electrical calculation tools”.

Selectivity enhanced by cascading

Upstream: Compact NSX160
Downstream: GV2 L

Ue: 380-415 V AC

Upstream			NSX160H				NSX160S			
Breaking capacity			70 kA				100 kA			
Trip unit			TM-D							
Downst.	**Thermal relay**	**Rating (A)**	**80**	**100**	**125**	**160**	**80**	**100**	**125**	**160**
GV2 L03	**LR2 D13 03**	**0.25/0.40**	70/70	70/70	70/70	70/70	100/100	100/100	100/100	100/100
GV2 L04	**LR2 D13 04**	**0.40/0.63**	70/70	70/70	70/70	70/70	100/100	100/100	100/100	100/100
GV2 L05	**LR2 D13 05**	**0.63/1**	70/70	70/70	70/70	70/70	100/100	100/100	100/100	100/100
GV2 L06	**LR2 D13 06**	**1/1.6**	70/70	70/70	70/70	70/70	100/100	100/100	100/100	100/100
GV2 L07	**LR2 D13 07**	**1.6/2.5**	70/70	70/70	70/70	70/70	100/100	100/100	100/100	100/100
GV2 L08	**LR2 D13 08**	**2.5/4**			70/70	70/70	100/100	100/100	100/100	100/100
GV2 L10	**LR2 D13 10**	**4/6.3**			70/70	70/70	100/100	100/100	100/100	100/100
GV2 L14	**LR2 D13 14**	**7/10**			70/70	70/70	100/100	100/100	100/100	100/100
GV2 L16	**LR2 D13 16**	**9/13**			70/70	70/70	100/100	100/100	100/100	100/100
GV2 L20	**LR2 D13 21**	**12/18**			70/70	70/70	100/100	100/100	100/100	100/100
GV2 L22	**LR2 D13 22**	**17/25**			70/70	70/70	100/100	100/100	100/100	100/100

Upstream			NSX160L				NSX160H	NSX160S	NSX160L
Breaking capacity			150 kA				70 kA	100 kA	150 kA
Trip unit			TM-D				Micrologic		
Downst.	**Thermal relay**	**Rating (A)**	**80**	**100**	**125**	**160**	**160**	**160**	**160**
GV2 L03	**LR2 D13 03**	**0.25/0.40**	150/150	150/150	150/150	150/150	70/70	100/100	150/150
GV2 L04	**LR2 D13 04**	**0.40/0.63**	150/150	150/150	150/150	150/150	70/70	100/100	150/150
GV2 L05	**LR2 D13 05**	**0.63/1**	150/150	150/150	150/150	150/150	70/70	100/100	150/150
GV2 L06	**LR2 D13 06**	**1/1.6**	150/150	150/150	150/150	150/150	70/70	100/100	150/150
GV2 L07	**LR2 D13 07**	**1.6/2.5**	150/150	150/150	150/150	150/150	70/70	100/100	150/150
GV2 L08	**LR2 D13 08**	**2.5/4**			150/150	150/150	70/70	100/100	150/150
GV2 L10	**LR2 D13 10**	**4/6.3**			150/150	150/150	70/70	100/100	150/150
GV2 L14	**LR2 D13 14**	**7/10**			150/150	150/150	70/70	100/100	150/150
GV2 L16	**LR2 D13 16**	**9/13**			150/150	150/150	70/70	100/100	150/150
GV2 L20	**LR2 D13 21**	**12/18**			150/150	150/150	70/70	100/100	150/150
GV2 L22	**LR2 D13 22**	**17/25**			150/150	150/150	70/70	100/100	150/150

Note: respect the basic rules of selectivity, in terms of overload, short-circuit, ground fault and earth leakage when applicable see page 6, or check curves with Schneider Electric online “Electrical calculation tools”.

Selectivity enhanced by cascading

Upstream: Compact NSX160, NSX250, NSX400, NSX630
Downstream: TeSys U

Ue: 440 V AC

Upstream			NSX160H		NSX160S		NSX160L		NSX250H		NSX250S		NSX250L	
Breaking capacity			65 kA		90 kA		130 kA		65 kA		90 kA		130 kA	
Trip unit			TM-D											
Downst.	**Thermal relay**	**Rating (A)**	**80/100**	**125/160**	**80/100**	**125/160**	**80/100**	**125/160**	**160**	**200/250**	**160**	**200/250**	**160**	**200/250**
TeSys U LUB12	**LUC●X6**	**0.15/0.6**		65/65		90/90		130/130	65/65	65/65	90/90	90/90	100/100	100/100
	LUC●1X	**0.35/1.4**		65/65		90/90		130/130	65/65	65/65	90/90	90/90	100/100	100/100
	LUC●05	**1.25/5**		65/65		90/90		130/130	65/65	65/65	90/90	90/90	100/100	100/100
	LUC●12	**3/12**		65/65		90/90		130/130	65/65	65/65	90/90	90/90	100/100	100/100
TeSys U LUB32	**LUC●X6**	**0.15/0.6**		5/65		5/90		5/130	5/65	65/65	5/90	90/90	5/100	100/100
	LUC●1X	**0.35/1.4**		5/65		5/90		5/130	5/65	65/65	5/90	90/90	5/100	100/100
	LUC●05	**1.25/5**		5/65		5/90		5/130	5/65	65/65	5/90	90/90	5/100	100/100
	LUC●12	**3/12**		5/65		5/90		5/130	5/65	65/65	5/90	90/90	5/100	100/100
	LUC●18	**4.5/18**		5/65		5/90		5/130	5/65	65/65	5/90	90/90	5/100	100/100
	LUC●32	**8/32**		5/65		5/90		5/130	5/65	65/65	5/90	90/90	5/100	100/100

Upstream			NSX160H	NSX160S	NSX160L	NSX250H	NSX250S	NSX250L	NSX400H	NSX400L
Breaking capacity			65 kA	90 kA	130 kA	65 kA	90 kA	130 kA	65 kA	90 kA
Trip unit			Micrologic							
Downst.	**Thermal relay**	**Rating (A)**	**160**	**160**	**160**	**250**	**250**	**250**	**400**	**400**
TeSys U LUB12	**LUC●X6**	**0.15/0.6**	65/65	90/90	130/130	65/65	90/90	100/100		
	LUC●1X	**0.35/1.4**	65/65	90/90	130/130	65/65	90/90	100/100		
	LUC●05	**1.25/5**	65/65	90/90	130/130	65/65	90/90	100/100		
	LUC●12	**3/12**	65/65	90/90	130/130	65/65	90/90	100/100		
TeSys U LUB32	**LUC●X6**	**0.15/0.6**	5/65	5/90	5/130	65/65	90/90	100/100		
	LUC●1X	**0.35/1.4**	5/65	5/90	5/130	65/65	90/90	100/100		
	LUC●05	**1.25/5**	5/65	5/90	5/130	65/65	90/90	100/100		
	LUC●12	**3/12**	5/65	5/90	5/130	65/65	90/90	100/100		
	LUC●18	**4.5/18**	5/65	5/90	5/130	65/65	90/90	100/100		
	LUC●32	**8/32**	5/65	5/90	5/130	65/65	90/90	100/100		

Note: respect the basic rules of selectivity, in terms of overload, short-circuit, ground fault and earth leakage when applicable see page 6, or check curves with Schneider Electric online “Electrical calculation tools”.

Protection of motor circuits

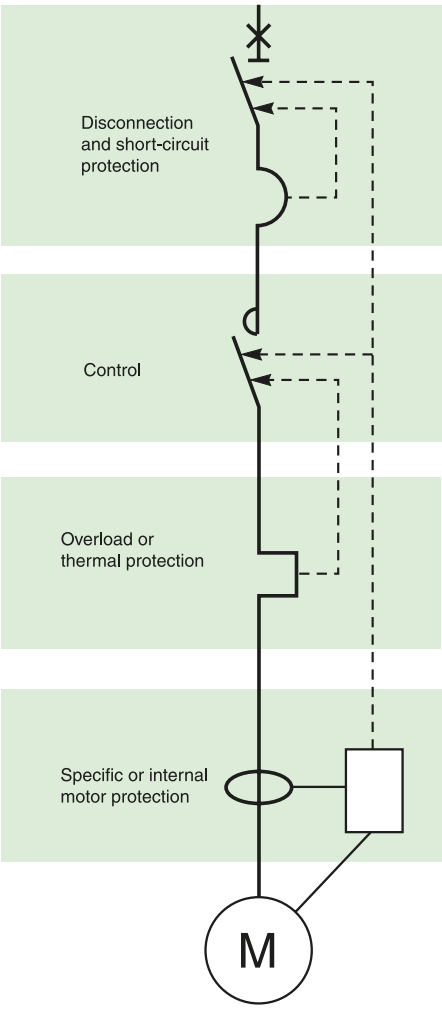
Circuit breaker/contactor coordination

A circuit supplying a motor may include one, two, three or four switchgear or controlgear devices fulfilling one or more functions.

When a number of devices are used, they must be coordinated to ensure optimum operation of the motor.

Protection of a motor circuit involves a number of parameters that depend on:
- the application (type of machine driven, operating safety, starting frequency, etc.)
- the level of service continuity imposed by the load or the application
- the applicable standards to ensure protection of life and property.

The necessary electrical functions are of very different natures:
- protection (motor-dedicated for overloads)
- control (generally with high endurance levels)
- isolation.



Protection functions

Disconnection functions:
- Isolate a motor circuit prior to maintenance operations.

Short-circuit protection:
Protect the starter and the cables against major overcurrents (> 10 In).

Control:
Start and stop the motor, and, if applicable:
- gradual acceleration
- speed control.

Overload protection:
Protect the starter and the cables against minor overcurrents (< 10 In).

Additional specific protection:
- limitative fault protection (while the motor is running)
- preventive fault protection (monitoring of motor insulation with motor off).

Overloads (I < 10 In).
An overload may be caused by:
- an electrical problem, for instance on the mains (loss of a phase, voltage outside tolerances, etc.)
- a mechanical problem, for instance excessive torque due to abnormally high demands by the process or motor damage (bearing vibrations, etc.)

A further consequence of these two origins is excessively long starting.

Impedant short-circuit (10 < I < 50 In)
Deterioration of motor-winding insulation is the primary cause.

Short-circuit (I > 50 In)
This type of fault is relatively rare. A possible cause may be a connection error during maintenance.

Overload protection
Thermal relays provide protection against this type of fault. They may be:
- integrated in the short-circuit protective device
- separate.

Short-circuit protection
This type of protection is provided by a circuit breaker.

Protection against insulation faults
This type of protection may be provided by:
- a residual current device (RCD)
- an insulation monitoring device (IMD).

Protection of motor circuits

Circuit breaker/contactor coordination

Applicable standards

A circuit supplying a motor must comply with the general rules set out in IEC standard 60947-4-1 and in particular with those concerning contactors, motor starters and their protection as stipulated in IEC 60947-4-1, notably:

- coordination of the components of the motor circuit
- trip class for thermal relays
- contactor utilisation categories
- coordination of insulation.

Coordination of the components of the motor circuit

Two types of coordination

The standard defines tests at different current levels. The purpose of these tests is to place the switchgear and controlgear in extreme conditions. Depending on the state of the components following the tests, the standard defines two types of coordination:

- **type 1:**

Deterioration of the contactor and the relay is acceptable under two conditions:

- no danger to operating personnel
- no danger to any components other than the contactor and the relay

- **type 2:**

Only minor welding of the contactor or starter contacts is permissible and the contacts must be easily separated.

- following type-2 coordination tests, the switchgear and controlgear functions must be fully operational.

Which type of coordination is needed?

Selection of a type of coordination depends on the operating conditions encountered.

The goal is to achieve the best balance between the user's needs and the cost of the installation.

- **type 1:**
  - qualified maintenance service
  - low cost of switchgear and controlgear
  - continuity of service is not imperative or may be ensured by simply replacing the faulty motor drawer
- **type 2:**
  - continuity of service is imperative
  - limited maintenance service
  - specifications stipulating type 2.

Protection of motor circuits

Circuit breaker/contactor coordination

The different test currents

"Ic", "r" and "Iq" test currents

To qualify for type-2 coordination, the standard requires three fault-current tests to check that the switchgear and controlgear operates correctly under overload and short-circuit conditions.

"Ic" current (overload I < 10 In)

The thermal relay provides protection against this type of fault, up to the Ic value (a function of Im or Isd) defined by the manufacturer.
IEC standard 60947-4-1 stipulates two tests that must be carried out to guarantee coordination between the thermal relay and the short-circuit protective device:

- at 0.75 Ic, only the thermal relay reacts
- at 1.25 Ic, the short-circuit protective device reacts.

Following the tests at 0.75 and 1.25 Ic, the trip characteristics of the thermal relay must be unchanged. Type-2 coordination thus enhances continuity of service. The contactor may be closed automatically following clearing of the faul.

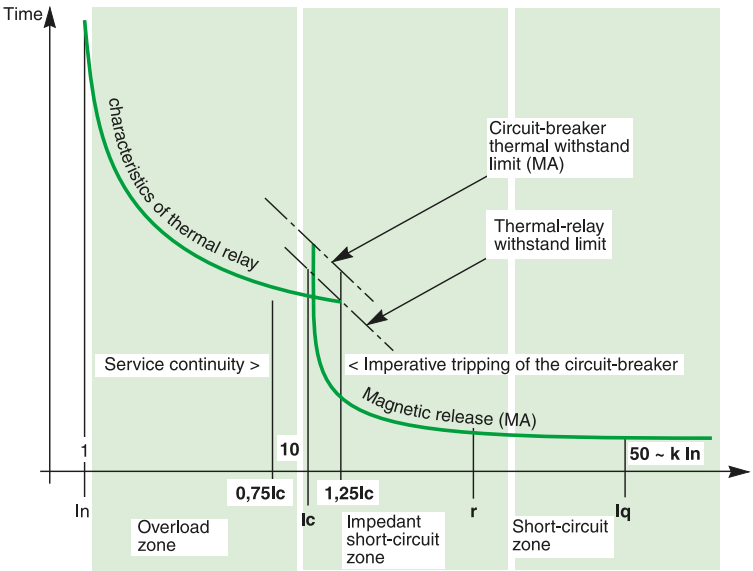
"r" current

(Impedant short-circuit 10 < I < 50 In)
The primary cause of this type of fault is the deterioration of insulation. IEC standard 60947-4-1 defines an intermediate short-circuit current “r”. This test current is used to check that the protective device provides protection against impedant short-circuits.
There must be no modification in the original characteristics of the contactor and the thermal relay following the test.
The circuit breaker must trip in ⩽ 10 ms for a fault current ⩾ 15 In.

Operational current Ie (AC3) of the motor (in A)	"r" current (kA)
Ie ⩽ 16	1
16 < Ie ⩽ 63	3
63 < Ie ⩽ 125	5
125 < Ie ⩽ 315	10
315 < Ie < 630	18

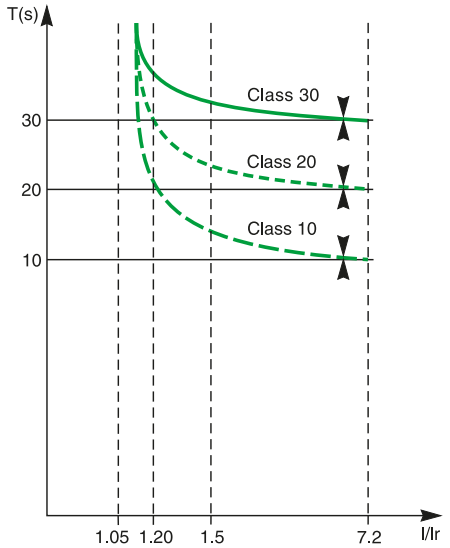
“Iq” current

(short-circuit I > 50 In)
This type of fault is relatively rare. A possible cause may be a connection error during maintenance.
Short-circuit protection is provided by devices that open quickly.
IEC standard 60947-4-1 defines the “Iq” current as generally ⩾ 50 kA.
The “Iq” current is used to check the coordination of the switchgear and controlgear installed on a motor supply circuit.
Following this test under extreme conditions, all the coordinated switchgear and controlgear must remain operational.



Protection of motor circuits

Circuit breaker/contactor coordination



Trip class of a thermal relay.

Trip class of a thermal relay

The four trip class of a thermal relay are 10 A, 10, 20 and 30 (maximum tripping times at 7.2 Ir).
Classes 10 and 10 A are the most commonly used. Classes 20 and 30 are reserved for motors with difficult starting conditions.
The diagram and the table opposite can be used to select a thermal relay suited to the motor starting time.

Class	1.05 Ir	1.2 Ir	1.5 Ir	7.2 Ir
10 A	t > 2 h	t < 2 h	t < 2 min.	2 ≤ t ≤ 10 s
10	t > 2 h	t < 2 h	t < 4 min.	4 ≤ t ≤ 10 s
20	t > 2 h	t < 2 h	t < 8 min.	6 ≤ t ≤ 20 s
30	t > 2 h	t < 2 h	t < 12 min.	9 ≤ t ≤ 30 s

Protection of motor circuits

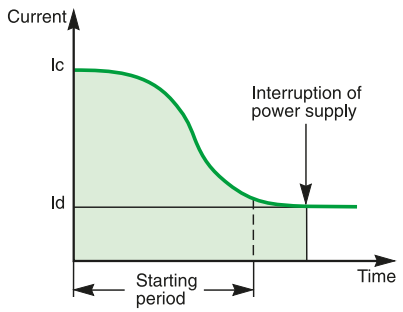
Circuit breaker/contactor coordination

The four utilisation categories of contactors (AC1 to AC4)

The four utilisation categories of contactors (AC1 to AC4)The utilisation category determines the operating frequency and endurance of a contactor. The category depends on the type of load. If the load is a motor; the category also depends on the service classification.

Main characteristics of the controlled electrical circuits and applications

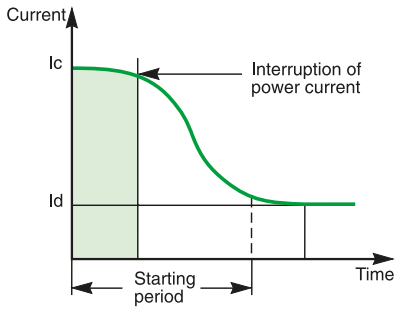
Category	Type of load	Contactor usage	Typical applications
AC1	No-inductive (cos φ 0.8)	Energisation	Heating, distribution
AC2	Slip-ring motors (cos φ 0.65)	Starting Switching off during running Regenerative braking Inching	Wire drawing machines
AC3	Squirrel-cage motors (cos φ 0.45 for Ie ≤ 100A) (cos φ 0.35 for Ie > 100A)	Starting Switching off during running	Compressors, lifts, mixing Pumps, escalators, fans, Conveyers, air-conditioning
AC4	Squirrel-cage motors (cos φ 0.45 for Ie ≤ 100A) (cos φ 0.35 for Ie > 100A)	Starting Switching off during running Regenerative braking	Printing machines, wire
		Plugging Inching	



AC3 utilisation category. The contactor interrupts the rated current of the motor.

AC3 utilisation category

This category covers asynchronous squirrel-cage motors that are switched off during running. This is the most common situation (85 % of all cases).
The control device establishes the starting current and interrupts the rated current at a voltage equal to approximately one-sixth of the rated value.
Current interruption is carried out with no difficulty.



AC4 utilisation category. The contactor must be capable of interrupting the starting current id.

AC4 utilisation category

This category covers asynchronous squirrel-cage or slip-ring motors capable of operating under regenerative-braking or inching (jogging) conditions.
The control device establishes the starting current and is capable of interrupting the starting current at a voltage that may be equal to that of the mains.
Such difficult conditions require oversizing of the control and protective devices with respect to category AC3.

Protection of motor circuits

Using the circuit breaker/contactor

Subtransient phenomena related to direct on-line starting of asynchronous motors

Subtransient phenomena occurring when starting squirrel-cage motors:
A squirrel-cage motor draws a high inrush current during starting. This current is related to the combined influence of two parameters:

- the high inductance of the copper stator winding
- the magnetisation of the iron core of the stator.

In motor: current drawn by the motor at full rated load (in A rms)

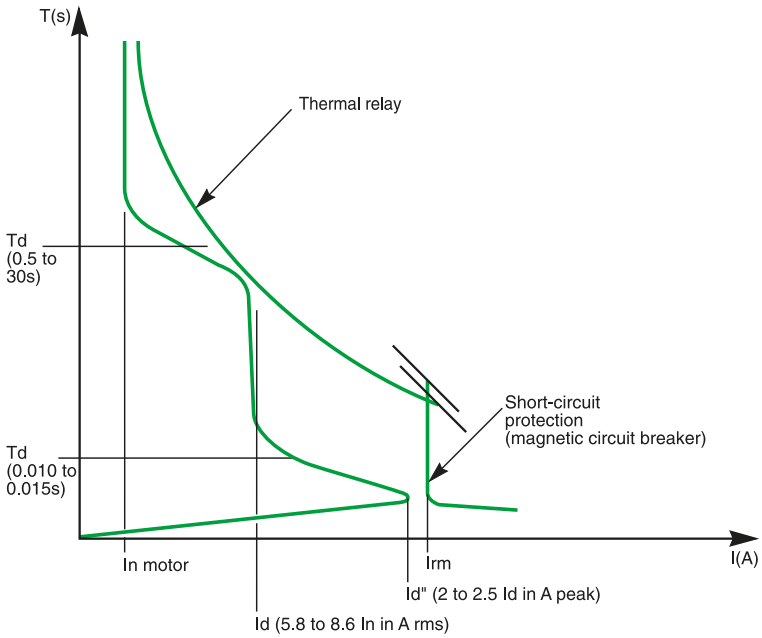
Id: current drawn by the motor during starting (in A ms)

Id'': subtransient current generated by the motor when it is energised. This very short subtransient phenomenon is expressed as k x Id x r 2 (in A peak).

td: motor starting time, from 0.5 to 30 seconds depending on the application.

td'': duration of the subtransient current, from 0.010 to 0.015 seconds when the motor is energised.

Irm: magnetic setting of the circuit breakers.



Typical upper and lower limits for these subtransient currents:
These values, not covered by standards, also depend on the type of motor technology used:

- ordinary motors Id'' = 2 Id to 2.1 Id (in A peak)
- high-efficiency motors Id'' = 2.2 Id to 2.5 Id (in A peak).
- variation of Id'' as a function of Id:

Type of motor	d (in A rms)	Id'' (in A peak)
Ordinary motor	5.8 to 8.6 In motor	Id'' = 2 Id = 11.5 In (A peak) to Id'' = 2.1 Id = 18 In (A peak)
High-efficiency motor	5.8 to 8.6 In motor	Id'' = 2.2 Id = 12.5 In (A peak) to Id'' = 2.5 Id = 21.5 In (A peak)

Example: Upon energisation, a high-efficiency motor with an Id of 7.5 In produces a subtransient current with a value between (depending on its characteritics):

- minimum = 16.5 In (in A peak)
- maximum = 18.8 In (in A peak).

Protection of motor circuits

Using the circuit breaker/contactor coordination tables

Subtransient currents and protection settings:
- as illustrated in the above table, subtransient currents can be very high.
- If they approach their upper limits, they can trip short-cicuit protection devices (nuisance tripping)
- circuit breakers are rated to provide optimum short-circuit protection for motor starters (type 2 coordination with thermal relay and contactor)
- combinations made up of circuit breakers and contactors and thermal relays are designed to allow starting of motors generating high subtransient currents (up to 19 In motor peak)
- the tripping of short-circuit protective devices when starting with a combination listed in the coordination tables means:
  - the limits of certain devices may be reached
  - the use of the starter under type 2 coordination conditions on the given motor may lead to premature wear of one of the components of the combination.

In event of such a problem, the ratings of the starter and the associated protective devices must be redesigned.

European regulation EC640 has been introduced in January 2015 to enforce usage of premium efficiency motor classified as IE3.

One consequence of the improvement of induction motor's efficiency may be an increase of starting current value.

TeSys and Compact ranges can handle IE3 motor higher inrush and starting current. However, due to the spread of starting current values of the motors on the market, it's recommended to check the value of subtransient starting current in Direct-On-Line application when Istart > 7,5 In.

Using the coordination tables for circuit breaker and contactors:

- **ordinary motor:**

The starter components can be selected directly from the coordination tables, whatever the values of the starting current (Id from 5.8 to 8.6 In) and the subtransient current

- **high-efficiency motors with Id ≤ 7.5 In:**

The starter components can be selected directly from the coordination tables, whatever the values of the starting current and the subtransient current

- **high-efficiency motors with Id > 7.5 In:**

When circuit breakers are used for motor currents in the neighbourhood of their rated current, they are set to provide minimum short-circuit protection at **19 In motor (A peak)**.
There are two possibilities:
- the subtransient starting current is known (indicated by the motor manufacturer) and is less than **19 In motor (A peak)**.

In this case, the starter components can be selected directly from the coordination tables, whatever the value of the starting current (for Id > 7.5 In).
Example: for a 110 kW 380/415 V 3-phase motor, the selected components are: NSX250-MA220/LC1-F225/LR9-F5371.
- the subtransient starting current is unknown or greater than 19 In motor (A peak).

In this case, the value used for the motor power in the coordination tables should be increased by 20 % to satisfy optimum starting and coordination conditions.
Example: for a 110 kW 380/415 V 3-phase motor, the selected components are those for a motor power of 110 + 20 % = 132 kW:
NSX400 Micrologic 4.3M/LC1-F265/LR9-F5371

Reversing starters and coordination

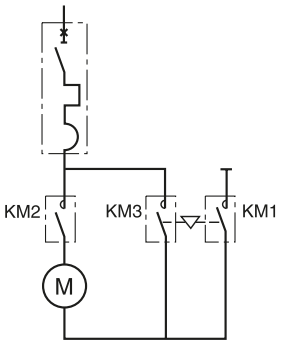
The starter components can be selected using the tables for direct-on-line starting. Replace contactors LC1 by LC2.

Star-delta starting and coordination

- the components should be sized according to the current flowing in the motor windings
- the mounting locations and connections of the various components of star-delta starters should be selected according to the type of coordination required and the protective devices implemented.

Protection of motor circuits

Using the circuit breaker/contactor coordination tables



Solution with thermal-magnetic motor circuit breaker.

Star-delta starting and type 1 coordination

Contactors KM2 and KM3 are sized for the line current divided by e KM1 can be sized for the line current divided by 3, however, for the sake of homogeneity, it is often identical to contactors KM2 and KM3.

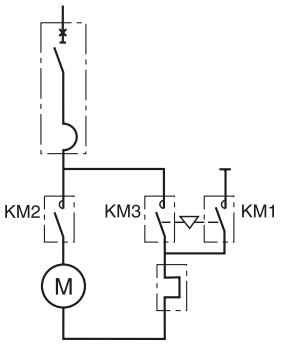
The starter components are selected from the special star-delta type 1 coordination tables.

Example: consider the following case:

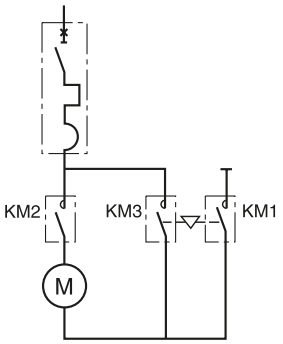
- 45 kW motor supplied at 380 V
- star-delta starting
- separate thermal relay
- short-circuit current of 20 kA at the starter
- type 1 coordination.

The starter components are selected using the table on page 557E4505.indd/8:

- circuit breaker: NSX100N-MA 100
- contactor: LC3-D50
- thermal relay: LR2-D3357.



Solution with magnetic motor circuit breaker.



Solution with thermal-magnetic motor circuit breaker.

Star-delta starting and type 2 coordination

Contactors KM1, KM2 and KM3 are sized for the line current.

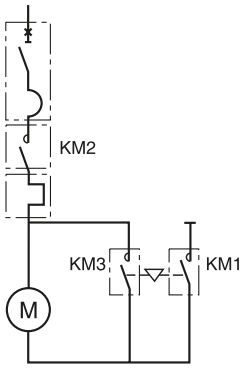
The starter components are selected from the direct-on-line type 2 coordination tables.

Example: consider the following case:

- 55 kW motor supplied at 415 V
- star-delta starting
- thermal protection built into the circuit breaker providing short-circuit protection
- short-circuit current of 45 kA at the starter
- type 2 coordination.

The starter components are selected using the table on page 189:

- circuit breaker: NSX160H with Micrologic 6.2
- starter: LC1-F115 to be replaced by LC3-F115.

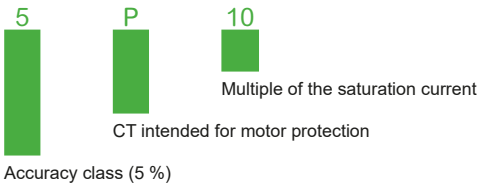


Solution with magnetic motor circuit breaker.

Protection of motor circuits

Circuit breaker/contactor coordination

The characteristics of the current transformers are the following (as defined by IEC 44-1/44-3):



The current transformer ratings must be 5 VA per phase.

Starting class and thermal relays

The following tables correspond to “normal” motor starting times. The associated thermal relays are either class 10 or 10 A (tripping time < 10 s).

■ for motors with long starting times, the class 10 or 10 A thermal relays must be replaced with class 20 thermal relays as indicated in the correspondence table opposite (for type 1 and type 2 coordination)

■ long starting times requiring a class 30 relay:

□ apply a derating coefficient (K = 0.8) to the circuit breaker and the contactor

■ coordination tables with the multifunction protective relay LT6-P

□ three types of multifunction relays (see the corresponding catalogue for detailed characteristics) are available. They may be connected:

- directly to the motor power supply line
- to the secondary winding of the current transformer.

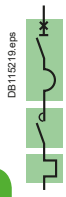
Relay		Rating Direct	Connecting Using current trans.
LTM R08	0.4 to 8 A	■	■
LTM R27	1.35 to 27 A	■	
LTM R100	5 to 100 A	■	

Correspondence table class 10 A and class 20 relay

Contactor series D	Thermal relay Class10/10 A	Class 20	Setting range
LC1-D09-D38	LRD 05	LRD 05L	0.63…1
	LRD 06	LRD 06L	1…1.6
	LRD 07	LRD 07L	1.6…2.5
	LRD 08	LRD 08L	2.5…4
	LRD 10	LRD 10L	4…6
	LRD 12	LRD 12L	5.5…8
	LRD 14	LRD 14L	7…10
LC1-D12-D38	LRD 16	LRD 16L	9…13
LC1-D18-D38	LRD 21	LRD 21L	12…18
LC1-D25-D38	LRD 22	LRD 22L	17…25
	LRD 32	LRD 32L	23…32
LC1-D32-D38	LRD 35		30…38
D40A - D65A	LRD 313	LRD 313L	9 ... 13
	LRD 318	LRD 318L	12 ... 18
	LRD 325	LRD 325L	17 ... 25
	LRD 332	LRD 332L	23 ... 32
	LRD 340	LRD 340L	30 ... 40
	LRD 350	LRD 350L	37 ... 50
	LRD 365	LRD 365L	38 ... 65
D80 - D95	LRD 3322	LR2 D3522	17 ... 25
	LRD 3353	LR2 D3553	23 ... 32
	LRD 3355	LR2 D3555	30 ... 40
	LRD 3357	LR2 D3557	37 ... 50
	LRD 3359	LR2 D3559	48 ... 65
	LRD 3361	LR2 D3561	55 ... 70
	LRD 3363	LR2 D3563	63 ... 80
	LRD 3365		80 ... 104
D115-D150	LR9 D5367	LR9D 5567	60 ... 100
	LR9 D5369	LR9D 5569	90 ... 150
F115-F185	LR9 F53 57	LR9 F55 57	30…50
	LR9 F53 63	LR9 F55 63	48…80
	LR9 F53 67	LR9 F55 67	60…100
	LR9 F53 69	LR9 F55 69	90…150
F185-F400	LR9 F53 71	LR9 F55 71	132…220
F225-F500	LR9 F73 75	LR9 F75 75	200…330
	LR9 F73 79	LR9 F75 79	300…500
F400-F800	LR9 F73 81	LR9 F75 81	380…630

[1] Independant mounting with LAD 7B105.

