

Representative Image

Alternate Catalog No. EF146-150
Catalog No. 1SAX351001R1101

Description: EF146-150 Electronic Overload Relay

UPC No 4013614442230

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The EF146 is an self-supplied electronic overload relay, which means no extra external supply is needed. It offers reliable and fast protection for motors in the event of overload or phase failure. Easy to use like a thermal overload relay and compatible with standard motor applications, the electronic overload relay is convincing, above all, due to its wide setting range, high accuracy, high operational temperature range and the possibility to select a trip class (10E, 20E, 30E). Further features are the temperature compensation, trip contact (NC), signal contact (NO), automatic- or manual reset selectable, trip-free mechanism, STOP- and Test function and a trip indication. The overload relays are connected directly to the contactors. The EF65, EF96 and EF146 have ATEX and IECEx certification 1) 1) ATEX is valid for products produced from week 42, 2014. IECEx is valid for products produced from week 15, 2017.

Descriptors

Category	Overload Relays

Specifications

Product Name	Electronic Overload Relay
Rated Operational Voltage	Auxiliary Circuit 600 V AC / DC Main Circuit 1000 V AC
Rated Operational Current	150 A
Setting Range	54 ... 150 A
Rated Impulse Withstand Voltage	Auxiliary Circuit 6 kV Main Circuit 8 kV
Rated Insulation Voltage	1000 V
Number of Poles	3
Number of Auxiliary Contacts NC	1
Number of Auxiliary Contacts NO	1
Number of Protected Poles	3
Trip Class	class 10E class 20E class 30E
Conventional Free-air Thermal Current	Auxiliary Circuit NC 6 A Auxiliary Circuit NO 6 A
Rated Frequency	Auxiliary Circuit 50 Hz Auxiliary Circuit 60 Hz Auxiliary Circuit DC Main Circuit 50Hz Main Circuit 60 Hz
Rated Operational Current AC-3	150 A
Degree of Protection	Housing IP20 Main Circuit Terminals IP10
Pollution Degree	3
Suitable For	AF116 AF140 AF146
Rated Operational Current AC-15	(240 V) NC 3 A (240 V) NO 3 A (400 V) NC 1.1 A (400 V) NO 1.1 A (500 V) NC 0.75 A (500 V) NO 0.75 A

by ABB

Specifications

Rated Operational Current DC-13	(125 V) NC 0.55 A (125 V) NO 0.5 A (24 V) NC 1.5 A (24 V) NO 1.5 A (250 V) NC 0.27 A (250 V) NO 0.27 A (60 V) NC 0.55 A (60 V) NO 0.55 A
Connecting Capacity Main Circuit	Flexible with Ferrule 1x 10 ... 70 mm² Flexible with Ferrule 2x 10 ... 35 mm² Flexible with Insulated Ferrule 1x 10 ... 70 mm² Flexible with Insulated Ferrule 2x 2 ... 35 mm² Flexible 1x 10 ... 70 mm² Flexible 2x 10 ... 35 mm² Rigid 1x 10 ... 95 mm² Rigid 2x 10 ... 35 mm²
Connecting Capacity Auxiliary Circuit	Flexible with Ferrule 1/2x 0.75 ... 2.5 mm² Flexible with Insulated Ferrule 1/2x 0.75 ... 2.5 mm² Flexible 1/2x 0.75 ... 2.5 mm² Rigid 1/2x 1 ... 4 mm²
Wire Stripping Length	Auxiliary Circuit 9 mm Main Circuit 20 mm
Tightening Torque	Auxiliary Circuit 0.8 ... 1.2 N·m Main Circuit 10 N·m
Mounting Position	Position 1 to 6
Power Loss	at Rated Operating Conditions per Pole 0.204 ... 1.575 W
Standards	IEC/EN 60947-1 IEC/EN 60947-4-1 IEC/EN 60947-5-1 UL 60947-1 UL 60947-4-1
Recommended Screw Driver	Auxiliary Circuit Pozidriv 2 Main Circuit Hexagon 4
Maximum Operating Voltage UL/CSA	Main Circuit 600 V AC
Ampere Rating UL/CSA	150 A
Contact Rating UL/CSA	(NC:) B600 (NC:) Q600 (NO:) B600 (NO:) Q600
Connecting Capacity Main Circuit UL/CSA	Flexible 1x 6-00 AWG Flexible 2x 6-2 AWG Stranded 2x 6-2 AWG Stranded 1x 6-00 AWG
Ambient Air Temperature	Operation -25 ... +70 °C Operation Compensated -25 ... +70 °C Storage -50 ... +85 °C
Ambient Air Temperature Compensation	Yes
Connecting Capacity Auxiliary Circuit UL/CSA	Flexible 1/2x 18-10 AWG Stranded 1/2x 18-10 AWG
Resistance to Shock acc. to IEC 60068-2-27	11 ms Pulse 25g
Maximum Operating Altitude Permissible	2000 m
RoHS Status	Following EU Directive 2011/65/EU
Resistance to Vibrations acc. to IEC 60068-2-6	5g / 3 ... 150 Hz
Tightening Torque UL/CSA	Auxiliary Circuit 7 ... 1 in·lb Main Circuit 70 in·lb
Object Classification Code	F

Classifications

ETIM 5.0	EC001080 - Electronic overload relay
ETIM 6.0	EC001080 - Electronic overload relay
ETIM 7	EC001080 - Electronic overload relay
eClass	7.0 27371502
ETIM 4	EC001080 - Electronic overload relay

Dimensions

Product Net Width	89.05 mm
Product Net Height	150.4 mm
Product Net Weight	0.879 kg
Product Net Depth / Length	105.2 mm

Package Information

Package Level 1 Units	1 piece
Package Level 1 Width	160 mm
Package Level 1 Depth / Length	97 mm
Package Level 1 Gross Weight	0.984 kg
Package Level 1 EAN	4013614442230
Package Level 1 Height	107 mm
Package Level 2 Width	489 mm
Package Level 2 Units	20 piece
Package Level 2 Depth / Length	332 mm
Package Level 2 EAN	4013614483394
Package Level 2 Gross Weight	20.243 kg
Package Level 2 Height	227 mm

Ordering

ECN	N
Customs Tariff Number	85364900
ECCN	N
ABB MDF Code	3DL - Relays (LV / Control + Protection)