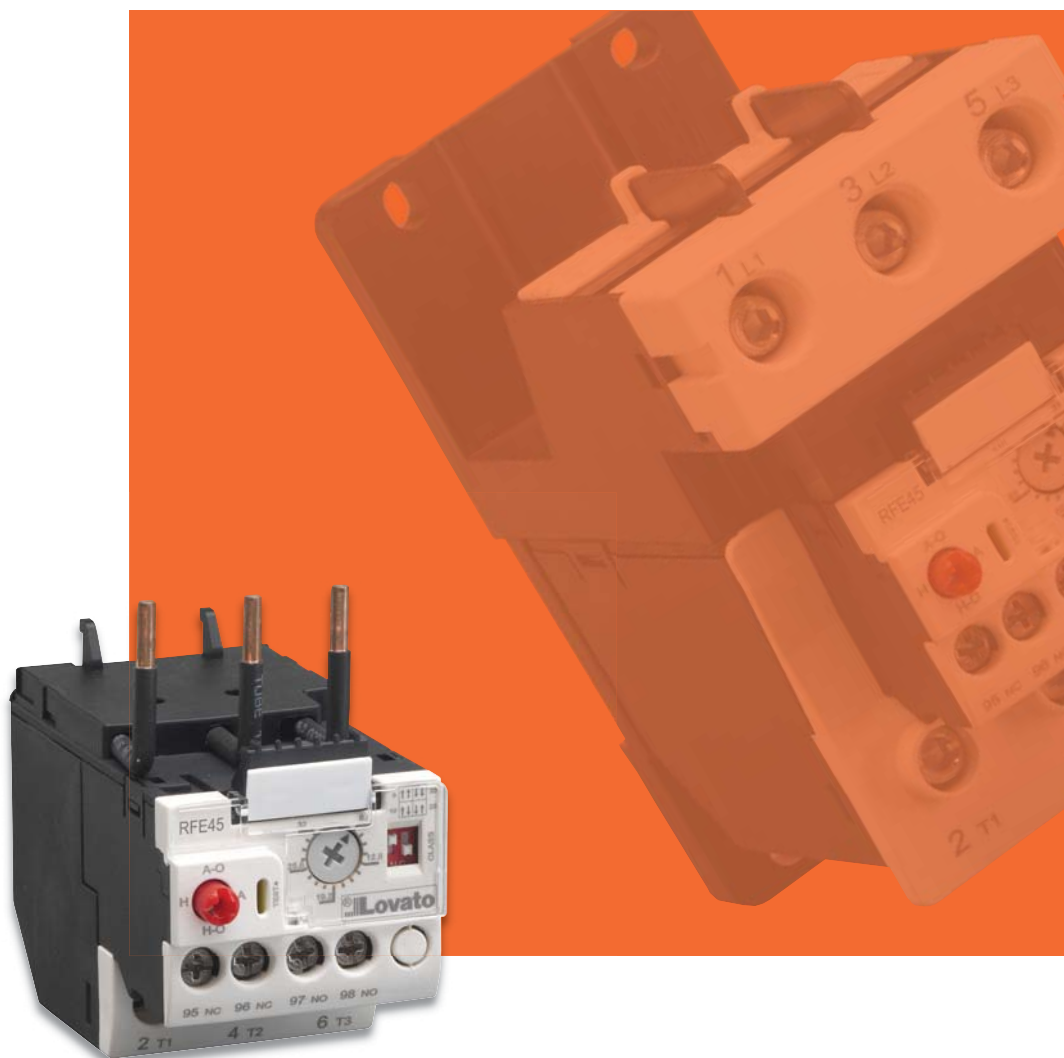


# ELECTRONIC OVERLOAD RELAYS



 **Lovato**  
**electric**

ENERGY AND AUTOMATION

# Motor protection relays

Electronic overload relays  
for BF series contactors

## Phase failure / single phase sensitive Three poles (three phase)



RFE45...