Type 2 coordination (IEC 60947-4-1) 220/240 V



Circuit breakers, contactors and thermal relays

Performance "Iq" (kA): U = 220/240V						
Circuit breaker	**B**	**F**	**N**	**H**	**S**	**L**
GV4L & LE 02 - 12	-	-	100	-	120 [4]	-
GV4L & LE 25 - 115	50	-	100	-	120 [4]	-
NSX100/160/250-MA	-	85	90	100	120	150
NSX400/630-Micrologic 1.3M	-	85	90	100	120	150
NS800L/NS1000L µicrologic 5.0	-	-	-	-	-	150

Starting [1]**:** normal LRD class 10 A, LR9 class 10.

Motors	Guide values of operational current in amps at :				Circuit breakers			Contactors [2]	Thermal o/l relays	
P (kW)	**220V (A)**	**230V (A)**	**240V (A)**	**Ie max (A)**	**Type**	**rat(A)**	**Irm(A)**	**Type**	**Type**	**Irth [1]**
0,09	0,54	0,52	0,50	1	GV4L or GV4LE	2	14	LC1-D09	LRD-05	0,63/1
0,12	0,73	0,7	0,67	1	GV4L or GV4LE	2	14	LC1-D09	LRD-05	0,63/1
0,18	1,05	1	0,96	1,6	GV4L or GV4LE	2	22	LC1-D09	LRD-06	1/1,6
0,25	1,57	1,5	1,44	1,6	GV4L or GV4LE	2	22	LC1-D09	LRD-06	1/1,6
0,37	2,0	1,9	1,82	2,5	GV4L or GV4LE	3,5	35	LC1-D09	LRD-07	1,6/2,5
0,55	2,7	2,6	2,5	3	GV4L or GV4LE	3,5	42	LC1-D32	LRD-08	2,5/4
0,75	3,5	3,3	3,2	4	GV4L or GV4LE	7	56	LC1-D32	LRD-08	2,5/4
1,1	4,9	4,7	4,5	6	GV4L or GV4LE	7	84	LC1-D32	LRD-10	4/6
1,5	6,6	6,3	6,0	7	GV4L or GV4LE	7	91	LC1-D40A	LRD-12 [3]	5,5/8
2,2	8,9	8,5	8,1	10	GV4L or GV4LE	12.5	138	LC1-D40A	LRD-14 [3]	7 /10
3	11,8	11,3	10,8	12,5	GV4L or GV4LE	12.5	163	LC1-D40A	LRD313	9/13
4	15,7	15	14,4	18	GV4L or GV4LE	25	250	LC1-D40A	LRD318	12/18
					NSX100-MA	25	250	LC1-D80	LRD 3321	12/18
5,5	20,9	20	19,2	25	GV4L or GV4LE	25	325	LC1-D40A	LRD325	17/25
					NSX100-MA	25	325	LC1-D80	LRD 3322	17/25
7,5	28,2	27	25,9	32	GV4L or GV4LE	50	450	LC1-D40A	LRD332	23/32
					NSX100-MA	50	450	LC1-D80	LRD-33 53	23/32
10	36,1	35	33,1	40	GV4L or GV4LE	50	550	LC1-D50A	LRD340	30/40
					NSX100-MA	50	550	LC1-D80	LRD-33 55	30/40
11	40	38	36	50	GV4L or GV4LE	50	650	LC1-D50A	LRD350	37/50
				40	NSX100-MA	50	550	LC1-D80	LRD-33 55	30/40
15	53	51	49	65	GV4L or GV4LE	80	880	LC1-D65A	LRD365	48/65
				63	NSX100-MA	100	700	LC1-D80	LRD-33 59	48/65
18,5	64	61	58	65	GV4L or GV4LE	80	880	LC1-D65A	LRD365	48/65
				63	NSX100-MA	100	900	LC1-D80	LRD-33 59	48/65
22	75	72	69	80	GV4L or GV4LE	80	1040	LC1-D80	LRD-33 63	63/80
					NSX100-MA	100	1100	LC1-D80	LRD-33 63	63/80
30	100	96	92	100	NSX100-MA	100	1300	LC1-D115	LR9-D53 67	60/100
								LC1-F115	LR9-F53 67	60/100
37	120	115	110	150	NSX160-MA	150	1950	LC1-D150	LR9-D53 69	90/150
								LC1-F150	LR9-F53 69	90/150
45	146	140	134	150	NSX160-MA	150	1950	LC1-D150	LR9-D53 69	90/150
								LC1-F150	LR9-F53 69	90/150
55	177	169	162	185	NSX250-MA	220	2420	LC1-F185	LR9-F53 71	132/220
				220	NSX400 - Micrologic 1.3M	320	2880	LC1-F265	LR9-F53 71	132/220
75	240	230	220	265	NSX400 - Micrologic 1.3M	320	3500	LC1-F265	LR9-F73 75	200/330
90	291	278	266	320	NSX400 - Micrologic 1.3M	320	4160	LC1-F330	LR9-F73 75	200/330
110	355	340	326	400	NSX630 - Micrologic 1.3M	500	5700	LC1-F400	LR9-F73 79	300/500
132	418	400	383	500	NSX630 - Micrologic 1.3M	500	6500	LC1-F500	LR9-F73 79	300/500
150	477	457	438	500	NSX630 - Micrologic 1.3M	500	6500	LC1-F500	LR9-F73 79	300/500
160	509	487	467	630	NS800L - Micrologic 5.0 - LR off	800	8000	LC1-F630	LR9-F73 81	380/630
200	637	609	584	630	NS800L - Micrologic 5.0 - LR off	800	8000	LC1-F630	LR9-F73 81	380/630
220	700	658	631	700	NS800L - Micrologic 5.0 - LR off	800	9600	LC1-F780 or LC1F1000	TC800/5 + LRD-10	630/1000
250	782	748	717	800	NS1000L - Micrologic 5.0 - LR off	1000	10000	LC1-F780 or LC1F1000	TC800/5 + LRD-10	630/1000

[1] For long starting (class 20), see the correspondence table for thermal relay.
[2] Reversers : replace LC1 with LC2 ; start-delta starter : replace LC1 with LC3.
[3] Separate overload relay.
[4] GV4LE only, for GV4 "S" performance with rotary handle, order GV4LE "S" & rotary handle separately.

Type 2 coordination (IEC 60947-4-1) 220/240 V

Electronic circuit-breaker

Contactor

Circuit breakers, and contactors

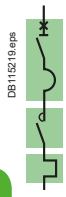
Performance "Iq" (kA): U = 220/240V						
Circuit breakers	**B**	**F**	**N**	**H**	**S**	**L**
GV4 P, PE & PEM 02 - 12	-	-	100	-	120 [4]	-
GV4 P, PE & PEM 25 - 115	50	-	100	-	120 [4]	-
NSX100/160/250 Micrologic 2.2M / 6.2M	-	85	90	100	120	150
NSX400/630 Micrologic 2.3M / 6.3M	-	85	90	100	120	150
NS800L/NS1000L Micrologic 5.0	-	-	-	-	-	150

Starting [1]	Standard IEC 60947-4-1			
Trip unit	GV4P, PE or PEM	Micrologic 2.2M / 2.3M	Micrologic 6.2M / 6.3M	Mircologic 5.0
normal (classe)	10	5, 10	5, 10	10
long (classe)	20	20	20, 30 [1]	20

Motors	Guide values of operational current in amps at :				Circuit breakers			Contactors [2]	Thermal o/l relays
P (kW)	220V (A)	230V (A)	240V (A)	Ie max (A)	Type	trip unit	Irth(A)	Irm(A) [3]	Type
0,09	0,54	0,52	0,50	1	GV4P, PE or PEM	2	0.8/2	14	LC1-D25
0,12	0,73	0,7	0,67	1	GV4P, PE or PEM	2	0.8/2	14	LC1-D25
0,18	1,05	1	0,96	1,6	GV4P, PE or PEM	2	0.8/2	22	LC1-D25
0,25	1,57	1,5	1,44	1,6	GV4P, PE or PEM	2	0.8/2	22	LC1-D25
0,37	2,0	1,9	1,82	2,5	GV4P, PE or PEM	3,5	1.4/3.5	42	LC1-D32
0,55	2,7	2,6	2,5	3	GV4P, PE or PEM	3,5	1.4/3.5	42	LC1-D32
0,75	3,5	3,3	3,2	4	GV4P, PE or PEM	7	2.9/7	56	LC1-D50A
1,1	4,9	4,7	4,5	6	GV4P, PE or PEM	7	2.9/7	84	LC1-D50A
1,5	6,6	6,3	6,0	7	GV4P, PE or PEM	7	2.9/7	91	LC1-D50A
2,2	8,9	8,5	8,1	10	GV4P, PE or PEM	12.5	5/12.5	138	LC1-D50A
3	11,8	11,3	10,8	12,5	GV4P, PE or PEM	12.5	5/12.5	163	LC1-D50A
				25	NSX100	Micrologic 2.2 or 6.2	12/25	13Irth	LC1-D80
4	15,7	15	14,4	18	GV4P, PE or PEM	25	10/25	250	LC1-D65A
				25	NSX100	Micrologic 2.2 or 6.2	12/25	13Irth	LC1-D80
5,5	20,9	20	19,2	25	GV4P, PE or PEM	25	10/25	250	LC1-D65A
					NSX100	Micrologic 2.2 or 6.2	12/25	13Irth	LC1-D80
7,5	28,2	27	25,9	50	GV4P, PE or PEM	50	20/50		LC1-D65A
					NSX100	Micrologic 2.2 or 6.2	25/50	13Irth	LC1-D80
10	36,1	35	33,1	50	GV4P, PE or PEM	50	20/50		LC1-D65A
					NSX100	Micrologic 2.2 or 6.2	25/50	13Irth	LC1-D80
11	40	38	36	50	GV4P, PE or PEM	50	20/50		LC1-D65A
					NSX100	Micrologic 2.2 or 6.2	25/50	13Irth	LC1-D80
15	53	51	49	80	GV4P, PE or PEM	80	40/80		LC1-D65A
					NSX100	Micrologic 2.2 or 6.2	50/100	13Irth	LC1-D80
18,5	64	61	58	80	GV4P, PE or PEM	80	40/80		LC1-D80
					NSX100	Micrologic 2.2 or 6.2	50/100	13Irth	LC1-D80
22	75	72	69	115	GV4P, PE or PEM	115	65/115		LC1-D115 or LC1-F115
				100	NSX100	Micrologic 2.2 or 6.2	50/100	13Irth	LC1-D115 or LC1-F115
30	100	96	92	100	GV4P, PE or PEM	115	65/115		LC1-D115 or LC1-F115
					NSX100	Micrologic 2.2 or 6.2	50/100	13Irth	LC1-D115 or LC1-F115
37	120	115	110	150	NSX160	Micrologic 2.2 or 6.2	70/150	13Irth	LC1D150 or LC1-F150
45	146	140	134	150	NSX160	Micrologic 2.2 or 6.2	70/150	13Irth	LC1D150 or LC1-F150
55	177	169	185	185	NSX250	Micrologic 2.2 or 6.2	100/220	13Irth	LC1-F185
					NSX400	Micrologic 2.3 or 6.3	160/320	13Irth	LC1-F185
75	240	230	220	265	NSX400	Micrologic 2.3 or 6.3	160/320	13Irth	LC1-F265
90	291	278	266	320	NSX400	Micrologic 2.3 or 6.3	160/320	13Irth	LC1-F330
110	355	340	326	400	NSX630	Micrologic 2.3 or 6.3	250/500	13Irth	LC1-F400
132	418	400	383	500	NSX630	Micrologic 2.3 or 6.3	250/500	13Irth	LC1-F500
150	448	429	411	500	NSX630	Micrologic 2.3 or 6.3	250/500	13Irth	LC1-F500
160	509	487	467	630	NS800L	Micrologic 5.0	320/800	8000	LC1-F630
200	637	609	584	630	NS800L	Micrologic 5.0	320/800	8000	LC1-F630
220	700	658	631	700	NS800L	Micrologic 5.0	320/800	9600	LC1-F780 or LC1F1000
250	782	748	717	800	NS1000L	Micrologic 5.0	400/1000	10000	LC1-F780 or LC1F1000

[1] For class 30 the contacteur rating shall be checked according to 30s thermal withstand (F range).
[2] Reversers : replace LC1 with LC2 ; start-delta starter : replace LC1 with LC3.
[3] Ii for Micrologic 5.0 control unit.
[4] GV4PE and PEM only, for GV4 "S" performance with rotary handle, order GV4PE, PEM "S" & rotary handle separately.

Type 2 coordination (IEC 60947-4-1) 380/400V



Circuit breakers, contactors and thermal relays

Performance "Iq" (kA): U = 380/400V						
Circuit breaker	**B**	**F**	**N**	**H**	**S**	**L**
GV4L & LE 02 - 12	-	-	50	-	100 [4]	-
GV4L & LE 25 - 115	25	-	50	-	100 [4]	-
NSX100/160/250-MA	-	36	50	70	100	130
NSX400/630-Micrologic 1.3M	-	36	50	70	100	130
NS800L/NS1000L Micrologic 5.0	-	-	-	-	-	130

Starting [1]**:** normal LRD class 10 A, LR9 class 10.

Motors Rated power P(kW)	Guide values of operational current in amps at : 380V	400V	Ie max	Circuit breakers Type	rat(A)	Irm(A) [3]	Contactors [2] Type	Thermal o/l relays Type	Irth [1]
0,18	0,63	0,6	1	GV4L or GV4LE	2	14	LC1-D09	LRD-05	0,63/1
0,25	0,89	0,85	1	GV4L or GV4LE	2	14	LC1-D09	LRD-05	0,63/1
0.37	1,16	1,1	1,6	GV4L or GV4LE	2	22	LC1-D09	LRD-06	1/1,6
0.55	1,58	1,5	2	GV4L or GV4LE	2	26	LC1-D09	LRD-06	1,6/2,5
0.75	2,00	1,9	2	GV4L or GV4LE	2	26	LC1-D09	LRD-07	1,6/2,5
1.1	2,8	2,7	3,5	GV4L or GV4LE	3,5	46	LC1-D25	LRD-08	2,5/4
1.5	3,8	3,6	7	GV4L or GV4LE	7	56	LC1-D40A	LR9D08 [5] [6]	1,6/8
2.2	5,2	4,9	7	GV4L or GV4LE	7	84	LC1-D40A	LR9D08 [5] [7]	1,6/8
3	6,8	6,5	7	GV4L or GV4LE	7	91	LC1-D40A	LRD-12 [5]	5,5/8
4	8,9	8,5	10	GV4L or GV4LE	12.5	138	LC1-D65A	LRD-14 [5]	7 /10
5.5	12,1	11,5	12,5	GV4L or GV4LE	12.5	163	LC1-D65A	LRD-313	9/13
7.5	16,3	15,5	18	GV4L or GV4LE	25	250	LC1-D65A	LRD-318	12/18
				NSX100-MA	25	250	LC1-D80	LRD 3321	12/18
10	20	19	25	GV4L or GV4LE	25	325	LC1-D65A	LRD-325	17/25
				NSX100-MA	25	325	LC1-D80	LRD 3322	17/25
11	23	22	25	GV4L or GV4LE	25	325	LC1-D65A	LRD-325	17/25
				NSX100-MA	25	450	LC1-D80	LRD 3322	17/25
15	31	29	32	GV4L or GV4LE	50	450	LC1-D65A	LRD-332	23/32
				NSX100-MA	50	450	LC1-D80	LRD-33 53	23/32
18.5	37	35	40	GV4L or GV4LE	50	550	LC1-D65A	LRD-340	30/40
				NSX100-MA	50	550	LC1-D80	LRD-33 55	30/40
22	43	41	50	GV4L or GV4LE	50	650	LC1-D65A	LRD-350	37/50
				NSX100-MA	50	650	LC1-D80	LRD-33 57	37/50
30	58	55	65	GV4L or GV4LE	80	880	LC1-D65A	LRD-365	48/65
			63	NSX100-MA	100	900	LC1-D80	LRD-33 59	48/65
37	69	66	80	GV4L or GV4LE	80	1040	LC1-D80	LRD-33 63	63/80
				NSX100-MA	100	1100	LC1-D80	LRD-33 63	63/80
45	84	80	100	GV4L or GV4LE	115	1380	LC1-D115	LR9D-5367	60/100
							LC1-F115	LR9-F5367	
				NSX100-MA	100	1300	LC1-D115	LR9-D53 67	60/100
							LC1-F115	LR9-F53 67	
55	102	97	115	GV4L or GV4LE	115	1495	LC1-D115	LR9D-5369	90/150
							LC1-F115	LR9-F5369	90/150
			150	NSX160-MA	150	1950	LC1-D150	LR9-D53 69	90/150
							LC1-F150	LR9-F53 69	90/150
75	139	132	150	NSX160-MA	150	1950	LC1-D150	LR9-D53 69	90/150
							LC1-F150	LR9-F53 69	90/150
90	168	160	185	NSX250-MA	220	2420	LC1-F185	LR9-F53 71	132/220
110	205	195	220	NSX250-MA	220	2860	LC1-F225	LR9-F53 71	132/220
				NSX400-Micrologic 1.3M	320	3500	LC1-F265	LR9-F53 71	132/220
132	242	230	265	NSX400-Micrologic 1.3M	320	3500	LC1-F265	LR9-F73 75	200/330
160	295	280	320	NSX400-Micrologic 1.3M	320	4160	LC1-F330	LR9-F73 75	200/330
200	368	350	400	NSX630-Micrologic 1.3M	500	5500	LC1-F400 (70kA)	LR9-F73 79	300/500
							LC1-F500 (130kA)	LR9-F73 79	300/500
220	400	380	500	NSX630-Micrologic 1.3M	500	6500	LC1-F500	LR9-F73 79	300/500
250	453	430	500	NSX630-Micrologic 1.3M	500	6500	LC1-F500	LR9-F73 79	300/500
300	526	500	630	NS800L - Micrologic 5.0 - LR off	800	8000	LC1-F630	LR9-F73 81	380/630
315	568	540	630	NS800L - Micrologic 5.0 - LR off	800	8000	LC1-F630	LR9-F73 81	380/630
355	642	610	780	NS1000L - Micrologic 5.0 - LR off	1000	10000	LC1-F780 or LC1 F1000	TC800/1 + LRD-05	500/800
400	726	690	780	NS1000L - Micrologic 5.0 - LR off	1000	10000	LC1-F780 or LC1 F1000	TC800/1 + LRD-05	500/800
450	789	750	780	NS1000L - Micrologic 5.0 - LR off	1000	10000	LC1-F780 or LC1 F1000	TC800/1 + LRD-05	500/800
500	895	850	900	NS1000L - Micrologic 5.0 - LR off	1000	10000	LC1-F1000	TC1000/1 + LRD-05	600/1000

[1] Heavy starting (class 20), see thermal O/L chart of equivalence.
[2] Reversers : replace LC1 with LC2 ; start-delta starter : replace LC1 with LC3.
[3] Ii for Micrologic 5.0 control unit.
[4] GV4LE only, for GV4 "S" performance with rotary handle, order GV4LE "S" & rotary handle separately.
[5] Separate overload Relay, use terminal block LAD7B106.
[6] or 1.5kW: GV4L 7A + GV1L3+LC1-D32+LRD08.
[7] or 2.2kW: GV4L 7A + GV1L3+LC1-D32+LRD10.

Type 2 coordination (IEC 60947-4-1) 380/400V

Circuit breakers, and contactors

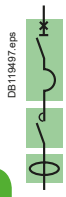
Performance "Iq" (kA): U = 380/400V						
Circuit breaker	**B**	**F**	**N**	**H**	**S**	**L**
GV4 P, PE & PEM 02 - 12	-	-	50	-	100 [4]	-
GV4 P, PE & PEM 25 - 115	25	-	50	-	100 [4]	-
NSX100/160/250 Micrologic 2.2M / 6.2M	-	36	50	70	100	130
NSX400/630 Micrologic 2.3M / 6.3M	-	36	50	70	100	130
NS800L/NS1000L Micrologic 5.0	-	-	-	-	-	130

Starting [1] Standard IEC 60947-4-1				
Trip unit	GV4P, PE or PEM	Micrologic 2.2M / 2.3M	Micrologic 6.2M / 6.3M	Mircologic 5.0
normal (classe)	10	5, 10	5, 10	10
long (classe)	20	20	20, 30 [1]	20

Motors Rated power P(kW)	Guide values of operational current in amps at : 380V	400V	Ie max	Circuit breakers Type	trip unit	Irth(A)	Irm(A) [3]	Contactors [2] Type
0,18	0,63	0,6	2	GV4P, PE or PEM	2	0.8/2	34	LC1-D25
0,25	0,89	0,85	2	GV4P, PE or PEM	2	0.8/2	34	LC1-D25
0.37	1,16	1,1	2	GV4P, PE or PEM	2	0.8/2	34	LC1-D25
0.55	1,58	1,5	2	GV4P, PE or PEM	2	0.8/2	34	LC1-D25
0.75	2,00	1,9	2	GV4P, PE or PEM	2	0.8/2	34	LC1-D25
1.1	2,8	2,7	3,5	GV4P, PE or PEM	3,5	1.4/3.5	60	LC1-D32
1.5	3,8	3,6	7	GV4P, PE or PEM	7	2.9/7	119	LC1-D50A
2.2	5,2	4,9	7	GV4P, PE or PEM	7	2.9/7	119	LC1-D50A
3	6,8	6,5	7	GV4P, PE or PEM	7	2.9/7	119	LC1-D50A
4	8,9	8,5	12,5	GV4P, PE or PEM	12,5	5/12.5	213	LC1-D50A
5.5	12,1	11,5	12,5	GV4P, PE or PEM	12,5	5/12.5	213	LC1-D50A
7.5	16,3	15,5	25	GV4P, PE or PEM	25	10/25	425	LC1-D65A
			25	NSX100	Micrologic 2.2M or 6.2M	12/25	13Irth	LC1-D80
10	20	19	25	GV4P, PE or PEM	25	10/25	425	LC1-D65A
				NSX100	Micrologic 2.2M or 6.2M	12/25	13Irth	LC1-D80
11	23	22	25	GV4P, PE or PEM	25	10/25	425	LC1-D65A
				NSX100	Micrologic 2.2M or 6.2M	12/25	13Irth	LC1-D80
15	31	29	50	GV4P, PE or PEM	50	20/50	850	LC1-D65A
				NSX100	Micrologic 2.2M or 6.2M	25/50	13Irth	LC1-D80
18.5	37	35	50	GV4P, PE or PEM	50	20/50	850	LC1-D65A
				NSX100	Micrologic 2.2M or 6.2M	25/50	13Irth	LC1-D80
22	43	41	50	GV4P, PE or PEM	50	20/50	850	LC1-D65A
				NSX100	Micrologic 2.2M or 6.2M	25/50	13Irth	LC1-D80
30	58	55	65	GV4P, PE or PEM	80	40/80	1360	LC1-D65A
			80	NSX100	Micrologic 2.2M or 6.2M	50/100(80)	13Irth	LC1-D80
37	69	66	80	GV4P, PE or PEM	80	40/80	1360	LC1-D80
				NSX100	Micrologic 2.2M or 6.2M	50/100(80)	13Irth	LC1-D80
45	84	80	115	GV4P, PE or PEM	115	65/115	1955	LC1-D115 or LC1-F115
			100	NSX100	Micrologic 2.2M	50/100	13Irth	LC1-D115 or LC1-F115
55	102	97	115	GV4P, PE or PEM	115	65/115	1955	LC1-D115 or LC1-F115
				NSX160	Micrologic 2.2M or 6.2M	70/150	13Irth	LC1-D150 or LC1-F150
75	139	132	150	NSX160	Micrologic 2.2M or 6.2M	70/150	13Irth	LC1-D150 or LC1-F150
90	168	160	185	NSX250	Micrologic 2.2M or 6.2M	100/220	13Irth	LC1-F225
110	205	195	220	NSX250	Micrologic 2.2M or 6.2M	100/220	13Irth	LC1-F225
			265	NSX400	Micrologic 2.3M or 6.3M	160/320	13Irth	LC1-F265
132	242	230	265	NSX400	Micrologic 2.3M or 6.3M	160/320	13Irth	LC1-F265
160	295	280	320	NSX400	Micrologic 2.3M or 6.3M	160/320	13Irth	LC1-F330
200	368	350	400	NSX630	Micrologic 2.3M or 6.3M	250/500	13Irth	LC1-F400 (70kA)
			500	NSX630	Micrologic 2.3M or 6.3M	250/500	13Irth	LC1-F500 (130kA)
220	400	380	500	NSX630	Micrologic 2.3M or 6.3M	250/500	13Irth	LC1-F500
250	453	430	500	NSX630	Micrologic 2.3M or 6.3M	250/500	13Irth	LC1-F500
300	526	500	630	NS800L	Micrologic 5.0	320/800	8000	LC1-F630
315	568	540	630	NS800L	Micrologic 5.0	320/800	8000	LC1-F630
355	642	610	780/900	NS1000L	Micrologic 5.0	400/1000	10 000	LC1-F780 or LC1-F1000
400	726	690	780/900	NS1000L	Micrologic 5.0	400/1000	10 000	LC1-F780 or LC1-F1000
450	789	750	780/900	NS1000L	Micrologic 5.0	400/1000	10 000	LC1-F780 or LC1-F1000
500	895	850	900	NS1000L	Micrologic 5.0	400/1000	10 000	LC1-F1000

[1] For class 30 the contacteur rating shall be checked according to 30s thermal withstand (F range).
[2] Reversers : replace LC1 with LC2 ; start-delta starter : replace LC1 with LC3.
[3] Ii for Micrologic 5.0 control unit.
[4] GV4PE and PEM only, for GV4 "S" performance with rotary handle, order GV4PE, PEM "S" & rotary handle separately.

Type 2 coordination (IEC 60947-4-1) 380/400 V



With short circuit breaker protection

Contactor

Thermal relay on CT

Circuit breakers, contactors and thermal relays

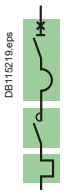
Performance "Iq" (kA): U = 380/400V						
Circuit breaker	**B**	**F**	**N**	**H**	**S**	**L**
GV4L & LE 02 - 12	-	-	50	-	100 [4]	-
GV4L & LE 25 - 115	25	-	50	-	100 [4]	-
NSX100/160/250-MA	-	36	50	70	100	130
NSX400/630-MA	-	36	50	70	100	130
NS800L/NS1000L Micrologic 5.0	-	-	-	-	-	130

Starting [1]**:** normal LRD class 10 A, LR9 class 10.

Motors Rated power	Guide values of operational current in amps at :			Circuit breakers			Contactors [2]	Thermal o/l relays Adj. class 10A to 30		Class 10	
P(kW)	380V	400V	Ie max	Type	rat(A)	Irm(A)	Type	Type	Irth [1]	Type	Irth
0,18	0,63	0,6	2	GV4L or GV4LE	2	26	LC1-D32	LTM R08	0,4/8	LR9D02	0.4/2
0,25	0,89	0,85	2	GV4L or GV4LE	2	26	LC1-D32	LTM R08	0,4/8	LR9D02	0.4/2
0.37	1,16	1,1	2	GV4L or GV4LE	2	26	LC1-D32	LTM R08	0,4/8	LR9D02	0.4/2
0.55	1,58	1,5	2	GV4L or GV4LE	2	26	LC1-D32	LTM R08	0,4/8	LR9D02	0.4/2
0.75	2,00	1,9	2	GV4L or GV4LE	2	26	LC1-D32	LTM R08	0,4/8	LR9D02	0.4/2
1.1	2,8	2,7	3,5	GV4L or GV4LE	3,5	46	LC1-D40A	LTM R08	0,4/8	LR9D08	1.6/8
1.5	3,8	3,6	7	GV4L or GV4LE	7	91	LC1-D40A	LTM R08	0,4/8	LR9D08	1.6/8
2.2	5,2	4,9	7	GV4L or GV4LE	7	91	LC1-D40A	LTM R08	0,4/8	LR9D08	1.6/8
3	6,8	6,5	7	GV4L or GV4LE	7	91	LC1-D40A	LTM R08	0,4/8	LR9D08	1.6/8
4	8,9	8,5	10	GV4L or GV4LE	12,5	138	LC1-D65A	LTM R27	1,35/27	LR9D32	6.4/32
			12,5	NSX100-MA	12,5	163	LC1-D80	LTM R27	1,35/27	LR9D32	6.4/32
5.5	12,1	11,5	12,5	GV4L or GV4LE	12,5	163	LC1-D65A	LTM R27	1,35/27	LR9D32	6.4/32
				NSX100-MA	12,5	163	LC1-D80	LTM R27	1,35/27	LR9D32	6.4/32
7.5	16,3	15,5	25	GV4L or GV4LE	25	325	LC1-D65A	LTM R27	1,35/27	LR9D32	6.4/32
				NSX100-MA	25	325	LC1-D80	LTM R27	1,35/27	LR9D32	6.4/32
10	20	19	25	GV4L or GV4LE	25	325	LC1-D65A	LTM R27	1,35/27	LR9D32	6.4/32
				NSX100-MA	25	325	LC1-D80	LTM R27	1,35/27	LR9D32	6.4/32
11	23	22	25	GV4L or GV4LE	25	325	LC1-D65A	LTM R27	1,35/27	LR9D32	6.4/32
				NSX100-MA	25	325	LC1-D80	LTM R27	1,35/27	LR9D32	6.4/32
15	31	29	32	GV4L or GV4LE	50	550	LC1-D65A	LTM R100	5/100	LR9D32	6.4/32
			32	NSX100-MA	50	550	LC1-D80	LTM R100	5/100	LR9D32	6.4/32
18.5	37	35	40	GV4L or GV4LE	50	550	LC1-D65A	LTM R100	5/100	LR9D110	22/110
			50	NSX100-MA	50	550	LC1-D80	LTM R100	5/100	LR9D110	22/110
22	43	41	50	GV4L or GV4LE	50	650	LC1-D65A	LTM R100	5/100	LR9D110	22/110
				NSX100-MA	50	550	LC1-D80	LTM R100	5/100	LR9D110	22/110
30	58	55	65	GV4L or GV4LE	80	880	LC1-D65A	LTM R100	5/100	LR9D110	22/110
			80	NSX100-MA	100	1100	LC1-D80	LTM R100	5/100	LR9D110	22/110
37	69	66	80	GV4L or GV4LE	80	1040	LC1-D80	LTM R100	5/100	LR9D110	22/110
				NSX100-MA	100	1100	LC1-D80	LTM R100	5/100	LR9D110	22/110
45	84	80	92	GV4L or GV4LE	115	1265	LC1-D115 or F115	LTM R100	5/100	LR9D110	22/110
			100	NSX160-MA	150	1300	LC1-D115 or F115	LTM R100	5/100	LR9D110	22/110
55	102	97	115	GV4L or GV4LE	115	1495	LC1-D115 or F115	LTM R08	on CT	LR9D08	on CT
				NSX160-MA	150	1300	LC1-D115 or F115	LTM R08	on CT	LR9D08	on CT
75	139	132	150	NSX160-MA	150	1950	LC1-D150 or F150	LTM R08	on CT	LR9D08	on CT
90	168	160	185	NSX250-MA	220	2420	LC1-F185	LTM R08	on CT	LR9D08	on CT
110	205	195	220	NSX250-MA	220	2860	LC1-F225	LTM R08	on CT	LR9D08	on CT
			265	NSX400 1.3M	320	3500	LC1-F265			LR9D08	on CT
132	242	230	265	NSX400 1.3M	320	3500	LC1-F265	LTM R08	on CT	LR9D08	on CT
160	295	280	320	NSX400 1.3M	320	4000	LC1-F330	LTM R08	on CT	LR9D08	on CT
200	368	350	400	NSX630-1.3M	500	5500	LC1-F400 (70kA)	LTM R08	on CT	LR9D08	on CT
			500	NSX630-1.3M	500	5500	LC1-F500 (130kA)	LTM R08	on CT	LR9D08	on CT
220	400	380	500	NSX630-1.3M	500	6500	LC1-F500	LTM R08	on CT	LR9D08	on CT
250	453	430	500	NSX630-1.3M	500	6500	LC1-F500	LTM R08	on CT	LR9D08	on CT
300	526	500	630	NS800L - Micrologic 5.0 - LR off	800	8000	LC1-F630	LTM R08	on CT	LR9D08	on CT
315	568	540	630	NS800L - Micrologic 5.0 - LR off	800	8000	LC1-F630	LTM R08	on CT	LR9D08	on CT
355	642	610	630	NS800L - Micrologic 5.0 - LR off	800	8000	LC1-F630	LTM R08	on CT	LR9D08	on CT
400	726	690	780	NS1000L - Micrologic 5.0 - LR off	1000	10000	LC1-F780 or LC1F1000	LTM R08	on CT	LR9D08	on CT
450	789	750	780	NS1000L - Micrologic 5.0 - LR off	1000	10000	LC1-F780 or LC1F1000	LTM R08	on CT	LR9D08	on CT
500	895	850	780	NS1000L - Micrologic 5.0 - LR off	1000	10000	LC1-F780 or LC1F1000	LTM R08	on CT	LR9D08	on CT
500		850	900,00	NS1000L - Micrologic 5.0 - LR off	1000	10000	LC1-F1000	LTM R08	on CT	LR9D08	on CT

[1] For installations with a class 30 relay, a derating of 20% must be apply on Circuit breakers and the contacteur rating shall be checked according to 30s thermal withstand (F range).
[2] Reversers : replace LC1 with LC2 ; start-delta starter : replace LC1 with LC3.
[3] Ii for Micrologic 5.0 control unit.
[4] GV4LE only, for GV4 "S" performance with rotary handle, order GV4LE "S" & rotary handle separately.

