



Reversing starter, 24 V DC, 0,18 - 3 A, Push in terminals, SmartWire-DT slave


Part no. EMS2-RO-T-3-SWD
Catalog No. 192384
Alternate Catalog No. EMS2-RO-T-3-SWD



Delivery program

Product range			Electronic motor starter
Product range			SmartWire-DT slave
Subrange			SmartWire-DT electronic motor starters
Basic function			Reversing starters (complete devices)
Function			For connecting to SmartWire-DT for expanded diagnostics
Description			DOL starting Reversing start Motor protection Circuit design: safety output stage with bypass, three-phase disconnect. Motor current additionally adjustable via SmartWire-DT.
Messages			Operational readiness Operating direction feedback Motor current in % Motor current in A Thermal motor image in % Overload prewarning Trip indications (overload, phase failure, etc.) Set short-circuit release value Device Type
Commands			Operating the motor starter Manual reset Automatic reset

Motor ratings

Max. rating for three-phase motors, 50 - 60 Hz			
AC-53a			
380 V 400 V 415 V	P	kW	0.06 - 1.1
Setting range of overload releases	I _r	A _x	0,18 - 3
			
Actuating voltage			24 V DC
Connection technique			Push in terminals
Connection to SmartWire-DT			yes

Technical data

General

Standards			IEC/EN 60947-4-2 UL508
Ambient temperature			
Storage		°C	
Min. ambient temperature, storage		°C	- 40
Ambient temperature, storage max.		°C	+ 80
Open		°C	
Operating ambient temperature min.		°C	-5
Operating ambient temperature max.		°C	+ 55
Weight		kg	0.22
Mounting			Top-hat rail IEC/EN 60715, 35 mm
Protection type (IEC/EN 60529, EN50178, VBG 4)			IP20
Mounting position			Vertical Motor feeder at bottom
Terminal capacity			

Push-in terminals			
		mm ²	0.2 - 2.5
		AWG	24 - 14

Main conducting paths

Rated operational voltage	U _e	V AC	500
Operational voltage range		V	
Operating voltage range min.		V	42
Operating voltage range max.		V	550
Rated operational current			
AC-51	I _e	A	3
AC-53a	I _e	A	3
			AC-53a: Please note possible derating.
Setting range of overload releases	I _r	A_x	0,18 - 3
Release class		CLASS	10
Heat dissipation	P _V	W	0.1 - 2.5

Control section

Rated control voltage	U _s	V DC	24
Control voltage range		V	19,2 - 30 V DC
Residual ripple on the input voltage		%	≤ 5
Rated control current	I _s	mA	60
Current draw inrush		mA	120
Actuating circuit (ON, L, R)			
Rated actuation voltage	U _c	V	24
Switching level "Low"		V	-3 - +9.6 V DC
Switching level "confirm Off"		V	< 5 V DC
Switching level "High"		V	19.2 - 30 V DC
Rated actuating current	I _c	mA	7

Electromagnetic compatibility (EMC)

Radio interference suppression			EN 55011 EN 61000-6-3, Class A (emitted interference, radiated)
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Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	I _n	A	3
Heat dissipation per pole, current-dependent	P _{vid}	W	0
Equipment heat dissipation, current-dependent	P _{vid}	W	2.5
Static heat dissipation, non-current-dependent	P _{vs}	W	2
Heat dissipation capacity	P _{diss}	W	0
Operating ambient temperature min.		°C	-5
Operating ambient temperature max.		°C	55
			If necessary, Allow for derating
IEC/EN 61439 design verification			
10.2 Strength of materials and parts			
10.2.2 Corrosion resistance			
Meets the product standard's requirements.			
10.2.3.1 Verification of thermal stability of enclosures			
Meets the product standard's requirements.			
10.2.3.2 Verification of resistance of insulating materials to normal heat			
Meets the product standard's requirements.			
10.2.3.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects			
Meets the product standard's requirements.			
10.2.4 Resistance to ultra-violet (UV) radiation			
Meets the product standard's requirements.			
10.2.5 Lifting			
Does not apply, since the entire switchgear needs to be evaluated.			
10.2.6 Mechanical impact			
Does not apply, since the entire switchgear needs to be evaluated.			
10.2.7 Inscriptions			
Meets the product standard's requirements.			
10.3 Degree of protection of ASSEMBLIES			
Does not apply, since the entire switchgear needs to be evaluated.			
10.4 Clearances and creepage distances			
Meets the product standard's requirements.			
10.5 Protection against electric shock			
Does not apply, since the entire switchgear needs to be evaluated.			

