

EMM W3/ 5-500 - Motor management



2963556

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Electronic motor management unit without power section



Commercial data

Item number	2963556
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	NULL
Product key	DK7511
GTIN	4017918929183
Weight per piece (including packing)	365.6 g
Weight per piece (excluding packing)	363.5 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 AC
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 %
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)

Measurement

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Input name	Voltage measuring input V1, V2, V3
Input voltage range	110 V AC ... 550 V AC (conductor voltage)
Mains frequency	50 Hz
	60 Hz
Typical input current at U_N	6 mA (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

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
Residual voltage	$< 1\text{ V}$

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

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)
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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
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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)

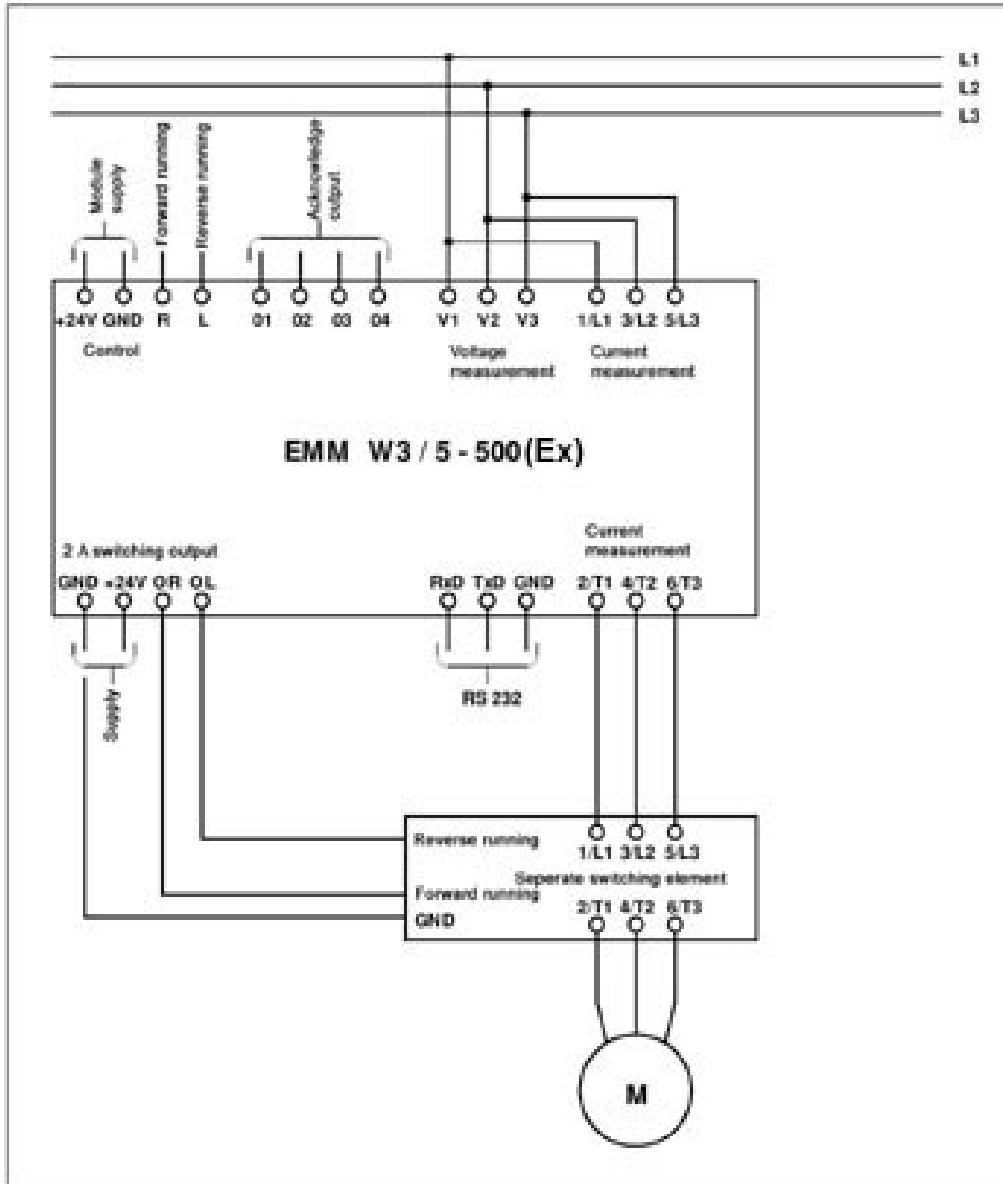
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Drawings

