# EF96-100



#### **General Information**

Extended Product Type:	EF96-100
Product ID:	1SAX341001R1101
EAN:	4013614442247
Catalog Description:	EF96-100 Electronic Overload Relay
Long Description:	The EF96-100 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. Single mounting kits are available as accessory.

# Categories

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

#### Ordering

Minimum Order Quantity:	1 piece
Customs Tariff Number:	85364900
EAN:	4013614442247

### Dimensions

Product Net Depth:         105.2 mm           Product Net Weight:         0.802 kg	Product Net Height:	132.7 mm
Product Net Weight: 0.802 kg	Product Net Depth:	105.2 mm
	Product Net Weight:	0.802 kg
Product Net Width: 70 mm	Product Net Width:	70 mm

# **Container Information**

Package Level 1 Width:	139 mm
Package Level 1 Height:	107 mm
Package Level 1 Length:	75.5 mm
Package Level 1 Gross Weight:	0.857 kg
Package Level 2 Units:	20 piece
Package Level 2 Width:	393 mm
Package Level 2 Height:	227 mm
Package Level 2 Length:	290 mm
Package Level 2 Gross Weight:	17.703 kg
Package Level 2 EAN:	4013614483387
Package Level 1 Units:	1 piece

#### Technical

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Rated Operational Voltage:	Auxiliary Circuit 600 V AC/DC Main Circuit 1000 V AC
Rated Operational Current (Ie):	100 A
Rated Operational Current AC-3 (Ie)	: 100 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 <sub>imp</sub> ):	Auxiliary Circuit 6 kV Main Circuit 8 kV
Rated Insulation Voltage (Ui):	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 <sub>th</sub> ):	Auxiliary Circuit NC 6 A Auxiliary Circuit NO 6 A
Rated Operational Current AC-15 (I <sub>e</sub> ):	(240 V) NC 3 A (240 V) NO 3 A (400 V) NC 1.1 A