Type 2 coordination (IEC 60947-4-1) 415 V



Circuit breakers, contactors and thermal relays

Performance "Iq" (kA): U = 415V						
Circuit breaker	**B**	**F**	**N**	**H**	**S**	**L**
GV4L & LE 02 - 12	-	-	50	-	100 [4]	-
GV4L & LE 25 - 115	25	-	50	-	100 [4]	-
NSX100/160/250-MA	-	36	50	70	100	130
NSX400/630-Micrologic 1.3M	-	36	50	70	100	130
NS800L/NS1000L Micrologic 5.0	-	-	-	-	-	130

Starting [1]**:** normal LRD class 10 A, LR9 class 10.

Motors Rated power P(kW)	Guide values of operational current in amps at : 415V	Ie max	Circuit breakers Type	rat(A)	Irm(A) [3]	Contactors [2] Type	Thermal o/l relays Type	Irth [1]
0,18	0,58	1	GV4L	2	14	LC1-D09	LRD-05	0,63/1
0,25	0,82	1	GV4L	2	14	LC1-D09	LRD-05	0,63/1
0.37	1,06	1,6	GV4L	2	22	LC1-D09	LRD-06	1/1,6
0.55	1,45	2	GV4L	2	26	LC1-D09	LRD-06	1,6/2,5
0.75	1,83	2	GV4L	2	26	LC1-D09	LRD-07	1,6/2,5
1.1	2,60	3,5	GV4L	3,5	46	LC1-D25	LRD-08	2,5/4
1.5	3,5	7	GV4L	7	56	LC1-D40A	LR9D08 [5] [6]	1,6/8
2.2	4,7	7	GV4L	7	84	LC1-D40A	LR9D08 [5] [7]	1,6/8
3	6,3	7	GV4L	7	91	LC1-D40A	LRD-12 [5]	5,5/8
4	8,2	10	GV4L	12.5	138	LC1-D65A	LRD-14 [5]	7 /10
5.5	11,1	12,5	GV4L	12.5	163	LC1-D65A	LRD-313	9/13
7.5	14,9	18	GV4L	25	250	LC1-D65A	LRD-318	12/18
			NSX100-MA	25	250	LC1-D80	LRD 3321	12/18
10	18,3	25	GV4L	25	325	LC1-D65A	LRD-325	17/25
			NSX100-MA	25	325	LC1-D80	LRD 3322	17/25
11	21,2	25	GV4L	25	325	LC1-D65A	LRD-325	17/25
			NSX100-MA	25	325	LC1-D80	LRD 3322	17/25
15	28,0	32	GV4L	50	450	LC1-D65A	LRD-332	23/32
			NSX100-MA	50	450	LC1-D80	LRD-33 53	23/32
18.5	33,7	40	GV4L	50	550	LC1-D65A	LRD-340	30/40
			NSX100-MA	50	550	LC1-D80	LRD-33 55	30/40
22	39,5	50	GV4L	50	650	LC1-D65A	LRD-350	37/50
		40	NSX100-MA	50	550	LC1-D80	LRD-33 55	30/40
30	53,0	63	GV4L	80	880	LC1-D65A	LRD-365	48/65
			NSX100-MA	100	1100	LC1-D80	LRD-33 59	48/65
37	63,6	80	GV4L	80	1040	LC1-D80	LRD-33 63	63/80
			NSX100-MA	100	1100	LC1-D80	LRD-33 63	63/80
45	77,1	80	GV4L	80	1040	LC1-D80	LRD-33 63	63/80
			NSX100-MA	100	1100	LC1-D80	LRD-33 63	63/80
55	93,5	115	GV4L	115	1495	LC1-D115 LC1-F115	LR9D-5369 LR9-F5369	90/150
		150	NSX160-MA	150	1950	LC1-D150	LR9-D53 69	90/150
						LC1-F150	LR9-F53 69	
75	127,2	150	NSX160-MA	150	1950	LC1-D150	LR9-D53 69	90/150
						LC1-F150	LR9-F53 69	
90	154,2	185	NSX250-MA	220	2420	LC1-F185	LR9-F53 71	132/220
110	188,0	220	NSX250-MA	220	2860	LC1-F225	LR9-F53 71	132/220
132	221,7	265	NSX400-Micrologic 1.3M	320	3500	LC1-F265	LR9-F73 75	200/330
160	269,9	320	NSX400-Micrologic 1.3M	320	4160	LC1-F330	LR9-F73 75	200/330
200	337,3	400	NSX630-Micrologic 1.3M	500	5500	LC1-F400 (70kA)	LR9-F73 79	300/500
		500	NSX630-Micrologic 1.3M	500	5500	LC1-F500 (130kA)	LR9-F73 79	300/500
220	366,3	400	NSX630-Micrologic 1.3M	500	6500	LC1-F400 (70kA)	LR9-F73 79	300/500
		500	NSX630-Micrologic 1.3M	500	6500	LC1-F500 (130kA)	LR9-F73 79	300/500
250	414,5	500	NSX630-Micrologic 1.3M	500	6500	LC1-F500	LR9-F73 79	300/500
300	481,9	630	NS800L - Micrologic 5.0 - LR off	800	8000	LC1-F630	LR9-F73 81	380/630
315	520,5	630	NS800L - Micrologic 5.0 - LR off	800	8000	LC1-F630	LR9-F73 81	380/630
355	588,0	630	NS800L - Micrologic 5.0 - LR off	800	8000	LC1-F630	LR9-F73 81	380/630
400	665,1	780	NS1000L - Micrologic 5.0 - LR off	1000	9600	LC1-F780/ LC1F1000	TC800/1 + LRD-05	500/800
450	722,9	780	NS1000L - Micrologic 5.0 - LR off	1000	10000	LC1-F780/ LC1F1000	TC800/1 + LRD-05	500/800
500	819,3	850	NS1000L - Micrologic 5.0 - LR off	1000	10000	LC1-F1000	TC1000/1 + LRD-05	500/1000

[1] Heavy starting (class 20), see thermal O/L chart of equivalence.
[2] Reversers : replace LC1 with LC2 ; start-delta starter : replace LC1 with LC3.
[3] Ii for Micrologic 5.0 control unit.
[4] GV4LE only, for GV4 "S" performance with rotary handle, order GV4LE "S" & rotary handle separately.
[5] Separate overload Relay, use terminal block LAD7B106.
[6] or 1.5kW: GV4L 7A + GV1L3+LC1-D32+LRD08.
[7] or 2.2kW: GV4L 7A + GV1L3+LC1-D32+LRD10.

Type 2 coordination (IEC 60947-4-1) 415 V

Circuit breakers, contactors

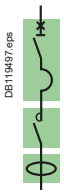
Performance "Iq" (kA): Ue = 415 V						
Circuit breaker	**B**	**F**	**N**	**H**	**S**	**L**
GV4 P, PE & PEM 02 - 12	-	-	50	-	100 [4]	-
GV4 P, PE & PEM 25 - 115	25	-	50	-	100 [4]	-
NSX100/160/250 Micrologic 2.2M / 6.2M	-	36	50	70	100	130
NSX400/630 Micrologic 2.3M / 6.3M	-	36	50	70	100	130
NS800L/NS1000L Micrologic 5.0	-	-	-	-	-	130

Starting [1] Standard IEC 60947-4-1				
Trip unit	GV4P, PE or PEM	Micrologic 2.2M / 2.3M	Micrologic 6.2M / 6.3M	Mircologic 5.0
normal (classe)	10	5, 10	5, 10	10
long (classe)	20	20	20, 30 [1]	20

Motors Rated power P(kW)	Guide values of operational current in amps at : 415V	le max	Circuit breakers Type	trip unit	Irth(A)	Irm(A) [3]	Contactors [2] Type
0,18	0,58	2	GV4P, PE or PEM	2	0.8/2	34	LC1-D25
0,25	0,82	2	GV4P, PE or PEM	2	0.8/2	34	LC1-D25
0.37	1,06	2	GV4P, PE or PEM	2	0.8/2	34	LC1-D25
0.55	1,45	2	GV4P, PE or PEM	2	0.8/2	34	LC1-D25
0.75	1,83	2	GV4P, PE or PEM	2	0.8/2	34	LC1-D25
1.1	2,60	3,5	GV4P, PE or PEM	3,5	1.4/3.5	60	LC1-D32
1.5	3,5	7	GV4P, PE or PEM	7	2.9/7	119	LC1-D50A
2.2	4,7	7	GV4P, PE or PEM	7	2.9/7	119	LC1-D50A
3	6,3	7	GV4P, PE or PEM	7	2.9/7	119	LC1-D50A
4	8,2	12,5	GV4P, PE or PEM	12,5	5/12.5	213	LC1-D50A
5.5	11,1	12,5	GV4P, PE or PEM	12,5	5/12.5	213	LC1-D50A
7.5	15	25	GV4P, PE or PEM	25	10/25	425	LC1-D65A
			NSX100	Micrologic 2.2M or 6.2M	12/25	13Irth	LC1-D80
10	18	25	GV4P, PE or PEM	25	10/25	425	LC1-D65A
			NSX100	Micrologic 2.2M or 6.2M	12/25	13Irth	LC1-D80
11	21	25	GV4P, PE or PEM	25	10/25	425	LC1-D65A
			NSX100	Micrologic 2.2M or 6.2M	12/25	13Irth	LC1-D80
15	28	50	GV4P, PE or PEM	50	10/25	850	LC1-D65A
			NSX100	Micrologic 2.2M or 6.2M	25/50	13Irth	LC1-D80
18.5	34	50	GV4P, PE or PEM	50	20/50	850	LC1-D65A
			NSX100	Micrologic 2.2M or 6.2M	25/50	13Irth	LC1-D80
22	40	50	GV4P, PE or PEM	50	20/50	850	LC1-D65A
			NSX100	Micrologic 2.2M or 6.2M	25/50	13Irth	LC1-D80
30	53	65	GV4P, PE or PEM	80	40/80	1360	LC1-D65A
		80	NSX100	Micrologic 2.2M or 6.2M	50/100(80)	13Irth	LC1-D80
37	64	80	GV4P, PE or PEM	80	40/80	1360	LC1-D80
			NSX100	Micrologic 2.2M or 6.2M	50/100(80)	13Irth	LC1-D80
45	77	115	GV4P, PE or PEM	115	65/115	1955	LC1-D115 or LC1-F115
		100	NSX100	Micrologic 2.2M	50/100	13Irth	LC1-D115 or LC1-F115
55	94	115	GV4P, PE or PEM	115	65/115	1955	LC1-D115 or LC1-F115
		150	NSX160	Micrologic 2.2M or 6.2M	70/150	13Irth	LC1-D150 or LC1-F150
75	127	150	NSX160	Micrologic 2.2M or 6.2M	70/150	13Irth	LC1-D150 or LC1-F150
90	154	185	NSX250	Micrologic 2.2M or 6.2M	100/220	13Irth	LC1-F225
110	188	220	NSX250	Micrologic 2.2M or 6.2M	100/220	13Irth	LC1-F225
132	222	265	NSX400	Micrologic 2.3M or 6.3M	160/320	13Irth	LC1-F265
160	270	320	NSX400	Micrologic 2.3M or 6.3M	160/320	13Irth	LC1-F330
200	337	400	NSX630	Micrologic 2.3M or 6.3M	250/500	13Irth	LC1-F400 (70kA)
		500	NSX630	Micrologic 2.3M or 6.3M	250/500	13Irth	LC1-F500 (130kA)
220	366	400	NSX630	Micrologic 2.3M or 6.3M	250/500	13Irth	LC1-F400 (70kA)
		500	NSX630	Micrologic 2.3M or 6.3M	250/500	13Irth	LC1-F500 (130kA)
250	415	500	NSX630	Micrologic 2.3M or 6.3M	250/500	13Irth	LC1-F500
300	482	630	NS800L	Micrologic 5.0	320/800	8000	LC1-F630
315	521	630	NS800L	Micrologic 5.0	320/800	8000	LC1-F630
355	588	780	NS1000L	Micrologic 5.0	400/1000	10000	LC1-F780 or LC1F1000
400	665	780	NS1000L	Micrologic 5.0	400/1000	10000	LC1-F780 or LC1F1000
450	723	780	NS1000L	Micrologic 5.0	400/1000	10000	LC1-F780 or LC1F1000
500	819	850	NS1000L	Micrologic 5.0	400/1000	10000	LC1F1000

[1] For class 30 the contacteur rating shall be checked according to 30s thermal withstand (F range).
[2] Reversers : replace LC1 with LC2 ; start-delta starter : replace LC1 with LC3.
[3] Ii for Micrologic 5.0 control unit.
[4] GV4PE and PEM only, for GV4 "S" performance with rotary handle, order GV4PE, PEM "S" & rotary handle separately

Type 2 coordination (IEC 60947-4-1) 415 V



With short circuit breaker protection

Contactor

Thermal relay on CT

Circuit breakers, contactors and thermal relays

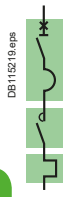
Performance "Iq" (kA): Ue = 415 V						
Circuit breakers	**B**	**F**	**N**	**H**	**S**	**L**
GV4 L & LE 02 - 12	-	-	50	-	100 [4]	-
GV4 L & LE 25 - 115	25	-	50	-	100 [4]	-
NSX100/160/250-MA	-	36	50	70	100	130
NSX400/630-MA	-	36	50	70	100	130
NS800L/NS1000L Micrologic 5.0	-	-	-	-	-	130

Starting [1]: adjustable class 10 A to 30.

Motors Rated power	Guide values of operational current in amps at :		Circuit breakers			Contactors [2]	Thermal o/l relays			
							Adj. class 10A to 30		Class 10	
P(kW)	415V	Ie max	Type	rat(A)	Irm(A)	Type	Type	Irth [1]	Type	Irth
0,18	0,58	2	GV4L	2	26	LC1-D32	LTM R08	0,4/8	LR9D02	0.4/2
0,25	0,82	2	GV4L	2	26	LC1-D32	LTM R08	0,4/8	LR9D02	0.4/2
0.37	1,06	2	GV4L	2	26	LC1-D32	LTM R08	0,4/8	LR9D02	0.4/2
0.55	1,45	2	GV4L	2	26	LC1-D32	LTM R08	0,4/8	LR9D02	0.4/2
0.75	1,83	2	GV4L	2	26	LC1-D32	LTM R08	0,d4/8	LR9D02	0.4/2
1.1	2,60	3,5	GV4L	3,5	46	LC1-D40A	LTM R08	0,4/8	LR9D08	1.6/8
1.5	3,5	7	GV4L	7	91	LC1-D40A	LTM R08	0,4/8	LR9D08	1.6/8
2.2	4,7	7	GV4L	7	91	LC1-D40A	LTM R08	0,4/8	LR9D08	1.6/8
3	6,3	7	GV4L	7	91	LC1-D40A	LTM R08	0,4/8	LR9D08	1.6/8
4	8,2	10	GV4L	12,5	138	LC1-D65A	LTM R27	1,35/27	LR9D32	6.4/32
		12,5	NSX100-MA	12,5	163	LC1-D80	LTM R27	1,35/27	LR9D32	6.4/32
5.5	11,1	12,5	GV4L	12,5	163	LC1-D65A	LTM R27	1,35/27	LR9D32	6.4/32
			NSX100-MA	12,5	163	LC1-D80	LTM R27	1,35/27	LR9D32	6.4/32
7.5	14,9	25	GV4L	25	325	LC1-D65A	LTM R27	1,35/27	LR9D32	6.4/32
			NSX100-MA	25	325	LC1-D80	LTM R27	1,35/27	LR9D32	6.4/32
10	18,3	25	GV4L	25	325	LC1-D65A	LTM R27	1,35/27	LR9D32	6.4/32
			NSX100-MA	25	325	LC1-D80	LTM R27	1,35/27	LR9D32	6.4/32
11	21,2	25	GV4L	25	325	LC1-D65A	LTM R27	1,35/27	LR9D32	6.4/32
			NSX100-MA	25	325	LC1-D80	LTM R27	1,35/27	LR9D32	6.4/32
15	28,0	32	GV4L	50	550	LC1-D65A	LTM R100	5/100	LR9D32	6.4/32
		32	NSX100-MA	50	650	LC1-D80	LTM R100	5/100	LR9D32	6.4/32
18.5	33,7	40	GV4L	50	550	LC1-D65A	LTM R100	5/100	LR9D110	22/110
		50	NSX100-MA	50	650	LC1-D80	LTM R100	5/100	LR9D110	22/110
22	39,5	50	GV4L	50	650	LC1-D65A	LTM R100	5/100	LR9D110	22/110
			NSX100-MA	50	650	LC1-D80	LTM R100	5/100	LR9D110	22/110
30	53,0	65	GV4L	80	880	LC1-D65A	LTM R100	5/100	LR9D110	22/110
		80	NSX100-MA	100	1100	LC1-D80	LTM R100	5/100	LR9D110	22/110
37	63,6	80	GV4L	80	1040	LC1-D80	LTM R100	5/100	LR9D110	22/110
			NSX100-MA	100	1100	LC1-D80	LTM R100	5/100	LR9D110	22/110
45	77,1	115	GV4L	115	1265	LC1-D115 or LC1-F115	LTM R100	5/100	LR9D110	22/110
		100	NSX100-MA	100	1100	LC1-D115 or LC1-F115	LTM R100	5/100	LR9D110	22/110
55	93,5	115	GV4L	115	1495	LC1-D115 or LC1-F115	LTM R08	sur TC/on CT	LR9D08	sur TC/on CT
		150	NSX160-MA	150	1950	LC1-D150 or LC1F50	LTM R08	sur TC/on CT	LR9D08	sur TC/on CT
75	127,2	150	NSX160-MA	150	1950	LC1-D150 or LC1F50	LTM R08	sur TC/on CT	LR9D08	sur TC/on CT
90	154,2	185	NSX250-MA	220	2420	LC1-F185	LTM R08	sur TC/on CT	LR9D08	sur TC/on CT
110	188,0	220	NSX250-MA	220	2860	LC1-F225	LTM R08	sur TC/on CT	LR9D08	sur TC/on CT
132	221,7	265	NSX400 1.3M	320	3500	LC1-F265			LR9D08	sur TC/on CT
160	269,9	320	NSX400 1.3M	320	4000	LC1-F330	LTM R08	sur TC/on CT	LR9D08	sur TC/on CT
200	337,3	400	NSX630-1.3M	500	5500	LC1-F400 (70kA)	LTM R08	sur TC/on CT	LR9D08	sur TC/on CT
		500			6300	LC1-F500 (130kA)	LTM R08	sur TC/on CT	LR9D08	sur TC/on CT
220	366,3	400	NSX630-1.3M	500	5500	LC1-F400 (70kA)	LTM R08	sur TC/on CT	LR9D08	sur TC/on CT
		500			6300	LC1-F500 (130kA)	LTM R08	sur TC/on CT	LR9D08	sur TC/on CT
250	414,5	500	NSX630-1.3M	500	6300	LC1-F500	LTM R08	sur TC/on CT	LR9D08	sur TC/on CT
300	481,9	630	NS800L - Micrologic 5.0 - LR off	800	8000	LC1-F630	LTM R08	sur TC/on CT	LR9D08	sur TC/on CT
315	520,5	630	NS800L - Micrologic 5.0 - LR off	800	8000	LC1-F630	LTM R08	sur TC/on CT	LR9D08	sur TC/on CT
355	588,0	780	NS1000L - Micrologic 5.0 - LR off	1000	10000	LC1-F780 or LC1F1000	LTM R08	sur TC/on CT	LR9D08	sur TC/on CT
400	665,1	780	NS1000L - Micrologic 5.0 - LR off	1000	10000	LC1-F780 or LC1F1000	LTM R08	sur TC/on CT	LR9D08	sur TC/on CT
450	722,9	780	NS1000L - Micrologic 5.0 - LR off	1000	10000	LC1-F780 or LC1F1000	LTM R08	sur TC/on CT	LR9D08	sur TC/on CT
500	819,3	900	NS1000L - Micrologic 5.0 - LR off	1000	10000	LC1F1000	LTM R08	sur TC/on CT	LR9D08	sur TC/on CT

[1] For installations with a class 30 relay, a derating of 20% must be apply on Circuit breakers and the contacteur rating shall be checked according to 30s thermal withstand (F range).
[2] Reversers : replace LC1 with LC2 ; start-delta starter : replace LC1 with LC3.
[3] Ii for Micrologic 5.0 control unit.
[4] GV4LE only, for GV4 "S" performance with rotary handle, order GV4LE "S" & rotary handle separately

Type 2 coordination (IEC 60947-4-1) 440 V



Circuit breakers, contactors and thermal relays

Performance "Iq" (kA): Ue = 440V [2]						
Circuit breakers	**B**	**F**	**N**	**H**	**S**	**L**
GV4L & LE 02 - 12	-	-	50	-	70 [4]	-
GV4L & LE 25 - 115	20	-	50	-	70 [4]	-
NSX100/160/250-MA	-	35	50	65	90	130
NSX400/630-Micrologic 1.3M	-	30	42	65	90	130
NS630bL/NS800L/NS1000L Micrologic 5.0	-	-	-	-	-	130

Starting [1]: normal LRD class 10 A, LR9 class 10.

Motors Rated power P(kW)	Guide values of operational current in amps at : 440V (A)	Ie max	Circuit breakers Type	rat(A)	Irm(A) [6]	Contactors [2] Type	Thermal o/l relays Type	Irth [1]
0,18	0,55	1	GV4L or GV4LE	2	14	LC1-D09	LRD-05	0,63/1
0,25	0,77	1	GV4L or GV4LE	2	14	LC1-D09	LRD-05	0,63/1
0,37	1	1,6	GV4L or GV4LE	2	22	LC1-D09	LRD-06	1/1,6
0,55	1,36	1,6	GV4L or GV4LE	2	22	LC1-D09	LRD-06	1/1,6
0,75	1,7	2	GV4L or GV4LE	2	26	LC1-D09	LRD-07	1,6/2,5
1,1	2,4	2,5	GV4L or GV4LE	3,5	35	LC1-D40A	LR9D08 [5]	1,6/8
1,5	3,3	3,5	GV4L or GV4LE	3,5	46	LC1-D40A	LR9D08 [5]	1,6/8
2,2	4,5	5	GV4L or GV4LE	7	70	LC1-D40A	LR9D08 [5]	1,6/8
3	5,9	7	GV4L or GV4LE	7	91	LC1-D40A	LRD-12 [5]	5.5/8
4	7,7	8	GV4L or GV4LE	12,5	113	LC1-D65A	LRD-12 [5]	5,5/8
5,5	10,5	12,5	GV4L or GV4LE	12,5	163	LC1-D65A	LRD-313	9/13
7,5	14	16	GV4L or GV4LE	25	225	LC1-D65A	LRD-318	12/18
		18	NSX100-MA	25	250	LC1-D80	LRD 3321	12/18
10	18,2	25	GV4L or GV4LE	25	325	LC1-D65A	LRD-325	17/25
			NSX100-MA	25	325	LC1-D80	LRD 3322	17/25
11	20	25	GV4L or GV4LE	25	325	LC1-D65A	LRD-325	17/25
			NSX100-MA	25	325	LC1-D80	LRD 3322	17/25
15	26	32	GV4L or GV4LE	50	450	LC1-D65A	LRD-332	23/32
			NSX100-MA	50	450	LC1-D80	LRD-3353	23/32
18,5	32	40	GV4L or GV4LE	50	550	LC1-D65A	LRD-340	30/40
			NSX100-MA	50	550	LC1-D80	LRD-3355	30/40
22	38	40	GV4L or GV4LE	50	550	LC1-D65A	LRD-340	30/40
			NSX100-MA	50	550	LC1-D80	LRD-3355	30/40
30	50	65	GV4L or GV4LE	80	880	LC1-D65A	LRD-365	48/65
		63	NSX100-MA	100	900	LC1-D80	LRD-3359	48/65
37	60	65	GV4L or GV4LE	80	880	LC1-D65A	LRD-365	48/65
		63	NSX100-MA	100	900	LC1-D80	LRD-3359	48/65
45	73	80	GV4L or GV4LE	80	1040	LC1-D80	LRD-33 63	63/80
			NSX100-MA	100	1100	LC1-D80	LRD-3363	63/80
55	88	100	GV4L or GV4LE	115	1380	LC1-D115	LR9-D5367	60/100
						LC1-F115	LR9-F5367	
			NSX100-MA	100	1300	LC1-D115	LR9-D5367	60/100
						LC1-F115	LR9-F5367	
75	120	150	NSX160-MA	150	1950	LC1-D150	LR9-D5369	90/150
						LC1-F150	LR9-F5369	
90	145	150	NSX160-MA	150	1950	LC1-D150	LR9-D5369	90/150
						LC1-F150	LR9-F5369	
110	177	185	NSX250-MA	220	2420	LC1-F185	LR9-F5371	132/220
132	209	265	NSX400-Micrologic 1.3M	320	3500	LC1-F265	LR9-F5371	132/220
160	255	265	NSX400 Micrologic 1.3M	320	3500	LC1-F265	LR9-F7375	200/330
200	318	320	NSX400 Micrologic 1.3M	320	4160	LC1-F330	LR9-F7375	200/330
220	343	400	NSX630-Micrologic 1.3M	500	5500	LC1-F400 (70kA)	LR9-F7379	300/500
						LC1-F500 (130kA)	LR9-F7379	300/500
250	390	500	NSX630-Micrologic 1.3M	500	6500	LC1-F500	LR9-F7379	300/500
300	466	500	NSX630-Micrologic 1.3M	500	6500	LC1-F500	LR9-F7379	300/500
315	490	630	NS800L - Micrologic 5.0 - LR off	800	8000	LC1-F630	LR9-F7381	380/630
355	554	630	NS800L - Micrologic 5.0 - LR off	800	8000	LC1-F630	LR9-F7381	380/630
375	587	630	NS800L - Micrologic 5.0 - LR off	800	8000	LC1-F630	LR9-F7381	380/630
400	627	720	NS800L - Micrologic 5.0 - LR off	800	9600	LC1-F780 or LC1F1000	TC800/1 + LRD-05	500/800
450	695	720	NS800L - Micrologic 5.0 - LR off	800	9600	LC1-F780 or LC1F1000	TC800/1 + LRD-05	500/800
500	772	780	NS1000L - Micrologic 5.0 - LR off	1000	10000	LC1F1000	TC800/1 + LRD-05	500/800
560	863	900	NS1000L - Micrologic 5.0 - LR off	1000	10000	LC1F1000	TC1000/1 + LRD-05	600/1000

[1] For long starting (class 20), see the correspondence table for thermal relay.
[2] For 480V Consult us.
[3] Reversers : replace LC1 with LC2 ; start-delta starter : replace LC1 with LC3.
[4] GV4LE only, for GV4 "S" performance with rotary handle, order GV4LE "S" & rotary handle separately.
[5] separate overload Relay, use terminal block LAD7B106.
[6] Ii for Micrologic 5.0 control unit.