Connection diagram



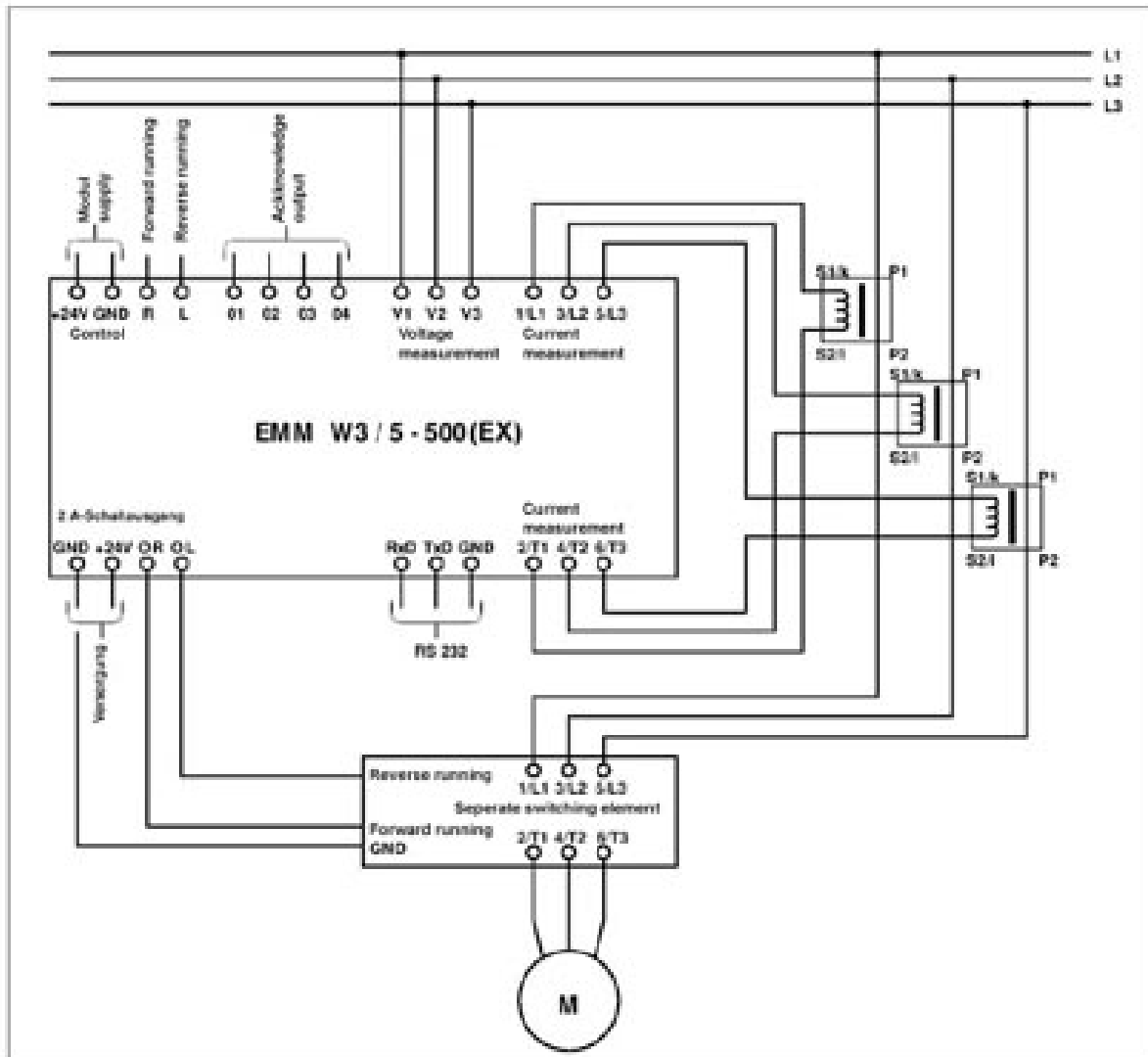
Connection version 1: Conductor currents < 5 A, without external current transformer

