

EMM W3/ 5-500 EX - Motor management



2963682

<https://www.phoenixcontact.com/us/products/2963682>

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.

Electronic motor management



Commercial data

Item number	2963682
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	NULL
Product key	DK7511
GTIN	4017918953096
Weight per piece (including packing)	388.1 g
Weight per piece (excluding packing)	262.32 g
Customs tariff number	85371099
Country of origin	DE

Technical data

Product properties

Product type	Electronic motor manager
Operating mode	100% operating factor

Electrical properties

Number of phases	3
Mains type	3-phase
Test voltage input/output	2.5 kV

Supply

Input name	Device supply
Nominal supply voltage	24 V DC
Supply voltage range with reference to U_{VN}	0.8 ... 1.2
Quiescent current	80 mA
Current consumption	80 mA
Protective circuit	Reverse polarity protection; Series polarity protection diode Surge protection
Operating voltage display	Green LED
Error indication	Red LED
Status display	LED (yellow)

Supply

Input name	Supply voltage for 2 A digital outputs
Nominal supply voltage	24 V DC ± 20 %
Nominal input voltage U_N	24 V DC ± 20 %
Input voltage range in reference to U_N	0.8 ... 1.2 0.8 ... 1.2
Typical input current at U_N	2 A

Input data

Control

Input name	Control input right/left
Nominal input voltage U_N	24 V DC
Input voltage range in reference to U_N	0.8 ... 1.2 0.8 ... 1.2
Typical input current at U_N	7 mA
Current consumption	7 mA
Reaction time in normal load operation	< 25 ms
Typical response time	< 25 ms
Typical turn-off time	< 25 ms
Reaction time in normal load operation	< 25 ms
Status display	LED yellow, forward running (R), LED yellow, reverse running (L)

2963682

<https://www.phoenixcontact.com/us/products/2963682>

Measurement

Input name	Voltage measuring input V1, V2, V3
Mains frequency	45 Hz
	65 Hz
Typical input current at U_N	6 mA AC (At 550 V AC, per line)
Current consumption	6 mA (at 550 V AC)
Protective circuit	Surge protection
	RC element; RC element

Measurement

Input name	Current measuring input L1/T1, L2/T2, L3/T3
Mains frequency	50 Hz
	60 Hz
Typical input current at U_N	max. 5 A

Power measurement

Basic accuracy	$\pm 2\%$ (Of input value, type $< \pm 1\%$, $\cos\phi 0.7$, $t_u 20\text{ }^\circ\text{C}$, $I = 5\text{ A}$)
Power range	0.1 kW ... 5 kW (x transformation ratio of external current transducers)

Voltage measurement/star voltage

Basic accuracy	$\pm 2\%$ (Of end value, typ. $< \pm 0.5\%$)
Voltage range	0 V ... 318 V (Toward virtual star point)

Current measurement

Basic accuracy	$\pm 2\%$ (Of end value, typ. $< \pm 1\%$)
Current range	0.25 A ... 5 A (x transformation ratio of external current transducers)
Measuring via	Current transformer for any conductor current

Output data

Switching outputs 2 A

Nominal output voltage	24 V DC
Nominal output voltage range (factor)	0.8 ... 1.2
Continuous load current	2 A
Protective circuit	Reverse polarity protection
	Surge protection
	short-circuit and overload proof

Acknowledging contacts O1-O4

Note	The meaning of the acknowledgement outputs can be freely parameterized, see user manual
Number of outputs	4
Nominal output voltage	$U_{VN} - 1\text{ V}$
Continuous load current	50 mA

Connection data

Control circuits

Connection method	Screw connection
Stripping length	8 mm
Screw thread	M3
Conductor cross-section rigid	0.2 mm ² ... 6 mm ²
Conductor cross-section flexible	0.2 mm ² ... 4 mm ²
Conductor cross-section AWG	24 ... 10

Load circuit

Connection method	Screw connection
Stripping length	8 mm
Screw thread	M3
Conductor cross-section rigid	0.2 mm ² ... 6 mm ²
Conductor cross-section flexible	0.2 mm ² ... 4 mm ²
Conductor cross-section AWG	24 ... 10

Interfaces

Data

Interface	RS-232
Transmission speed	19200 bit (baud)

Dimensions

Width	62 mm
Height	107 mm
Depth	120 mm

Material specifications

Color	green (RAL 6021)
-------	------------------

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-20 °C ... 60 °C
Ambient temperature (storage/transport)	-20 °C ... 70 °C

