

Presentation



Easy TeSys thermal overload relays are designed to protect a.c. circuits and motors against:

- overloads
- phase failure
- long starting time
- prolonged stalled rotor condition.

The thermal relay permanently controls the current driven by the motor. When this current exceeds the setting, its auxiliary contacts will change state, causing the motor to stop.

Description

- 1 Adjustment dial I_r
- 2 Test button
Operation of the Test button allows:
 - checking of control circuit wiring
 - simulation of relay tripping (actuates both the N/O and N/C contacts)
- 3 Stop button. Actuates the N/C contact; does not affect the N/O contact
- 4 Reset button
- 5 Trip indicator
- 6 Setting locked by sealing the cover
- 7 Selector for manual or automatic reset

Easy TeSys overload relays are supplied with the selector in the manual position, protected by a cover.

Deliberate action is required to move it to the automatic position.

Easy TeSys thermal overload relays

3-pole thermal overload relays

Direct connection to Easy TeSys contactors



Differential Thermal Overload Relays

for Use with Fuses or Circuit Breakers

- Compensated relays with manual or automatic reset
- with relay trip indicator
- for a.c

Relay Setting Range (A)	Fuses to Be Used with Selected Relay		For Use with Contactor	Reference	Weight Lb
	aM (A)	gG (A)			
Class 10 ⁽¹⁾ for Connection by Screw Clamp Terminals					
0.10...0.16	0.25	2	DPE09...32	DPER01	0.287 (0.13kg)
0.16...0.25	0.5	2	DPE09...32	DPER02	0.287 (0.13kg)
0.25...0.40	1	2	DPE09...32	DPER03	0.287 (0.13kg)
0.40...0.63	1	2	DPE09...32	DPER04	0.287 (0.13kg)
0.63...1	2	4	DPE09...32	DPER05	0.287 (0.13kg)
1...1.6	2	4	DPE09...32	DPER06	0.287 (0.13kg)
1.6...2.5	4	6	DPE09...32	DPER07	0.287 (0.13kg)
2.5...4	6	10	DPE09...32	DPER08	0.287 (0.13kg)
4...6	8	16	DPE09...32	DPER10	0.287 (0.13kg)
5.5...8	12	20	DPE09...32	DPER12	0.287 (0.13kg)
7...10	12	20	DPE09...32	DPER14	0.287 (0.13kg)
9...13	16	25	DPE12...32	DPER16	0.287 (0.13kg)
12...18	20	35	DPE18...32	DPER21	0.287 (0.13kg)
16...24	25	50	DPE25...32	DPER22	0.287 (0.13kg)
23...32	40	63	DPE25...32	DPER32	0.287 (0.13kg)

⁽¹⁾ Standard UL 60947-4-1 specifies a tripping time for 7.2 times the setting current I_R : class 10: between 4 and 10 seconds.

Power Circuit Characteristics				
Relay Type		Ref.	DPER	
		Size	01...21	22...32
			1	
Tripping class	Conforming to IEC 60947-4-1		10	
Rated insulation voltage	Conforming to IEC 60947-4-1	V	690	
Rated impulse withstand voltage (Uimp)		kV	6	
Frequency limits	Of the operating current	Hz	50...60	
Setting range	Depending on model	A	0.1...18	16...38
Power Circuit Connections				
Connection by Screw Clamp Terminals		Minimum/maximum c.s.a.		
	Flexible cable without cable end 1 conductor	mm²	1.5...6 AWG 16...10	2.5...10 AWG 14...8
	Flexible cable with cable end 1 conductor		1...4 AWG 18...10	1.5...6 AWG 16...10
	Solid cable without cable end 1 conductor		1...6 AWG 18...10	2.5...10 AWG 14...8
	Tightening torque	Lbf.in	15.05 (1.7N.m)	22.13 (2.5N.m)
Auxiliary Contact Characteristics				
Conventional thermal current		A	5	
Max. sealed consumption of the operating coils of controlled contactors (Occasional operating cycles of contact 95-96)	a.c. supply	V	110	120
		A	3.27	3
Protection against short-circuits	By gG, maximum rating or by GB2	A	5	
Connection by screw clamp terminals	Flexible cable without cable end 1 conductor	mm²	Minimum/maximum c.s.a. 2 x 1...2.5 AWG 2 x 18...10	
	Flexible cable with cable end 1 conductor		2 x 1...2.5 AWG 2 x 18...10	
	Solid cable without cable end 1 conductor		2 x 1...2.5 AWG 2 x 18...10	
	Tightening torque	Lbf.in	15.05 (1.7N.m)	
Environment				
Conforming to standard			IEC 60947-4-1, IEC 60947-5-1, UL 60947-4-1, CSA C22.2 No. 60947-4-1	
Product certifications			cUL, UL Listed	
Degree of protection	Conforming to IEC 60529		IP2X	
Protective treatment	Conforming to IEC 60068		"TH"	
Ambient air temperature	Storage	°F	-76...176 (-60...80°C)	
	Normal operation without derating (IEC 60947-4-1)		-4...140 (-20...+60°C)	
	Minimum/maximum operating temperature (with derating) ⁽¹⁾		-4...158 (-20...70°C)	
Operating positions without derating	In relation to normal vertical mounting plane		Any position	
Flame resistance	Conforming to IEC 60068-2-1	°F	1562 (850°C)	
Shock resistance	Permissive acceleration conforming to IEC 60068-2-7		6 gn - 11 ms	
Vibration resistance	Permissive acceleration conforming to IEC 60068-2-6		3 gn	
Dielectric strength at 50 Hz	Conforming to IEC 60255-5	kV	6	
Surge withstand	Conforming to IEC 60801-5		6	
Operating Characteristics				
Temperature compensation		°F	-4...140 (-20...+60°C)	
Tripping threshold	Conforming to IEC 60947-4-1	A	1.14 ± 0.06 Ir	
Sensitivity to phase failure	Conforming to IEC 60947-4-1		Tripping current 130 % of Ir on two phase, the last one at 0	

⁽¹⁾ Contact your regional sales.