Type 2 coordination (IEC 60947-4-1) 440 V

Circuit breakers, and contactors

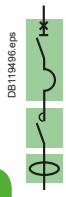
Performance "Iq" (kA): Ue = 440V [2]						
Circuit breaker	**B**	**F**	**N**	**H**	**S**	**L**
GV4 P, PE & PEM 02 - 12	-	-	50	-	70 [5]	-
GV4 P, PE & PEM 25 - 115	20		50	-	70 [5]	-
NSX100/160/250-MA	-	35	42	65	90	130
NSX400/630-MA	-	30	42	65	90	130
NS630bL/NS800L/NS1000L Micrologic 5.0	-	-	-	-	-	130

Starting [1] Standard IEC 60947-4-1				
Trip unit	GV4P, PE or PEM	Micrologic 2.2M / 2.3M	Micrologic 6.2M / 6.3M	Mircologic 5.0
normal (classe)	10	5, 10	5, 10	10
long (classe)	20	20	20, 30 [1]	20

Motors Rated power P(kW)	Guide values of operational current in amps at : 440V (A)	Ie max (A)	Circuit breakers Type	trip unit	Irth(A)	Irm(A) [4]	Contactors [2] Type
0,18	0,55	2	GV4P, PE or PEM	2	0.8/2	34	LC1-D25
0,25	0,77	2	GV4P, PE or PEM	2	0.8/2	34	LC1-D25
0,37	1	2	GV4P, PE or PEM	2	0.8/2	34	LC1-D25
0,55	1,36	2	GV4P, PE or PEM	2	0.8/2	34	LC1-D25
0,75	1,7	2	GV4P, PE or PEM	2	0.8/2	34	LC1-D25
1,1	2,4	2,5	GV4P, PE or PEM	3,5	1.4/3.5	60	LC1-D32
1,5	3,3	3,5	GV4P, PE or PEM	3,5	1.4/3.5	60	LC1-D32
2,2	4,5	7	GV4P, PE or PEM	7	2.9/7	119	LC1-D65A
3	5,9	7	GV4P, PE or PEM	7	2.9/7	119	LC1-D65A
4	7,7	12,5	GV4P, PE or PEM	12,5	5/12.5	213	LC1-D65A
5,5	10,5	12,5	GV4P, PE or PEM	12,5	5/12.5	213	LC1-D65A
7,5	14	25	GV4P, PE or PEM	25	10/25	425	LC1-D65A
		20	NSX100	Micrologic 2.2 / 6.2M	12/20	13Irth	LC1-D80
10	18,2	25	GV4P, PE or PEM	25	10/25	425	LC1-D65A
			NSX100	Micrologic 2.2 / 6.2M	15/25	13Irth	LC1-D80
11	20	25	GV4P, PE or PEM	25	10/25	425	LC1-D65A
			NSX100	Micrologic 2.2 / 6.2M	15/25	13Irth	LC1-D80
15	26	50	GV4P, PE or PEM	50	20/50	850	LC1-D65A
		40	NSX100	Micrologic 2.2 / 6.2M	24/40	13Irth	LC1-D80
18,5	32	50	GV4P, PE or PEM	50	20/50	850	LC1-D65A
		40	NSX100	Micrologic 2.2 / 6.2M	24/40	13Irth	LC1-D80
22	38	50	GV4P, PE or PEM	50	20/50	850	LC1-D65A
		40	NSX100	Micrologic 2.2 / 6.2M	24/40	13Irth	LC1-D80
30	50	63	GV4P, PE or PEM	80	40/80	1360	LC1-D65A
		80	NSX100	Micrologic 2.2 / 6.2M	48/80	13Irth	LC1-D80
37	60	63	GV4P, PE or PEM	80	40/80	1360	LC1-D65A
		80	NSX100	Micrologic 2.2 / 6.2M	48/80	13Irth	LC1-D80
45	73	80	GV4P, PE or PEM	80	40/80	1360	LC1-D80
			NSX100	Micrologic 2.2 / 6.2M	48/80	13Irth	LC1-D80
55	88	100	GV4P, PE or PEM	115	65/115	1955	LC1-D115 or LC1-F115
			NSX100	Micrologic 2.2 / 6.2M	60/100	13Irth	LC1-D115 or LC1-F115
75	120	150	NSX160	Micrologic 2.2 / 6.2M	90/150	13Irth	LC1-D150 or LC1-F150
90	145	150	NSX160	Micrologic 2.2 / 6.2M	90/150	13Irth	LC1-D150 or LC1-F150
110	177	185	NSX250	Micrologic 2.2 / 6.2M	131/220	13Irth	LC1-F225
132	209	265	NSX400	Micrologic 2.3 / 6.3M	160/320	13Irth	LC1-F265
160	255	265	NSX400	Micrologic 2.3 / 6.3M	160/320	13Irth	LC1-F265
200	318	320	NSX400	Micrologic 2.3 / 6.3M	160/320	13Irth	LC1-F330
220	343	400	NSX630	Micrologic 2.3 / 6.3M	250/500	13Irth	LC1-F400 (70kA)
		500					LC1-F500 (130kA)
250	390	400	NSX630	Micrologic 2.3 / 6.3M	250/500	13Irth	LC1-F500
300	466	500	NSX630	Micrologic 2.3 / 6.3M	250/500	13Irth	LC1-F500
315	490	630	NS800L	Micrologic 5.0	320/800	8000	LC1-F630
355	554	630	NS800L	Micrologic 5.0	320/800	8000	LC1-F630
375	587	630	NS800L	Micrologic 5.0	320/800	8000	LC1-F630
400	627	720	NS800L	Micrologic 5.0	320/800	9600	LC1-F780 or LC1F1000
450	695	720	NS800L	Micrologic 5.0	320/800	9600	LC1-F780 or LC1F1000
500	772	800	NS1000L	Micrologic 5.0	400/1000	10000	LC1-F1000
560	863	900	NS1000L	Micrologic 5.0	400/1000	10000	LC1-F1000

[1] For class 30 the contacteur rating shall be checked according to 30s thermal withstand (F range).
[2] For 480V Consult us.
[3] Reversers : replace LC1 with LC2 ; start-delta starter : replace LC1 with LC3.
[4] Ii for Micrologic 5.0 control unit.
[5] GV4PE only, for GV4 "S" performance with rotary handle, order GV4PE "S" & rotary handle separately.

Type 2 coordination (IEC 60947-4-1) 440 V



Magnetic circuit breaker (MA)

Contactor

Thermal relay on CT

Circuit breakers, contactors and thermal relays

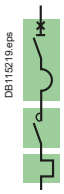
Performance "Iq" (kA): Ue = 440V [1]						
Circuit breakers	**B**	**F**	**N**	**H**	**S**	**L**
GV4 L & LE 02 - 12	-	-	50	-	70 [4]	-
GV4 L & LE 25 - 115	20	-	50	-	70 [4]	-
NSX400/630-Micrologic 1.3M	-	30	42	65	90	130
NS630bL/NS800L/NS1000L Micrologic 5.0	-	-	-	-	-	130

Starting [1]: normal LRD class 10 A, LR9 class 10.

Motors Rated power	Guide values of operational current in amps at :		Circuit breakers			Contactors [2]	Thermal o/l relays Adj. class 10A to 30		Class 10	
P(kW)	440V (A)	Ie max	Type	rat(A)	Irm(A) [4]	Type	Type	Irth [1]	Type	Irth
0,18	0,55	2	GV4L or GV4LE	2	26	LC1-D32	LTM R08	0,4/8	LR9D02	0.4/2
0,25	0,77	2	GV4L or GV4LE	2	26	LC1-D32	LTM R08	0,4/8	LR9D02	0.4/2
0,37	1	2	GV4L or GV4LE	2	26	LC1-D32	LTM R08	0,4/8	LR9D02	0.4/2
0,55	1,36	2	GV4L or GV4LE	2	26	LC1-D32	LTM R08	0,4/8	LR9D02	0.4/2
0,75	1,7	2	GV4L or GV4LE	2	26	LC1-D32	LTM R08	0,4/8	LR9D02	0.4/2
1,1	2,4	3,5	GV4L or GV4LE	3,5	46	LC1-D40A	LTM R08	0,4/8	LR9D08	1.6/8
1,5	3,3	3,5	GV4L or GV4LE	3,5	46	LC1-D40A	LTM R08	0,4/8	LR9D08	1.6/8
2,2	4,5	7	GV4L or GV4LE	7	91	LC1-D40A	LTM R08	0,4/8	LR9D08	1.6/8
3	5,9	7	GV4L or GV4LE	7	91	LC1-D40A	LTM R08	0,4/8	LR9D08	1.6/8
4	7,7	10	GV4L or GV4LE	12,5	138	LC1-D65A	LTM R27	1,35/27	LR9D32	6.4/32
		12,5	NSX100-MA	12,5	163	LC1-D80	LTM R27	1,35/27	LR9D32	6.4/32
5,5	10,5	12,5	GV4L or GV4LE	12,5	163	LC1-D65A	LTM R27	1,35/27	LR9D32	6.4/32
			NSX100-MA	12,5	163	LC1-D80	LTM R27	1,35/27	LR9D32	6.4/32
7,5	14	25	GV4L or GV4LE	25	325	LC1-D65A	LTM R27	1,35/27	LR9D32	6.4/32
			NSX100-MA	25	325	LC1-D80	LTM R27	1,35/27	LR9D32	6.4/32
10	18,2	25	GV4L or GV4LE	25	325	LC1-D65A	LTM R27	1,35/27	LR9D32	6.4/32
			NSX100-MA	25	325	LC1-D80	LTM R27	1,35/27	LR9D32	6.4/32
11	20	25	GV4L or GV4LE	25	325	LC1-D65A	LTM R27	1,35/27	LR9D32	6.4/32
			NSX100-MA	25	325	LC1-D80	LTM R27	1,35/27	LR9D32	6.4/32
15	26	32	GV4L or GV4LE	50	550	LC1-D65A	LTM R100	5/100	LR9D32	6.4/32
		32	NSX100-MA	50	550	LC1-D80	LTM R100	5/100	LR9D32	6.4/32
18,5	32	40	GV4L or GV4LE	50	550	LC1-D65A	LTM R100	5/100	LR9D110	22/110
		50	NSX100-MA	50	550	LC1-D80	LTM R100	5/100	LR9D110	22/110
22	38	50	GV4L or GV4LE	50	650	LC1-D65A	LTM R100	5/100	LR9D110	22/110
			NSX100-MA	50	550	LC1-D80	LTM R100	5/100	LR9D110	22/110
30	50	65	GV4L or GV4LE	80	880	LC1-D65A	LTM R100	5/100	LR9D110	22/110
		80	NSX100-MA	100	1100	LC1-D80	LTM R100	5/100	LR9D110	22/110
37	60	65	GV4L or GV4LE	80	880	LC1-D65A	LTM R100	5/100	LR9D110	22/110
		80	NSX100-MA	100	1100	LC1-D80	LTM R100	5/100	LR9D110	22/110
45	73	80	GV4L or GV4LE	80	1040	LC1-D80	LTM R100	5/100	LR9D110	22/110
			NSX100-MA	100	1100	LC1-D80	LTM R100	5/100	LR9D110	22/110
55	88	100	GV4L or GV4LE	115	1380	LC1-D115	LTM R100	5/100	LR9D110	22/110
						LC1-F115	LTM R100	5/100	LR9D110	22/110
			NSX100-MA	100	1300	LC1-D115 or F115	LTM R100	5/100	LR9D110	22/110
75	120	150	NSX160-MA	150	1950	LC1-D150 or F150	LTM R08	on CT	LR9D08	on CT
90	145	150	NSX160-MA	150	1950	LC1-D150 or F150	LTM R08	on CT	LR9D08	on CT
110	177	185	NSX250-MA	220	2420	LC1-F185	LTM R08	on CT	LR9D08	on CT
132	209	265	NSX400-Micrologic 1.3M	320	3500	LC1-F265			LR9D08	on CT
160	255	265	NSX400-Micrologic 1.3M	320	3500	LC1-F265	LTM R08	on CT	LR9D08	on CT
200	318	320	NSX400-Micrologic 1.3M	320	4000	LC1-F330	LTM R08	on CT	LR9D08	on CT
220	343	400	NSX630-Micrologic 1.3M	500	5500	LC1-F400 (70kA)	LTM R08	on CT	LR9D08	on CT
		500	NSX630-Micrologic 1.3M	500	6500	LC1-F500 (130kA)	LTM R08	on CT	LR9D08	on CT
250	390	500	NSX630-Micrologic 1.3M	500	6500	LC1-F500	LTM R08	on CT	LR9D08	on CT
300	466	500	NSX630-Micrologic 1.3M	500	6500	LC1-F500	LTM R08	on CT	LR9D08	on CT
315	490	630	NS800L - Micrologic 5.0 - LR off	800	8000	LC1-F630	LTM R08	on CT	LR9D08	on CT
355	554	630	NS800L - Micrologic 5.0 - LR off	800	8000	LC1-F630	LTM R08	on CT	LR9D08	on CT
375	587	630	NS800L - Micrologic 5.0 - LR off	800	8000	LC1-F630	LTM R08	on CT	LR9D08	on CT
400	627	720	NS800L - Micrologic 5.0 - LR off	800	9600	LC1-F780 or LC1-F1000	LTM R08	on CT	LR9D08	on CT
450	695	720	NS800L - Micrologic 5.0 - LR off	800	9600	LC1-F780 or LC1-F1000	LTM R08	on CT	LR9D08	on CT
500	772	800	NS1000L -Micrologic 5.0 - LR off	1000	10000	LC1-F1000	LTM R08	on CT	LR9D08	on CT
560	863	900	NS1000L -Micrologic 5.0 - LR off	1000	10000	LC1-F1000	LTM R08	on CT	LR9D08	on CT

[1] For 480V Consult us.
[2] For installations with a class 30 relay, a derating of 20% must be apply on Circuit breakers and the contacteur rating shall be checked according to 30s thermal withstand (F range).
[3] Reversers : replace LC1 with LC2 ; start-delta starter : replace LC1 with LC3.
[4] GV4LE only, for GV4 "S" performance with rotary handle, order GV4LE "S" & rotary handle separately.

Type 2 coordination (IEC 60947-4-1) 690 V



Circuit breakers, contactors and thermal relays

Performance "Iq" (kA) : Ue = 690 V	
Circuit breaker	**iq**
GV2 < L06 or GV2 ≥ L07 + LA9 LB920	50 kA
GV2 < P06 or GV2 ≥ P07 + LA9 LB920	50 kA

Starting [1]: normal LRD class 10 A.

GV2L

Motors			Circuit breaker			Contactors [3]	Thermal o/l relays	
P (kW)	I (A) 690 V	Ie max	Type	Rating (A)	Irm (A)	Type	Type	Irth [1]
0.37	0.64	0.64	GV2-L04	0.63	8	LC1-D09	LRD05	0.63...1
0.55	0.87	1	GV2-L05	1	13	LC1-D09	LRD05	0.63...1
0.75	1.1	1.6	GV2-L06	1.6	21	LC1-D09	LRD06	1...1.6
1.1	1.6	2.5	LA9LB920 [2] + GV2-L07	2.5	33	LC1-D25	LRD07	1.6...2.5
1.5	2.1	2.5	LA9LB920 [2] + GV2-L07	2.5	33	LC1-D25	LRD07	1.6...2.5
2.2	2.8	4	LA9LB920 [2] + GV2-L08	4	52	LC1-D25	LRD08	2.5...4
3	3.8	4	LA9LB920 [2] + GV2-L08	4	52	LC1-D25	LRD08	2.5...4
4	4.9	6	LA9LB920 [2] + GV2-L10	6.3	82	LC1-D25	LRD10	4...6
5.5	6.7	8	LA9LB920 [2] + GV2-L14	10	130	LC1-D25	LRD12	5.5...8
7.5	8.9	10	LA9LB920 [2] + GV2-L14	10	130	LC1-D25	LRD14	7...10
10	11.5	13	LA9LB920 [2] + GV2-L16	14	182	LC1-D25	LRD16	9...13
15	17	18	LA9LB920 [2] + GV2-L20	18	234	LC1-D32	LRD21	12...18
18.5	21	21	LA9LB920 [2] + GV2-L22	25	325	LC1-D40A	LRD325	16...24
22	24	32	LA9LB920 [2] + GV2-L32	32	416	LC1-D40A	LRD332	23...32

GV2P

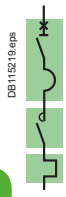
Motors			Circuit breaker			Contactors [3]
P (kW)	I (A) 690 V	Ie max	Type	Irth (A)	Irm (A)	Type
0.37	0.63	0.63	GV2-P04	0.63		LC1-D09
0.55	0.87	1	GV2-P05	1		LC1-D09
0.75	1.1	1.6	GV2-P06	1.6		LC1-D09
1.1	1.6	2.5	LA9LB920 [2] + GV2-P07	2.5		LC1-D25
1.5	2.1	2.5	LA9LB920 [2] + GV2-P07	2.5		LC1-D25
2.2	2.8	4	LA9LB920 [2] + GV2-P08	4		LC1-D25
3	3.8	4	LA9LB920 [2] + GV2-P08	4		LC1-D25
4	4.9	6.3	LA9LB920 [2] + GV2-P10	6.3		LC1-D25
5.5	6.7	10	LA9LB920 [2] + GV2-P14	10		LC1-D25
7.5	8.9	10	LA9LB920 [2] + GV2-P14	10		LC1-D25
10	12	14	LA9LB920 [2] + GV2-P16	14		LC1-D25
11	12.8	14	LA9LB920 [2] + GV2-P16	14		LC1-D32
15	17	18	LA9LB920 [2] + GV2-P20	18		LC1-D32
18.5	21	23	LA9LB920 [2] + GV2-P21	23		LC1-D32
22	24	32	LA9LB920 [2] + GV2-P32	32		LC1-D40A

Starting: adjustable

Motors			Circuit breaker			Contactors [3]	Thermal o/l relays	
P (kW)	I (A) 690 V	Ie max	Type	Rating (A)	Irm (A)	Type	Type	Irth [1]
0.37	0.64	0.64	GV2-L04	0.63	8	LC1-D09	LTM R08	0.4/8
0.55	0.87	1	GV2-L05	1	13	LC1-D09	LTM R08	0.4/8
0.75	1.1	1.6	GV2-L06	1.6	21	LC1-D09	LTM R08	0.4/8
1.1	1.6	2.5	LA9LB920 [2] + GV2-L07	2.5	33	LC1-D25	LTM R08	0.4/8
1.5	2.1	2.5	LA9LB920 [2] + GV2-L07	2.5	33	LC1-D25	LTM R08	0.4/8
2.2	2.8	4	LA9LB920 [2] + GV2-L08	4	52	LC1-D25	LTM R08	0.4/8
3	3.8	4	LA9LB920 [2] + GV2-L08	4	52	LC1-D25	LTM R08	0.4/8
4	4.9	6	LA9LB920 [2] + GV2-L10	6.3	82	LC1-D25	LTM R08	0.4/8
5.5	6.7	8	LA9LB920 [2] + GV2-L14	10	130	LC1-D25	LTM R08	0.4/8
7.5	8.9	10	LA9LB920 [2] + GV2-L14	10	130	LC1-D25	LTM R27	1.35/27
11	12.8	14	LA9LB920 [2] + GV2-L16	14	182	LC1-D25	LTM R27	1.35/27
15	17	18	LA9LB920 [2] + GV2-L20	18	234	LC1-D32	LTM R27	1.35/27
18.5	21	21	LA9LB920 [2] + GV2-L22	25	325	LC1-D40A	LTM R27	1.35/27
22	24	27	LA9LB920 [2] + GV2-L32	32	416	LC1-D40A	LTM R27	1.35/27

[1] For long starting (class 20), see the correspondence table for thermal relay.
[2] One LA9LB920 limitor (on the supply side of the breaker) can be used for several starter up to 32 A.
Connections between limitor and GV2 breaker shall be done in such a way to minimizae the risk of short circuit.
[3] Reversers : replace LC1 with LC2 ; start-delta starter : replace LC1 with LC3.

Type 2 coordination (IEC 60947-4-1) 690 V



Circuit breakers, contactors and thermal relays

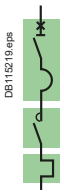
Performance "Iq" (kA) : Ue = 690 V	
Circuit breaker	**iq**
LUALB1	70 kA
LA9LB920	35 kA

Starting : adjustable.

Motors			TeSys U		Limitor	Control unit	
P (kW)	**I (A) 690V**	**Ie max**	**Type** [2]	**Im**		**Type** [1]	**Irth**
0.37	0.64	0.64	LUB12	14.2 In	LUALB1	LUC●01	0.35...1.4
			LUB12	14.2 In	LA9LB920	LUC●01	0.35...1.4
0.55	0.87	1	LUB12	14.2 In	LUALB1	LUC●01	0.35...1.4
			LUB12	14.2 In	LA9LB920	LUC●01	0.35...1.4
0.75	1.1	1.6	LUB12	14.2 In	LUALB1	LUC●01	0.35...1.4
			LUB12	14.2 In	LA9LB920	LUC●01	0.35...1.4
1.1	1.6	2.5	LUB12	14.2 In	LUALB1	LUC●05	1.25...5
			LUB12	14.2 In	LA9LB920	LUC●05	1.25...5
1.5	2.1	2.5	LUB12	14.2 In	LUALB1	LUC●05	1.25...5
			LUB12	14.2 In	LA9LB920	LUC●05	1.25...5
2.2	2.8	4	LUB12	14.2 In	LUALB1	LUC●05	1.25...5
			LUB12	14.2 In	LA9LB920	LUC●05	1.25...5
3	3.8	4	LUB12	14.2 In	LUALB1	LUC●05	1.25...5
			LUB12	14.2 In	LUALB1	LUC●05	1.25...5
4	4.9	6	LUB12	14.2 In	LUALB1	LUC●12	3...12
			LUB12	14.2 In	LA9LB920	LUC●12	3...12
5.5	6.7	8	LUB12	14.2 In	LUALB1	LUC●12	3...12
			LUB12	14.2 In	LA9LB920	LUC●12	3...12
7.5	8.9	10	LUB12	14.2 In	LUALB1	LUC●12	3...12
			LUB12	14.2 In	LA9LB920	LUC●12	3...12
11	12.8	18	LUB32	14.2 In	LUALB1	LUC●18	4.5...18
			LUB32	14.2 In	LA9LB920	LUC●18	4.5...18
15	17	18	LUB32	14.2 In	LUALB1	LUC●18	4.5...18
			LUB32	14.2 In	LA9LB920	LUC●18	4.5...18
18.5	21	25	LUB32	14.2 In	LUALB1	LUC●32	8...32
			LUB32	14.2 In	LA9LB920	LUC●32	8...32

[1] to be replaced by A, B, D or CM according to protection and monitoring needs.
[2] For Reversing replace LUB12 by LU2B12 and LUB32 by LU2B32.

Type 2 coordination (IEC 60947-4-1) 690 V



Circuit breakers, contactors and thermal relays

Performance "Iq" (kA) : Ue = 690 V			
Circuit breakers	**HB1**	**HB2**	**LB**
NSX100/250 MA	75 kA	100 kA	-
NSX400/630 Micrologic 1.3M	75 kA	100 kA	-
NS800 Micrologic 5.0x	-	-	75 kA

Starting [1]: normal LRD class 10 A, LR9 class 10.

Motors Rated power P(kW)	Guide values of operational current in amps at : 690V (A)	le max	Circuit breakers Type	rat(A)	Irm(A) [3]	Contactors [2] Type	Thermal o/l relays [1] Type	Irth
0,37	0,64	1	NSX100-MA	12,5	75	LC1-D80	CT 1A + LRD05	0.63..1
0,55	0,87	1	NSX100-MA	12,5	75	LC1-D80	CT 1A + LRD05	0.63..1
0,75	1,1	1,5	NSX100-MA	12,5	75	LC1-D80	CT 1,5A + LRD05	0,95..1,5
1,1	1,6	2,5	NSX100-MA	12,5	75	LC1-D80	CT 2A + LRD05	1,26..2
1,5	2,1	2,5	NSX100-MA	12,5	75	LC1-D80	CT 2,5A + LRD05	1,6..2,5
2,2	2,8	4	NSX100-MA	12,5	75	LC1-D80	CT 4A + LRD05	2.5..4
3	3,8	4	NSX100-MA	12,5	75	LC1-D80	CT 4A + LRD05	2.5..4
4	4,9	6	NSX100-MA	12,5	112	LC1-D80	CT 6A + LRD05	3,8..6
5,5	6,7	7,5	NSX100-MA	12,5	112	LC1-D80	CT 7,5A + LRD05	4,7..7,5
7,5	8,9	12,5	NSX100-MA	12,5	162	LC1-D80	CT 10A + LRD05	6,3..10
10	11,5	12,5	NSX100-MA	12,5	162	LC1-D80	CT 12,5A + LRD05	7,8..12,5
11	12,8	20	NSX100-MA	25	162	LC1-D80	CT 20A + LRD05	12,6..20
15	17	20	NSX100-MA	25	300	LC1-D80	CT 20A + LRD05	12,6..20
18,5	21	25	NSX100-MA	25	325	LC1-D80	CT 24A + LRD05	15.24
22	24	25	NSX100-MA	25	325	LC1-D80	CT 30A + LRD05	19..30
30	32	40	NSX100-MA	50	550	LC1-D150	CT 40A + LRD05	25..40
37	39	50	NSX100-MA	50	650	LC1-D150	CT 50A + LRD05	31,5..50
45	47	50	NSX100-MA	50	650	LC1-D150	CT 50A + LRD05	31,5..50
55	57	63	NSX100-MA	100	900	LC1-D150	LR9-F53 63 or CT 50A + LRD05	48..80
						LC1-F115	LR9-F53 63 or CT 50A + LRD05	48..80
75	77	80	NSX100-MA	100	1100	LC1-D150	LR9-F53 63 or CT 100A + LRD05	48..80
						LC1-F115	LR9-F53 63 or CT 100A + LRD05	48..80
90	93	100	NSX250-MA	150	1350	LC1-F150	LR9-F53 67 or CT 100A + LRD05	60..100
110	113	115	NSX250-MA	150	1500	LC1-F185	LR9-F53 69 or CT 125A + LRD 05	90..150
132	134	150	NSX250-MA	150	1950	LC1-F330	LR9-F53 71 or CT 160A + LRD05	132..220
160	162	220	NSX250-MA	220	2860	LC1-F330	LR9-F53 71 or CT 200A + LRD05	132..220
200	203	220	NSX250-MA	220	2860	LC1-F330	LR9-F53 71 or CT 250A + LRD05	132..220
220	220	225	NSX400-Micrologic 1.3M	320	3200	LC1-F400 45kA	LR9-F73 75 or CT 320A + LRD05	200..330
						LC1-F500 100kA	LR9-F73 75 or CT 320A + LRD05	200..330
250	250	280	NSX400-Micrologic 1.3M	320	3840	LC1-F400 45kA	LR9-F73 75 or CT 320A + LRD05	200..330
						LC1-F500 100kA	LR9-F73 75 or CT 320A + LRD05	200..330
315	313	330	NSX630-Micrologic 1.3M	500	4500	LC1-F500	LR9-F73 75 or CT 320A + LRD05	200..330
335	335	340	NSX630-Micrologic 1.3M	500	4500	LC1-F500	LR9-F73 79 or CT 400A+LRD05	300..500
355	354	460	NSX630-Micrologic 1.3M	500	6000	LC1-F630	LR9-F73 79 or CT 400A+LRD05	300..500
375	374	460	NSX630-Micrologic 1.3M	500	6000	LC1-F630	LR9-F73 79 or CT 400A+LRD05	300..500
400	400	460	NSX630-Micrologic 1.3M	500	6000	LC1-F630	LR9-F73 81 or CT 500A+LRD05	380..630
450	455	460	NSX630-Micrologic 1.3M	500	6000	LC1-F630	LR9-F73 81 or CT 500A+LRD05	380..630
475	475	480	NS800LB - Micrologic 5.0 LR Off	800	6400	LC1-F780	LR9-F73 81 or CT 500A+LRD05	380..630

[1] CT: Current transformer for motor thermal relay, for instance S11 range from RS ISOLSEC.
[2] Reversers : replace LC1 with LC2 ; start-delta starter : replace LC1 with LC3.
[3] Ii for Micrologic 5.0 control unit.

Type 2 coordination (IEC 60947-4-1) 690 V

Circuit breakers, contactors

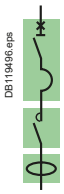
Performance "Iq" (kA) : Ue = 690 V			
Circuit breakers	**HB1**	**HB2**	**LB**
LA9 LB920 + NS80H MA	-	-	-
NSX100/160/250 Micrologic 2.2 M/6.2 M	75 kA	100 kA	-
NSX400/630 Micrologic 2.2 M/6.2 M	75 kA	100 kA	-
NS800 Micrologic 5.0x	-	-	75 kA

Starting	Standard IEC 60947-4-1		
Micrologic	2.2 M/2.3 M	6.2 M/6.3 M	5.0
Normal (class)	5, 10	5, 10	10
Long (class)	20	20, 30	20

Motors			Circuit breakers				Contactors [1]
P (kW)	**I (A) 690 V**	**Ie max**	**Type**	**Trip unit**	**Irth (A)**	**Irm (A) [2]**	**Type**
10	11.6	25	NSX100	Micrologic 2.2 M or 6.2 M	12/25	13 Irth	LC1 D80
11	12.8	25	NSX100	Micrologic 2.2 M or 6.2 M	12/25	13 Irth	LC1 D80
15	17	25	NSX100	Micrologic 2.2 M or 6.2 M	12/25	13 Irth	LC1 D80
18.5	22	25	NSX100	Micrologic 2.2 M or 6.2 M	12/25	13 Irth	LC1 D80
22	24	25	NSX100	Micrologic 2.2 M or 6.2 M	12/25	13 Irth	LC1 D80
30	32	50	NSX100	Micrologic 2.2 M or 6.2 M	25/50	13 Irth	LC1 D150 / F115
37	39	50	NSX100	Micrologic 2.2 M or 6.2 M	25/50	13 Irth	LC1 D150 / F115
45	47	50	NSX100	Micrologic 2.2 M or 6.2 M	25/50	13 Irth	LC1 D150 / F115
55	57	63	NSX100	Micrologic 2.2 M or 6.2 M	50/100	13 Irth	LC1 D150 / F115
75	77	80	NSX100	Micrologic 2.2 M or 6.2 M	50/100	13 Irth	LC1 D150 / F115
90	93	100	NSX250	Micrologic 2.2 M or 6.2 M	70/150	13 Irth	LC1 F150
110	113	125	NSX250	Micrologic 2.2 M or 6.2 M	70/150	13 Irth	LC1 F185
132	134	150	NSX250	Micrologic 2.2 M or 6.2 M	70/150	13 Irth	LC1 F330
160	162	220	NSX250	Micrologic 2.2 M or 6.2 M	100/220	13 Irth	LC1 F330
200	203	220	NSX250	Micrologic 2.3 M or 6.3 M	100/220	13 Irth	LC1 F330
220	223	280	NSX400	Micrologic 2.3 M or 6.3 M	160/320	13 Irth	LC1 F400 (45 kA) LC1 F500 (100 kA)
250	250	280	NSX400	Micrologic 2.3 M or 6.3 M	160/320	13 Irth	LC1 F400 (45 kA) LC1 F500 (100 kA)
315	313	340	NSX630	Micrologic 2.3 M or 6.3 M	250/500	13 Irth	LC1 F500
335	335	340	NSX630	Micrologic 2.3 M or 6.3 M	250/500	13 Irth	LC1 F500
355	354	460	NSX630	Micrologic 2.3 M or 6.3 M	250/500	13 Irth	LC1 F630
375	374	460	NSX630	Micrologic 2.3 M or 6.3 M	250/500	13 Irth	LC1 F630
400	400	460	NSX630	Micrologic 2.3 M or 6.3 M	250/500	13 Irth	LC1 F630
450	455	460	NSX630	Micrologic 2.3 M or 6.3 M	250/500	13 Irth	LC1 F630
475	475	480	NS800LB	Micrologic 5.0	320/800	13 Irth	LC1 F780

[1] Reversers: replace LC1 with LC2; start-delta starter: replace LC1 with LC3.
[2] Ii for Micrologic 5.0 control unit.

Type 2 coordination (IEC 60947-4-1) 690 V



Magnetic circuit breaker (MA)

Contactor

Thermal relay on CT

Circuit breakers, contactors

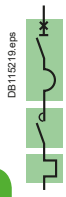
Performance "Iq" (kA): Ue = 690 V			
Circuit breakers	**HB1**	**HB2**	**LB**
NSX100/250 MA	75 kA	100 kA	-
NSX400/630 Micrologic 1.3 M	75 kA	100 kA	-
NS800 Micrologic 5.0x	-	-	75 kA

Starting: adjustable.

