



DC motor driver module; 12–30 V; brush,3.5 A

Part no. **XN-322-1DCD-B35**
178794

General specifications	
Product name	Eaton XN-322 DC motor driver
Part no.	XN-322-1DCD-B35
EAN	7640130098282
Product Length/Depth	104.2 millimetre
Product height	16.8 millimetre
Product width	80.3 millimetre
Product weight	0.061 kilogram
Certifications	CULus UL File No.: E172143 IEC/EN 61131-2 IEC/EN 61000-6-4 IEC/EN 61000-6-2 CE
Product Tradename	XN-322
Product Type	DC motor driver
Product Sub Type	None
Catalog Notes	Current regulator module for operating a DC motor (brushed motor) with a supply voltage of 12–30 V and a max. motor current of 3.5 A. In addition, this module features two 20 mA / 350 mA (maximum current) LED drivers. DC motor driver module, 12-30 V, 3.5 A, brushed One LED driver output / One power LED driver output (both current-controlled) The max. heat dissipation is specified as the maximum power produced inside the device's housing. The motor current must not exceed a max. value of 3.5 A. This also applies to the motor's braking and starting.
Features & Functions	
Electric connection type	Plug-in connection
Features	Fieldbus connection over separate bus coupler possible
Fitted with:	Motor current parameter setting Thermal motor protection
Functions	2 conductors, Connection option, Output current, Motor driver Short-circuit protection, outputs available
General information	
Current consumption	15 mA (typ.), for +24 V, Power supply - Input 55 mA (typ.), for +5 V power supply (internal), Power supply - Input
Degree of protection	IP20 NEMA 1
Mounting method	Rail mounting possible
Number of channels	2, Analog Outputs
Overvoltage category	III
Pollution degree	3
Product category	XN-322 DC motor driver
Resolution	10 Bit 8 Bit (Analog outputs)
Type	XN300 technology module
Used with	XN-312-... XN300
Voltage type	DC
Ambient conditions, mechanical	
Height of fall (IEC/EN 60068-2-32) - max	1 m
Mounting position	Horizontal
Shock resistance	15 g, Mechanical, Half-sinusoidal shock 11 ms, 18 Impacts
Vibration resistance	5 - 8.4 / 8.4 -150 Hz, 3,5 mm / 1 g
Climatic environmental conditions	
Air pressure	795 - 1080 hPa (operation)

Ambient operating temperature - min		0 °C
Ambient operating temperature - max		55 °C
Ambient storage temperature - min		-20 °C
Ambient storage temperature - max		85 °C
Climatic proofing		Damp heat, constant, to IEC 60068-2-3 Dry heat to IEC 60068-2-2
Environmental conditions		Condensation: prevent with appropriate measures
Relative humidity		0 - 95 % (non-condensing)
Electro magnetic compatibility		
Air discharge		8 kV (Air discharge) 4 kV (Contact discharge)
Burst impulse		1 kV, Signal cable 2 kV, Supply cable
Electromagnetic fields		1 V/m at 2 - 2.7 GHz (according to IEC EN 61000-4-3) 10 V/m at 0.08 - 1.0 GHz (according to IEC EN 61000-4-3) 3 V/m at 1.4 - 2 GHz (according to IEC EN 61000-4-3)
Emitted interference		47 dB (at 230 - 1000 MHz, Class A, radiated, high frequency) 40 dB (at 30 - 230 MHz, Class A, radiated, high frequency)
Radiated RFI		10 V
Surge rating		0.5/0.5 kV, Supply cable, balanced/unbalanced, EMC 1 kV, Signal cable, unbalanced, EMC
Voltage dips		Voltage dips: 10 ms/Voltage fluctuations: Yes
Terminal capacities		
Terminal capacity		0.2 - 1.5 mm ² , flexible without ferrule, H07V-K 24 - 16 AWG 0.2 - 1.5 mm ² , solid, H07V-U 0.25 - 1.5 mm ² , with ferrules with plastic collar according to DIN 46228-1 (ferrules crimped gas-tight) 0.25 - 1.5 mm ² , with ferrules without plastic collar according to DIN 46228-1 (ferrules crimped gas-tight)
Gauge pin		A1 (according to IEC/EN 60947-1)
Stripping length (main cable)		10 mm
Insulating material group		I
Electrical rating		
Rated control supply voltage		24 V (X1, Sensor/transmitter supply)
Rated operational current (Ie) - min		0 A
Rated operational current (Ie) - max		3.5 A
Rated operational voltage		160 V (terminations) 24 V (X3)
Supply voltage at AC, 50 Hz - min		0 V AC
Supply voltage at AC, 50 Hz - max		0 V AC
Supply voltage at DC - min		18 V DC
Supply voltage at DC - max		30 V DC
Communication		
Connection type		Push-in spring-cage terminal (plug-in connection), Connection design in TOP direction 2 conductors, Analog outputs, Output current
Protocol		Other bus systems
Input/Output		
Load current		Not specified by plug manufacturer
Number of inputs		0
Output current		0 - 20/350 mA, Analog outputs 0-3500 mA
Safety		
Explosion safety category for dust		None
Explosion safety category for gas		None
Potential isolation		Sensor/transmitter supply: no Power supply, Input: no
Design verification		
Equipment heat dissipation, current-dependent Pvid		0 W
Heat dissipation capacity Pdis		0 W

