DATASHEET - EMS-DO-T-9-SWD



DOL starter, 24 V DC, 1,5 - 7 (AC-53a), 9 (AC-51) A, Push in terminals, SmartWire-DT slave

Part no. Catalog No. Alternate Catalog No.

EMS-D0-T-9-SWD 170107 g EMS-D0-T-9-SWD



Delivery program

Product rangeElectronic motor starterProduct rangeSmartWire-DT slaveSubrangeSmartWire-DT electronic motor startersBasic functionDOL starters (complete devices)FunctionFor connecting to SmartWire-DT for expanded diagnostics.DescriptionDOL starting Motor protection Circuit design: safety output stage with bypass, three-phase disconnect. Motor current additionally adjustable via SmartWire-DT.MessagesOperating direction feedback Motor current in % Thermal motor image in % Orelad are warning				This item is only available for a limited time. Replacement item: Art. no. 192387, Type: EMS2-D0-T-9-SWD
Product rangeImageImageImageImageSubrangeImageImageImageImageImageBasic functionImageImageImageImageImageFunctionImageImageImageImageImageDescriptionImageImageImageImageImageMessagesImageImageImageImageImageMessagesImage	Product range			Electronic motor starter
SubrangeSmartWire-DT electronic motor startersBasic functionDOL starters (complete devices)FunctionFor connecting to SmartWire-DT for expanded diagnostics.DescriptionDOL starting Motor protection Circuit design: safety output stage with bypass, three-phase disconnect. Motor current additionally adjustable via SmartWire-DT.MessagesOperational readiness 	Product range			SmartWire-DT slave
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Messages Operational readiness Operating direction feedback Motor current in % Motor current in A Thermal motor image in % Overload prevaring	Description			DOL starting Motor protection Circuit design: safety output stage with bypass, three-phase disconnect. Motor current additionally adjustable via SmartWire-DT.
Trip indications (overload, phase failure, etc.) Set short-circuit release value Device Type	Vessages			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	Commands			Operating the motor starter Manual reset Automatic reset
Motor ratings	Motor ratings			
Max. rating for three-phase motors, 50 - 60 Hz	Max. rating for three-phase motors, 50 - 60 Hz			
AC-53a	AC-53a			
380 V 400 V 415 V P kW 0.55 - 3	380 V 400 V 415 V	Р	kW	0.55 - 3
Setting range of overload releases I_r A_x $1,5 - 7$ (AC-53a) 9 (AC-51)	Setting range of overload releases	l _r	A_x	1,5 - 7 (AC-53a) 9 (AC-51)
Actuating voltage 24 V DC	Actuating voltage			24 V DC
Connection technique Push in terminals	Connection technique			Push in terminals
Connection to SmartWire-DT yes	Connection to SmartWire-DT			yes

Technical data

General			
Standards			IEC/EN 60947-4-2
Dimensions			
Width		mm	30
Height		mm	157
Depth		mm	124
Weight		kg	0.3
Mounting			Top-hat rail IEC/EN 60715, 35 mm
Protection type (IEC/EN 60529, EN50178, VBG 4)			IP20
Mounting position			Vertical
Lifespan, electrical	Operations		3 × 10 ⁷
Max. switching frequency		Operatior h	13/200 (pulse pause time 50:50)
Terminal capacity			

Solid		mm ²	1 x (0.2 - 2.5) 1 x AWG20 - 14
flexible, with ferrule		mm ²	2 × (0,2 - 2,5)
Neter			1 x AWG24 - 14 Minimum langth 10 mm
Notes		2	
		mm ²	2 x (u,z - 1,3) 2 x AWG24 - 16
Notes			Minimum length 10 mm.
Climatic environmental conditions			
Operating ambient temperature	0	°U	-5 - +60, in accordance with IEC 60068-2-1
storage Main conducting naths	8	°С	-40 - +80
Rated impulse withstand voltage	Uimn	V AC	6000
	- mp		11/2
Rated operational voltage	U.	V	42 - 550
Pated aparational ourrant	Οų	•	
		٨	120_0
AC-51	'e	A	1.20 - 3
AU-53a	le	A	1.20 - 7
Heat dissipation	P _V	W	1 - 12
Static heat dissipation, non-current-dependent	P _{vs}	W	1
Basic insulation to IEC/EN60947-1			
Between supply, control, and switching voltages		V AC	500
between feedback signal output and switch voltage		V AC	500
Current measurement			
Setting range of overload releases	l _r	A_x	1,5 - 7 (AC-53a) 9 (AC-51)
Release class		CLASS	10 (Ir ≦ 4 A) 10A (Ir > 4 A)
Recovery time	tw	min.	2 (manual startup) 20 (automatic restart)
Balance monitoring			
Magnitude $I_{max} > I_{rated} ((I_{max} - I_{min})/I_{max})$		%	If ≧ 33, pick-up time of 120 s If ≧ 67, pick-up time of 1.8 s
Magnitude $I_{max} < I_{rated}$ (($I_{max} - I_{min}$)/ I_{rated})		%	If ≧ 33, pick-up time of 120 s If ≧ 67, pick-up time of 1.8 s
Stall protection			
Pick-up time I (L1) or I (L3)		А	60
Pick-up time		S	0.5
Short-circuit rating			
Type "1" coordination			
Short-circuit protective device			50 kA, 500 V AC: Fuse 16 A gG/gL 50 kA, 500 V AC: fuse 30 A CCMR 50 kA, 415 V AC: PKM0-4 15 kA, 415 V AC: PKM0-6,3 2.5 kA, 400 V AC: FAZ-B16/3
Control section			
Input data			
Supply voltage	U _{AUX}	V DC	24 (-15 - +20 %)
Residual ripple on the input voltage		%	≦ 5
Input current		mA	70
Current draw inrush		mA	120
Current draw (operation)	U _{AUX}	mA	50
Electromagnetic compatibility (EMC)			
Electrostatic discharge (ESD)			
applied standard			IEC/EN 61000-4-2, Level 3
Air discharge		kV	8
Contact discharge		kV	6
Electromagnetic fields (RFI)			
applied standard			IEC/EN 61000-4-3
		V/m	800 - 1000 MHz: 10 1.4 - 2 GHz: 10