10.6 Incorporation of switching devices and components		Does not apply, since the entire switchgear needs to be evaluated.
10.7 Internal electrical circuits and connections		Is the panel builder's responsibility.
10.8 Connections for external conductors		Is the panel builder's responsibility.
10.9 Insulation properties		
10.9.2 Power-frequency electric strength		Is the panel builder's responsibility.
10.9.3 Impulse withstand voltage		Is the panel builder's responsibility.
10.9.4 Testing of enclosures made of insulating material		Is the panel builder's responsibility.
10.10 Temperature rise		The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.
10.11 Short-circuit rating		Is the panel builder's responsibility. The specifications for the switchgear must be observed.
10.12 Electromagnetic compatibility		Is the panel builder's responsibility. The specifications for the switchgear must be observed.
10.13 Mechanical function		The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

Technical data ETIM 7.0

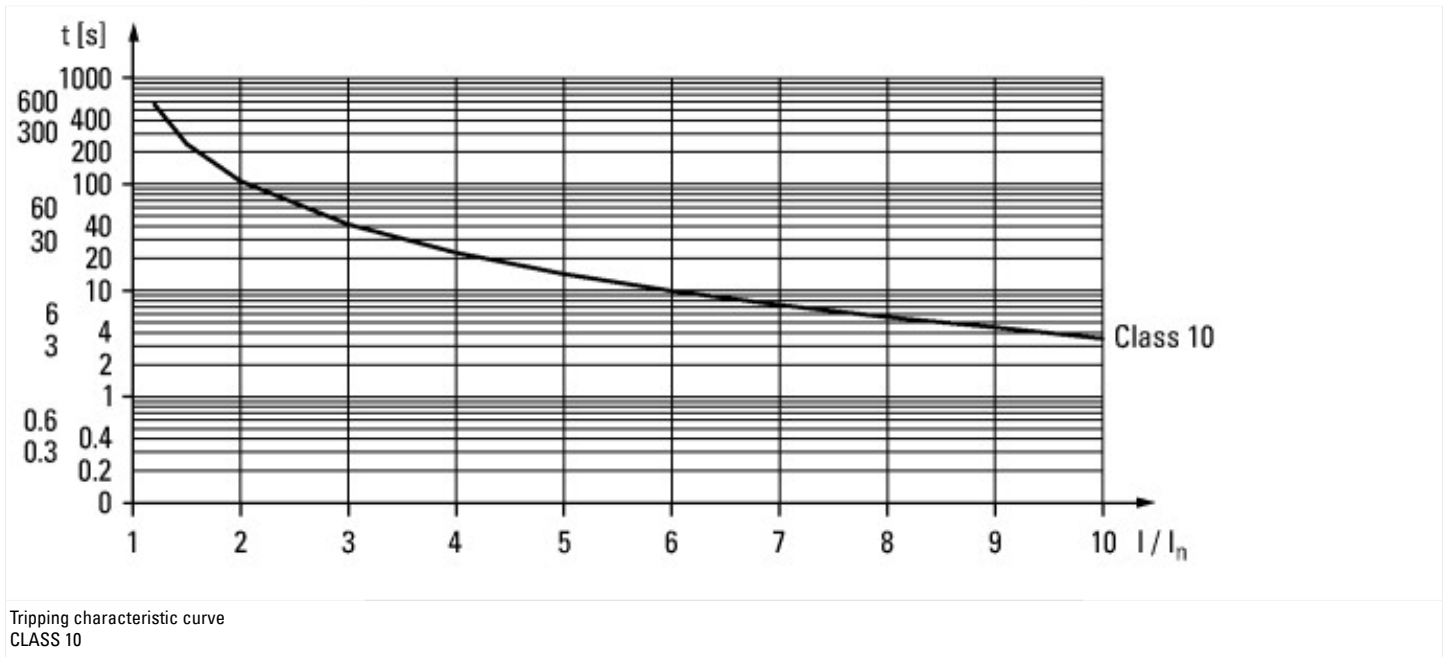
Low-voltage industrial components (EG000017) / Motor starter/Motor starter combination (EC001037)		
Electric engineering, automation, process control engineering / Low-voltage switch technology / Load breakout, motor breakout / Motor starter combination (ecl@ss10.0.1-27-37-09-05 [AJZ718013])		
Kind of motor starter		Reversing starter
With short-circuit release		No
Rated control supply voltage U_s at AC 50HZ	V	0 - 0
Rated control supply voltage U_s at AC 60HZ	V	0 - 0
Rated control supply voltage U_s at DC	V	24 - 24
Voltage type for actuating		DC
Rated operation power at AC-3, 230 V, 3-phase	kW	0.55
Rated operation power at AC-3, 400 V	kW	1.1
Rated power, 460 V, 60 Hz, 3-phase	kW	0
Rated power, 575 V, 60 Hz, 3-phase	kW	0
Rated operation current I_e	A	3
Rated operation current at AC-3, 400 V	A	3
Overload release current setting	A	0.18 - 3
Rated conditional short-circuit current, type 1, 480 Y/277 V	A	0
Rated conditional short-circuit current, type 1, 600 Y/347 V	A	0
Rated conditional short-circuit current, type 2, 230 V	A	0
Rated conditional short-circuit current, type 2, 400 V	A	0
Number of auxiliary contacts as normally open contact		0
Number of auxiliary contacts as normally closed contact		0
Ambient temperature, upper operating limit	°C	60
Temperature compensated overload protection		Yes
Release class		CLASS 10
Type of electrical connection of main circuit		Spring clamp connection
Type of electrical connection for auxiliary- and control current circuit		Spring clamp connection
Rail mounting possible		Yes
With transformer		No
Number of command positions		
Suitable for emergency stop		No
Coordination class according to IEC 60947-4-3		
Number of indicator lights		5
External reset possible		Yes
With fuse		No
Degree of protection (IP)		IP20
Degree of protection (NEMA)		Other
Supporting protocol for TCP/IP		No
Supporting protocol for PROFIBUS		No
Supporting protocol for CAN		No