Rated Operational Current DC-13 (le):(Degree of Protection:(Pollution Degree:(Connecting Capacity Auxiliary Circuit:(F(Connecting Capacity Main Circuit:(F(F(Connecting Capacity Main Circuit:(F(Connecting Capacity Main Circuit:(F(Connecting Capacity Main Circuit:(F(	
(Ie):       (Ie):         Degree of Protection:       (Ie):         Pollution Degree:       (Ie):         Connecting Capacity Auxiliary       (Ie):         Circuit:       (Ie):         Connecting Capacity Auxiliary       (Ie):         Circuit:       (Ie):         Connecting Capacity Main Circuit:       (Ie):         F       (Ie):         Connecting Capacity Main Circuit:       (Ie):         F       (Ie):         Vire Stripping Length:       (Ie):         Recommended Screw Driver:       (Ie):         Mounting Position:       (Ie):	(125 V) NO 0.5 A $(24 V) NC 1.5 A$ $(24 V) NC 1.5 A$ $(250 V) NC 0.27 A$ $(50 V) NC 0.55 A$ $(60 V) NC 0.55 A$ $(60 V) NC 0.55 A$ Housing IP20 Main Circuit Terminals IP10 3 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 with Insulated Ferrule 1/2x 0.75 2.5 mm <sup>2</sup> Flexible with Ferrule 1x 6 50 mm <sup>2</sup> Flexible with Ferrule 1x 6 50 mm <sup>2</sup> Flexible with Insulated Ferrule 1x 6 50 mm <sup>2</sup> Flexible with Insulated Ferrule 1x 6 50 mm <sup>2</sup> Flexible with Insulated Ferrule 2x 2 35 mm <sup>2</sup> Flexible with Insulated Ferrule 2x 2 35 mm <sup>2</sup> Flexible with Insulated Ferrule 1x 6 50 mm <sup>2</sup> Flexible with Insulated Ferrule 2x 2 35 mm <sup>2</sup> Flexible with Insulated Ferrule 1x 6 50 mm <sup>2</sup> Flexible with Insulated Ferrule 1x 6 50 mm <sup>2</sup> Flexible with Insulated Ferrule 2x 2 35 mm <sup>2</sup> Flexible with Insulated Ferrule 1x 6 50 mm <sup>2</sup> Flexible with Insulated Ferrule 1x 6 50 mm <sup>2</sup> Flexible with Insulated Ferrule 2x 2 35 mm <sup>2</sup> Flexible with Insulated Ferrule 1x 6 50 mm <sup>2</sup> Flexible 2x 6 35 mm <sup>2</sup> Flexible 1x 6 70 mm <sup>2</sup> Flexible 2x 6 35 mm <sup>2</sup> Auxiliary Circuit 0.8 1.2 N·m Main Circuit 6 N·m Auxiliary Circuit 9 mm Main Circuit 9 mm Main Circuit 40 mm Auxiliary Circuit Pozidriv 2 Main Circuit Hexagon 4 Position 1 to 6 at Rated Operating Conditions per Pole 0.117 0.9 W
Pollution Degree: 3 Connecting Capacity Auxiliary Circuit: F Connecting Capacity Main Circuit: F Connecting Capacity Main Circuit: F Tightening Torque: A Wire Stripping Length: A Recommended Screw Driver: A Mounting Position: F	Main Circuit Terminals IP10 3 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> Flexible 1/2x 1 4 mm <sup>2</sup> Flexible 1/2x 1 4 mm <sup>2</sup> Flexible with Ferrule 1x 6 50 mm <sup>2</sup> Flexible with Ferrule 2x 6 35 mm <sup>2</sup> Flexible with Insulated Ferrule 1x 6 50 mm <sup>2</sup> Flexible with Insulated Ferrule 1x 6 50 mm <sup>2</sup> Flexible with Insulated Ferrule 2x 2 35 mm <sup>2</sup> Flexible 1x 6 70 mm <sup>2</sup> Flexible 1x 6 70 mm <sup>2</sup> Flexible 1x 6 70 mm <sup>2</sup> Rigid 1x 6 70 mm <sup>2</sup> Rigid 1x 6 70 mm <sup>2</sup> Rigid 2x 6 35 mm <sup>2</sup> Auxiliary Circuit 0.8 1.2 N·m Main Circuit 6 N·m Auxiliary Circuit 9 mm Main Circuit 9 mm Main Circuit 40 mm Auxiliary Circuit Pozidriv 2 Main Circuit Hexagon 4 Position 1 to 6 at Rated Operating Conditions per Pole 0.117 0.9 W
Connecting Capacity Auxiliary Circuit:FConnecting Capacity Main Circuit:FConnecting Capacity Main Circuit:FTightening Torque:MWire Stripping Length:MRecommended Screw Driver:MMounting Position:F	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         Flexible with Ferrule 1x 6 50 mm²         Flexible with Ferrule 2x 6 35 mm²         Flexible with Insulated Ferrule 1x 6 50 mm²         Flexible with Insulated Ferrule 1x 6 50 mm²         Flexible with Insulated Ferrule 2x 2 35 mm²         Flexible with Insulated Ferrule 2x 2 35 mm²         Flexible 2x 6 35 mm²         Flexible 2x 6 35 mm²         Rigid 1x 6 70 mm²         Rigid 2x 6 35 mm²         Rigid 2x 6 35 mm²         Auxiliary Circuit 0.8 1.2 N·m         Main Circuit 6 N·m         Auxiliary Circuit 9 mm         Main Circuit 20 mm         Auxiliary Circuit Pozidriv 2         Main Circuit Hexagon 4         Position 1 to 6         at Rated Operating Conditions per Pole 0.117 0.9 W
Circuit: F Connecting Capacity Main Circuit: F Tightening Torque: A Wire Stripping Length: A Recommended Screw Driver: A Mounting Position: F	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> Flexible with Ferrule 1x 6 50 mm <sup>2</sup> Flexible with Ferrule 2x 6 35 mm <sup>2</sup> Flexible with Insulated Ferrule 1x 6 50 mm <sup>2</sup> Flexible with Insulated Ferrule 2x 2 35 mm <sup>2</sup> Flexible 1x 6 70 mm <sup>2</sup> Flexible 2x 6 35 mm <sup>2</sup> Rigid 1x 6 70 mm <sup>2</sup> Rigid 2x 6 35 mm <sup>2</sup> Auxiliary Circuit 0.8 1.2 N·m Main Circuit 6 N·m Auxiliary Circuit 9 mm Main Circuit 9 mm Main Circuit Hexagon 4 Position 1 to 6 at Rated Operating Conditions per Pole 0.117 0.9 W
Tightening Torque:       A         Wire Stripping Length:       A         Recommended Screw Driver:       A         Mounting Position:       A	Flexible with Ferrule 2x 6 35 mm <sup>2</sup> Flexible with Insulated Ferrule 1x 6 50 mm <sup>2</sup> Flexible with Insulated Ferrule 2x 2 35 mm <sup>2</sup> Flexible 1x 6 70 mm <sup>2</sup> Flexible 2x 6 35 mm <sup>2</sup> Rigid 1x 6 70 mm <sup>2</sup> Rigid 2x 6 35 mm <sup>2</sup> Auxiliary Circuit 0.8 1.2 N·m Main Circuit 6 N·m Auxiliary Circuit 9 mm Main Circuit 9 mm Main Circuit Pozidriv 2 Main Circuit Hexagon 4 Position 1 to 6 at Rated Operating Conditions per Pole 0.117 0.9 W
Wire Stripping Length:	Main Circuit 6 N·m Auxiliary Circuit 9 mm Main Circuit 20 mm Auxiliary Circuit Pozidriv 2 Main Circuit Hexagon 4 Position 1 to 6 at Rated Operating Conditions per Pole 0.117 0.9 W
Recommended Screw Driver:	Main Circuit 20 mm Auxiliary Circuit Pozidriv 2 Main Circuit Hexagon 4 Position 1 to 6 at Rated Operating Conditions per Pole 0.117 0.9 W
Mounting Position:	Main Circuit Hexagon 4 Position 1 to 6 at Rated Operating Conditions per Pole 0.117 0.9 W
•	at Rated Operating Conditions per Pole 0.117 0.9 W
Power Loss: a	
l l l l l l l l l l l l l l l l l l l	AF80 AF96
	IEC/EN 60947-1 IEC/EN 60947-4-1 IEC/EN 60947-5-1 UL 60947-1 UL 60947-4-1
Setting Range:	36 100 A
Environmental	
	Yes
Compensation: Maximum Operating Altitude 2 Permissible:	2000 m
	11 ms Pulse 25g
Resistance to Vibrations acc. to IEC 5 60068-2-6:	5g / 3 150 Hz
RoHS Status:	Following EU Directive 2011/65/EC
	Operation -25 +70 °C Operation Compensated -25 +70 °C Storage -50 +85 °C
Technical UL/CSA	
	100 A
	(NC:) B600 (NC:) Q600 (NO:) B600 (NO:) Q600
UL/CSA:	Flexible 1/2x 8-2 AWG Stranded 1/2x 8-2 AWG
Circuit UL/CSA:	Flexible 1/2x 18-10 AWG Stranded 1/2x 18-10 AWG
	Auxiliary Circuit 7 1 in·lb Main Circuit 70 in·lb
Maximum Operating Voltage NUL/CSA:	Main Circuit 600 V AC