		2.0 - 2.7 GHz: 3
Radio interference suppression		EN 55011, Class A (emitted interference, line-conducted) EN 61000-6-3, Class A (emitted interference, radiated)
Note on use		This product is designed for operation in industrial environments (environment 2). The use in residential environments (environment 1) could cause electrical interference so that addition suppression must be planned.
Burst	kV	2 IEC/EN 61000-4-4, level 3
power pulses (Surge)		1 kV (symmetrical) 2 kV (asymmetrical) according to IEC/EN 61000-4-5
Immunity to line-conducted interference to (IEC/EN 61000-4-6)	V	10

Design verification as per IEC/EN 61439

Reted operational current for specified heat dissipationIIIReted operational current despendentPoirV21Equipment heat dissipation, current dependentPoirV0Distributed dissipation, current dependentParaV0Operating ambient temperature min.ParaV0Operating ambient temperature max.ParaV0EVEX MS3 designed verticationParaV010.2.2.2.Corresion resistanceParaV010.2.2.2.Corresion resistanceParaParaPara10.2.2.2.Corresion of testance of insulation materials to obmorth leadParaPara10.2.2.2.Corresion of resistance of insulation materials to obmorth leadParaPara10.2.2.2.Urification of resistance of insulation materials to obmorth leadParaPara10.2.2.2.Urification of resistance of insulation materials to obmorth leadParaPara10.2.2.2.Urification of resistance of insulation materials to obmorth leadParaPara10.2.2.Urification of resistance of insulation materials to obmorth leadParaPara10.2.3.Urification of operation of ASSEMBLIESParaParaPara10.3.0.0.2.Urification of operation of AssemanceParaPara	Tec	hnical data for design verification			
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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		Direct starter
With short-circuit release		No
Rated control supply voltage Us at AC 50HZ	V	0 - 0
Rated control supply voltage Us at AC 60HZ	V	0 - 0

Rated control supply voltage Us at DC	V	24 - 24
Voltage type for actuating		DC
Rated operation power at AC-3, 230 V, 3-phase	kW	1.5
Rated operation power at AC-3, 400 V	kW	3
Rated power, 460 V, 60 Hz, 3-phase	kW	2.2
Rated power, 575 V, 60 Hz, 3-phase	kW	0
Rated operation current le	А	9
Rated operation current at AC-3, 400 V	A	7
Overload release current setting	A	1.5 - 9
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	40
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		0
Suitable for emergency stop		No
Coordination class according to IEC 60947-4-3		Class 1
Number of indicator lights		A
External reset nessible		7 Vos
With fuce		No
Pagrap of protection (IP)		
Degree of protection (NFMA)		Other
		No
Supporting protocol for CAN		No
Supporting protocol for INTERPLIS		No
		No
Supporting protocol for MODPUS		No
Supporting protocol for MODBOS		NO
Supporting protocol for Data-Hignway		No
Supporting protocol for DeviceNet		No
Supporting protocol for SUCUNE I		NO
Supporting protocol for LUN		NO
		No
		No
Supporting protocol for SERCUS		NO
		No
Supporting protocol for EtherNet/IP		No
Supporting protocol for AS-Interface Safety at Work		
Supporting protocol for DeviceNet Safety		
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	30
Height	mm	157
Depth	mm	139

Approvals

Product Standards	IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14; CE marking
UL File No.	E29096
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









Additional product information (links)

MN034002ZU EMS-...-SWD electronic motor starter/EMS electronic motor starter

MN034002ZU EMSSWD electronic motor starter/EMS electronic motor starter - Deutsch / English	https://es-assets.eaton.com/DOCUMENTATION/AWB_MANUALS/MN034002ZU_DE_EN.pdf
Produktinformation EMS, Hinweise zur Projektierung	http://www.eaton.eu/ecm/groups/public/@pub/@europe/@electrical/documents/content/pct_1040938_de.pdf