PRODUCT-DETAILS

EF146-150

EF146-150 Electronic Overload Relay 54 ... 150 A



General Information

Extended Product Type	EF146-150
Product ID	1SAX351001R1101
EAN	4013614442230
Catalog Description	EF146-150 Electronic Overload Relay 54 ... 150 A
Long Description	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.

Ordering

Minimum Order Quantity	1 piece
Customs Tariff Number	85364900

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Popular Downloads

Data Sheet, Technical Information	2CDC107041D0201
Instructions and Manuals	2CDC107028M6803
Instructions and Manuals (Part 2)	1SAC200017M0002
Ex Operating Instructions	2CDC107043M6801
Time-Current Characteristic Curve	1SAX100509F0002 1SAX100510F0001
CAD Dimensional Drawing	2CDC001079B0201
Dimension Diagram	1SAX300407F0001

Dimensions

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

Technical

Setting Range	54 ... 150 A
Rated Operational Voltage	Auxiliary Circuit 600 V AC/DC Main Circuit 1000 V AC
Rated Operational Current (I_e)	150 A
Rated Frequency (f)	Auxiliary Circuit 50 Hz Auxiliary Circuit 60 Hz Auxiliary Circuit DC Main Circuit 50 Hz Main Circuit 60 Hz
Rated Impulse Withstand Voltage (U_{imp})	Auxiliary Circuit 6 kV Main Circuit 8 kV
Rated Insulation Voltage (U_i)	1000 V
Number of Poles	3
Number of Auxiliary Contacts NC	1
Number of Auxiliary Contacts NO	1
Number of Protected Poles	3
Conventional Free-air Thermal Current (I_{th})	Auxiliary Circuit NC 6 A Auxiliary Circuit NO 6 A
Rated Operational Current AC-15 (I_e)	(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
Rated Operational Current DC-13 (I_e)	(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
Degree of Protection	Housing IP20 Main Circuit Terminals IP10
Pollution Degree	3

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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
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
Tightening Torque	Auxiliary Circuit 0.8 ... 1.2 N·m Main Circuit 10 N·m
Wire Stripping Length	Auxiliary Circuit 9 mm Main Circuit 20 mm
Recommended Screw Driver	Auxiliary Circuit Pozidriv 2 Main Circuit Hexagon 4
Mounting Position	1 ... 6
Power Loss	at Rated Operating Conditions per Pole 0.204 ... 1.575 W
Suitable For	AF116 AF140 AF146
Standards	IEC/EN 60947-1 IEC/EN 60947-4-1 IEC/EN 60947-5-1 UL 60947-1 UL 60947-4-1

Technical UL/CSA

Maximum Operating Voltage UL/CSA	Main Circuit 600 V AC
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
Connecting Capacity Auxiliary Circuit UL/CSA	Flexible 1/2x 18-10 AWG Stranded 1/2x 18-10 AWG
Tightening Torque UL/CSA	Auxiliary Circuit 7 ... 1 in·lb Main Circuit 70 in·lb

Environmental

Ambient Air Temperature	Operation -25 ... +70 °C Operation Compensated -25 ... +70 °C Storage -50 ... +85 °C
Ambient Air Temperature Compensation	Yes
Maximum Operating Altitude Permissible	2000 m
Resistance to Shock acc. to IEC 60068-2-27	11 ms Pulse 25g
Resistance to Vibrations	5g 3 ... 150 Hz
RoHS Status	Following EU Directive 2011/65/EU and Amendment 2015/863 July 22, 2019
Toxic Substances Control Act - TSCA	2CMT2023-006525

Material Compliance

Conflict Minerals Reporting Template	9AKK108467A5658

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(CMRT)	
REACH Declaration	2CMT2021-006202
RoHS Information	1SAD938519-0180
RoHS Status	Following EU Directive 2011/65/EU and Amendment 2015/863 July 22, 2019
Toxic Substances Control Act - TSCA	2CMT2023-006525
WEEE B2C / B2B	Business To Business
WEEE Category	5. Small Equipment (No External Dimension More Than 50 cm)

Circular Value

ABB EcoSolutions	Yes
End of Life Instructions	1SAC200283H0001

Eco Transparency

Environmental Product Declaration - EPD	1SAC200236H0001
Environmental Information	1SAC200100H0001

Certificates and Declarations

ABS Certificate	1SAA941002-0102
ATEX Certificate	1SAA941004-3901
BV Certificate	1SAA941002-0201
CB Certificate	1SAA964013-2001
CCS Certificate	1SAA941001-0901
CQC Certificate	CQC2013010309592132
Declaration of Conformity - CCC	2020980309000286
Declaration of Conformity - CE	1SAD101100-3601
Declaration of Conformity - UKCA	1SAD201100-3601
DNV Certificate	1SAA941003-0302
EAC Certificate	1SAA941003-2701
IECEx Certificate	1SAA941000-4001
LR Certificate	1SAA941002-0501
RINA Certificate	RINA_ELE376813CS
RMRS Certificate	1SAA941001-0701
UL Certificate	E48139-19990512

Container Information

Package Level 1 Units	box 1 piece
Package Level 1 Width	160 mm
Package Level 1 Height	107 mm
Package Level 1 Depth / Length	97 mm
Package Level 1 Gross Weight	0.984 kg
Package Level 1 EAN	4013614442230

Classifications

Object Classification Code	F
ETIM 4	EC001080 - Electronic overload relay

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ETIM 5	EC001080 - Electronic overload relay
ETIM 6	EC001080 - Electronic overload relay
ETIM 7	EC001080 - Electronic overload relay
ETIM 8	EC001080 - Electronic overload relay
eClass	V11.0 : 27371502
UNSPSC	39122330
IDEA Granular Category Code (IGCC)	5365 >> Electronic overload relay
E-Number (Finland)	3706582
E-Number (Norway)	4116702
E-Number (Sweden)	3210247

Accessories

Identifier	Description	Type	Quantity	Unit Of Measure
1SAX101911R1001	DRS-F-01 Remote Reset Coil	DRS-F-01	1	piece
1SAX101911R1002	DRS-F-02 Remote Reset Coil	DRS-F-02	1	piece
1SAX101911R1003	DRS-F-03 Remote Reset Coil	DRS-F-03	1	piece
1SAX101911R1004	DRS-F-04 Remote Reset Coil	DRS-F-04	1	piece
1SAX101911R1011	DRS-F-EF-01 Remote Coil	DRS-F-EF-01	1	piece
1SAX101911R1012	DRS-F-EF-02 Remote Coil	DRS-F-EF-02	1	piece
1SAX101911R1013	DRS-F-EF-03 Remote Coil	DRS-F-EF-03	1	piece
1SAX101911R1014	DRS-F-EF-04 Remote Coil	DRS-F-EF-04	1	piece
1SAZ701903R1001	WRH-F Holder	WRH-F	1	piece
1SAZ701903R1011	WRB-400 Bowden Wire	WRB-400	1	piece
1SAZ701903R1012	WRB-600 Bowden Wire	WRB-600	1	piece
1SAZ701903R1013	WRB-1000 Bowden Wire	WRB-1000	1	piece
1SAZ701903R1030	WRBG Gasket	WRBG	1	piece
1SFA616162R1014	KPR3-101L Reset push button	KPR-101L	1	piece

Categories

Low Voltage Products and Systems → Control Products → Contactors → Electronic Overload Relays



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