Standards and regulations

Air clearances and creepage distances between the power circuits

Standards/regulations	DIN EN 50178
	safe isolation

Power station requirements

Standards/regulations	DWR 1300/ZXX01/DD/7080.8d
-----------------------	---------------------------

EMM W3/ 5-500 EX - Motor management



2963682

<https://www.phoenixcontact.com/us/products/2963682>

EMC regulations

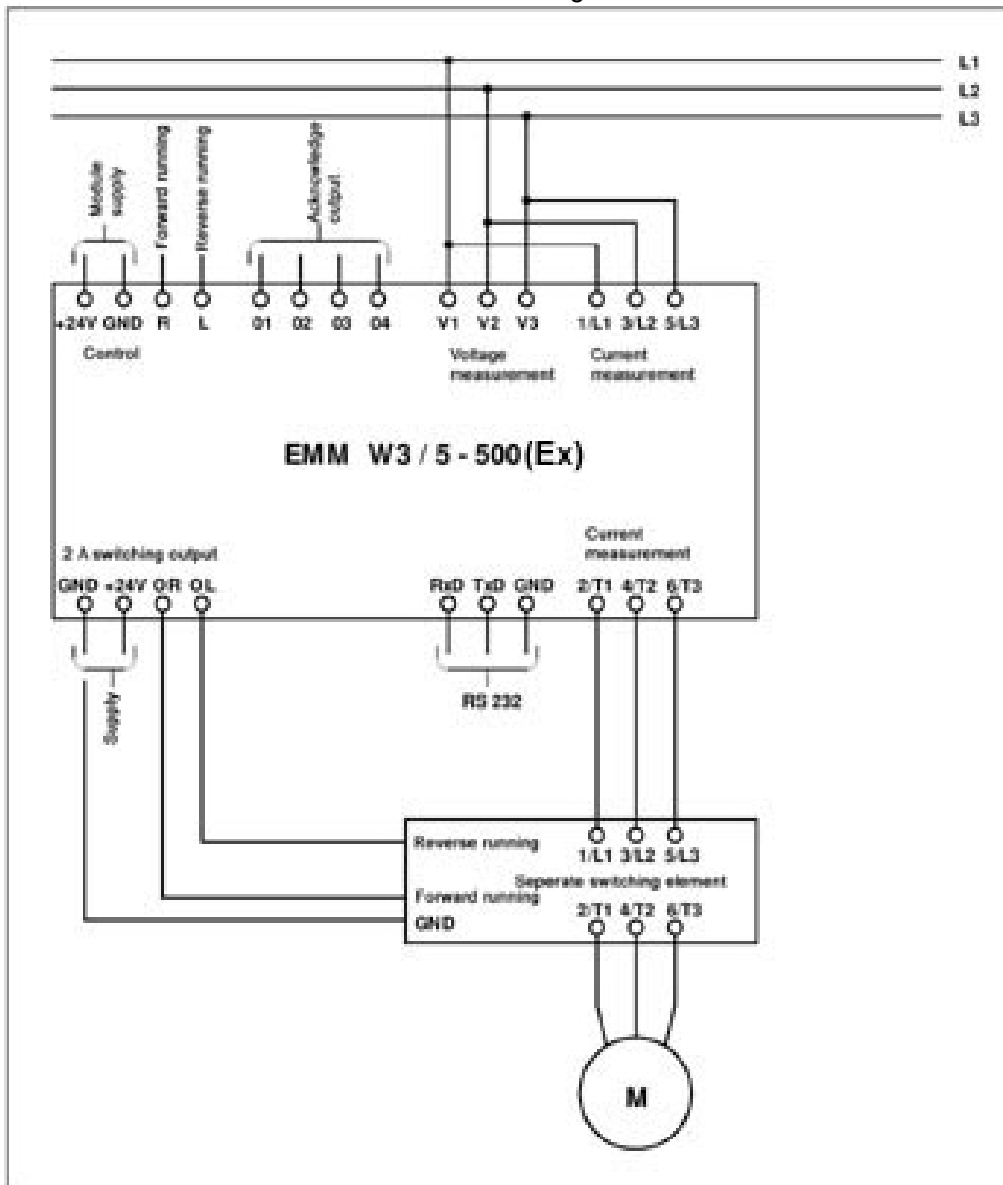
Standards/regulations	EN 61000-6-2
	EN 61000-6-4

Mounting

Assembly note	can be aligned with spacing > 20 mm
Mounting position	Vertical (horizontal DIN rail)

