Eaton 192389

Eaton Moeller® series EMS2 DOL starter, 24 V DC, 1,5 - 7 (AC-53a), 9 (AC-51) A, Push in terminals, SmartWire-DT slave, Controlled stop, PTB 19 ATEX 3000

PRODUCT NAME	Eaton Moeller® series EMS2 DOL starter
CATALOG NUMBER	192389
PRODUCT LENGTH/DEPTH	114.5 mm
PRODUCT HEIGHT	99 mm
PRODUCT WIDTH	22.5 mm
PRODUCT WEIGHT	0.297 kg
CERTIFICATIONS	UL508 IEC 61508 EN ISO 13849 IEC/EN 60947-4-2 UL File No.: E338590 UL Category Control No.: NLDX, NLDX7 PTB 19 ATEX 3000 UL 60947-4-1 CSA-C22.2 No. 60947-4-1-14 CE marking UL listed Certified by UL for use in Canada UL report applies to both US and Canada

Powering Business Worldwide

TYPE	DOL starter (complete device)
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.
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 RESIST. OF INSUL. MAT. TO ABNORMAL HEAT/FIRE BY INTERNAL ELECT. 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	Does not apply, since the

CHARACTERISTIC CURVE	eaton-contactors-ems2-reversing-starter-characteristic-curve-002.eps eaton-contactors-ems2-reversing-starter-characteristic-curve-003.eps eaton-contactors-ems2-reversing-starter-characteristic-curve.eps
DECLARATIONS OF CONFORMITY	DA-DC-00004126.pdf
	eaton-ems2-electronic-motorstarter-brochure-br034001en-en-us.pdf
	eaton-ems2-electronic-motorstarter-flyer-fl034007en-en-us.pdf
	eaton-contactors-ems2-reversing-starter-dimensions.eps eaton-contactors-ems2-reversing-starter-3d-drawing.eps

PROTECTION OF ASSEMBLIES	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.
10.9.2 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.
CLASS	CLASS 10
CONNECTION TO SMARTWIRE-DT	Yes
MODEL	Direct starter
EXPLOSION SAFETY CATEGORY FOR DUST	ATEX dust-ex-protection, II (2) G [Ex e] [Ex d] [Ex px] ATEX dust-ex-protection, II (2) D [Ex t] [Ex p]
ELECTRICAL CONNECTION TYPE OF MAIN CIRCUIT	Spring clamp connection
VOLTAGE TYPE	DC
MOUNTING POSITION	Motor feeder at bottom Vertical
MOUNTING METHOD	Top-hat rail fixing (according to IEC/EN 60715, 35 mm) Rail mounting possible
CONNECTION	Push in terminals
FUNCTIONS	Controlled stop Temperature compensated overload protection For connecting to SmartWire-DT for expanded diagnostics

	DOL starting Motor protection Automatic reset Display of Device Type Display of Enable signal Manual reset Display of Motor current in % Display of Operating direction feedback Operating the motor starter Display of Operational readiness Display of Overload prewarning Display of Set short-circuit release value Display of Thermal motor image in % Display of Trip indications (overload, phase failure, etc.)
TERMINAL CAPACITY	0.2 - 2.5 mm^2, Main cables, Push-in terminals
TERMINAL CAPACITY (AWG)	24 - 14, Push-in terminals
OVERLOAD RELEASE CURRENT SETTING - MIN	1.5 A
POWER CONSUMPTION (SEALING) AT DC	12 W
RATED ACTUATING CURRENT (IC)	5 mA
RATED CONDITIONAL SHORT-CIRCUIT CURRENT (IQ), TYPE 2, 230 V	0 A
RATED CONDITIONAL SHORT-CIRCUIT CURRENT (IQ), TYPE 2, 380 V, 400 V, 415 V	0 A
RATED CONDITIONAL SHORT-CIRCUIT CURRENT, TYPE 1, 480 Y/277 V	0 A
RATED CONDITIONAL SHORT-CIRCUIT CURRENT, TYPE 1, 600 Y/347 V	0 A
RATED CONTROL SUPPLY CURRENT IS	60 mA
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50	0 V