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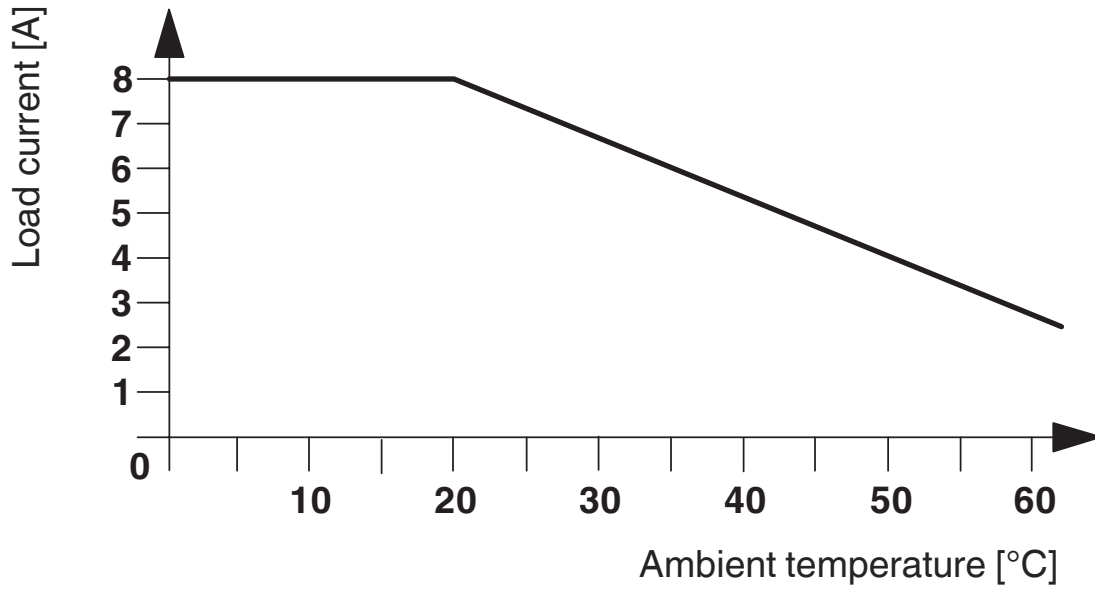
<https://www.phoenixcontact.com/us/products/2963556>

Connection diagram

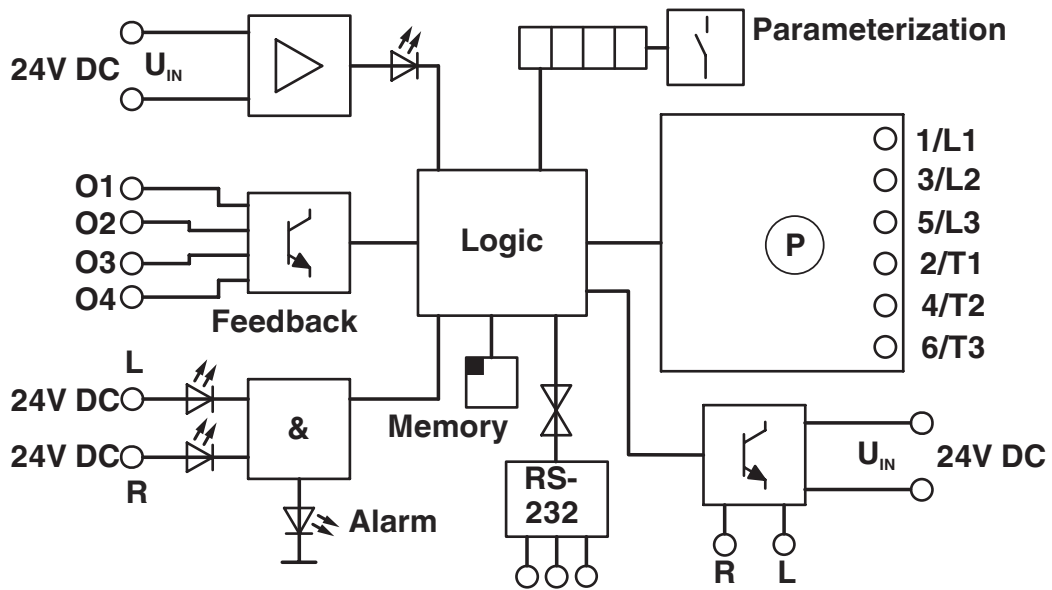


Connection version 2: Conductor currents > 5 A, with external current transformer

Diagram



Block diagram



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

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Environmental product compliance

EU REACH SVHC

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