Drawings

Connection diagram



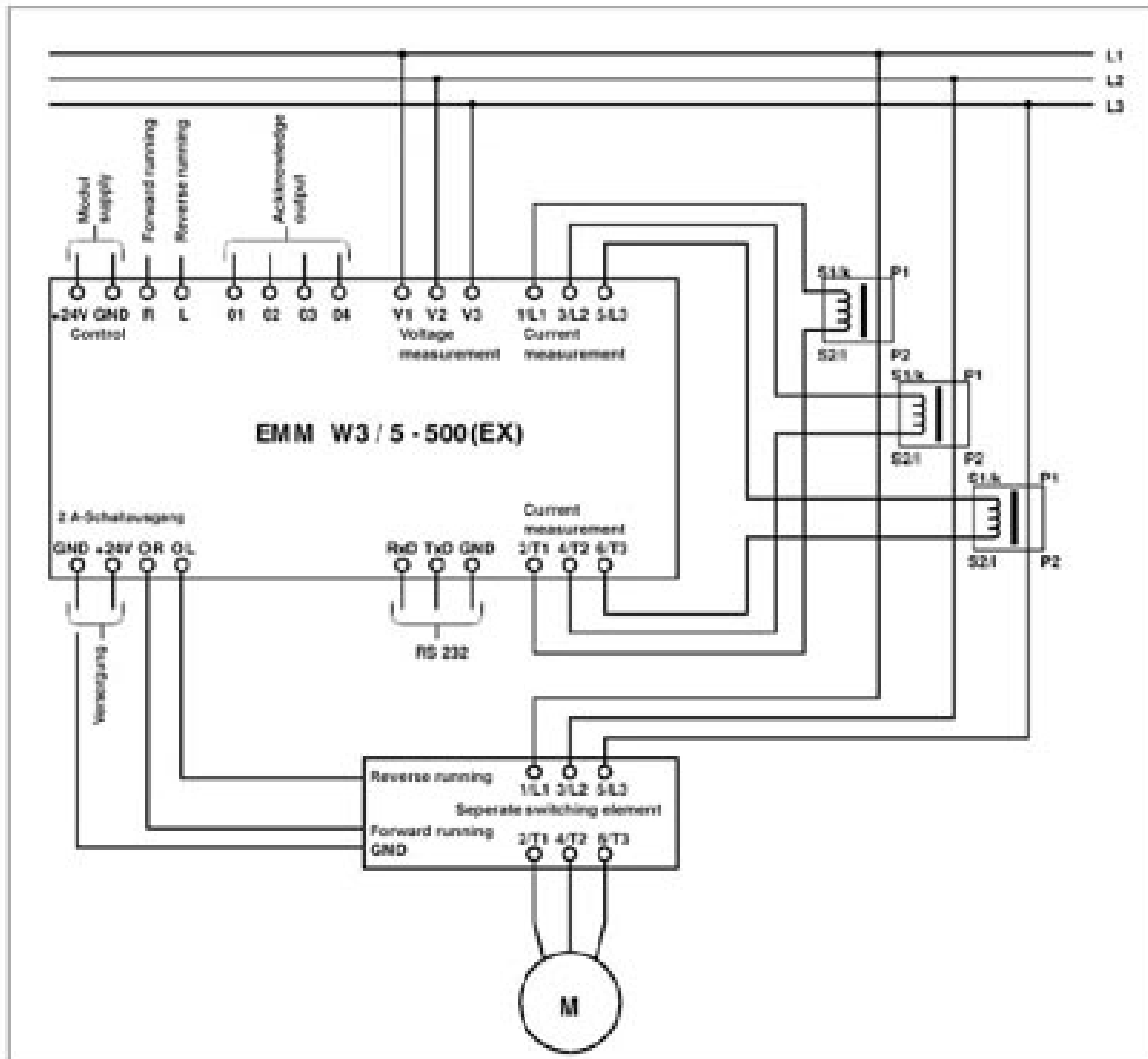
Connection version 1: Conductor currents < 5 A, without external current transformer