Motors			Circuit breakers			Contactors [2]	Thermal o/l relays	
P (kW)	**I (A) 690 V**	**Ie max**	**Type**	**Rating (A)**	**Irm (A)**	**Type**	**Type**	**Irth [1]**
0.37	0.64	8	NSX100-MA	12.5	75	LC1-D80	LTM R08	0.4/8
0.55	0.87	8	NSX100-MA	12.5	75	LC1-D80	LTM R08	0.4/8
0.75	1.1	8	NSX100-MA	12.5	75	LC1-D80	LTM R08	0.4/8
1.1	1.6	8	NSX100-MA	12.5	75	LC1-D80	LTM R08	0.4/8
1.5	2.1	8	NSX100-MA	12.5	75	LC1-D80	LTM R08	0.4/8
2.2	2.8	8	NSX100-MA	12.5	75	LC1-D80	LTM R08	0.4/8
3	3.8	8	NSX100-MA	12.5	75	LC1-D80	LTM R08	0.4/8
4	4.9	8	NSX100-MA	12.5	112	LC1-D80	LTM R08	0.4/8
5.5	6.7	8	NSX100-MA	12.5	112	LC1-D80	LTM R08	0.4/8
7.5	8.9	12.5	NSX100-MA	12.5	162	LC1-D80	LTM R27	1.35/27
11	12.8	25	NSX100-MA	25	325	LC1-D80	LTM R27	1.35/27
15	17	25	NSX100-MA	25	325	LC1-D80	LTM R27	1.35/27
18.5	21	25	NSX100-MA	25	325	LC1-D80	LTM R27	1.35/27
22	24	25	NSX100-MA	25	400	LC1-D80	LTM R27	1.35/27
30	32	50	NSX100-MA	50	650	LC1-D150/F115	LTM R100	5/100
37	39	50	NSX100-MA	50	650	LC1-D150/F115	LTM R100	5/100
45	47	50	NSX100-MA	50	650	LC1-D150/F115	LTM R100	5/100
55	57	63	NSX100-MA	100	1100	LC1-D150/F115	LTM R100	5/100
75	77	80	NSX100-MA	100	1100	LC1-D150/F115	LTM R100	5/100
90	93	100	NSX250-MA	150	1350	LC1-F150	LTM R100	5/100
110	113	115	NSX250-MA	150	1500	LC1-F185	LTM R08	on TC
132	134	150	NSX250-MA	150	1950	LC1-F330	LTM R08	on TC
160	162	220	NSX250-MA	220	2420	LC1-F330	LTM R08	on TC
200	203	220	NSX250-MA	220	2420	LC1-F330	LTM R08	on TC
220	223	225	NSX400-Micrologic 1.3M	320	3200	LC1-F400 45 kA LC1-F500 100 kA	LTM R08	on TC
250	250	280	NSX400-Micrologic 1.3M	320	3840	LC1-F400 45 kA LC1-F500 100 kA	LTM R08	on TC
315	313	340	NSX630-Micrologic 1.3M	500	4500	LC1-F500	LTM R08	on TC
335	335	340	NSX630-Micrologic 1.3M	500	4500	LC1-F500	LTM R08	on TC
355	354	460	NSX630-Micrologic 1.3M	500	6000	LC1-F630	LTM R08	on TC
375	374	460	NSX630-Micrologic 1.3M	500	6000	LC1-F630	LTM R08	on TC
400	400	460	NSX630-Micrologic 1.3M	500	6000	LC1-F630	LTM R08	on TC
450	455	460	NSX630-Micrologic 1.3M	500	6000	LC1-F630	LTM R08	on TC
475	475	480	NS800LB Micrologic 5 LR Off		6400	LC1-F780	LTM R08	on TC

[1] Check contactor and circuit breaker thermal withstand for installations with a class 30 relay.
[2] Reversers: replace LC1 with LC2; start-delta starter: replace LC1 with LC3.

Type 1 coordination (IEC 60947-4-1)



GV4L circuit breaker, contactor and Overload relay

Direct-on-line starting

Reverser

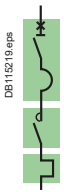
"Iq" breaking performance: equal to the breaking capacity of the circuit breaker alone.

Starting [1]: Direct on line normal start Class 10A/10.

Motors 220/230 V		380 V		415 V		440 V		500/525 V		660/690 V		Circuit breakers		Contactors [3]	Thermal relays [1]	
P (kW)	I (A)	P (kW)	I (A)	P (kW)	I (A)	P (kW)	I (A)	P (kW)	I (A)	P (kW)	I (A)	Type	cal (A)	Type	Type	Irth (A)
		0,37	1,2	0,37	1,1	0,37	1	0,55	1,2	0,75	1,2	GV4L or LE	2	LC1-D09	LRD 06	1/1,6
		0,55	1,6	0,55	1,5	0,55	1,4	0,75	1,5	1	1,5	GV4L or LE	2	LC1-D09	LRD 06	1/1,6
0,37	1,8	0,75	2	0,75	1,8	0,75	1,7					GV4L or LE	2	LC1-D09	LRD 07	1,6/2,5
						1,1	2,4	1,1	2	1,5	2	GV4L or LE	3,5	LC1-D09	LRD 07	1,6/2,5
0,55	2,8	1,1	2,8	1,1	2,6			1,5	2,6	2,2	2,8	GV4L or LE	3,5	LC1-D09	LRD 08	2,5/4
		1,5	3,8	1,5	3,5	1,5	3,3			3	3,8	GV4L or LE	7	LC1-D09	LRD 08	2,5/4
1,1	4,4	2,2	5,2	2,2	4,7	2,2	4,5	3	5	4	4,9	GV4L or LE	7	LC1-D09	LRD 10	4/6
1,5	6,1	3	6,6	3	6,5	3	5,8	4	6,5	5,5	6,6	GV4L or LE	7	LC1-D09	LRD 12	5,5/8
2,2	8,7	4	8,5	4	8,2	4	7,9	5,5	9			GV4L or LE	12,5	LC1-D09	LRD 14	7/10
										7,5	8,9	GV4L or LE	12,5	LC1-D12	LRD 14	7/10
3	11,5	5,5	11,5	5,5	11,1	5,5	10,5	7,5	12			GV4L or LE	12,5	LC1-D12	LRD 16	9/13
4	14,5	7,5	16	7,5	15	7,5	14	9	14			GV4L or LE	25	LC1-D18	LRD 21	12/18
				9	17	9	16,9	10	15			GV4L or LE	25	LC1-D18	LRD 21	12/18
										10	11,5	GV4L or LE	25	LC1-D18	LRD 16	9/13
5,5	20	11	23	11	21	11	20	11	18,4			GV4L or LE	25	LC1-D25	LRD 22	16/24
										15	17	GV4L or LE	25	LC1-D25	LRD 21	12/18
										18,5	21,3	GV4L or LE	25	LC1-D32	LRD 22	16/24
7,5	28	15	30	15	28	15	26,5	18,5	28,5			GV4L or LE	50	LC1-D32	LRD 32	23/32
								22	33	30	34,6	GV4L or LE	50	LC1-D40A	LRD 340	30/40
11	39	18,5	37	18,5	35	22	37					GV4L or LE	50	LC1-D40A	LRD 350	37/50
		22	44	22	40			30	45	33	39	GV4L or LE	50	LC1-D50A	LRD 350	37/50
15	52					30	50					GV4L or LE	50	LC1-D65A	LRD 365	48/65
										37	42	GV4L or LE	50	LC1-D65A	LRD 350	37/50
18,5	64	30	58	30	53	37	60	37	55			GV4L or LE	80	LC1-D65A	LRD 365	48/65
				37	64							GV4L or LE	80	LC1-D80	LRD 3561	55/70
										45	47	GV4L or LE	80	LC1-D80	LRD 3561	55/70
22	75	37	69	45	77	45	73	55	80			GV4L or LE	80	LC1-D80	LRD 3363	63/80
		45	80									GV4L or LE	115	LC1-D95	LRD 3365	80/104
										55	57	GV4L or LE	80	LC1-D115	LRD 3561	55/70
										75	77	GV4L or LE	80	LC1-D115	LR9D5367	60/100
30	95	55	97	55	93	55	90	75	106	90	93	GV4L or LE	115	LC1-D115	LR9D5369	90/150

[1] For long starting (class 20), see the correspondence table for thermal relay.
[2] For 480V application consult us.
[3] Reversers : replace LC1 with LC2.

Type 1 coordination (IEC 60947-4-1)



Magnetic circuit breaker (MA)

Contactor

Thermal relay

NSX100 circuit breakers, contactors and thermal relays

Direct-on-line starting

Reverser

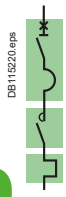
"Iq" breaking performance: equal to the breaking capacity of the circuit breaker alone.

Starting [1]: normal class 10A/10.

Motors 220/230 V		380 V		415 V		440 V [2]		500/525 V		660/690 V		Circuit breakers		Contactors [3]	Thermal relays [1]	
P (kW)	I (A)	P (kW)	I (A)	P (kW)	I (A)	P (kW)	I (A)	P (kW)	I (A)	P (kW)	I (A)	Type	cal (A)	Type	Type	Irth (A)
		0,37	1,2	0,37	1,1	0,37	1	0,55	1,2	0,75	1,2	NSX100B/F/N/H/S/L MA	2,5	LC1-D09	LRD 06	1/1,6
		0,55	1,6	0,55	1,5	0,55	1,4	0,75	1,5	1	1,5	NSX100B/F/N/H/S/L MA	2,5	LC1-D09	LRD 06	1/1,6
0,37	1,8	0,75	2	0,75	1,8	0,75	1,7					NSX100B/F/N/H/S/L MA	2,5	LC1-D09	LRD 07	1,6/2,5
						1,1	2,4	1,1	2	1,5	2	NSX100B/F/N/H/S/L MA	2,5	LC1-D09	LRD 07	1,6/2,5
0,55	2,8	1,1	2,8	1,1	2,5			1,5	2,6	2,2	2,8	NSX100B/F/N/H/S/L MA	6,3	LC1-D09	LRD 08	2,5/4
		1,5	3,7	1,5	3,5	1,5	3,1			3	3,8	NSX100B/F/N/H/S/L MA	6,3	LC1-D09	LRD 08	2,5/4
1,1	4,4	2,2	5	2,2	4,8	2,2	4,5	3	5	4	4,9	NSX100B/F/N/H/S/L MA	6,3	LC1-D09	LRD 10	4/6
1,5	6,1	3	6,6	3	6,5	3	5,8	4	6,5	5,5	6,6	NSX100B/F/N/H/S/L MA	12,5	LC1-D09	LRD 12	5,5/8
2,2	8,7	4	8,5	4	8,2	4	7,9	5,5	9			NSX100B/F/N/H/S/L MA	12,5	LC1-D09	LRD 14	7/10
										7,5	8,9	NSX100B/F/N/H/S/L MA	12,5	LC1-D12	LRD 14	7/10
										7,5	8,9	NSX100HB1/HB2 MA	12,5	LC1-D40A	LRD 14	7/10
3	11,5	5,5	11,5	5,5	11	5,5	10,4	7,5	12			NSX100B/F/N/H/S/L MA	12,5	LC1-D12	LRD 16	9/13
4	14,5	7,5	15,5	7,5	14	7,5	13,7	9	14			NSX100B/F/N/H/S/L MA	25	LC1-D18	LRD 21	12/18
				9	17	9	16,9	10	15			NSX100B/F/N/H/S/L MA	25	LC1-D18	LRD 21	12/18
										10	11,5	NSX100B/F/N/H/S/L MA	25	LC1-D18	LRD 16	9/13
										10	11,5	NSX100HB1/HB2 MA	25	LC1-D40A	LRD313	9/13
5,5	20	11	22	11	21	11	20,1	11	18,4			NSX100B/F/N/H/S/L MA	25	LC1-D25	LRD 22	17/25
										15	17	NSX100B/F/N/H/S/L MA	25	LC1-D25	LRD 21	12/18
										18,5	21,3	NSX100B/F/N/H/S/L MA	25	LC1-D32	LRD 22	17/25
										18,5	21,3	NSX100HB1/HB2 MA	25	LC1-D40A	LRD325	17/25
7,5	28	15	30	15	28	15	26,5	18,5	28,5			NSX100B/F/N/H/S/L MA	50	LC1-D32	LRD 32	23/32
								22	33	30	34,6	NSX100B/F/N/H/S/L MA	50	LC1-D40A	LRD340	30/40
										30	34,6	NSX100HB1/HB2 MA	50	LC1-D80	LRD3355	30/40
11	39	18,5	37	22	40	22	39					NSX100B/F/N/H/S/L MA	50	LC1-D40A	LRD350	37/50
		22	44	25	47			30	45			NSX100B/F/N/H/S/L MA	50	LC1-D50A	LRD350	37/50
										37	42	NSX100B/F/N/H/S/L MA	50	LC1-D65A	LRD350	37/50
										37	42	NSX100HB1/HB2 MA	50	LC1-D80	LRD3357	37/50
15	52	30	59	30	55	30	51,5					NSX100B/F/N/H/S/L MA	100	LC1-D65A	LRD365	48/65
18,5	64					37	64	37	55							
										45	49	NSX100B/F/N/H/S/L/ HB1/HB2 MA	100	LC1-D80	LRD3357	37/50
22	75	37	72	37	72	45	76	55	80			NSX100B/F/N/H/S/L MA	100	LC1-D80	LRD3363	63/80
				45	80											
25	85	45	85									NSX100B/F/N/H/S/L MA	100	LC1-D95	LRD3365	80/104
										55	57	NSX100B/F/N/H/S/L/ HB1/HB2 MA	100	LC1-D115	LRD3561	55/70
30	100			55	100	55	96			75	77	NSX100B/F/N/H/S/L/ HB1/HB2 MA	100	LC1-D115	LR9-D53 67	60/100

[1] For long starting (class 20), see the correspondence table for thermal relay.
[2] For 480V application consult us.
[3] Reversers : replace LC1 with LC2.

Type 1 coordination (IEC 60947-4-1)



NSX160 to NS1250 circuit breaker, contactor and thermal relay

Direct-on-line starting

Reverser

"Iq" breaking performance: equal to the breaking capacity of the circuit breaker alone.

Starting [1]: normal, class 10.

Motors 220/230 V		380 V		415 V		440 V [2]		500/525 V		660/690 V		Circuit breakers	Contactors [3]		Thermal relays [1]	
P (kW)	I (A)	P (kW)	I (A)	P (kW)	I (A)	P (kW)	I (A)	P (kW)	I (A)	P (kW)	I (A)	Type	cal (A)	Type	Type	Irth (A)
37 45	125 150	55 75	105 140	75	135	75	124	75 90	110 130	90	100	NSX160B/F/N/H/S/L MA NSX250HB1/HB2 MA	150	LC1D-150 LC1F-150	LR9-D53 69 LR9-F53 69	90/150 100/160
55	180	90	170	90	160	90 110	156 180	110	156	110	120	NSX 250B/F/N/H/S/L/HB1/HB2 MA	220	LC1F-185	LR9-F53 71	132/220
		110	210	110	200	132	215					NSX 250B/F/N/H/S/L/HB1/HB2 MA	220	LC1F-225	LR9-F53 71	132/220
								132	190	132 160	140 175	NSX 250B/F/N/H/S/L/HB1/HB2 MA	220	LC1F-265	LR9-F53 71	132/220
75	250	132	250	132	230	160	256	160	228			NSX400F/N/H/S/L/HB1/HB2 Micrologic 1.3M	320	LC1F-265	LR9-F73 75	200/330
90	312	160	300	160	270			200	281	200 220	220 240	NSX400F/N/H/S/L/HB1/HB2 Micrologic 1.3M	320	LC1F-330	LR9-F73 75	200/330
110	360	200	380	220	380	220	360	220	310			NSX630F/N/H/S/L/HB1/HB2 Micrologic 1.3M	500	LC1F-400	LR9-F73 79	300/500
										250	270	NSX630F/N/H/S/L/HB1/HB2 Micrologic 1.3M	500	LC1F-400	LR9-F73 75	200/330
		220	420			250	401			335	335	NSX630F/N/H/S/L/HB1/HB2 Micrologic 1.3M	500	LC1F-500	LR9-F73 79	300/500
150	480	250	480	250	430			315 335	445 460			NSX630F/N/H/S/L/HB1/HB2 Micrologic 1.3M	500	LC1F-500	LR9-F73 79	300/500
						300	480			375 450	400 480	NSX630F/N/H/S/L/HB1/HB2 Micrologic 1.3M	500	LC1-F630	LR9-F73 81	380/630
160	520	300	570	300	510	335	540	355 375 400	500 530 570			NS800N/H Micrologic 5.0 - LR off NS1000L Micrologic 5.0 - LR off	800 1000	LC1-F630	LR9-F73 81	380/630
200	630	335	630	335	580	375	590	450	630			NS800N/H Micrologic 5.0 - LR off NS1000L Micrologic 5.0 - LR off	800 1000	LC1-F630	LR9-F73 81	380/630
220	700	375	700	375	650	400	650					NS800N/H Micrologic 5.0 - LR off NS1000L Micrologic 5.0 - LR off	800 1000	LC1-F800	LR2-F83 83	500/800
		400	750	400	690	450	720					NS800N/H Micrologic 5.0 - LR off NS1000L Micrologic 5.0 - LR off	800 1000	LC1-F800 LC1-BL33	LR2-F83 83	500/800
										500 560	530 580	NS800N/H Micrologic 5.0 - LR off NS1000L Micrologic 5.0 - LR off	800 1000	LC1-BL33	LR2-F83 83	500/800
250	800	450	800	450	750			500 560	700 760			NS1000N/H Micrologic 5.0 - LR off	1000	LC1-BM33	LR2-F83 83	500/800
		500	900	500	830	500 560	800 900	600	830			NS1000N/H Micrologic 5.0 - LR off	1000	LC1-BM33	LR2-F83 85	630/1000
300	970	560 600	1000 1100	560 600	920 1000	600 670	960 1080	670 750	920 1020			NS1250N/H Micrologic 5.0 - LR off	1250	LC1-BP33	LR2-F83 85	630/1000

[1] For long starting (class 20), see the correspondence table for thermal relay.
[2] For 480V application consult us.
[3] Reversers : replace LC1 with LC2.

Type 1 coordination (IEC 60947-4-1)

GV4P circuit breaker and contactor

Direct-on-line starting

Reverser

"Iq" breaking performance: equal to the breaking capacity of the circuit breaker alone.

Starting [1]: Direct on line normal start Class 10A/10.

Motors 220/230 V		380 V		415 V		440 V		500/525 V		660/690 V		Circuit breakers		Contactors [3]	Thermal relay [1]	
P (kW)	I (A)	P (kW)	I (A)	P (kW)	I (A)	P (kW)	I (A)	P (kW)	I (A)	P (kW)	I (A)	Type	cal (A)	Type	Type	Irth (A)
		0,37	1,2	0,37	1,1	0,37	1	0,55	1,2	0,75	1,2	GV4P, PE or PEM	2	LC1-D09		0,8/2
		0,55	1,6	0,55	1,5	0,55	1,4	0,75	1,5	1	1,5	GV4P, PE or PEM	2	LC1-D09		0,8/2
0,37	1,8	0,75	2	0,75	1,8	0,75	1,7					GV4P, PE or PEM	2	LC1-D09		0,8/2
						1,1	2,4	1,1	2	1,5	2	GV4P, PE or PEM	3,5	LC1-D09		1,4/3,5
0,55	2,8	1,1	2,8	1,1	2,6			1,5	2,6	2,2	2,8	GV4P, PE or PEM	3,5	LC1-D09		1,4/3,5
		1,5	3,8	1,5	3,5	1,5	3,3			3	3,8	GV4P, PE or PEM	7	LC1-D09		2,9/7
1,1	4,4	2,2	5,2	2,2	4,7	2,2	4,5	3	5	4	4,9	GV4P, PE or PEM	7	LC1-D09		2,9/7
1,5	6,1	3	6,6	3	6,5	3	5,8	4	6,5	5,5	6,6	GV4P, PE or PEM	7	LC1-D09		2,9/7
2,2	8,7	4	8,5	4	8,2	4	7,9	5,5	9			GV4P, PE or PEM	12,5	LC1-D25		5/12,5
										7,5	8,9	GV4P, PE or PEM	12,5	LC1-D25		5/12,5
3	11,5	5,5	11,5	5,5	11,1	5,5	10,5	7,5	12			GV4P, PE or PEM	12,5	LC1-D25		5/12,5
4	14,5	7,5	16	7,5	15	7,5	14	9	14			GV4P, PE or PEM	25	LC1-D25		10/25
				9	17	9	16,9	10	15			GV4P, PE or PEM	25	LC1-D25		10/25
										10	11,5	GV4P, PE or PEM	25	LC1-D25		10/25
5,5	20	11	23	11	21	11	20	11	18,4			GV4P, PE or PEM	25	LC1-D25		10/25
										15	17	GV4P, PE or PEM	25	LC1-D25		10/25
7,5	28	15	30	15	28	15	26,5	18,5	28,5			GV4P, PE or PEM	50	LC1-D40A		20/50
								22	33	30	34,6	GV4P, PE or PEM	50	LC1-D40A		20/50
11	39	18,5	37	18,5	35	22	37					GV4P, PE or PEM	50	LC1-D40A		20/50
		22	44	22	40			30	45	33	39	GV4P, PE or PEM	50	LC1-D50A		20/50
15	52					30	50					GV4P, PE or PEM	50	LC1-D65A		20/50
										37	42	GV4P, PE or PEM	50	LC1-D65A		20/50
18,5	64	30	58	30	53	37	60	37	55			GV4P, PE or PEM	80	LC1-D65A		40/80
				37	64							GV4P, PE or PEM	80	LC1-D65A		40/80
										45	47	GV4P, PE or PEM	80	LC1-D80		40/80
22	75	37	69	45	77	45	73	55	80			GV4P, PE or PEM	80	LC1-D80		40/80
		45	80									GV4P, PE or PEM	115	LC1-D95		65/115
										55	57	GV4P, PE or PEM	80	LC1-D115		40/80
										75	77	GV4P, PE or PEM	80	LC1-D115		40/80
30	95	55	97	55	93	55	90	75	106	90	93	GV4P, PE or PEM	115	LC1-D115		65/115

[1] For long starting (class 20), see the correspondence table for thermal relay.
[2] For 480V application consult us.
[3] Reversers : replace LC1 with LC2.

Type 1 coordination (IEC 60947-4-1)

NSX100 to NS1250 circuit breakers

Direct-on-line starting

Reverser

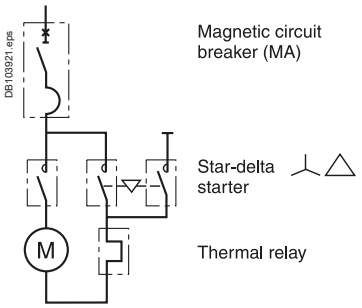
"Iq" breaking performance: equal to the breaking capacity of the circuit breaker alone.

Starting	Standard IEC 60947-4-1		
Micrologic	2.2 M/2.3 M	6.2 M/6.3 M	5.0
Normal (class)	5, 10	5, 10	10
Long (class)	20	20, 30 [3]	20

Motors 220/230 V		380 V		415 V		440 V [1]		500/525 V		660/690 V		Circuit breakers	Contactors [2]		
P (kW)	I (A)	P (kW)	I (A)	P (kW)	I (A)	P (kW)	I (A)	P (kW)	I (A)	P (kW)	I (A)	Type	Trip unit	Irth (A)	Type
7,5	28	15	30	15	28	15	26,5	18,5	28,5			NSX100B/F/N/H/S/L	Micrologic 2.2 or 6.2	25/50	LC1-D32
11	39	18,5	37	22	40	22	39	22	33	30	34,6	NSX100B/F/N/H/S/L/HB1/HB2	Micrologic 2.2 or 6.2	25/50	LC1-D40A
		22	44	25	47			30	45	33	39	NSX100B/F/N/H/S/L/HB1/HB2	Micrologic 2.2 or 6.2	25/50	LC1-D50A
15	52	30	59	30	55	30	51,5			37	42	NSX100B/F/N/H/S/L	Micrologic 2.2 or 6.2	48/80	LC1-D65A
										37	42	NSX100HB1/HB2	Micrologic 2.2 or 6.2	48/80	LC1-D80
18,5	64					37	64	37	55			NSX100B/F/N/H/S/L	Micrologic 2.2 or 6.2	48/80	LC1-D65A
22	75	37	72	37	72	45	76	55	80	45	49	NSX100B/F/N/H/S/L/HB1/HB2	Micrologic 2.2 or 6.2	48/80	LC1-D80
25	85	45	85									NSX100B/F/N/H/S/L/HB1/HB2	Micrologic 2.2 or 6.2	50/100	LC1-D95
										55	60	NSX100B/F/N/H/S/L/HB1/HB2	Micrologic 2.2 or 6.2	50/100	LC1-D80
30	100			55	100	55	96			75	80	NSX100B/F/N/H/S/L/HB1/HB2	Micrologic 2.2 or 6.2	50/100	LC1D-115 or LC1F-115
37 45	125 150	55 75	105 140	75	135	75	124	75 90	110 130	90	100	NSX160B/F/N/H/S/L NSX250HB1/HB2	Micrologic 2.2 or 6.2	70/150	LC1D-150 or LC1F-150
55	180	90	170	90	160	90 110	156 180	110	156	110	120	NSX 250B/F/N/H/S/L/HB1/HB2	Micrologic 2.2 or 6.2	100/220	LC1F-185
		110	210	110	200	132	215					NSX 250B/F/N/H/S/L/HB1/HB2	Micrologic 2.2 or 6.2	100/220	LC1F-225
								132	190	132 160	140 175	NSX 250B/F/N/H/S/L/HB1/HB2	Micrologic 2.2 or 6.2	100/220	LC1F-265
75	250	132	250	132	230	160	256	160	228			NSX400F/N/H/S/L/HB1/HB2	Micrologic 2.3 or 6.3	160/320	LC1F-265
90	312	160	300	160	270			200	281	200 220	220 240	NSX400F/N/H/S/L/HB1/HB2	Micrologic 2.3 or 6.3	160/320	LC1F-330
110	360	200	380	220	380	220	360	220	310	250	270	NSX630F/N/H/S/L/HB1/HB2	Micrologic 2.3 or 6.3	250/500	LC1F-400
		220	420			250	401	315	445	335	335	NSX630F/N/H/S/L/HB1/HB2	Micrologic 2.3 or 6.3	250/500	LC1F-500
150	480	250	480	250	430			335	460			NSX630F/N/H/S/L/HB1/HB2	Micrologic 2.3 or 6.3	250/500	LC1F-500
						300	480	355 375	500 530	375 450	400 480	NSX630F/N/H/S/L/HB1/HB2	Micrologic 2.3 or 6.3	250/500	LC1-F630
160	520	300	570	300	510	335	540	400	570			NS800N/H NS1000L	Micrologic 5.0	320/800 400/1000	LC1-F630
200	630	335	630	335	580	375	590	450	630			NS800N/H NS1000L	Micrologic 5.0	320/800 400/1000	LC1-F630
220	700	375	700	375	650	400	650					NS800N/H NS1000L	Micrologic 5.0	320/800 400/1000	LC1-F800
		400	750	400	690	450	720					NS800N/H NS1000L	Micrologic 5.0	320/800 400/1000	LC1-F800 LC1-BL33
										500 560	530 580	NS800N/H NS1000L	Micrologic 5.0	320/800 400/1000	LC1-BL33
250	800	450	800	450	750			500 560	700 760			NS1000N/H	Micrologic 5.0	400/1000	LC1-BM33
		500	900	500	830	500 560	800 900	600	830			NS1000N/H	Micrologic 5.0	400/1000	LC1-BM33
300	970	560	1000	560	920	600	960	670	920			NS1250N/H	Micrologic 5.0	630/1250	LC1-BP33
		600	1100	600	1000	670	1080	750	1020			NS1250N/H	Micrologic 5.0	630/1250	LC1-BP33

[1] For 480V application consult us.
[2] Reversers : replace LC1 with LC2.
[3] For class 30 the contacteur rating shall be checked according to 30s thermal withstand (F range).

Type 1 coordination (IEC 60947-4-1)



GV4L/LE and NSX100 circuit breaker

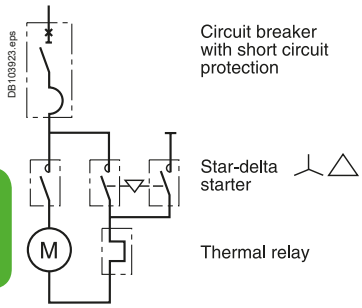
Star-delta starting

"Iq" breaking performance: equal to the breaking capacity of the circuit breaker alone.
Starting: normal.

Motors 220/230 V		380 V		415 V		440 V [1]		Circuit breakers		Contactors	Thermal relays	
P (kW)	I (A)	P (kW)	I (A)	P (kW)	I (A)	P (kW)	I (A)	Type	cal (A)	Type	Type	Irth (A)
0,55	2,8	1,1	2,8	1,1	2,6	1,5	3,1	GV4L or LE	3,5	LC3-D09	LRD 07	1,6/2,5
		1,5	3,8	1,5	3,5			GV4L or LE	7	LC3-D09	LRD 07	1,6/2,5
1,1	4,4	2,2	5,2	2,2	4,7	2,2	4,5	GV4L or LE	7	LC3-D09	LRD 08	2,5/4
1,5	6,1	3	6,6	3	6,5	3	5,8	GV4L or LE	12,5	LC3-D09	LRD 08	2,5/4
2,2	8,7	4	8,5	4	8,2	4	7,9	GV4L or LE	12,5	LC3-D09	LRD 10	4/6
3	11,5	5,5	11,5	5,5	11,1	5,5	10,4	GV4L or LE	12,5	LC3-D09	LRD 12	5,5/8
4	14,5	7,5	16	7,5	15	7,5	13,7	GV4L or LE	25,0	LC3-D09	LRD 14	7/10
5,5	20			9	17	9	16,9	GV4L or LE	25,0	LC3-D12	LRD 16	9/13
		11	23	11	21	11	20	GV4L or LE	25,0	LC3-D12	LRD 16	9/13
7,5	28	15	30	15	28	15	26,5	GV4L or LE	50,0	LC3-D18	LRD 21	12/18
11	39	18,5	37	22	40	22	37	GV4L or LE	50,0	LC3-D18	LRD 22	17/25
		22	44	25	47			GV4L or LE	50,0	LC3-D32	LRD 32	23/32
15	52					30	50	GV4L or LE	80,0	LC3-D32	LRD 32	23/32
				30	53			GV4L or LE	80,0	LC3-D32	LRD 32	23/32
18,5	64	30	58	37	64	37	60	GV4L or LE	80,0	3xLC1-D40A	LRD 340	30/40
		37	69					GV4L or LE	80,0	3xLC1-D40A	LRD 350	37/50
22	75	45	80	45	77	45	73	GV4L or LE	80,0	2xLC1-D50A + 1 xLC1D40A	LRD 350	37/50
30	95	55	97	55	93	55	90	GV4L or LE	115	2xLC1-D65A + 1 xLC1D40A	LRD 365	48/65
0,55	2,8	1,5	3,8	1,5	3,5	1,5	3,1	NSX100B/F/N/H/S/L MA	6,3	LC3-D09	LRD 07	1,6/2,5
1,1	4,4	2,2	5,2	2,2	4,7	2,2	4,5	NSX100B/F/N/H/S/L MA	6,3	LC3-D09	LRD 08	2,5/4
1,5	6,1	3	6,6	3	6,5	3	5,8	NSX100B/F/N/H/S/L MA	12,5	LC3-D09	LRD 08	2,5/4
2,2	8,7	4	8,5	4	8,2	4	7,9	NSX100B/F/N/H/S/L MA	12,5	LC3-D09	LRD 10	4/6
3	11,5	5,5	11,5	5,5	11,1	5,5	10,4	NSX100B/F/N/H/S/L MA	12,5	LC3-D09	LRD 12	5,5/8
4	14,5	7,5	16	7,5	15	7,5	13,7	NSX100B/F/N/H/S/L MA	25	LC3-D09	LRD 14	7/10
5,5	20			9	17	9	16,9	NSX100B/F/N/H/S/L MA	25	LC3-D12	LRD 16	9/13
		11	23	11	21	11	20	NSX100B/F/N/H/S/L MA	25	LC3-D12	LRD 16	9/13
7,5	28	15	30	15	28	15	26,5	NSX100B/F/N/H/S/L MA	50	LC3-D18	LRD 21	12/18
11	39	18,5	37	22	40	22	37	NSX100B/F/N/H/S/L MA	50	LC3-D18	LRD 22	17/25
		22	44	25	47			NSX100B/F/N/H/S/L MA	100	LC3-D32	LRD 32	23/32
15	52					30	50	NSX100B/F/N/H/S/L MA	100	LC3-D32	LRD 32	23/32
				30	53			NSX100B/F/N/H/S/L MA	100	LC3-D32	LRD 32	23/32
18,5	64	30	58	37	64	37	60	NSX100B/F/N/H/S/L MA	100	3xLC1-D40A	LRD 340	30/40
		37	69					NSX100B/F/N/H/S/L MA	100	3xLC1-D40A	LRD 350	37/50
22	75	45	80	45	77	45	73	NSX100B/F/N/H/S/L MA	100	2xLC1-D50A + 1 xLC1D40A	LRD 350	37/50
30	100			55	100	55	96	NSX100B/F/N/H/S/L MA	100	2xLC1-D65A + 1 xLC1D40A	LRD 365	48/65

[1] 480V application : Consult us.

