

## Characteristics

# Protection components

## TeSys LR9 F electronic thermal overload relays

### Overload relays

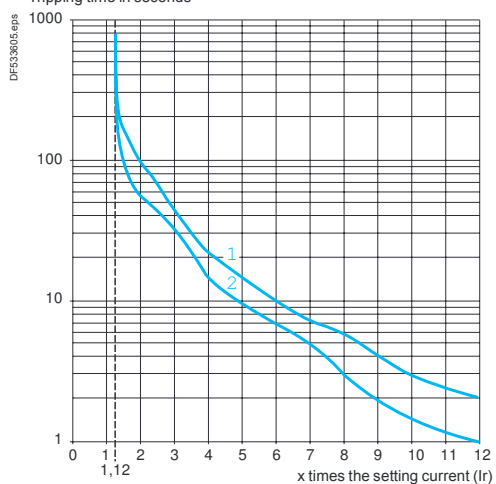
Operating characteristics				
Tripping class	Conforming to IEC 60947-4-1			10, 10 A and 20
Temperature compensation		°C		-20...+70
Reset				Manual on front of relay
Fault indication				On front of relay
Test function				On front of relay
Stop function				Actuation of N/C contact, without affecting N/O contact
Tripping thresholds	Conforming to IEC 60947-4-1	Alarm	A	$1.05 \pm 0.06 I_n$
		Tripping	A	$1.12 \pm 0.06 I_n$
Sensitivity to phase failure	Conforming to IEC 60947-4-1			Tripping in $4 \text{ s} \pm 20 \%$ in the event of phase failure
Adjustment (nominal motor current)				Setting dial on front of relay
Security sealing				Yes
Alarm circuit characteristics				
Rated supply voltage	d.c. supply	V		24
Supply voltage limits		V		17...32
Current consumption	No-load	mA		$\leq 5$
Switching current		mA		0...150
Protection	Short-circuit and overload			Auto-protected
Voltage drop	Closed state	V		$\leq 2.5$
Connection	Flexible cable without cable end	mm <sup>2</sup>		0.5...1.5
Tightening torque		N.m		0.45

### LR9 F tripping curve

#### Average operating times depending on multiples of the setting current

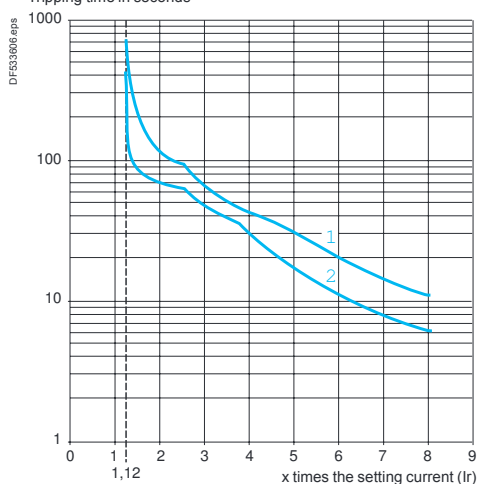
##### Class 10

Tripping time in seconds



##### Class 20

Tripping time in seconds



- 1 Cold state curve
- 2 Hot state curve