**new**



RFX38 04

**new**



RFE110...

Order code	Adjustment range	Protection fuses		Qty per pkg	Wt [kg]
		aM [A]	gG [A]		
	[A]	[A]	[A]	n°	[kg]

MANUAL OR AUTOMATIC RESETTING.  
Direct mounting on BF09...BF38 contactors.  
Independent mounting with RFX38 04 base.

<b>RFE45 0200</b>	0.4...2	4	6	1	0.195
<b>RFE45 0800</b>	1.6...8	14	20	1	0.195
<b>RFE45 3200</b>	6.4...32	40	63	1	0.195

Independent mounting.  
Screw fixing or 35mm DIN rail (IEC/EN 60715) mounting.

<b>RFX38 04</b>	For RFE45 relays	5	0.082
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MANUAL OR AUTOMATIC RESETTING.  
Independent mounting.

<b>RFE110 110</b>	22...110	125	200	1	0.695
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## Three phase IEC motor powers ①

230V [kW]	400V [kW]	500V [kW]	690V [kW]
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0.09...0.37	0.12...0.75	0.18...0.75	0.25...1.1
0.37...0.55	0.75...3	1.1...4	1.1...5.5
2.2...7.5	3...15	6.8...28	5.5...30

7.5...30	11...55	15...75	22...90
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① The indicated powers apply to 4-pole motors; it is advisable to always check that the nameplate motor current is within the relay adjustment range.

## General characteristics

RFE... electronic relays are characterized by a wide current range and high precision in tripping time.  
RFE... are self powered by the power circuit current, so they do not require auxiliary power supply.  
RFE... are suitable for all types of motor starting because different tripping classes (5, 10, 20 or 30) can be selected. A single front button is used to select the auto/manual reset function and to activate or deactivate the STOP function.

## Operational characteristics

- Rated insulation voltage (main circuit)  $U_i$ : 1000V
- Rated insulation voltage (auxiliary circuit)  $U_i$ : 690V
- IEC rated impulse withstand voltage  $U_{imp}$ : 8kV
- Rated frequency: 50/60Hz
- Maximum rated current: 32A for RFE45, 110A for RFE110
- Maximum conductor section: 10mm<sup>2</sup> - AWG6 for RFE45, 50mm<sup>2</sup> - AWG1/0 for RFE110
- Dissipation per phase: 0.3W max
- Selectable tripping class: 5-10-20-30
- Phase failure sensitive: tripping in 3s max
- Phase asymmetry sensitive: asymmetry >40% tripping in 3s max
- Operation position: any
- Sealable adjuster and class selection switches
- UL/CSA and IEC/EN 60947-5-1 auxiliary contact designation: B600, R300
- Degree of protection: IP20
- Operating temperature: -25...+70°C
- Storage temperature: -55...+80°C
- Compensation temperature: -25...+70°C.