HZ - MAX	
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 50 HZ - MIN	0 V
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MAX	0 V
RATED CONTROL SUPPLY VOLTAGE (US) AT AC, 60 HZ - MIN	0 V
RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MAX	24 V
RATED CONTROL SUPPLY VOLTAGE (US) AT DC - MIN	24 V
RATED OPERATIONAL CURRENT (IE) AT AC-3, 380 V, 400 V, 415 V	7 A
RADIO INTERFERENCE CLASS	EN 55011 Class A (EN 61000-6-3, emitted interference, radiated)
RESIDUAL RIPPLE	≤ 5 % (input voltage)
RATED CONTROL SUPPLY VOLTAGE	19.2 - 30 V DC
PROTOCOL	Other bus systems
INRUSH CURRENT	120 mA (draw)
RATED CONTROL VOLTAGE (UC)	24 V (Actuating circuit ON, L, R)
RATED OPERATIONAL CURRENT (IE)	9 A
RATED OPERATIONAL CURRENT (IE) AT AC-51	9 A
RATED OPERATIONAL CURRENT (IE) AT AC-53A - MAX	7 A
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	9 A
RATED OPERATIONAL VOLTAGE	42 - 550 V 500 V AC
SAFETY PARAMETER (EN ISO 13849-1)	3, Category PL e, Performance level 60 (safe switch off) / 82 (motor protection) years; MTTFD
SAFETY PARAMETER (IEC 62061)	Opening delay [ms]: 200 (safe switch off) / Class

	10A (motor protection) 99 % (safe switch off) / 98 % (motor protection), DC
SWITCHING LEVEL	19.2 - 30 V DC, Switching level "High", Actuating circuit (ON, L, R) < 5 V DC, Switching level "confirm Off", Actuating circuit (ON, L, R) -3 - 9.6 V DC, Switching level "Low", Actuating circuit (ON, L, R)
AMBIENT OPERATING TEMPERATURE - MAX	55 °C
AMBIENT OPERATING TEMPERATURE - MIN	-5 °C
AMBIENT STORAGE TEMPERATURE - MAX	80 °C
AMBIENT STORAGE TEMPERATURE - MIN	40 °C
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID	12 W
HEAT DISSIPATION CAPACITY PDISS	0 W
HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID	0 W
NUMBER OF AUXILIARY CONTACTS (NORMALLY CLOSED CONTACTS)	0
NUMBER OF AUXILIARY CONTACTS (NORMALLY OPEN CONTACTS)	0
NUMBER OF COMMAND POSITIONS	0
NUMBER OF PILOT LIGHTS	0
OVERLOAD RELEASE CURRENT SETTING - MAX	9 A
RATED OPERATIONAL POWER AT AC-3, 220/230 V, 50 HZ	1.5 kW
RATED OPERATIONAL POWER AT AC-3, 380/400 V, 50 HZ	3 kW
RATED OPERATIONAL POWER AT AC-53A, 380/400 V, 50 HZ	3 kW
RATED POWER AT 460 V,	0 kW

60 HZ, 3-PHASE	
RATED POWER AT 575 V, 60 HZ, 3-PHASE	0 kW
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS	2 W
HEAT DISSIPATION DETAILS	If necessary, Allow for derating
PRODUCT CATEGORY	Electronic motor starter
COORDINATION CLASS (IEC 60947-4-3)	Class 1
DEGREE OF PROTECTION	IP20 NEMA Other
ELECTRICAL CONNECTION TYPE FOR AUXILIARY- AND CONTROL-CURRENT CIRCUIT	Spring clamp connection
ACTUATING VOLTAGE	24 V DC
POWER CONSUMPTION	12 W

PROJECT NAME:	
PROJECT NUMBER:	
PREPARED BY:	
:	

Eaton House
30 Pembroke Road
Dublin 4,
Eaton.com

Follow us on social media to get the latest product and support information.