ESP100 Solid State Overload

Panel Mounted Class 48

Features

- Broadest Line in the Industry
- NEMA Class 10, 20 and 30 Trip Curves
- Trip Free Design
- Solid State Overload
  - — Phase Loss Protection
  - — w2% Repeat Trip Accuracy
  - — Manual Reset
  - — FLA Adjustment Dial with Wide Adjustment Range
  - — Heaterless Design
- UL Listed File #E22655 or Component Recognized
- CSA Certified File #LR6535

Application

Furnas ESP100 solid state overload relays are self powered, requiring no separate 120V source to power the circuit board. They provide phase loss protection, fewer connection points and high repeat trip accuracy which results in longer motor life and cost savings. NEMA Class 10, 20 and 30 trip curves are available for a variety of applications.

The heaterless construction of these overloads minimizes energy costs and the costs of cabinet ventilation or cooling. Solid state overloads can be used at temperatures from –30°C to 70°C and are rated for 50Hz and 60Hz applications.

ESP100 panel mounted overloads can be used to upgrade existing starter applications where panel mounted thermal overloads are used. In addition, ESP100 overloads can be panel mounted when used with other types of controllers, such as DP, IEC contactors, and soft starts.

ESP100 overloads can be used on high voltage applications, making them ideal for use with vacuum contactors and other high voltage control.

ESP100 overloads can be retrofitted on existing Furnas contactors using the retrofit plate suffixes or on other brands using the plates listed in the competitive retrofit plates table.

Thermal overload relays are used to protect motors from excessive heat resulting from sustained motor overload, too rapid cycling and stalled rotor. The percentage of overload determines the length of time required to open the circuit.

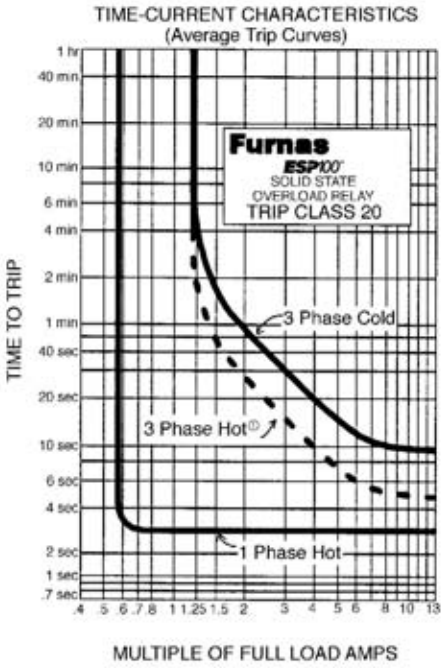
Features

The ESP100 solid state overload provides phase loss protection for the motor by tripping within three seconds upon complete loss of one phase of a three phase motor branch circuit.

Each overload has at least a 2:1 current adjustment range with the adjustment dial reading out in full load amps. In addition to the markings on the dial there are audible clicks which allow for extremely fine tuning.

1. NEMA Class 10 for protecting submersible pump motors, hermetically sealed refrigeration motors, etc., trips in less than 10 seconds at 6 times trip current.
2. NEMA Class 20 for protecting standard motors trips in less than 20 seconds at 6 times trip current.
3. NEMA Class 30 trips in less than 30 seconds at 6 times trip current.

Note: The trip current in a 40°C ambient temperature is 125% of the minimum full load current listed in the heater tables, unless otherwise shown.



Solid State Overloads and Field Modification Kits, Class 48

Ordering Instructions

- Determine overload range for specific voltage and Hp rating.
- To retrofit existing Thermal Innova Starters with the ESP100 Solid State Overload Relay add the appropriate suffix to the end of the catalog number from the Retrofit Plates table shown below. Example: 48ASE3M201P.

Additional References

- Trip Curves.
- Dimensions .
- Wiring Diagrams.

Solid State, 3 Phase

ServiceFirst Item #	Manual Reset Class 20 Mfg. #	Full Load Amp Current Range	Phase	Frame[1] Size
RLY02304	48ASA3M20	0.25–1	3	A
RLY02305	48ASB3M20	0.75–3	3	A
RLY02306	48ASD3M20	2.5–10	3	A
RLY02307	48ASE3M20	9–18	3	A1
RLY02308	48ASF3M20	13–27	3	A1
RLY02309	48ASG3M20	20–40	3	A1
RLY02310	48BSF3M20	13–27	3	B
RLY02311	48BSH3M20	22–45	3	B
RLY02312	48BSJ3M20	30–60	3	B
RLY02313	48BSK3M20	45–90	3	B
RLY02314	48BSL3M20	57–115	3	B
RLY02315	48BSM3M20	67–135	3	B
RLY02316	48BSN3M20	81–162[2]	3	B
RLY02317	48ASS3M20	100–210[3]	3	A
RLY02318	48ASU3M20	100–270[3]	3	A
RLY02319	48ASX3M20	200–540[4]	3	A
		420–1220[5]	3	A

Field Modification Kits

ServiceFirst Item #	Mfg. #	Description		Frame Size
KIT06529	49ASNO	Auxiliary Contact Kit[6]	NO Contact	All
KIT06530	49ASNC		NC Contact	All

[2]Temperature rating - 20° to 60°C.
[3]Requires use of 300:5 Current Transformers–3 of 97CT005.
[4]Requires use of 600:5 Current Transformers–3 of 97CT008.
[5]Requires use of 1200:5 Current Transformers–3 of 97CT012.
[6]Not available on self-reset versions.