Heat dissipation per pole, current-dependent Pvid		0 W
Rated operational current for specified heat dissipation (In)		0 A
Static heat dissipation, non-current-dependent Pvs		3.91 W
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 protection of assemblies		Meets the product standard's requirements.
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.
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.
10.12 Electromagnetic compatibility		Is the panel builder's responsibility.
10.13 Mechanical function		The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

Technical data ETIM 9.0

Programmable logic controllers PLC (EG000024) / Fieldbus, decentr. periphery - power module, motor switch (EC001605)		
Electric engineering, automation, process control engineering / Control, Process Control System (PCS) / Field bus, decentralized peripheral / Field bus, decentralized peripheral - power module, motor switch (ecl@ss13-27-24-26-09 [BAA072018])		
Supply voltage AC 50 Hz	V	0 - 0
Supply voltage AC 60 Hz	V	0 - 0
Supply voltage DC	V	18 - 30
Voltage type (supply voltage)		DC
Number of inputs		0
Permitted voltage at input	V	0 - 0
Type of voltage (input voltage)		DC
Type of digital output		Transistor
Permitted voltage at output	V	12 - 30
Type of output voltage		DC
Short-circuit protection, outputs available		Yes
Number of motor outlets		1
Rated operation current of the motor	A	0 - 3.5
With motor current parameter setting		Yes
Type of electrical connection at the motor output		Plug-in connection
With brake output		No
With thermal motor protection		Yes
Number of HW-interfaces industrial Ethernet		0
Number of interfaces PROFINET		0
Number of HW-interfaces RS-232		0
Number of HW-interfaces RS-422		0
Number of HW-interfaces RS-485		0
Number of HW-interfaces serial TTY		0
Number of HW-interfaces parallel		0
Number of HW-interfaces wireless		0

Number of HW-interfaces USB		0
Number of HW-interfaces other		1
With optical interface		No
Supporting protocol for EtherCAT		No
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 KNX		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 PROFI-safe		No
Supporting protocol for SafetyBUS p		No
Supporting protocol for other bus systems		Yes
Radio standard Bluetooth		No
Radio standard WLAN 802.11		No
Radio standard GPRS		No
Radio standard GSM		No
Radio standard UMTS		No
IO link master		No
System accessory		Yes
Degree of protection (IP)		IP20
Degree of protection (NEMA)		1
Type of electric connection		Plug-in connection
Fieldbus connection over separate bus coupler possible		Yes
Rail mounting possible		Yes
Wall mounting/direct mounting		No
Front built-in possible		No
Rack-assembly possible		No
Suitable for safety functions		No
SIL according to IEC 61508		None
Performance level according to EN ISO 13849-1		None
Appendant operation agent (Ex ia)		No
Appendant operation agent (Ex ib)		No
Explosion safety category for gas		None
Explosion safety category for dust		None
Certified for UL hazardous location class I		No
Certified for UL hazardous location class II		No
Certified for UL hazardous location class III		No
Certified for UL hazardous location division 1		No
Certified for UL hazardous location division 2		No
Certified for UL hazardous location group A (acetylene)		No
Certified for UL hazardous location group B (hydrogen)		No

Certified for UL hazardous location group C (ethylene)			No
Certified for UL hazardous location group D (propane)			No
Certified for UL hazardous location group E (metal dusts)			No
Certified for UL hazardous location group F (carbonaceous dusts)			No
Certified for UL hazardous location group G (non-conductive dusts)			No
Width		mm	80.3
Height		mm	16.8
Depth		mm	104.2