## Certifications and compliance

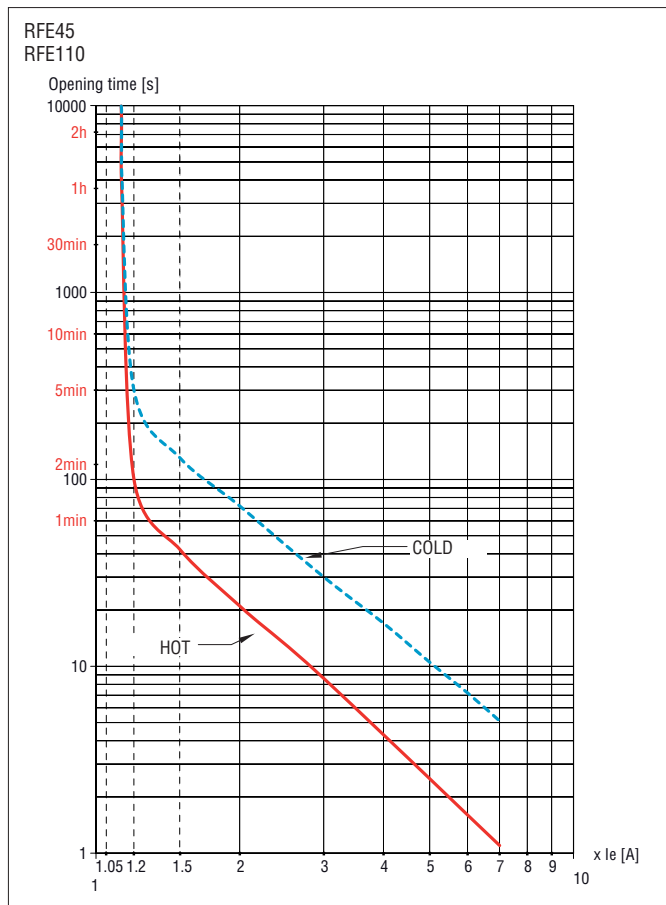
Certifications obtained: cULus.  
Compliant with standards: IEC/EN 60947-1; IEC/EN 60947-4-1, UL 60947-1, UL 60947-4-1, CSA C22.2 n° 60947-1, CSA C22.2 n° 60947-4-1.

# Motor protection relays

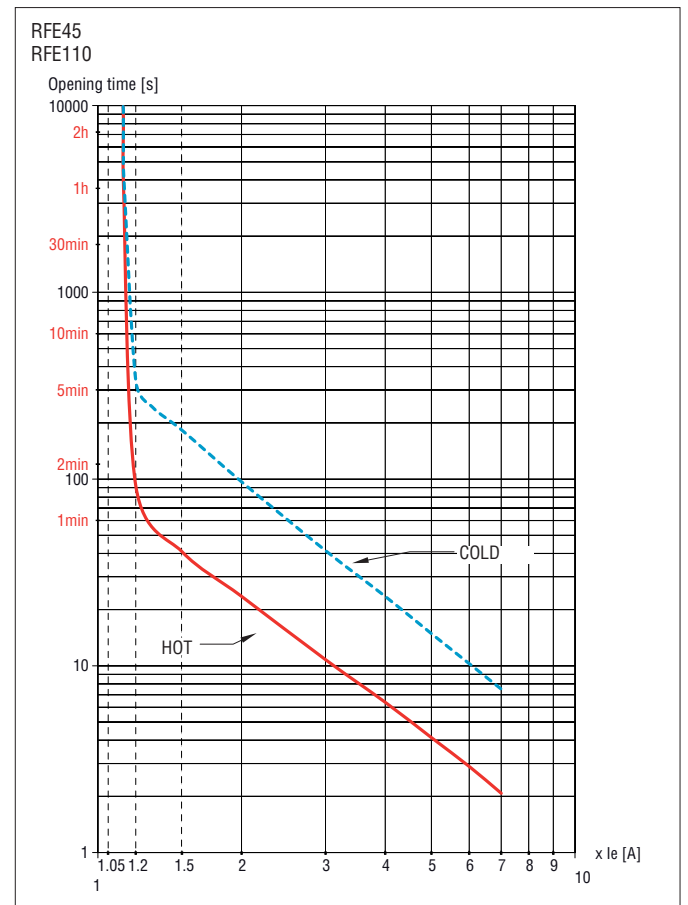
Electronic overload relays  
Technical characteristics