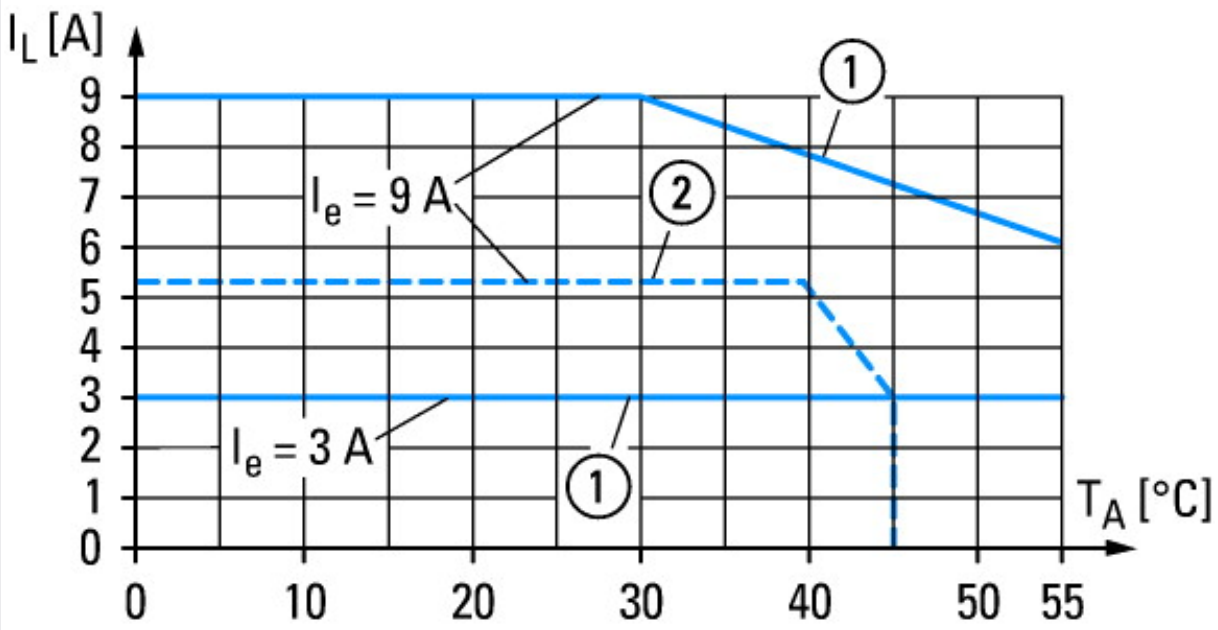
Supporting protocol for INTERBUS			No
Supporting protocol for ASI			No
Supporting protocol for MODBUS			No
Supporting protocol for Data-Highway			No
Supporting protocol for DeviceNet			No
Supporting protocol for SUCONET			No
Supporting protocol for LON			No
Supporting protocol for PROFINET IO			No
Supporting protocol for PROFINET CBA			No
Supporting protocol for SERCOS			No
Supporting protocol for Foundation Fieldbus			No
Supporting protocol for EtherNet/IP			No
Supporting protocol for AS-Interface Safety at Work			No
Supporting protocol for DeviceNet Safety			No
Supporting protocol for INTERBUS-Safety			No
Supporting protocol for PROFIsafe			No
Supporting protocol for SafetyBUS p			No
Supporting protocol for other bus systems			Yes
Width		mm	22.5
Height		mm	112.5
Depth		mm	113.6

Approvals

Product Standards			UL 60947-4-1; CSA C22.2 No. 60947-4-1-14; CE marking
UL File No.			E338590
UL Category Control No.			NLDX, NLDX7
CSA File No.			UL report applies to both US and Canada
North America Certification			UL listed, certified by UL for use in Canada
Specially designed for North America			No

Characteristics





Current derating

- ① For devices installed with a minimum clearance of 20 mm
- ② For devices in direct sequence

Dimensions