Data Sheet, Technical Information (Part 2):	1SAX100509F0001 1SAX100510F0001
Instructions and Manuals:	2CDC107027M6801
Instructions and Manuals (Part 2):	2CDC107043M6801
ABS Certificate:	1SAA941002-0101
ATEX Certificate:	1SAA941004-3901
BV Certificate:	1SAA941002-0201
CB Certificate:	1SAA942010-2001
CCC Certificate:	1SAA942006-3802
cUL Certificate:	cUL_E48139
Data Sheet, Technical Information:	2CDC107041D0201
Declaration of Conformity - CE:	1SAD938512-0180 1SAD938508-0180
DNV Certificate:	1SAA941003-0301
EAC Certificate:	1SAA941003-2701
GOST Certificate:	1SAA941001-2701
LR Certificate:	1SAA941002-0501
RINA Certificate:	RINA_ELE376813CS
RMRS Certificate:	1SAA941001-0701
RoHS Information:	1SAA942001-4406
UL Certificate:	UL_E48139

# Classifications

E-nummer:	3210246
ETIM 4:	EC001080 - Electronic overload relay
ETIM 5:	EC001080 - Electronic overload relay
ETIM 6:	EC001080 - Electronic overload relay
eClass:	7.0 27371502
UNSPSC:	39121521
Object Classification Code:	F