Type 1 coordination (IEC 60947-4-1)



NSX160 to NS1000 circuit breakers

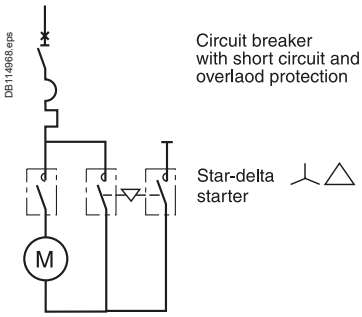
Star-delta starting

"Iq" breaking performance: equal to the breaking capacity of the circuit breaker alone.
Starting: normal.

Motors 220/230 V		380 V		415 V		440 V [1]		Circuit breakers		Contactors	Thermal relays	
P (kW)	I (A)	P (kW)	I (A)	P (kW)	I (A)	P (kW)	I (A)	Type	cal (A)	Type	Type	Irth (A)
		55	105					NSX160B/F/N/H/S/L MA	150	LC3-D80	LRD 3359	48/65
37	125			75	135	75	124	NSX160B/F/N/H/S/L MA	150	LC3-D80	LRD 3363	63/80
45	150	75	140					NSX160B/F/N/H/S/L MA	150	LC3-D115 LC3-F115	LR9D 5367 LR9F 5367	60/100
		90	170	90	160	90	156	NSX 250B/F/N/H/S/L MA	220	LC3-D115 LC3-F115	LR9D 5367 LR9F 5367	60/100
55	180					110	180	NSX 250B/F/N/H/S/L MA	220	LC3-D115 LC3-F115	LR9D 5369 LR9F 5369	90/150
		110	210	110	200			NSX 250B/F/N/H/S/L MA	220	LC3-D115 LC3-F115	LR9D 5369 LR9F 5369	90/150
						132	215	NSX 250B/F/N/H/S/L MA	220	LC3-D150 LC3-F150	LR9D 5369 LR9F 5369	90/150
75	250	132	250	132	230			NSX400F/N/H/S/L Micrologic 1.3M	320	LC3-D150 LC3-F150	LR9D 5369 LR9F 5369	90/150
90	312	160	300	160	270	160	256	NSX400F/N/H/S/L Micrologic 1.3M	320	LC3 F185	LR9F 5371	132/220
110	360	200	380	220	380	220	360	NSX630F/N/H/S/L Micrologic 1.3M	500	LC3-F265	LR9F 7375	200/330
		220	420			250	401	NSX630F/N/H/S/L Micrologic 1.3M	500	LC3-F265	LR9F 7375	200/330
150	480	250	480	250	430			NSX630F/N/H/S/L Micrologic 1.3M	500	LC3-F330	LR9-F73 75	200/330
						300	480	NSX630F/N/H/S/L Micrologic 1.3M	500	LC3-F330	LR9F 7375	200/330
160	520	300	570	300	510	335	540	NS800N/H Micrologic 5.0 - LR off	800	LC3-F400	LR9F 7375	200/330
								NS1000L Micrologic 5.0 - LR off	1000			
				335	580	375	590	NS800N/H Micrologic 5.0 - LR off	800	LC3-F400	LR9F 7379	300/500
								NS1000L Micrologic 5.0 - LR off	1000			

[1] 480V application : Consult us.

Type 1 coordination (IEC 60947-4-1)



GV4P/PE/PEM, NSX100 to NS1000 circuit breakers, contactors

Star-delta starting

"Iq" breaking performance: equal to the breaking capacity of the circuit breaker alone.
Starting: normal.

Motors								Circuit breakers			Contactors
220/230 V		380 V		415 V		440 V [1]					
P (kW)	I (A)	P (kW)	I (A)	P (kW)	I (A)	P (kW)	I (A)	Type	Trip unit	Irth (A)	Type
		0,37	1,2	0,37	1,1	0,37	1	GV4P, PE or PEM	2	0,8/2	LC3-D09
		0,55	1,6	0,55	1,5	0,55	1,4	GV4P, PE or PEM	2	0,8/2	LC3-D09
0,37	1,8	0,75	2	0,75	1,8	0,75	1,7	GV4P, PE or PEM	2	0,8/2	LC3-D09
						1,1	2,4	GV4P, PE or PEM	3,5	1,4/3,5	LC3-D09
0,55	2,8	1,1	2,8	1,1	2,6			GV4P, PE or PEM	3,5	1,4/3,5	LC3-D09
		1,5	3,8	1,5	3,5	1,5	3,3	GV4P, PE or PEM	7	2,9/7	LC3-D09
1,1	4,4	2,2	5,2	2,2	4,7	2,2	4,5	GV4P, PE or PEM	7	2,9/7	LC3-D09
1,5	6,1	3	6,6	3	6,5	3	5,8	GV4P, PE or PEM	7	2,9/7	LC3-D09
2,2	8,7	4	8,5	4	8,2	4	7,9	GV4P, PE or PEM	12,5	5/12,5	LC3-D09
3	11,5	5,5	11,5	5,5	11,1	5,5	10,5	GV4P, PE or PEM	12,5	5/12,5	LC3-D09
4	14,5	7,5	16	7,5	15	7,5	14	GV4P, PE or PEM	25	10/25	LC3-D12
				9	17	9	16,9	GV4P, PE or PEM	25	10/25	LC3-D12
5,5	20	11	23	11	21	11	20	GV4P, PE or PEM	25	10/25	LC3-D18
7,5	28	15	30	15	28	15	26,5	GV4P, PE or PEM	50	20/50	LC3-D18
11	39	18,5	37	18,5	35	22	37	GV4P, PE or PEM	50	20/50	LC3-D18
		22	44	22	40			GV4P, PE or PEM	50	20/50	LC3-D18
15	52			30	53	30	50	GV4P, PE or PEM	50	20/50	LC3-D32
18,5	64	30	58	37	64	37	60	GV4P, PE or PEM	80	40/80	3xLC1-D40A
22	75	37	69	45	77	45	73	GV4P, PE or PEM	80	40/80	3xLC1-D40A
		45	80					GV4P, PE or PEM	115	65/115	2xLC1-D50A + 1xLC1D40A
30	95	55	97	55	93	55	90	GV4P, PE or PEM	115	65/115	2xLC1-D50A + 1xLC1D40A
7,5	28	15	30	15	28	15	26,5	NSX100B/F/N/H/S/L	Micrologic 2.2M or 6.2E-M	25/50	LC3-D18
11	39	18,5	37	22	40	22	39	NSX100B/F/N/H/S/L	Micrologic 2.2M or 6.2E-M	25/50	LC3-D18
		22	44	25	47			NSX100B/F/N/H/S/L	Micrologic 2.2M or 6.2E-M	25/50	LC3-D18
15	52			30	55	30	51,5	NSX100B/F/N/H/S/L	Micrologic 2.2M or 6.2E-M	50/100	LC3-D32
				30	55			NSX100B/F/N/H/S/L	Micrologic 2.2M or 6.2E-M	50/100	LC3-D32
18,5	64	30	59	37	66	37	64	NSX100B/F/N/H/S/L	Micrologic 2.2M or 6.2E-M	50/100	3xLC1-D40A
		37	72					NSX100B/F/N/H/S/L	Micrologic 2.2M or 6.2E-M	50/100	2xLC1-D50A + 1xLC1D40A
22	75			45	80	45	76	NSX100B/F/N/H/S/L	Micrologic 2.2M or 6.2E-M	50/100	2xLC1-D50A + 1xLC1D40A
25	85	45	85					NSX100B/F/N/H/S/L	Micrologic 2.2M or 6.2E-M	50/100	2xLC1-D50A + 1xLC1D40A
30	100			55	100	55	96	NSX100B/F/N/H/S/L	Micrologic 2.2M or 6.2E-M	50/100	2xLC1-D65A + 1xLC1D40A
		55	105					NSX160B/F/N/H/S/L	Micrologic 2.2M or 6.2E-M	70/150	LC3-D80
37	125	75	140	75	135	75	124	NSX160B/F/N/H/S/L	Micrologic 2.2M or 6.2E-M	70/150	LC3-D80
45	150	75	140					NSX160B/F/N/H/S/L	Micrologic 2.2M or 6.2E-M	70/150	LC3-D115 or LC3-F115
		90	170	90	160	90	156	NSX 250B/F/N/H/S/L	Micrologic 2.2M or 6.2E-M	100/220	LC3-D115 or LC3-F115
55	180	110	210	110	200	110	180	NSX 250B/F/N/H/S/L	Micrologic 2.2M or 6.2E-M	100/220	LC3-D115 or LC3-F115
						132	215	NSX 250B/F/N/H/S/L	Micrologic 2.2M or 6.2E-M	100/220	LC3-D150 or LC3-F150
75	250	132	250	132	230			NSX400F/N/H/S/L	Micrologic 2.3M or 6.3E-M	160/320	LC3-D150 or LC3-F150
90	312	160	300	160	270	160	256	NSX400F/N/H/S/L	Micrologic 2.3M or 6.3E-M	160/320	LC3F-185
110	360	200	380	220	380	220	360	NSX630F/N/H/S/L	Micrologic 2.3M or 6.3E-M	250/500	LC3-F265
		220	420			250	401	NSX630F/N/H/S/L	Micrologic 2.3M or 6.3E-M	250/500	LC3-F265
150	480	250	480	250	430			NSX630F/N/H/S/L	Micrologic 2.3M or 6.3E-M	250/500	LC3-F330
						300	480	NSX630F/N/H/S/L	Micrologic 2.3M or 6.3E-M	250/500	LC3-F330
160	520	300	570	300	510	335	540	NS800N/H NS1000L	Micrologic 5.0	320/800 400/1000	LC3-F400
				335	580	375	590	NS800N/H NS1000L	Micrologic 5.0	320/800 400/1000	LC3-F400

[1] 480V application : Consult us.

Type 1 coordination (IEC 60947-4-1) for AC1 Utilisation category : Non-inductive or slightly inductive loads

Ue ≤ 440 V AC

"Iq" performance: equal to the breaking capacity of the circuit breaker alone.

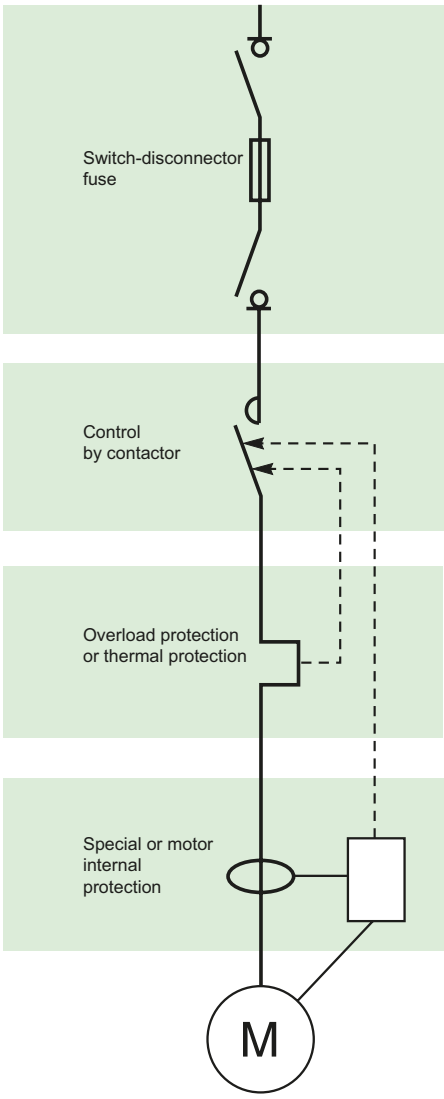
Ie max [1]	Circuit breakers	Iq 440V (kA)				Contactor
40°	Type	According to circuit breaker breaking capacity	Trip unit	Rating (A)	Ir (A)	
40	Compact NSX100 B/F/N	25/35/50	Micrologic 2.2 / 5.2	40	18..40	LC1D40A
80	Compact NSX100 B/F/N	25/35/50	Micrologic 2.2 / 5.2	100	40..100	LC1D50A or 65A
100	Compact NSX100 B/F/N	25/35/50	Micrologic 2.2 / 5.2	100	40..100	LC1D80
160	Compact NSX160 B/F/N	25/35/50	Micrologic 2.2 / 5.2	160	63..160	LC1D80
						LC1D115
250	Compact NSX250 B/F/N	35/50	Micrologic 2.3 / 5.3	250	100..250	LC1D115
275	Compact NSX400 F/N	35/50	Micrologic 2.3 / 5.3	400	160..400	LC1F185
315	Compact NSX400 F/N	35/50	Micrologic 2.3 / 5.3	400	160..400	LC1F225
350	Compact NSX400 F/N	35/50	Micrologic 2.3 / 5.3	400	160..400	LC1F265
400	Compact NSX400 F/N	35/50	Micrologic 2.3 / 5.3	400	160..400	LC1F330
500	Compact NSX630 F/N	35/50	Micrologic 2.3 / 5.3	630	150..630	LC1F400
630	Compact NSX630 F/N	35/50	Micrologic 2.3 / 5.3	630	150..630	LC1F500
800	Compact NS800L	130	Micrologic 2.0 / 5.0 / 6.0 / 7.0	800	320..800	LC1F630
1000	Compact NS1000L	130	Micrologic 2.0 / 5.0 / 6.0 / 7.0	1000	400..1000	LC1F630
						LC1F1250
1250	Masterpact MTZ1 12 H1/H2/H3	42/50/50	Micrologic 5/6/7.0X Ii "fast"	1250	500..1259	LC1F1400
1400	Masterpact MTZ1 16 H1/H2/H3	42/50/50	Micrologic 5/6/7.0X Ii "fast"	1600	630..1600	LC1F1400
1600	Masterpact MTZ1 16 H1/H2/H3	42/50/50	Micrologic 5/6/7.0X Ii "fast"	1600	630..1600	LC1F1700
	Masterpact MTZ2 16 N1/H1/H2					
1700	Masterpact MTZ2 20 N1/H1/H2	42/50/50	Micrologic 5/6/7.0X Ii "fast"	2000	800..2000	LC1F1700
2000	Masterpact MTZ2 20 N1/H1/H2	42/50/50	Micrologic 5/6/7.0X Ii "fast"	2000	800..2000	LC1F1700
2100	Masterpact MTZ2 25 N1/H1/H2	42/50/50	Micrologic 5/6/7.0X Ii "fast"	2500	1000..2500	LC1F2100

[1] Values for Fix circuit breaker with IEC60947-1 Tables 9 & 10 cross section of conductors. Check derating of circuit breaker and contactor according to ambiant temperature and installation.

Protection of motor circuits with fuses: general

Example:
An INF●160 can receive BS fuse-links in sizes A2, A3 or A4, which correspond to the following ratings:
- ■ A2 size:
  - □ 2 to 32 A for gG fuse-links
  - □ 32M35 to 32M63 for gM fuse-links
- ■ A3 size:
  - □ 35 to 63 A for gG fuse-links
  - □ 63M80 to 63M100 for gM fuse-links
- ■ A4 size:
  - □ 80 to 100 A for gG fuse-links
  - □ 100M125 to 100M200 for gM fuse-links.

The tables on page 208 to page 212 directly indicate the correct selection of fuse-links and Fupact switches depending on the distribution circuit rating and the motor rating (for direct-on-line starting).



Fuse size table

The table below indicates the minimum and maximum fuse sizes depending on the rating of the switch and the applicable reference standard.

	BS		DIN		NFC	
	min.	max.	min.	max.	min.	max.
INF●32	A1	A2			10 x 38	14 x 51
INFD40			000	000		
INFC50					14 x 51	14 x 51
INF●63	A2	A3	000	000	22 x 58	22 x 58
INF●100	A2	A4				
INFC125					22 x 58	22 x 58
INF●160	A2	A4	000	00		
INF●200	B1	B2	0	0		
INF●250	B1	B3	0	1		
INF●400	B1	B4	0	2		
INF●630	C1	C3	3	3		
INF●800	C1	C3	3	3		
ISFT100N			000	000		
ISFT100			000	000		
ISF●160			000	00		
ISF●250			1	1		
ISF●400			2	2		
ISF●630			3	3		

Protection of motor feeders

A motor feeder is generally made up of:
- ■ a control contactor
- ■ a thermal relay for overcurrent protection
- ■ a short-circuit protection device
- ■ a disconnection device capable of interrupting load currents.

Fupact switch-disconnector fuses are ideally suited to perform the last two functions in the list. What is more, Fupact devices are totally compatible with the IEC 60204 machine directive.

Additional specific protection:
- ■ fault limiting protection (while the motor is running)
- ■ fault prevention (monitoring of motor insulation with motor off).

Fupact characteristics

The local emergency-off switch must have the AC23 characteristic for the rated motor current.
Motor starting characteristics are the following:
- ■ peak current: 8 to 10 In
- ■ duration of peak current: 20 to 30 ms
- ■ starting current Id: 4 to 8 In
- ■ starting time td: 2 to 4 seconds.

Short-circuit protection of motors is ensured by aM or gM [1] fuse-links that are sized to take into account the above characteristics.
Fupact offers a wide range of fuse utilisations, whatever the applicable reference standard.
[1] A gM fuse-link is in fact simply a derated gG fuse-link.

Coordination of devices on the motor feeder

- ■ Thermal protection of:
  - □ motor
  - □ conductors
  - □ switch
  - □ fuse

is ensured by the thermal relay on the contactor.
- ■ Overload (or short-circuit) protection of:
  - □ motor
  - □ conductors
  - □ switch
  - □ thermal relay

is ensured by the fuse.
To ensure a high level of operational quality, it is important to ensure **coordination of the devices** on the motor feeder in compliance with standard IEC 60947-4.
The equipment manufacturers provide type-1 and type-2 coordination tables between fuse-links, contactors and thermal relays.

NOTE : Proposed fuses are based on 4 poles 50 Hz induction motors direct on line start Id/In y 7 for 10 sec.
The choice of fuses and overload relay shall be checked according to the actual motor's caracteristic.

Protection of motor circuits with BS fuses

Selection tables for Fupact devices and associated BS fuse-links

Example:
A 37 kW motor supplied at 415 V is protected by 160 A gM fuse-links.
This type of fuse-link may be mounted on a Fupact INFB100 or higher.
See the grey section in the table opposite.

230/240 V				
P(kW)	(HP)	In (A)	Fupact	gG/gM
0.37	0.5	**1.9**	**INFB32**	**gG 6**
1	0.7	**2.7**	**INFB32**	**gG 10**
0.8	1	**3.6**	**INFB32**	**gG 16**
1.1	1.5	**4.5**	**INFB32**	**gG 16**
1.5	2	**6.3**	**INFB32**	**gG 20**
2.2	2.9	**9**	**INFB32**	**20M25**
3	4	**11.7**	**INFB32**	**20M32**
4	5.3	**15.2**	**INFB32**	**32M40**
5.5	7.3	**19.8**	**INFB32**	**32M50**
7.5	10	**26**	**INFB32**	**32M50**
10	13	**34**	**INFB32**	**63M80**
11	15	**38**	**INFB63**	**63M80**
15	20	**51**	**INFB63**	**63M100**
18.5	25	**63**	**INFB100**	**100M160**
22	29	**74**	**INFB100**	**100M160**
30	40	**99**	**INFB200**	**gG 200**
37	49	**125**	**INFB200**	**200M250**
45	60	**144**	**INFB200**	**200M250**
55	73	**177**	**INFB250**	**315M400**
75	100	**245**	**INFB250**	**315M400**
90	120	**296**	**INFB400**	**400M450**
110	147	**354**	**INFB630**	**gG 630**
132	176	**408**	**INFB800**	**gG 800**
150	200	**484**	**INFB800**	**gG 800**
160	213	**496**	**INFB800**	**gG 800**

415V				
P(kW)	(HP)	In (A)	Fupact	gG/gM
0.37	0.5	**1.1**	**INFB32**	**gG 4**
1	0.7	**1.5**	**INFB32**	**gG 6**
0.8	1	**2**	**INFB32**	**gG 10**
1.1	1.5	**2.5**	**INFB32**	**gG 10**
1.5	2	**3.5**	**INFB32**	**gG 16**
2.2	2.9	**5**	**INFB32**	**gG 16**
3	4	**6.5**	**INFB32**	**gG 20**
4	5.3	**8.4**	**INFB32**	**20M25**
5.5	7.3	**11**	**INFB32**	**20M32**
7.5	10	**14.4**	**INFB32**	**32M40**
10	13.3	**19.1**	**INFB32**	**32M50**
11	15	**21**	**INFB32**	**32M50**
15	20	**28**	**INFB32**	**32M63**
18.5	25	**35**	**INFB63**	**63M80**
22	29	**41**	**INFB63**	**63M80**
30	40	**55**	**INFB63**	**63M100**
37	49	**69**	**INFB100**	**100M160**
45	60	**80**	**INFB100**	**100M160**
55	73	**98**	**INFB200**	**gG 200**
75	100	**136**	**INFB200**	**200M250**
90	120	**164**	**INFB200**	**200M315**
110	147	**196**	**INFB250**	**315M400**
132	176	**226**	**INFB250**	**315M400**
150	200	**268**	**INFB400**	**400M500**
160	213	**275**	**INFB400**	**400M500**
200	267	**358**	**INFB630**	**gG 630**
240	320	**428**	**INFB800**	**gG 800**
280	373	**488**	**INFB800**	**gG 800**

Protection of motor circuits with NFC fuses

Selection tables for Fupact devices and associated NFC fuse-links

Example:
A 30 kW motor supplied at 690 V is protected by:
- 80 A gG fuse-links
- 32 A aM fuse-links.

Both types of fuse-links may be mounted on a Fupact INFC63 [1] or higher.
See the grey section in the table on following page.
[1] Fupact is designed to allow overrated protection.

230/240 V

P(kW)	(HP)	In (A)	Fupact	gG	Fupact	aM
0.37	0.49	**1.9**	**INFC32**	**6**	**INFC32**	**2**
0.55	0.73	**2.7**	**INFC32**	**10**	**INFC32**	**4**
0.75	1	**3.6**	**INFC32**	**16**	**INFC32**	**4**
1.1	1.5	**4.5**	**INFC32**	**16**	**INFC32**	**6**
1.5	2	**6.3**	**INFC32**	**20**	**INFC32**	**8**
2.2	2.9	**9**	**INFC32**	**25**	**INFC32**	**10**
3	4	**11.7**	**INFC32**	**32**	**INFC32**	**12**
4	5.3	**15.2**	**INFC32**	**40**	**INFC32**	**16**
5.5	7.3	**19.8**	**INFC32**	**50**	**INFC32**	**20**
7.5	10	**26**	**INFC50**	**50**	**INFC32**	**32**
10	13	**34**	**INFC63**	**80**	**INFC50**	**40**
11	15	**38**	**INFC63**	**80**	**INFC50**	**40**
15	20	**51**	**INFC63**	**100**	**INFC63**	**63**
18.5	25	**63**	**-**	**160**	**INFC125**	**80**
22	29	**74**	**-**	**160**	**INFC125**	**80**
30	40	**99**	**-**	**200**	**INFC125**	**100**
37	49	**125**	**-**	**250**	**INFC125**	**125**

380/400V

P(kW)	(HP)	In (A)	Fupact	gG	Fupact	aM
0.37	0.49	**1.1**	**INFC32**	**4**	**INFC32**	**2**
0.55	0.73	**1.6**	**INFC32**	**6**	**INFC32**	**2**
0.75	1	**2.2**	**INFC32**	**10**	**INFC32**	**4**
1.1	1.5	**2.7**	**INFC32**	**10**	**INFC32**	**4**
1.5	2	**3.8**	**INFC32**	**16**	**INFC32**	**4**
2.2	2.9	**5.5**	**INFC32**	**16**	**INFC32**	**6**
3	4	**7.1**	**INFC32**	**20**	**INFC32**	**8**
4	5.3	**9.2**	**INFC32**	**25**	**INFC32**	**10**
5.5	7.3	**12**	**INFC32**	**32**	**INFC32**	**12**
7.5	10	**16**	**INFC32**	**40**	**INFC32**	**16**
10	13	**21**	**INFC32**	**50**	**INFC32**	**25**
11	15	**23**	**INFC32**	**50**	**INFC32**	**25**
15	20	**31**	**INFC63**	**80**	**INFC32**	**32**
18.5	25	**38**	**INFC63**	**80**	**INFC50**	**40**
22	29	**45**	**INFC63**	**100**	**INFC50**	**50**
30	40	**60**	**INFC63**	**125**	**INFC63**	**63**
37	49	**75**	**-**	**160**	**INFC125**	**80**
45	60	**87**	**-**	**200**	**INFC125**	**100**
55	73	**107**	**-**	**200**	**INFC125**	**125**

415 V

P(kW)	(HP)	In (A)	Fupact	gG	Fupact	aM
0.37	0.49	**1.1**	**INFC32**	**4**	**INFC32**	**2**
0.55	0.73	**1.5**	**INFC32**	**6**	**INFC32**	**2**
0.75	1	**2**	**INFC32**	**6**	**INFC32**	**2**
1.1	1.5	**2.5**	**INFC32**	**10**	**INFC32**	**4**
1.5	2	**3.5**	**INFC32**	**16**	**INFC32**	**4**
2.2	2.9	**5**	**INFC32**	**16**	**INFC32**	**6**
3	4	**6.5**	**INFC32**	**20**	**INFC32**	**8**
4	5.3	**8.4**	**INFC32**	**25**	**INFC32**	**10**
5.5	7.3	**11**	**INFC32**	**32**	**INFC32**	**12**
7.5	10	**14**	**INFC32**	**40**	**INFC32**	**16**
10	13	**19**	**INFC32**	**50**	**INFC32**	**25**
11	15	**21**	**INFC32**	**50**	**INFC32**	**25**
15	20	**28**	**INFC63**	**63**	**INFC32**	**32**
18.5	25	**35**	**INFC63**	**80**	**INFC50**	**40**
22	29	**41**	**INFC63**	**80**	**INFC50**	**50**
30	40	**55**	**INFC63**	**100**	**INFC63**	**63**
37	49	**69**	**-**	**160**	**INFC125**	**80**
45	60	**80**	**-**	**160**	**INFC125**	**80**
55	73	**98**	**-**	**200**	**INFC125**	**100**

440 V

P(kW)	(HP)	In (A)	Fupact	gG	Fupact	aM
0.37	0.49	**1**	**INFC32**	**4**	**INFC32**	**2**
0.55	0.73	**1.4**	**INFC32**	**6**	**INFC32**	**2**
0.75	1	**1.9**	**INFC32**	**6**	**INFC32**	**2**
1.1	1.5	**2.4**	**INFC32**	**10**	**INFC32**	**4**
1.5	2	**3.3**	**INFC32**	**10**	**INFC32**	**4**
2.2	2.9	**4.7**	**INFC32**	**16**	**INFC32**	**6**
3	4	**6.1**	**INFC32**	**16**	**INFC32**	**6**
4	5.3	**7.9**	**INFC32**	**20**	**INFC32**	**8**
5.5	7.3	**10.4**	**INFC32**	**25**	**INFC32**	**10**
7.5	10	**14**	**INFC32**	**40**	**INFC32**	**16**
10	13	**18**	**INFC50**	**50**	**INFC32**	**20**
11	15	**20**	**INFC50**	**50**	**INFC32**	**20**
15	20	**26**	**INFC63**	**63**	**INFC32**	**32**
18.5	25	**33**	**INFC63**	**80**	**INFC50**	**40**
22	29	**39**	**INFC63**	**80**	**INFC50**	**40**
30	40	**52**	**INFC63**	**100**	**INFC50**	**50**
37	49	**65**	**-**	**160**	**INFC125**	**80**
45	60	**75**	**-**	**160**	**INFC125**	**80**
55	73	**92**	**-**	**200**	**INFC125**	**100**

Protection of motor circuits with NFC fuses

500 V						
P(kW)	(HP)	In (A)	Fupact	gG	Fupact	aM
0.37	0.49	**0.9**	**INFC32**	**4**	**INFC32**	**2**
0.55	0.73	**1.2**	**INFC32**	**4**	**INFC32**	**2**
0.75	1	**1.5**	**INFC32**	**6**	**INFC32**	**2**
1.1	1.5	**2.2**	**INFC32**	**6**	**INFC32**	**2**
1.5	2	**2.9**	**INFC32**	**10**	**INFC32**	**4**
2.2	2.9	**3.9**	**INFC32**	**10**	**INFC32**	**4**
3	4	**5.2**	**INFC32**	**16**	**INFC32**	**6**
4	5.3	**6.8**	**INFC32**	**20**	**INFC32**	**8**
5.5	7.3	**9.2**	**INFC32**	**25**	**INFC32**	**10**
7.5	10	**12**	**INFC32**	**32**	**INFC32**	**12**
10	13	**16**	**INFC32**	**32**	**INFC32**	**16**
11	15	**18**	**INFC32**	**40**	**INFC32**	**20**
15	20	**23**	**INFC63**	**50**	**INFC32**	**25**
18.5	25	**28**	**INFC63**	**63**	**INFC50**	**32**
22	29	**33**	**INFC63**	**80**	**INFC50**	**40**
30	40	**45**	**INFC63**	**100**	**INFC63**	**50**
37	49	**53**	**INFC63**	**100**	**INFC63**	**63**
45	60	**64**	**-**	**160**	**INFC125**	**80**
55	73	**78**	**-**	**160**	**INFC125**	**80**

525/550 V						
P(kW)	(HP)	In (A)	Fupact	gG	Fupact	aM
0.37	0.49	**0.8**	**INFC63**	**4**	**INFC32**	**2**
0.55	0.73	**1.1**	**INFC63**	**4**	**INFC32**	**2**
0.75	1	**1.4**	**INFC63**	**6**	**INFC32**	**2**
1.1	1.5	**2.1**	**INFC63**	**6**	**INFC32**	**2**
1.5	2	**2.8**	**INFC63**	**10**	**INFC32**	**4**
2.2	2.9	**3.7**	**INFC63**	**10**	**INFC32**	**4**
3	4	**4.9**	**INFC63**	**16**	**INFC32**	**6**
4	5.3	**6.5**	**INFC63**	**20**	**INFC32**	**8**
5.5	7.3	**8.7**	**INFC63**	**25**	**INFC32**	**10**
7.5	10	**12**	**INFC63**	**32**	**INFC32**	**12**
10	13	**15**	**INFC63**	**32**	**INFC32**	**16**
11	15	**17**	**INFC63**	**40**	**INFC32**	**20**
15	20	**22**	**INFC63**	**50**	**INFC32**	**25**
18.5	25	**27**	**INFC63**	**63**	**INFC63**	**32**
22	29	**31**	**INFC63**	**80**	**INFC63**	**40**
30	40	**43**	**-**	**100**	**INFC63**	**50**
37	49	**50**	**-**	**100**	**INFC63**	**63**
45	60	**61**	**-**	**125**	**INFC63**	**63**
55	73	**74**	**-**	**160**	**INFC125**	**80**

660/690V						
P(kW)	(HP)	In (A)	Fupact	gG	Fupact	aM
0.37	0.49	**0.7**	**INFC63**	**2**	**INFC32**	**2**
0.55	0.73	**0.9**	**INFC63**	**4**	**INFC32**	**2**
0.75	1	**1.1**	**INFC63**	**4**	**INFC32**	**2**
1.1	1.5	**1.6**	**INFC63**	**6**	**INFC32**	**2**
1.5	2	**2.2**	**INFC63**	**6**	**INFC32**	**4**
2.2	2.9	**2.8**	**INFC63**	**10**	**INFC32**	**4**
3	4	**3.8**	**INFC63**	**10**	**INFC32**	**6**
4	5.3	**4.9**	**INFC63**	**16**	**INFC32**	**6**
5.5	7.3	**6.7**	**INFC63**	**20**	**INFC32**	**8**
7.5	10	**9**	**INFC63**	**25**	**INFC32**	**10**
10	13	**12**	**INFC63**	**32**	**INFC32**	**12**
11	15	**13**	**INFC63**	**32**	**INFC32**	**16**
15	20	**17**	**INFC63**	**40**	**INFC32**	**20**
18.5	25	**22**	**INFC63**	**50**	**INFC32**	**25**
22	29	**24**	**INFC63**	**50**	**INFC63**	**25**
30	40	**32**	**INFC63**	**80**	**INFC63**	**32**
37	49	**39**	**INFC63**	**80**	**INFC63**	**40**
45	60	**47**	**-**	**100**	**INFC63**	**50**
55	73	**57**	**-**	**125**	**INFC63**	**63**
75	100	**77**	**-**	**160**	**INFC125**	**80**

Protection of motor circuits with DIN fuses

Selection tables for Fupact devices and associated DIN fuse-links

Example:
A 75 kW motor supplied at 500 V is protected by:
- 200 A gG fuse-links
- 125 A aM fuse-links.