## TRIP CHARACTERISTIC FOR ELECTRONIC OVERLOAD RELAYS

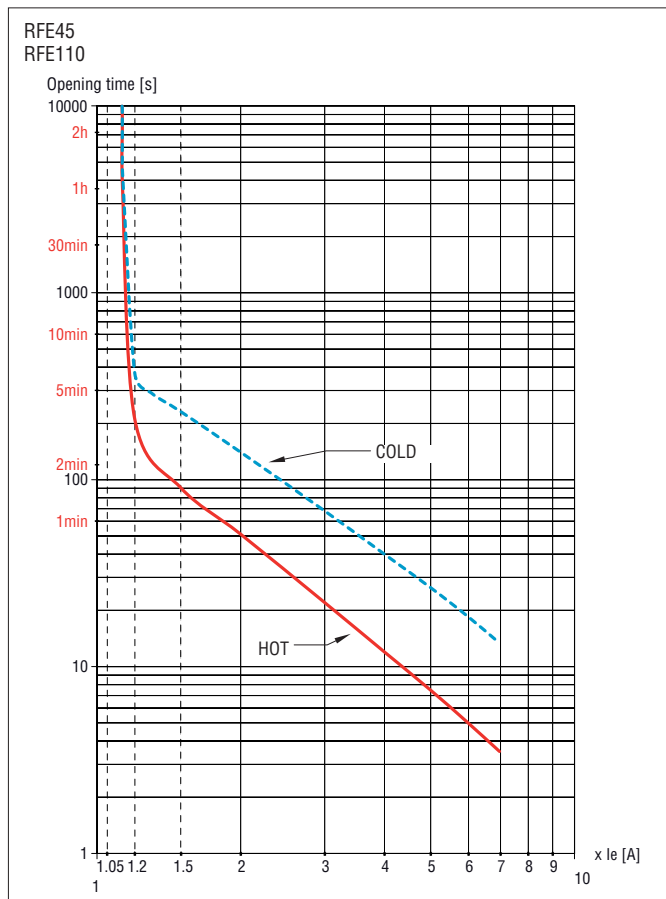
Three phase balanced operation; class 5



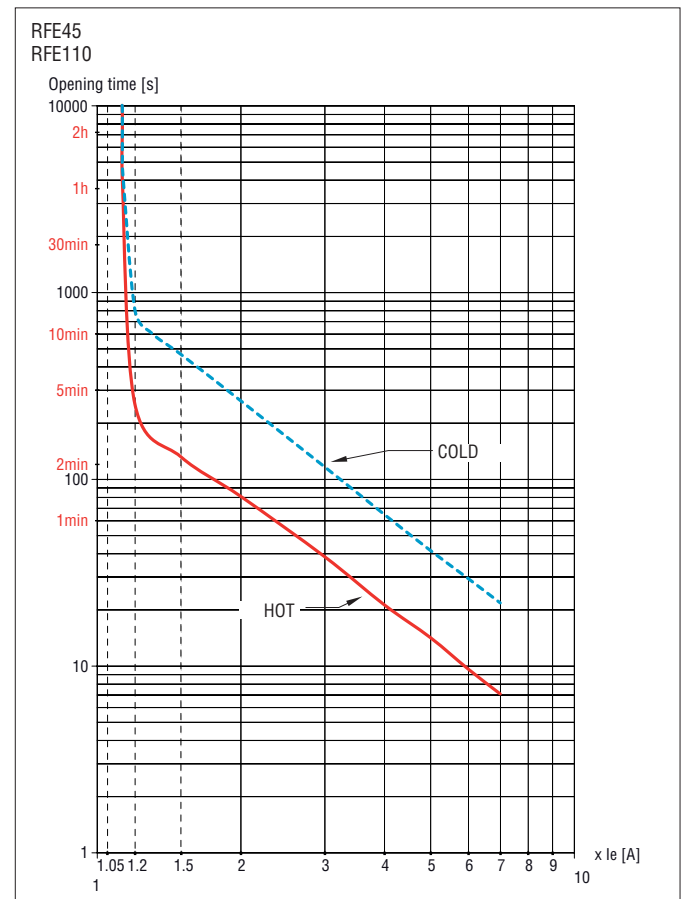
Three phase balanced operation; class 10



Three phase balanced operation; class 20



Three phase balanced operation; class 30





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