

## Alternate Catalog No. EF65-56 Catalog No. 1SAX331001R1102

**Description:** EF65-56 Electronic Overload Relay

**UPC No** 4013614493010

**Home > Contactors & Starters > Overload Relays**

The EF65 is a 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. Single mounting kits are available as accessory. 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.

Representative Image

### Descriptors

Category	Overload Relays
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### Specifications

Product Name	Electronic Overload Relay
Rated Operational Voltage	Auxiliary Circuit 600 V AC / DC Main Circuit 1000 V AC
Rated Operational Current	56 A
Setting Range	20 ... 56 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	56 A
Degree of Protection	Housing IP20 Main Circuit Terminals IP10
Pollution Degree	3
Suitable For	AF40 AF52 AF65
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 4 ... 35/2x 2.5 ... 35 mm <sup>2</sup> /mm <sup>2</sup> Flexible with Insulated Ferrule 1/2x 4 ... 35 mm <sup>2</sup> Flexible 1/2x 4 ... 35 mm <sup>2</sup> Rigid 1/2x 4 ... 35 mm <sup>2</sup>
Connecting Capacity Auxiliary Circuit	Flexible with Ferrule 1/2x 0.75 ... 2.5 mm <sup>2</sup> Flexible with Insulated Ferrule 1/2x 0.75 ... 2.5 mm <sup>2</sup> Flexible 1/2x 0.75 ... 2.5 mm <sup>2</sup> Rigid 1/2x 1 ... 4 mm <sup>2</sup>
Wire Stripping Length	Auxiliary Circuit 9 mm Main Circuit 20 mm
Tightening Torque	Auxiliary Circuit 0.8 ... 1.2 N·m Main Circuit 4 N·m
Mounting Position	Position 1 to 6
Power Loss	at Rated Operating Conditions per Pole 0.036 ... 0.282 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 Pozidriv 2
Maximum Operating Voltage UL/CSA	Main Circuit 600 V AC
Ampere Rating UL/CSA	56 A
Contact Rating UL/CSA	(NC:) B600 (NC:) Q600 (NO:) B600 (NO:) Q600
Connecting Capacity Main Circuit UL/CSA	Flexible 1/2x 10-2 AWG Stranded 1/2x 10-2 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 55 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	70 mm
Product Net Height	131.2 mm

## Dimensions

Product Net Weight	0.821 kg
Product Net Depth / Length	105.2 mm

## Package Information

Package Level 1 Units	1 piece
Package Level 1 Width	139 mm
Package Level 1 Depth / Length	75.5 mm
Package Level 1 Gross Weight	0.876 kg
Package Level 1 EAN	4013614493010
Package Level 1 Height	107 mm
Package Level 2 Width	393 mm
Package Level 2 Units	20 piece
Package Level 2 Depth / Length	290 mm
Package Level 2 EAN	4013614511417
Package Level 2 Gross Weight	18.803 kg
Package Level 2 Height	227 mm

## Ordering

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