Both types of fuse-links may be mounted on a Fupact INFD200 or higher.
See the grey section in the table below.

230/240 V

P(kW)	(HP)	In (A)	Fupact	gG	Fupact	aM
0.37	0.49	**1.9**	**INFD40**	**6**	**INFD40**	**2**
0.55	0.73	**2.7**	**INFD40**	**10**	**INFD40**	**4**
0.75	1	**3.6**	**INFD40**	**16**	**INFD40**	**4**
1.1	1.5	**4.5**	**INFD40**	**16**	**INFD40**	**6**
1.5	2	**6.3**	**INFD40**	**20**	**INFD40**	**8**
2.2	2.9	**9.0**	**INFD40**	**25**	**INFD40**	**10**
3	4	**11.7**	**INFD40**	**32**	**INFD40**	**12**
4	5.3	**15.2**	**INFD40**	**40**	**INFD40**	**16**
5.5	7.3	**19.8**	**INFD40**	**50**	**INFD40**	**20**
7.5	10	**26**	**INFD40**	**50**	**INFD40**	**32**
10	13	**34**	**INFD40**	**80**	**INFD40**	**40**
11	15	**38**	**INFD40**	**80**	**INFD40**	**40**
15	20	**51**	**INFD63**	**100**	**INFD63**	**63**
18.5	25	**63**	**INFD160**	**160**	**INFD160**	**80**
22	29	**74**	**INFD160**	**160**	**INFD160**	**80**
30	40	**99**	**INFD200**	**200**	**INFD160**	**100**
37	49	**125**	**INFD200**	**250**	**INFD160**	**125**
45	60	**144**	**INFD200**	**250**	**INFD160**	**160**
55	73	**177**	**INFD250**	**355**	**INFD200**	**200**
75	100	**245**	**INFD400**	**400**	**INFD400**	**250**
90	120	**296**	**INFD400**	**450**	**INFD400**	**315**
110	147	**354**	**INFD630**	**630**	**INFD400**	**355**
132	176	**408**	**INFD630**	**800**	**INFD630**	**450**
150	200	**484**	**INFD630**	**800**	**INFD630**	**500**
160	213	**496**	**INFD630**	**800**	**INFD630**	**500**
200	267	**646**	**-**	**-**	**INFD800**	**800**

380/400V

P(kW)	(HP)	In (A)	Fupact	gG	Fupact	aM
0.37	0.49	**1.1**	**INFD40**	**4**	**INFD40**	**2**
0.55	0.73	**1.6**	**INFD40**	**6**	**INFD40**	**2**
0.75	1	**2.2**	**INFD40**	**10**	**INFD40**	**4**
1.1	1.5	**2.7**	**INFD40**	**10**	**INFD40**	**4**
1.5	2	**3.8**	**INFD40**	**16**	**INFD40**	**4**
2.2	2.9	**5.55,5**	**INFD40**	**16**	**INFD40**	**6**
3	4	**7.1**	**INFD40**	**20**	**INFD40**	**8**
4	5.3	**9.2**	**INFD40**	**25**	**INFD40**	**10**
5.5	7.3	**12**	**INFD40**	**32**	**INFD40**	**12**
7.5	10	**16**	**INFD40**	**40**	**INFD40**	**16**
10	13	**21**	**INFD40**	**50**	**INFD40**	**25**
11	15	**23**	**INFD40**	**50**	**INFD40**	**25**
15	20	**31**	**INFD40**	**80**	**INFD40**	**32**
18.5	25	**38**	**INFD40**	**80**	**INFD40**	**40**
22	29	**45**	**INFD63**	**100**	**INFD63**	**50**
30	40	**60**	**INFD63**	**125**	**INFD63**	**63**
37	49	**75**	**INFD160**	**160**	**INFD160**	**80**
45	60	**87**	**INFD200**	**200**	**INFD160**	**100**
55	73	**107**	**INFD200**	**200**	**INFD160**	**125**
75	100	**149**	**INFD200**	**250**	**INFD160**	**160**
90	120	**179**	**INFD250**	**355**	**INFD200**	**200**
110	147	**214**	**INFD400**	**400**	**INFD250**	**250**
132	176	**247**	**INFD400**	**450**	**INFD250**	**250**
150	200	**293**	**INFD400**	**500**	**INFD400**	**315**
160	213	**300**	**INFD630**	**630**	**INFD400**	**315**
200	267	**391**	**INFD630**	**800**	**INFD400**	**400**
240	320	**467**	**INFD630**	**800**	**INFD630**	**500**
280	373	**533**	**-**	**-**	**INFD630**	**630**
300	400	**573**	**-**	**-**	**INFD630**	**630**
320	427	**588**	**-**	**-**	**INFD630**	**630**

415 V

P(kW)	(HP)	In (A)	Fupact	gG	Fupact	aM
0.37	0.49	**1.1**	**INFD40**	**4**	**INFD40**	**2**
0.55	0.73	**1.5**	**INFD40**	**6**	**INFD40**	**2**
0.75	1	**2**	**INFD40**	**10**	**INFD40**	**2**
1.1	1.5	**2.5**	**INFD40**	**10**	**INFD40**	**4**
1.5	2	**3.5**	**INFD40**	**16**	**INFD40**	**4**
2.2	2.9	**5**	**INFD40**	**16**	**INFD40**	**6**
3	4	**6.5**	**INFD40**	**20**	**INFD40**	**8**
4	5.3	**8.4**	**INFD40**	**25**	**INFD40**	**10**
5.5	7.3	**11**	**INFD40**	**32**	**INFD40**	**12**
7.5	10	**14**	**INFD40**	**40**	**INFD40**	**16**
10	13	**19**	**INFD40**	**50**	**INFD40**	**25**
11	15	**21**	**INFD40**	**50**	**INFD40**	**25**
15	20	**28**	**INFD40**	**63**	**INFD40**	**32**
18.5	25	**35**	**INFD40**	**80**	**INFD40**	**40**
22	29	**41**	**INFD63**	**80**	**INFD63**	**50**
30	40	**55**	**INFD63**	**100**	**INFD63**	**63**
37	49	**69**	**INFD160**	**160**	**INFD160**	**80**
45	60	**80**	**INFD160**	**160**	**INFD160**	**80**
55	73	**98**	**INFD200**	**200**	**INFD160**	**100**
75	100	**136**	**INFD200**	**250**	**INFD160**	**160**
90	120	**164**	**INFD250**	**315**	**INFD200**	**200**
110	147	**196**	**INFD250**	**355**	**INFD200**	**200**
132	176	**226**	**INFD400**	**400**	**INFD250**	**250**
150	200	**268**	**INFD400**	**450**	**INFD400**	**315**
160	213	**275**	**INFD400**	**500**	**INFD400**	**315**
200	267	**358**	**INFD630**	**630**	**INFD400**	**400**
240	320	**428**	**INFD630**	**800**	**INFD630**	**450**
280	373	**488**	**INFD630**	**800**	**INFD630**	**500**
300	400	**525**	**-**	**-**	**INFD630**	**630**
320	427	**538**	**-**	**-**	**INFD630**	**630**
355	473	**605**	**-**	**-**	**INFD630**	**630**
375	500	**610**	**-**	**-**	**INFD630**	**630**

440 V

P(kW)	(HP)	In (A)	Fupact	gG	Fupact	aM
0.37	0.49	**1**	**INFD40**	**4**	**INFD40**	**2**
0.55	0.73	**1.4**	**INFD40**	**6**	**INFD40**	**2**
0.75	1	**1.9**	**INFD40**	**6**	**INFD40**	**2**
1.1	1.5	**2.4**	**INFD40**	**10**	**INFD40**	**4**
1.5	2	**3.3**	**INFD40**	**10**	**INFD40**	**4**
2.2	2.9	**4.7**	**INFD40**	**16**	**INFD40**	**6**
3	4	**6.1**	**INFD40**	**16**	**INFD40**	**6**
4	5.3	**7.9**	**INFD40**	**20**	**INFD40**	**8**
5.5	7.3	**10.4**	**INFD40**	**25**	**INFD40**	**10**
7.5	10	**14**	**INFD40**	**40**	**INFD40**	**16**
10	13	**18**	**INFD40**	**50**	**INFD40**	**20**
11	15	**20**	**INFD40**	**50**	**INFD40**	**20**
15	20	**26**	**INFD40**	**63**	**INFD40**	**32**
18.5	25	**33**	**INFD40**	**80**	**INFD40**	**40**
22	29	**39**	**INFD40**	**80**	**INFD40**	**40**
30	40	**52**	**INFD63**	**100**	**INFD63**	**50**
37	49	**65**	**INFD160**	**160**	**INFD160**	**80**
45	60	**75**	**INFD160**	**160**	**INFD160**	**80**
55	73	**92**	**INFD160**	**200**	**INFD160**	**100**
75	100	**128**	**INFD200**	**250**	**INFD160**	**125**
90	120	**155**	**INFD250**	**315**	**INFD160**	**160**
110	147	**185**	**INFD250**	**355**	**INFD200**	**200**
132	176	**213**	**INFD400**	**400**	**INFD250**	**250**
150	200	**253**	**INFD400**	**450**	**INFD400**	**250**
160	213	**259**	**INFD400**	**500**	**INFD400**	**315**
200	267	**338**	**INFD630**	**630**	**INFD400**	**355**
240	320	**404**	**INFD630**	**800**	**INFD630**	**400**
280	373	**460**	**INFD630**	**800**	**INFD630**	**450**
300	400	**495**	**INFD630**	**800**	**INFD630**	**500**
320	427	**507**	**-**	**-**	**INFD630**	**500**
355	473	**560**	**-**	**-**	**INFD630**	**630**
375	500	**575**	**-**	**-**	**INFD630**	**630**
400	533	**611**	**-**	**-**	**INFD630**	**630**

500 V

P(kW)	(HP)	In (A)	Fupact	gG	Fupact	aM
0.37	0.49	**0.9**	**INFD40**	**4**	**INFD40**	**2**
0.55	0.73	**1.2**	**INFD40**	**4**	**INFD40**	**2**
0.75	1	**1.5**	**INFD40**	**6**	**INFD40**	**2**
1.1	1.5	**2.2**	**INFD40**	**6**	**INFD40**	**2**
1.5	2	**2.9**	**INFD40**	**10**	**INFD40**	**4**
2.2	2.9	**3.9**	**INFD40**	**10**	**INFD40**	**4**
3	4	**5.2**	**INFD40**	**16**	**INFD40**	**6**
4	5.3	**6.8**	**INFD40**	**20**	**INFD40**	**8**
5.5	7.3	**9.2**	**INFD40**	**25**	**INFD40**	**10**
7.5	10	**12**	**INFD40**	**32**	**INFD40**	**12**
10	13	**16**	**INFD40**	**32**	**INFD40**	**16**
11	15	**18**	**INFD40**	**40**	**INFD40**	**20**
15	20	**23**	**INFD40**	**50**	**INFD40**	**25**
18.5	25	**28**	**INFD40**	**63**	**INFD40**	**32**
22	29	**33**	**INFD40**	**80**	**INFD40**	**40**
30	40	**45**	**INFD63**	**100**	**INFD63**	**50**
37	49	**53**	**INFD63**	**100**	**INFD160**	**63**
45	60	**64**	**INFD160**	**160**	**INFD160**	**80**
55	73	**78**	**INFD160**	**160**	**INFD160**	**80**
75	100	**106**	**INFD200**	**200**	**INFD160**	**125**
90	120	**130**	**INFD200**	**250**	**INFD160**	**160**
110	147	**155**	**INFD250**	**315**	**INFD200**	**160**
132	176	**187**	**INFD250**	**355**	**INFD250**	**200**
150	200	**211**	**INFD400**	**400**	**INFD400**	**250**
160	213	**225**	**INFD400**	**400**	**INFD400**	**250**
200	267	**280**	**INFD400**	**450**	**INFD400**	**315**
240	320	**338**	**INFD630**	**630**	**INFD630**	**355**
280	373	**386**	**INFD630**	**800**	**INFD630**	**400**
300	400	**415**	**INFD630**	**800**	**INFD630**	**450**
320	427	**435**	**INFD630**	**800**	**INFD630**	**450**
355	473	**488**	**INFD630**	**800**	**INFD630**	**500**
375	500	**515**	**-**	**-**	**INFD630**	**500**
400	533	**552**	**-**	**-**	**INFD630**	**630**
450	600	**630**	**-**	**-**	**INFD630**	**630**

Protection of motor circuits with DIN fuses

525/550 V						
P(kW)	(HP)	In (A)	Fupact	gG	Fupact	aM
0.37	0.49	**0.8**	**INFD40**	**4**	**INFD40**	**2**
0.55	0.73	**1.1**	**INFD40**	**4**	**INFD40**	**2**
0.75	1	**1.4**	**INFD40**	**6**	**INFD40**	**2**
1.1	1.5	**2.1**	**INFD40**	**6**	**INFD40**	**2**
1.5	2	**2.8**	**INFD40**	**10**	**INFD40**	**4**
2.2	2.9	**3.7**	**INFD40**	**10**	**INFD40**	**4**
3	4	**4.9**	**INFD40**	**16**	**INFD40**	**6**
4	5.3	**6.5**	**INFD40**	**20**	**INFD40**	**8**
5.5	7.3	**8.7**	**INFD40**	**25**	**INFD40**	**10**
7.5	10	**12**	**INFD40**	**32**	**INFD40**	**12**
10	13	**15**	**INFD40**	**32**	**INFD40**	**16**
11	15	**17**	**INFD40**	**40**	**INFD40**	**20**
15	20	**22**	**INFD40**	**50**	**INFD40**	**25**
18.5	25	**27**	**INFD40**	**63**	**INFD40**	**32**
22	29	**31**	**INFD63**	**80**	**INFD40**	**40**
30	40	**43**	**INFD160**	**100**	**INFD63**	**50**
37	49	**50**	**INFD160**	**100**	**INFD63**	**63**
45	60	**61**	**INFD160**	**125**	**INFD63**	**63**
55	73	**74**	**INFD200**	**160**	**INFD160**	**80**
75	100	**101**	**INFD250**	**200**	**INFD160**	**100**
90	120	**123**	**INFD400**	**250**	**INFD160**	**125**
110	147	**147**	**INFD400**	**250**	**INFD250**	**160**
132	176	**178**	**INFD630**	**355**	**INFD250**	**200**
150	200	**200**	**INFD630**	**400**	**INFD250**	**200**
160	213	**214**	**INFD630**	**400**	**INFD250**	**250**
200	267	**266**	**INFD630**	**450**	**INFD400**	**315**
240	320	**321**	**-**	**-**	**INFD400**	**355**
280	373	**366**	**-**	**-**	**INFD400**	**400**
300	400	**394**	**-**	**-**	**INFD400**	**400**
320	427	**413**	**-**	**-**	**INFD630**	**450**
355	473	**464**	**-**	**-**	**INFD630**	**500**
375	500	**490**	**-**	**-**	**INFD630**	**500**

660/690V						
P(kW)	(HP)	In (A)	Fupact	gG	Fupact	aM
0.37	0.49	**0.7**	**INFD40**	**2**	**INFD40**	**2**
0.55	0.73	**0.9**	**INFD40**	**4**	**INFD40**	**2**
0.75	1	**1.1**	**INFD40**	**4**	**INFD40**	**2**
1.1	1.5	**1.6**	**INFD40**	**6**	**INFD40**	**2**
1.5	2	**2.2**	**INFD40**	**6**	**INFD40**	**4**
2.2	2.9	**2.8**	**INFD40**	**10**	**INFD40**	**4**
3	4	**3.8**	**INFD40**	**10**	**INFD40**	**6**
4	5.3	**4.9**	**INFD40**	**16**	**INFD40**	**6**
5.5	7.3	**6.7**	**INFD40**	**20**	**INFD40**	**8**
7.5	10	**9**	**INFD40**	**25**	**INFD40**	**10**
10	13	**12**	**INFD40**	**32**	**INFD40**	**12**
11	15	**13**	**INFD40**	**32**	**INFD40**	**16**
15	20	**17**	**INFD40**	**40**	**INFD40**	**20**
18.5	25	**22**	**INFD40**	**50**	**INFD40**	**25**
22	29	**24**	**INFD40**	**50**	**INFD40**	**25**
30	40	**32**	**INFD63**	**80**	**INFD40**	**32**
37	49	**39**	**INFD63**	**80**	**INFD63**	**40**
45	60	**47**	**INFD160**	**100**	**INFD63**	**50**
55	73	**57**	**INFD160**	**125**	**INFD63**	**63**
75	100	**77**	**INFD200**	**160**	**INFD160**	**80**
90	120	**93**	**INFD250**	**200**	**INFD160**	**100**
110	147	**113**	**INFD250**	**250**	**INFD160**	**125**
132	176	**134**	**INFD250**	**250**	**INFD250**	**160**
150	200	**152**	**INFD400**	**315**	**INFD250**	**160**
160	213	**162**	**INFD400**	**315**	**INFD250**	**160**
200	267	**203**	**INFD630**	**400**	**INFD250**	**200**
240	320	**244**	**INFD630**	**450**	**INFD250**	**250**
280	373	**284**	**INFD630**	**500**	**INFD400**	**315**
300	400	**305**	**INFD630**	**500**	**INFD400**	**315**
320	427	**325**	**-**	**-**	**INFD630**	**355**
355	473	**354**	**-**	**-**	**INFD630**	**355**
375	500	**374**	**-**	**-**	**INFD630**	**400**
400	533	**400**	**-**	**-**	**INFD630**	**400**
450	600	**455**	**-**	**-**	**INFD630**	**450**

Type 2 coordination (IEC 60947-4-1) 380/415 V

Schneider Electric switch-disconnector fuses and contactors

Performance: Ue = 380/415 V - "Iq" 100 kA

Starting Class 10 A/10

Motors				Switch-fuse [1]	Fuse-link type		Contactors [2]	Thermal relays	
P (kW)	I (A) 380 V	I (A) 415 V	Ie Max (A)	Type	gG rating (A)	aM rating (A)	Type	Type	Irth (A)
0.37	1.2	1.1	1.6	INFC32 or INFD40	4	2	LC1-D09	LRD 06	1/1.6
0.55	1.6	1.5	1.6	INFC32 or INFD40	6	2	LC1-D09	LRD 06	1/1.6
0.75	2	1.8	2.5	INFC32 or INFD40	10	4	LC1-D09	LRD 07	1.6/2.5
1.1	2.8	2.6	2.5	INFC32 or INFD40	10	4	LC1-D09	LRD 07	1.6/2.5
1.5	3.7	3.4	4	INFC32 or INFD40	16	4	LC1-D09	LRD 08	2.5/4
2.2	5.3	4.8	6	INFC32 or INFD40	16	6	LC1-D09	LRD 10	4/6
3	7	6.5	8	INFC32 or INFD40	20	8	LC1-D09	LRD 12	5.5/8
4	9	8.2	10	INFC32 or INFD40	25	10	LC1-D12	LRD 14	7/10
5.5	12	11	12	INFC32 or INFD40	32	12	LC1-D12	LRD 16	9/13
7.5	16	14	16	INFC32 or INFD40	40	16	LC1-D18	LRD 21	12/18
10	21	19	24	INFC32 or INFD40	50	25	LC1-D25	LRD 22	16/24
11	23	21	24	INFC32 or INFD40	50	25	LC1-D25	LRD 22	16/24
15	30	28	32	INFC32 or INFD40 INFC63 or INFD40	- 63	32 -	LC1-D32	LRD 32	23/32
18.5	37	34	40	INFC50 or INFD40 INFC63 or INFD40	- 80	40 -	LC1-D40A	LRD 340	30/40
22	43	40	50	INFC50 or INFD63 INFC63 or INFD63	- 100	50 -	LC1-D50A	LRD 350	37/50
30	59	55	63	INFC63 or INFD63	125	63	LC1-D65A	LRD 365	48/65
37	72	66	80	INFC125 or INFD160	160	80	LC1-D80	LRD 3363	63/80
45	85	80	100	INFC125 or INFD160 INFD200	- 200	100 -	LC1-D115	LR9-D53 67	60/100
55	105	100	115	INFC125 or INFD160 INFD200	- 200	125 -	LC1-D115	LR9-D53 69	90/150
75	140	135	150	INFD160 INFD200	- 250	160 -	LC1-D150	LR9-D53 69	90/150
90	170	160	185	INFD200 INFD250	- 355	200 -	LC1-F265	LR9-F53 71	132/220
110	210	200	220	INFD250 INFD400	- 400	250 -	LC1-F330	LR9-F53 71	132/220
132	250	230	250	INFD250 INFD400	- 450	250 -	LC1-F330	LR9-F73 75	200/330
160	300	270	265	INFD400 INFD630	- 630	315 -	LC1-F400	LR9-F73 75	200/330
200	380	361	400	INFD400 INFD630	- 800	400 -	LC1-F500	LR9-F73 79	300/500
250	460	430	500	INFD630	800	500	LC1-F500	LR9-F73 79	300/500
280	520	475	630	INFD630	800	630	LC1-F630	LR9-F73 81	380/630
300	565	500	630	INFD630	-	630	LC1-F630	LR9-F73 81	380/630
335	610	560	630	INFD630	-	630	LC1-F630	LR9-F73 81	380/630
355	630	590	630	INFD630	-	800	LC1-F630	LR9-F73 81	380/630

[1] INFC for NFC cylindrical ferrule / INFD for NH DIN type fuse-link.
[2] Reversers: replace LC1 with LC2; star-delta starter: replace LC1 with LC3.

Type 2 coordination (IEC 60947-4-1) 380/415 V

Schneider Electric switch-disconnector fuses and contactors

Performance: Ue = 380/415 V - "Iq" 100 kA

Starting Adjustable class 10 A to 30 [4]

Motors				Switch-fuse [1]	Fuse-link type		Contactors [2]	Thermal relays	
P (kW)	I (A) 380 V	I (A) 415 V	Ie Max (A)	Type	gG rating (A)	aM rating (A)	Type	Type	Irth (A)
0.37	1.2	1.1	2	INFC32 or INFD40	4	2	LC1-D09	LTM R08	0.4/8 [3]
0.55	1.6	1.5	2	INFC32 or INFD40	6	2	LC1-D09	LTM R08	0.4/8 [3]
0.75	2	1.8	4	INFC32 or INFD40	10	4	LC1-D09	LTM R08	0.4/8 [3]
1.1	2.8	2.6	4	INFC32 or INFD40	10	4	LC1-D09	LTM R08	0.4/8 [3]
1.5	3.7	3.4	4	INFC32 or INFD40	16	4	LC1-D09	LTM R08	0.4/8 [3]
2.2	5.3	4.8	6	INFC32 or INFD40	16	6	LC1-D09	LTM R08	0.4/8 [3]
3	7	6.5	8	INFC32 or INFD40	20	8	LC1-D09	LTM R08	0.4/8 [3]
4	9	8.2	10	INFC32 or INFD40	25	10	LC1-D12	LTM R27	1.35/27 [3]
5.5	12	11	12	INFC32 or INFD40	32	12	LC1-D18	LTM R27	1.35/27 [3]
7.5	16	14	16	INFC32 or INFD40	40	16	LC1-D25	LTM R27	1.35/27 [3]
10	21	19	25	INFC32 or INFD40	50	25	LC1-D32	LTM R27	1.35/27 [3]
11	23	21	25	INFC32 or INFD40	50	25	LC1-D32	LTM R27	1.35/27 [3]
15	30	28	32	INFC32 or INFD40 INFC63 or INFD40	- 80	32 -	LC1-D40A	LTM R100	5/100 [3]
18.5	37	34	40	INFC50 or INFD40 INFC63 or INFD40	- 80	40 -	LC1-D40A	LTM R100	5/100 [3]
22	43	40	50	INFC50 or INFD63 INFC63 or INFD63	- 100	50 -	LC1-D50A	LTM R100	5/100 [3]
30	59	55	63	INFC63 or INFD63	125	63	LC1-D65A	LTM R100	5/100 [3]
37	72	66	80	INFC125 or INFD160	160	80	LC1-D80	LTM R100	5/100 [3]
45	85	80	80	INFC125 or INFD160 INFD200	- 200	100 -	LC1-D115	LTM R100	5/100 [3]
55	105	100	115	INFC125 or INFD160 INFD200	- 200	125 -	LC1-D115	LTM R08	On CT
75	140	135	150	INFD160 INFD200	- 250	160 -	LC1-D150	LTM R08	On CT
90	170	160	185	INFD200 INFD250	- 355	200 -	LC1-D265	LTM R08	On CT
110	210	200	225	INFD250 INFD400	- 400	250 -	LC1-F330	LTM R08	On CT
132	250	230	250	INFD250 INFD400	- 450	250 -	LC1-F330	LTM R08	On CT
160	300	270	315	INFD400 INFD630	- 630	315 -	LC1-F400	LTM R08	On CT
200	380	361	400	INFD400 INFD630	- 800	400 -	LC1-F500	LTM R08	On CT
250	460	430	500	INFD630	800	500	LC1-F500	LTM R08	On CT
280	520	475	630	INFD630	800	630	LC1-F630	LTM R08	On CT
300	565	500	630	INFD630	-	630	LC1-F630	LTM R08	On CT
335	610	560	630	INFD630	-	630	LC1-F630	LTM R08	On CT
355	630	590	630	INFD630	-	800	LC1-F630	LTM R08	On CT

[1] INFC for NFC cylindric ferrule / INFD for NH DIN type fuse-link.
[2] Reversers: replace LC1 with LC2; star-delta starter: replace LC1 with LC3.
[3] Currents transformers built-in electronic relays.
[4] For use with overload relay setted in class 20 and 30, apply respectively a derating of 20 % and 37 %.

Type 2 coordination (IEC 60947-4-1) 440 V

Schneider Electric switch-disconnector fuses and contactors

Performance: Ue = 440 V [3] - "Iq" 100 kA

Starting Class 10 A/10

Motors			Switch-fuse [1]	Fuse-link type		Contactors [2]	Thermal relays	
P (kW)	I (A) 440 V	Ie Max (A)	Type	gG rating (A)	aM rating (A)	Type	Type	Irth (A)
0.37	1	1.6	INFC32 or INFD40	4	2	LC1-D09	LRD 06	1/1.6
0.55	1.4	1.6	INFC32 or INFD40	6	2	LC1-D09	LRD 06	1/1.6
0.75	1.9	2.5	INFC32 or INFD40	6	2	LC1-D09	LRD 07	1.6/2.5
1.1	2.4	2.5	INFC32 or INFD40	10	4	LC1-D09	LRD 07	1.6/2.5
1.5	3.3	4	INFC32 or INFD40	10	4	LC1-D09	LRD 08	2.5/4
2.2	4.7	6	INFC32 or INFD40	16	6	LC1-D09	LRD 10	4/6
3	6.1	6	INFC32 or INFD40	16	6	LC1-D09	LRD 10	4/6
4	7.9	8	INFC32 or INFD40	20	8	LC1-D09	LRD 12	5.5/8
5.5	10.4	10	INFC32 or INFD40	25	10	LC1-D12	LRD 16	9/13
7.5	14	16	INFC32 or INFD40	40	16	LC1-D18	LRD 21	12/18
11	20	20	INFC32 or INFD40 INFC50 or INFD40	- 50	20 -	LC1-D25	LRD 22	16/24
15	26	32	INFC32 or INFD40 INFC63 or INFD40	- 63	32 -	LC1-D32	LRD 32	23/32
18.5	33	40	INFC50 or INFD40 INFC63 or INFD40	- 80	40 -	LC1-D40A	LRD 340	30/40
22	39	50	INFC50 or INFD63 INFC63 or INFD63	- 100	50 -	LC1-D50A	LRD 340	30/40
30	52	63	INFC50 or INFD63 INFC63 or INFD63	- 125	63 -	LC1-D65A	LRD 365	48/65
37	65	65	INFC125 or INFD160 INFD160	- 160	80 -	LC1-D80	LRD 3359	48/65
45	75	80	INFC125 or INFD160 INFD160	- 160	80 -	LC1-D80	LRD 3363	63/80
55	92	100	INFC125 or INFD160 INFD160	- 200	100 -	LC1-D115	LR9-D53 67	60/100
75	128	125	INFD160 INFD200	- 250	125 -	LC1-D150	LR9-D53 69	90/150
90	155	150	INFD160 INFD250	- 315	160 -	LC1-D185	LR9-D53 69	90/150
110	185	200	INFD200 INFD250	- 355	200 -	LC1-F265	LR9-F53 71	132/220
132	213	220	INFD250 INFD400	- 400	250 -	LC1-F265	LR9-F53 71	132/220
160	259	315	INFD400	500	315	LC1-F330	LR9-F73 75	200/330
200	338	330	INFD400 INFD630	- 630	355 -	LC1-F400	LR9-F73 75	200/330
250	423	400	INFD630	800	400	LC1-F500	LR9-F73 79	300/500
280	460	450	INFD630	800	450	LC1-F500	LR9-F73 79	300/500
300	495	500	INFD630	800	500	LC1-F500	LR9-F73 79	300/500
355	560	630	INFD630	-	630	LC1-F630	LR9-F73 81	380/630
375	575	630	INFD630	-	630	LC1-F630	LR9-F73 81	380/630
400	611	630	INFD630	-	800	LC1-F630	LR9-F73 81	380/630

[1] INFC for NFC cylindric ferrule / INFD for NH DIN type fuse-link.
[2] Reversers: replace LC1 with LC2; star-delta starter: replace LC1 with LC3.
[3] Valid for 480V NEMA network.