EMM W3/ 5-500 EX - Motor management

2963682

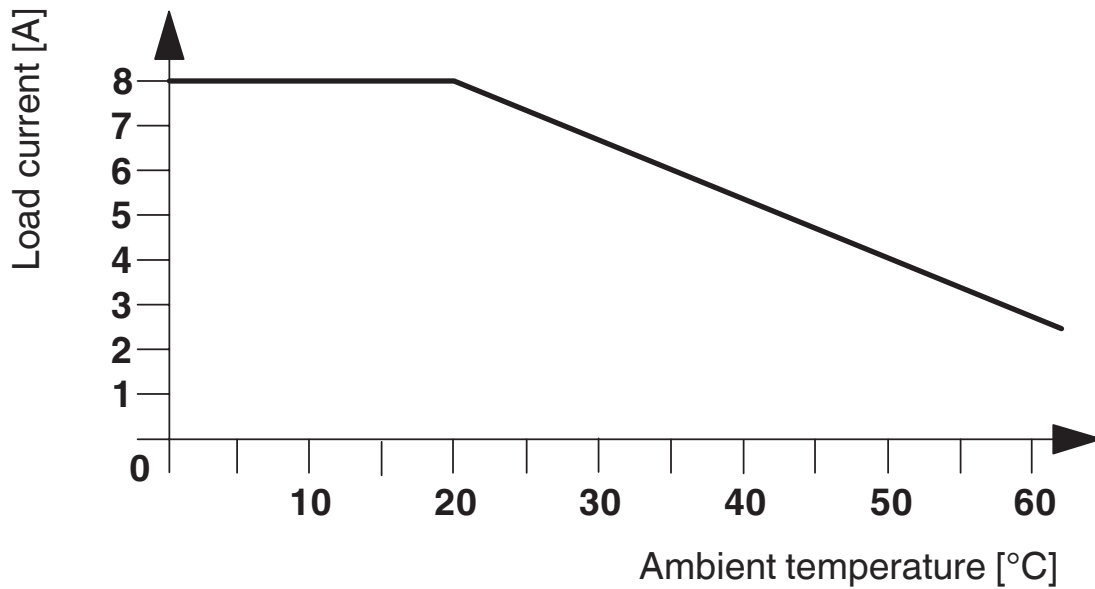
<https://www.phoenixcontact.com/us/products/2963682>

Connection diagram

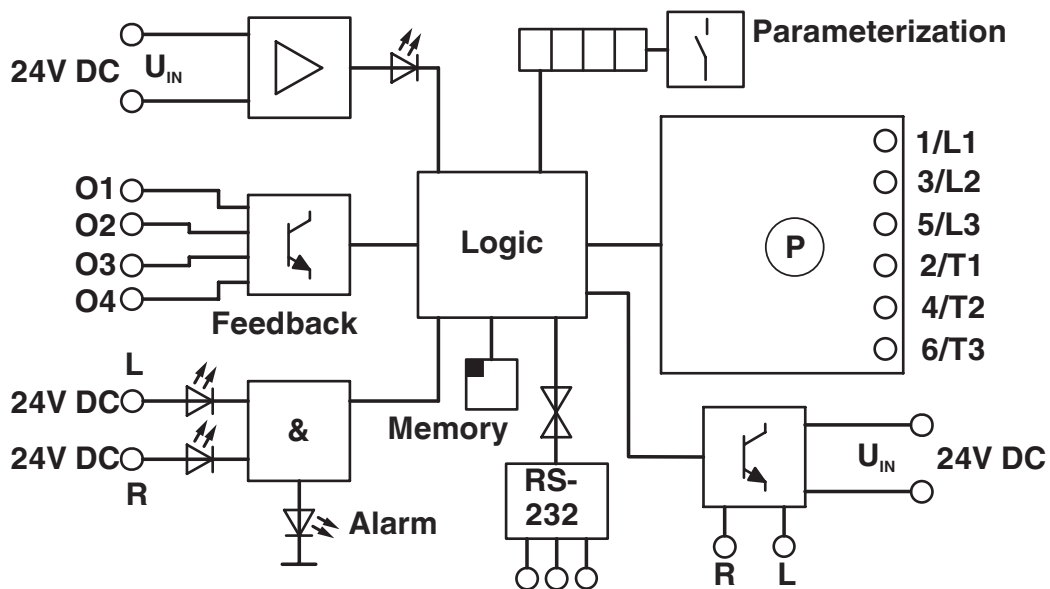


Connection version 2: Conductor currents > 5 A, with external current transformer

Diagram



Block diagram



- A = parameterization
- B = check-back
- C = power evaluation
- D = memory
- E = alarm
- F = switching output

EMM W3/ 5-500 EX - Motor management



2963682

<https://www.phoenixcontact.com/us/products/2963682>

Environmental product compliance

EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%
-------------------------------------	----------------------------

Phoenix Contact 2026 © - all rights reserved

<https://www.phoenixcontact.com>

Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com