Type 2 coordination (IEC 60947-4-1) 440 V

Schneider Electric switch-disconnector fuses and contactors

Performance: Ue = 440 V [5] - "Iq" 100 kA

Starting Adjustable class 10 A to 30 [4]

Motors			Switch-fuse [1]	Fuse-link type		Contactors [2]	Thermal relays	
P (kW)	I (A) 440 V	Ie Max (A)	Type	gG rating (A)	aM rating (A)	Type	Type	Irth (A)
0.37	1	2	INFC32 or INFD40	4	2	LC1-D09	LTM R08	0.4/8 [3]
0.55	1.4	2	INFC32 or INFD40	6	2	LC1-D09	LTM R08	0.4/8 [3]
0.75	1.8	2	INFC32 or INFD40	6	2	LC1-D09	LTM R08	0.4/8 [3]
1.1	2.4	4	INFC32 or INFD40	10	4	LC1-D09	LTM R08	0.4/8 [3]
1.5	3.3	4	INFC32 or INFD40	10	4	LC1-D09	LTM R08	0.4/8 [3]
2.2	4.7	6	INFC32 or INFD40	16	6	LC1-D09	LTM R08	0.4/8 [3]
3	6.1	6	INFC32 or INFD40	16	6	LC1-D09	LTM R08	0.4/8 [3]
4	7.9	8	INFC32 or INFD40	20	8	LC1-D09	LTM R08	0.4/8 [3]
5.5	10.4	10	INFC32 or INFD40	25	10	LC1-D12	LTM R27	1.35/27 [3]
7.5	14	16	INFC32 or INFD40	40	16	LC1-D18	LTM R27	1.35/27 [3]
11	20	20	INFC32 or INFD40 INFC50 or INFD40	- 50	20 -	LC1-D25	LTM R27	1.35/27 [3]
15	26	27	INFC32 or INFD40 INFC63 or INFD40	- 63	32 -	LC1-D32	LTM R27	1.35/27 [3]
18.5	33	40	INFC50 or INFD40 INFC63 or INFD40	- 80	40 -	LC1-D40A	LTM R100	5/100 [3]
22	39	50	INFC50 or INFD63 INFC63 or INFD63	- 100	50 -	LC1-D50A	LTM R100	5/100 [3]
30	52	63	INFC50 or INFD63 INFC63 or INFD63	- 125	63 -	LC1-D63A	LTM R100	5/100 [3]
37	65	80	INFC125 or INFD160 INFD160	- 160	80 -	LC1-D80	LTM R100	5/100 [3]
45	75	80	INFC125 or INFD160 INFD160	- 160	80 -	LC1-D80	LTM R100	5/100 [3]
55	92	100	INFC125 or INFD160 INFD160	- 200	100 -	LC1-D115	LTM R100	5/100 [3]
75	128	125	INFD160 INFD200	- 250	125 -	LC1-D150	LTM R08	On CT
90	155	160	INFD160 INFD250	- 315	160 -	LC1-F185	LTM R08	On CT
110	185	200	INFD200 INFD250	- 355	200 -	LC1-F265	LTM R08	On CT
132	213	250	INFD250 INFD400	- 400	250 -	LC1-F265	LTM R08	On CT
160	259	315	INFD400	500	315	LC1-F330	LTM R08	On CT
200	338	355	INFD400 INFD630	- 630	355 -	LC1-F400	LTM R08	On CT
250	423	400	INFD630	800	400	LC1-F500	LTM R08	On CT
280	460	450	INFD630	800	450	LC1-F500	LTM R08	On CT
300	495	500	INFD630	800	500	LC1-F500	LTM R08	On CT
355	560	630	INFD630	-	630	LC1-F630	LTM R08	On CT
375	575	630	INFD630	-	630	LC1-F630	LTM R08	On CT
400	611	630	INFD630	-	800	LC1-F630	LTM R08	On CT

[1] INFC for NFC cylindric ferrule / INFD for NH DIN type fuse-link.
[2] Reversers: replace LC1 with LC2; star-delta starter: replace LC1 with LC3.
[3] Currents transformers built-in electronic relays.
[4] For use with overload relay setted in class 20 and 30, apply respectively a derating of 20 % and 37 %.
[5] Valid for 480 V NEMA network.

Type 2 coordination (IEC 60947-4-1) 500 V

Schneider Electric switch-disconnector fuses and contactors

Performance: Ue = 500 V - "Iq" 100 kA

Starting Class 10 A/10

Motors			Switch-fuse [1]	Fuse-link type		Contactors [2]	Thermal relays	
P (kW)	I (A) 500 V	Ie Max (A)	Type	gG rating (A)	aM rating (A)	Type	Type	Irth (A)
0.37	0.8	1	INFC32 or INFD40	4	2	LC1-D09	LRD 05	0.63/1
0.55	1.2	1.6	INFC32 or INFD40	4	2	LC1-D09	LRD 06	1/1.6
0.75	1.5	1.6	INFC32 or INFD40	6	2	LC1-D09	LRD 06	1/1.6
1.1	2	2	INFC32 or INFD40	6	2	LC1-D09	LRD 07	1.6/2.5
1.5	2.8	4	INFC32 or INFD40	10	4	LC1-D09	LRD 08	2.5/4
2.2	3.8	4	INFC32 or INFD40	10	4	LC1-D09	LRD 08	2.5/4
3	5	6	INFC32 or INFD40	16	6	LC1-D09	LRD 10	4/6
4	6.5	8	INFC32 or INFD40	20	8	LC1-D09	LRD 12	5.5/8
5.5	9	10	INFC32 or INFD40	25	10	LC1-D12	LRD 16	9/13
7.5	12	12	INFC32 or INFD40	32	12	LC1-D18	LRD 16	9/13
10	15	16	INFC32 or INFD40	32	16	LC1-D25	LRD 21	12/18
11	18.4	20	INFC32 or INFD40	40	20	LC1-D25	LRD 22	16/24
15	23	24	INFC32 or INFD40 INFC63 or INFD40	- 50	25 -	LC1-D32	LRD 22	16/24
18.5	28.5	32	INFC50 or INFD40 INFC63 or INFD40	- 63	32 -	LC1-D32	LRD 32	23/32
22	33	40	INFC50 or INFD40 INFC63 or INFD40	- 80	40 -	LC1-D40A	LRD 340	30/40
30	45	50	INFC63 or INFD63	100	50	LC1-D50A	LRD 350	37/50
37	55	63	INFC63 or INFD63	100	63	LC1-D65A	LRD 365	48/65
45	65	70	INFC125 or INFD160 INFD160	- 160	80 -	LC1-D80	LRD 3361	55/70
55	75	80	INFC125 or INFD160 INFD160	- 160	80 -	LC1-D115	LRD 3363	63/80
75	105	115	INFD160 INFD200	- 200	125 -	LC1-D115	LR9-D53 69	90/150
90	130	150	INFD160 INFD200	 250	160	LC1-D150	LR9-D53 69	90/150
110	156	160	INFD200 INFD250	- 315	160 -	LC1-F185	LR9-F53 71	132/220
132	187	200	INFD250	355	200	LC1-F265	LR9-F53 71	132/220
160	230	250	INFD400	400	250	LC1-F265	LR9-F73 75	200/330
200	280	315	INFD400	450	315	LC1-F400	LR9-F73 75	200/330
240	338	355	INFD630	630	355	LC1-F400	LR9-F73 79	300/500
280	386	400	INFD630	800	400	LC1-F500	LR9-F73 79	300/500
300	415	450	INFD630	800	450	LC1-F500	LR9-F73 79	300/500
320	425	450	INFD630	800	450	LC1-F500	LR9-F73 79	300/500
355	478	500	INFD630	800	500	LC1-F500	LR9-F73 79	300/500
375	482	500	INFD630	-	500	LC1-F630	LR9-F73 81	380/630
400	534	500	INFD630	-	630	LC1-F630	LR9-F73 81	380/630
450	630	630	INFD630	-	630	LC1-F630	LR9-F73 81	380/630

[1] INFC for NFC cylindric ferrule / INFD for NH DIN type fuse-link.
[2] Reversers: replace LC1 with LC2 ; start-delta starter: replace LC1 with LC3.

Note: proposed fuses are based on 4 poles 50 Hz induction motors direct on line start Id/In y 7 for 10 sec.
The choice of fuses and overload relay shall be checked according to the actual motor's caracteristic.

Type 2 coordination (IEC 60947-4-1) 500 V

Schneider Electric switch-disconnector fuses and contactors

Performance: Ue = 500 V - "Iq" 100 kA

Starting Adjustable class 10 A to 30 [4]

Motors			Switch-fuse [1]	Fuse-link type		Contactors [2]	Thermal relays	
P (kW)	I (A) 500 V	Ie Max (A)	Type	gG rating (A)	aM rating (A)	Type	Type	Irth (A)
0.37	0.8	1	INFC32 or INFD40	4	2	LC1-D09	LTM R08	0.4/8[3]
0.55	1.2	1.6	INFC32 or INFD40	4	2	LC1-D09	LTM R08	0.4/8 [3]
0.75	1.5	1.6	INFC32 or INFD40	6	2	LC1-D09	LTM R08	0.4/8 [3]
1.1	2	2	INFC32 or INFD40	6	2	LC1-D09	LTM R08	0.4/8 [3]
1.5	2.8	4	INFC32 or INFD40	10	4	LC1-D09	LTM R08	0.4/8 [3]
2.2	3.8	4	INFC32 or INFD40	10	4	LC1-D09	LTM R08	0.4/8 [3]
3	5	6	INFC32 or INFD40	16	6	LC1-D09	LTM R08	0.4/8 [3]
4	6.5	8	INFC32 or INFD40	20	8	LC1-D09	LTM R08	0.4/8 [3]
5.5	9	10	INFC32 or INFD40	25	10	LC1-D25	LTM R27	1.35/27 [3]
7.5	12	12	INFC32 or INFD40	32	12	LC1-D25	LTM R27	1.35/27 [3]
10	15	16	INFC32 or INFD40	32	16	LC1-D25	LTM R27	1.35/27 [3]
11	18.4	20	INFC32 or INFD40	40	20	LC1-D25	LTM R27	1.35/27 [3]
15	23	24	INFC32 or INFD40 INFC63 or INFD40	- 50	25 -	LC1-D32	LTM R27	1.35/27 [3]
18.5	28.5	32	INFC50 or INFD40 INFC63 or INFD40	- 63	32 -	LC1-D32	LTM R100	5/100 [3]
22	33	40	INFC50 or INFD40 INFC63 or INFD40	- 80	40 -	LC1-D40A	LTM R100	5/100 [3]
30	45	50	INFC63 or INFD63	100	50	LC1-D50A	LTM R100	5/100 [3]
37	55	63	INFC63 or INFD63	100	63	LC1-D65A	LTM R100	5/100 [3]
45	65	70	INFC125 or INFD160 INFD160	- 160	80 -	LC1-D80	LTM R100	5/100 [3]
55	75	80	INFC125 or INFD160 INFD160	- 160	80 -	LC1-D115	LTM R100	5/100 [3]
75	105	115	INFD160 INFD200	- 200	125 -	LC1-D115	LTM R08	On CT
90	130	150	INFD160 INFD200	- 250	160 -	LC1-D150	LTM R08	On CT
110	156	160	INFD200 INFD250	- 315	160 -	LC1-F185	LTM R08	On CT
132	187	200	INFD250	355	200	LC1-F265	LTM R08	On CT
160	230	250	INFD400	400	250	LC1-F265	LTM R08	On CT
200	280	315	INFD400	450	315	LC1-F400	LTM R08	On CT
240	338	355	INFD630	630	355	LC1-F400	LTM R08	On CT
280	386	400	INFD630	800	400	LC1-F500	LTM R08	On CT
300	415	450	INFD630	800	450	LC1-F500	LTM R08	On CT
320	425	450	INFD630	800	450	LC1-F500	LTM R08	On CT
355	478	500	INFD630	800	500	LC1-F500	LTM R08	On CT
375	482	500	INFD630	-	500	LC1-F630	LTM R08	On CT
400	534	500	INFD630	-	630	LC1-F630	LTM R08	On CT
450	630	630	INFD630	-	630	LC1-F630	LTM R08	On CT

[1] INFC for NFC cylindric ferrule / INFD for NH DIN type fuse-link.
[2] Reversers: replace LC1 with LC2; star-delta starter: replace LC1 with LC3.
[3] Currents transformers built-in electronic relays.
[4] For use with overload relay setted in class 20 and 30, apply respectively a derating of 20 % and 37 %.

Type 2 coordination (IEC 60947-4-1) 525/550 V

Schneider Electric switch-disconnector fuses and contactors

Performance: Ue = 525/550 V - "Iq" 80/100 kA [1]

Starting Class 10 A/10

Motors				Switch-fuse [1]	Fuse-link type		Contactors [2]	Thermal relays	
P (kW)	I (A) 525 V	I (A) 550 V	Ie Max (A)	Type	gG rating (A)	aM rating (A)	Type	Type	Irth (A)
0.37	0.8	0.8	1	INFC32 or INFD40	-	2	LC1-D09	LRD 05	0.63/1
				INFC63 or INFD40	4	-			
0.55	1.2	1.1	1.6	INFC32 or INFD40	-	2	LC1-D09	LRD 06	1/1.6
				INFC63 or INFD40	4	-			
0.75	1.5	1.4	1.6	INFC32 or INFD40	-	2	LC1-D09	LRD 06	1/1.6
				INFC63 or INFD40	6	-			
1.1	2	2.1	2.5	INFC32 or INFD40	-	2	LC1-D09	LRD 07	1.6/2.5
				INFC63 or INFD40	6	-			
1.5	2.8	2.8	4	INFC32 or INFD40	-	4	LC1-D09	LRD 08	2.5/4
				INFC63 or INFD40	10	-			
2.2	3.8	3.7	4	INFC32 or INFD40	-	4	LC1-D09	LRD 08	2.5/4
				INFC63 or INFD40	10	-			
3	5	4.9	6	INFC32 or INFD40	-	6	LC1-D09	LRD 10	4/6
				INFC63 or INFD40	16	-			
4	6.5	6.5	8	INFC32 or INFD40	-	8	LC1-D09	LRD 12	5.5/8
				INFC63 or INFD40	20	-			
5.5	9	8.7	10	INFC32 or INFD40	-	10	LC1-D25	LRD 16	9/13
				INFC63 or INFD40	25	-			
7.5	12	11.8	12	INFC32 or INFD40	-	12	LC1-D25	LRD 16	9/13
				INFC63 or INFD40	32	-			
10	15	15.2	16	INFC32 or INFD40	-	16	LC1-D25	LRD 21	12/18
				INFC63 or INFD40	32	-			
11	18.4	16.7	24	INFC32 or INFD40	-	20	LC1-D25	LRD 22	16/24
				INFC63 or INFD40	40	-			
15	23	21.9	24	INFC32 or INFD40	-	25	LC1-D32	LRD 22	16/24
				INFC63 or INFD40	50	-			
18.5	28.5	26.6	32	INFC63 or INFD40	63	32	LC1-D32	LRD 32	23/32
22	33	31	40	INFC63 or INFD40	-	40	LC1-D40A	LRD 340	30/40
				INFC63 or INFD63	80	-			
30	45	43	50	INFC63 or INFD63	-	50	LC1-D50A	LRD 350	37/50
				INFD160	100	-			
37	55	50	63	INFC63 or INFD63	-	63	LC1-D65A	LRD 365	48/65
				INFD160	100	-			
45	65	61	70	INFC63 or INFD63	-	63	LC1-D80	LRD 3361	55/70
				INFD160	125	-			
55	75	74	80	INFC63 or INFD160	-	80	LC1-D115	LRD 3363	63/80
				INFD200	160	-			
75	105	101	115	INFD160	-	100	LC1-D115	LR9-D53 69	90/150
				INFD250	200	-			
90	130	123	125	INFD160	-	125	LC1-D150	LR9-D53 69	90/150
				INFD400	250	-			
110	156	147	160	INFD250	-	160	LC1-F185	LR9-F53 71	132/220
				INFD400	250	-			
132	187	178	200	INFD250	-	200	LC1-F265	LR9-F53 71	132/220
				INFD630	355	-			
160	214	204	250	INFD250	-	250	LC1-F265	LR9-F73 75	200/330
				INFD630	400	-			
200	266	254	315	INFD400	-	315	LC1-F400	LR9-F73 75	200/330
				INFD630	450	-			
240	321	307	355	INFD400	-	355	LC1-F400	LR9-F73 79	300/500
280	366	350	400	INFD400	-	400	LC1-F500	LR9-F73 79	300/500
300	394	376	400	INFD400	-	400	LC1-F500	LR9-F73 79	300/500
320	413	394	450	INFD630	-	450	LC1-F500	LR9-F73 79	300/500
355	464	443	500	INFD630	-	500	LC1-F500	LR9-F73 79	300/500
375	490	467	500	INFD630	-	500	LC1-F630	LR9-F73 81	380/630

[1] Coordination chart built with 690 V fuse-links (80 kA for NFC fuse-links, 100 kA for DIN fuse-link).
[2] INFC for NFC cylindric ferrule / INFD for NH DIN type fuse-link.
[3] Reversers: replace LC1 with LC2; star-delta starter: replace LC1 with LC3.

Type 2 coordination (IEC 60947-4-1) 525/550 V

Schneider Electric switch-disconnector fuses and contactors

Performance: Ue = 525/550 V - "Iq" 80/100 kA [1]

Starting Adjustable class 10 A to 30 [4]

Motors				Switch-fuse [1]	Fuse-link type		Contactors [2]	Thermal relays	
P (kW)	I (A) 525 V	I (A) 550 V	Ie Max (A)	Type	gG rating (A)	aM rating (A)	Type	Type	Irth (A)
0.37	0.8	0.8	2	INFC32 or INFD40	-	2	LC1-D09	LTM R08	0.4/8 [5]
				INFC63 or INFD40	4	-			
0.55	1.2	1.1	2	INFC32 or INFD40	-	2	LC1-D09	LTM R08	0.4/8 [5]
				INFC63 or INFD40	4	-			
0.75	1.5	1.4	2	INFC32 or INFD40	-	2	LC1-D09	LTM R08	0.4/8 [5]
				INFC63 or INFD40	6	-			
1.1	2	2.1	2	INFC32 or INFD40	-	2	LC1-D09	LTM R08	0.4/8 [5]
				INFC63 or INFD40	6	-			
1.5	2.8	2.8	4	INFC32 or INFD40	-	4	LC1-D09	LTM R08	0.4/8 [5]
				INFC63 or INFD40	10	-			
2.2	3.8	3.7	4	INFC32 or INFD40	-	4	LC1-D09	LTM R08	0.4/8 [5]
				INFC63 or INFD40	10	-			
3	5	4.9	6	INFC32 or INFD40		6	LC1-D09	LTM R08	0.4/8 [5]
				INFC63 or INFD40	16	-			
4	6.5	6.5	8	INFC32 or INFD40	-	8	LC1-D09	LTM R08	0.4/8 [5]
				INFC63 or INFD40	20	-			
5.5	9	8.7	10	INFC32 or INFD40	-	10	LC1-D25	LTM R27	1.35/27 [5]
				INFC63 or INFD40	25	-			
7.5	12	11.8	12	INFC32 or INFD40	-	12	LC1-D25	LTM R27	1.35/27 [5]
				INFC63 or INFD40	32	-			
10	15	15.2	16	INFC32 or INFD40	-	16	LC1-D25	LTM R27	1.35/27 [5]
				INFC63 or INFD40	32	-			
11	18.4	16.7	20	INFC32 or INFD40	-	20	LC1-D25	LTM R27	1.35/27 [5]
				INFC63 or INFD40	40	-			
15	23	21.9	25	INFC32 or INFD40	-	25	LC1-D32	LTM R27	1.35/27 [5]
				INFC63 or INFD40	50	-			
18.5	28.5	26.6	32	INFC63 or INFD40	63	32	LC1-D32	LTM R100	5/100 [5]
22	33	31	40	INFC63 or INFD40	-	40	LC1-D40A	LTM R100	5/100 [5]
				INFC63 or INFD63	80	-			
30	45	43	50	INFC63 or INFD63	-	50	LC1-D50A	LTM R100	5/100 [5]
				INFD160	100	-			
37	55	50	63	INFC63 or INFD63	-	63	LC1-D65A	LTM R100	5/100 [5]
				INFD160	100	-			
45	65	61	63	INFC63 or INFD63	-	63	LC1-D80	LTM R100	5/100 [5]
				INFD160	125	-			
55	75	74	80	INFC63 or INFD160	-	80	LC1-D115	LTM R100	5/100 [5]
				INFD200	160	-			
75	105	101	100	INFD160	-	100	LC1-D115	LTM R08	On CT
				INFD250	200	-			
90	130	123	125	INFD160	-	125	LC1-D150	LTM R08	On CT
				INFD400	250	-			
110	156	147	160	INFD250	-	160	LC1-F185	LTM R08	On CT
				INFD400	250	-			
132	187	178	200	INFD250	-	200	LC1-F265	LTM R08	On CT
				INFD630	355	-			
160	214	204	250	INFD250	-	250	LC1-F265	LTM R08	On CT
				INFD630	400	-			
200	266	254	315	INFD400	-	315	LC1-F400	LTM R08	On CT
				INFD630	450	-			
240	321	307	355	INFD400	-	355	LC1-F400	LTM R08	On CT
280	366	350	400	INFD400	-	400	LC1-F500	LTM R08	On CT
300	394	376	400	INFD400	-	400	LC1-F500	LTM R08	On CT
320	413	394	450	INFD630	-	450	LC1-F500	LTM R08	On CT
355	464	443	500	INFD630	-	500	LC1-F500	LTM R08	On CT
375	490	467	500	INFD630	-	500	LC1-F630	LTM R08	On CT

[1] Coordination chart built with 690 V fuse-links (80 kA for NFC fuse-links, 100 kA for DIN fuse-link).
[2] INFC for NFC cylindric ferrule / INFD for NH DIN type fuse-link.
[3] Reversers: replace LC1 with LC2; star-delta starter: replace LC1 with LC3.
[4] For use with overload relay setted in class 20 and 30, apply respectively a derating of 20 % and 37 %.
[5] Currents transformers built-in electronic relays.

Type 2 coordination (IEC 60947-4-1) 660/690 V

Schneider Electric switch-disconnector fuses and contactors

Performance: Ue = 660/690 V - "Iq" 80/100 kA [1]

Starting Class 10 A/10

Motors			Switch-fuse [1]	Fuse-link type		Contactors [2]	Thermal relays	
P (kW)	I (A) 690 V	Ie Max (A)	Type	gG rating (A)	aM rating (A)	Type	Type	Irth (A)
0.75	1.1	1.6	INFC32 or INFD40 INFC63 or INFD40	- 4	2 -	LC1-D09	LRD 06	1/1.6
1	1.6	1.6	INFC32 or INFD40 INFC63 or INFD40	- 6	2 -	LC1-D09	LRD 06	1/1.6
1.5	2.2	2.5	INFC32 or INFD40 INFC63 or INFD40	- 6	4 -	LC1-D09	LRD 07	1.6/2.5
2.2	2.8	4	INFC32 or INFD40 INFC63 or INFD40	- 10	4 -	LC1-D09	LRD 08	2.5/4
3	3.8	4	INFC32 or INFD40 INFC63 or INFD40	- 10	6 -	LC1-D09	LRD 08	2.5/4
4	4.9	6	INFC32 or INFD40 INFC63 or INFD40	- 16	6 -	LC1-D09	LRD 10	4/6
5.5	6.7	8	INFC32 or INFD40 INFC63 or INFD40	- 20	8 -	LC1-D09	LRD 12	5.5/8
7.5	8.9	10	INFC32 or INFD40 INFC63 or INFD40	- 25	10 -	LC1-D25	LRD 16	9/13
11	12.8	13	INFC32 or INFD40 INFC63 or INFD40	- 32	16 -	LC1-D25	LRD 16	9/13
15	17	20	INFC32 or INFD40 INFC63 or INFD40	- 40	20 -	LC1-D25	LRD 22	16/24
18.5	22	24	INFC32 or INFD40 INFC63 or INFD40	- 50	25 -	LC1-D32	LRD 22	16/24
22	24	32	INFC32 or INFD40 INFC63 or INFD40	- 50	25 -	LC1-D40A	LRD 332	23/32
30	32	32	INFC63 or INFD40 INFC63 or INFD63	- 80	32 -	LC1-D40A	LRD 340	30/40
37	39	40	INFC63 or INFD63	80	40	LC1-D65A	LRD 365	37/50
45	47	50	INFC63 or INFD63 INFD160	- 100	50 -	LC1-D80	LRD 3357	37/50
55	57	63	INFC63 or INFD63 INFD160	- 125	63 -	LC1-D115	LRD 3359	48/65
75	77	80	INFC125 or INFD160 INFD200	- 160	80 -	LC1-D115	LRD 3363	63/80
90	93	100	INFD160 INFD250	- 200	100 -	LC1-D150	LR9-D53 69	90/150
110	113	125	INFD160 INFD250	- 250	125 -	LC1-F185	LR9-D53 69	90/150
132	134	160	INFD250	250	160	LC1-F265	LR9-F53 71	132/220
160	162	160	INFD250 INFD400	- 315	160 -	LC1-F265	LR9-F53 71	132/220
200	203	200	INFD250 INFD630	- 400	200 -	LC1-F400	LR9-F73 75	200/330
220	223	250	INFD250 INFD630	- 450	250 -	LC1-F400	LR9-F73 75	200/330
250	253	315	INFD400 INFD630	- 500	315 -	LC1-F400	LR9-F73 75	200/330
315	320	355	INFD630	-	355	LC1-F500	LR9-F73 79	300/500
355	354	400	INFD630	-	400	LC1-F630	LR9-F73 79	300/500
400	400	450	INFD630	-	450	LC1-F630	LR9-F73 79	300/500
450	455	500	INFD630	-	500	LC1-F630	LR9-F73 79	300/500

[1] Coordination chart built with 690 V fuse-links (80 kA for NFC fuse-links, 100 kA for DIN fuse-link).
[2] INFC for NFC cylindric ferrule / INFD for NH DIN type fuse-link.
[3] Reversers: replace LC1 with LC2; star-delta starter: replace LC1 with LC3.

Type 2 coordination (IEC 60947-4-1) 660/690 V

Schneider Electric switch-disconnector fuses and contactors

Performance: Ue = 660/690 V - "Iq" 80/100 kA [1]

Starting Adjustable class 10 A to 30 [4]

Motors			Switch-fuse [1]	Fuse-link type		Contactors [2]	Thermal relays	
P (kW)	I (A) 690 V	Ie Max (A)	Type	gG rating (A)	aM rating (A)	Type	Type	Irth (A)
0.75	1.1	2	INFC32 or INFD40 INFC63 or INFD40	- 4	2 -	LC1-D09	LTM R08	0.4/8 [5]
1	1.6	2	INFC32 or INFD40 INFC63 or INFD40	- 6	2 -	LC1-D09	LTM R08	0.4/8 [5]
1.5	2.2	4	INFC32 or INFD40 INFC63 or INFD40	- 6	4 -	LC1-D09	LTM R08	0.4/8 [5]
2.2	2.8	4	INFC32 or INFD40 INFC63 or INFD40	- 10	4 -	LC1-D09	LTM R08	0.4/8 [5]
3	3.8	6	INFC32 or INFD40 INFC63 or INFD40	- 10	6 -	LC1-D09	LTM R08	0.4/8 [5]
4	4.9	6	INFC32 or INFD40 INFC63 or INFD40	- 16	6 -	LC1-D09	LTM R08	0.4/8 [5]
5.5	6.7	8	INFC32 or INFD40 INFC63 or INFD40	- 20	8 -	LC1-D09	LTM R08	0.4/8 [5]
7.5	8.9	10	INFC32 or INFD40 INFC63 or INFD40	- 25	10 -	LC1-D25	LTM R27	1.35/27 [5]
11	12.8	16	INFC32 or INFD40 INFC63 or INFD40	- 32	16 -	LC1-D25	LTM R27	1.35/27 [5]
15	17	20	INFC32 or INFD40 INFC63 or INFD40	- 40	20 -	LC1-D25	LTM R27	1.35/27 [5]
18.5	22	25	INFC32 or INFD40 INFC63 or INFD40	- 50	25 -	LC1-D32	LTM R27	1.35/27 [5]
22	24	25	INFC32 or INFD40 INFC63 or INFD40	- 50	25 -	LC1-D40A	LTM R27	1.35/27 [5]
30	32	32	INFC63 or INFD40 INFC63 or INFD63	- 80	32 -	LC1-D40A	LTM R100	5/100 [5]
37	39	40	INFC63 or INFD63	80	40	LC1-D65A	LTM R100	5/100 [5]
45	47	50	INFC63 or INFD63 INFD160	- 100	50 -	LC1-D80	LTM R100	5/100 [5]
55	57	63	INFC63 or INFD63 INFD160	- 125	63 -	LC1-D115	LTM R100	5/100 [5]
75	77	80	INFC125 or INFD160 INFD200	- 160	80 -	LC1-D115	LTM R100	5/100 [5]
90	93	100	INFD160 INFD250	- 200	100 -	LC1-D150	LTM R100	5/100 [5]
110	113	125	INFD160 INFD250	- 250	125 -	LC1-F185	LTM R08	On CT
132	134	160	INFD200 INFD250	- 250	160 -	LC1-F265	LTM R08	On CT
160	162	160	INFD200 INFD400	- 315	160 -	LC1-F265	LTM R08	On CT
200	203	200	INFD200 INFD630	- 400	200 -	LC1-F400	LTM R08	On CT
220	223	250	INFD250 INFD630	- 450	250 -	LC1-F400	LTM R08	On CT
250	253	315	INFD400 INFD630	- 500	315 -	LC1-F400	LTM R08	On CT
315	320	355	INFD400	-	355	LC1-F500	LTM R08	On CT
355	354	400	INFD400	-	400	LC1-F630	LTM R08	On CT
400	400	450	INFD630	-	450	LC1-F630	LTM R08	On CT
450	455	500	INFD630	-	500	LC1-F630	LTM R08	On CT

[1] Coordination chart built with 690 V fuse-links (80 kA for NFC fuse-links, 100 kA for DIN fuse-link).
[2] INFC for NFC cylindric ferrule / INFD for NH DIN type fuse-link.
[3] Reversers: replace LC1 with LC2; star-delta starter: replace LC1 with LC3.
[4] For use with overload relay setted in class 20 and 30, apply respectively a derating of 20 % and 37 %.
[5] Currents transformers built-in electronic relays.