

Motor management - EMM 3-230AC/500AC-16-IFS - 2297536

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Electronic motor management with integrated current transformers up to 16 A - active power measurement for overload and underload monitoring of motors and systems for optimum protection. Freely parameterizable switching and signaling thresholds.

The illustration shows the 24 V version.

Product Features

- Optional connection to INTERFACE system and PROFIBUS-GATEWAY-IFS via TBUS
- Freely parameterizable signaling or switching thresholds
- Digital outputs control external switching elements



Key Commercial Data

Packing unit	1 pc
Weight per Piece (excluding packing)	444.44 g
Custom tariff number	85371099
Country of origin	Germany

Technical data

Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area
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Input data

Input name	Device supply
Rated control circuit supply voltage U_S	230 V AC
Voltage range with reference to U_S	0.4 ... 1.1
Control supply voltage range	92 V AC ... 253 V AC
Rated control supply current I_S	10 mA
Switching threshold	48 V AC ("0" signal)

Motor management - EMM 3-230AC/500AC-16-IFS - 2297536

Technical data

Input data

	96 V AC ("1" signal)
Operating voltage display	Green LED
Status display	LED yellow right rotation (R), LED yellow left rotation (L), LED green data communication
Indication	Red LED
Input name	Digital inputs (IN1 - IN4)
Rated actuating voltage U_C	230 V AC
Rated actuating current I_C	3.5 mA
Input name	Voltage measuring input V1, V2, V3
Input voltage range	42 V AC ... 575 V AC
Typical input current at U_N	< 0.5 mA
Input name	Current measuring input L1/T1, L2/T2, L3/T3
Typical input current at U_N	max. 16 A

Output data

Output name	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	230 V AC (relay output/500 mA)
Continuous load current	500 mA

Current measurement

Measuring via	Internal current transformer
Basic accuracy	typ. 0.5 %

Voltage measurement/phase-to-neutral voltage

Voltage range	0 V AC ... 350 V AC (Phase-to-neutral voltage)
Basic accuracy	typ. 0.75 %

Power measurement

Power range	14 kW
Basic accuracy	typ. 2 %

Connection data, control circuit

Connection name	Control circuits
Connection method	Screw connection
Stripping length	8 mm
Screw thread	M3
Conductor cross section solid	0.2 mm ² ... 2.5 mm ²
Conductor cross section flexible	0.2 mm ² ... 2.5 mm ²

Motor management - EMM 3-230AC/500AC-16-IFS - 2297536

Technical data

Connection data, control circuit

Conductor cross section AWG	24 ... 14
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Connection data load circuit

Connection name	Load circuit
Connection method	Screw connection
Stripping length	8 mm
Screw thread	M3
Conductor cross section solid	0.2 mm ² ... 2.5 mm ²
Conductor cross section flexible	0.2 mm ² ... 2.5 mm ²
Conductor cross section AWG	24 ... 14

General

Test voltage input/output	8 kV
Mounting position	Vertical (horizontal DIN rail)
Assembly instructions	In rows with zero spacing
Operating mode	100% operating factor
Designation	Standards/regulations
Standards/regulations	DIN EN 50178
	EN 60947
	EN 60947-4-2

Dimensions

Width	22.5 mm
Height	99 mm
Depth	114.5 mm

Ambient conditions

Ambient temperature (operation)	-25 °C ... 70 °C
Ambient temperature (storage/transport)	-25 °C ... 70 °C
Degree of protection	IP20

Standards and Regulations

Designation	Standards/regulations
Standards/regulations	DIN EN 50178
	EN 60947
	EN 60947-4-2

Motor management - EMM 3-230AC/500AC-16-IFS - 2297536

Classifications

eCl@ss

eCl@ss 4.0	27371102
eCl@ss 4.1	27371102
eCl@ss 5.0	27371601
eCl@ss 5.1	27371601
eCl@ss 6.0	27371601
eCl@ss 7.0	27371601
eCl@ss 8.0	27370804

ETIM

ETIM 2.0	EC000066
ETIM 3.0	EC000066
ETIM 4.0	EC000066
ETIM 5.0	EC002572

UNSPSC

UNSPSC 6.01	30211915
UNSPSC 7.0901	39121514
UNSPSC 11	39121514
UNSPSC 12.01	39121514
UNSPSC 13.2	39121514

Approvals

Approvals

Approvals

UL Listed / cUL Listed / EAC / cULus Listed

Ex Approvals

ATEX

Approvals submitted

Approval details

Motor management - EMM 3-230AC/500AC-16-IFS - 2297536

Approvals

UL Listed 

cUL Listed 

EAC

cULus Listed 

Accessories

Accessories

Configuration set

Configuration package - MM-CONF-SET - 2297992



Configuration package for the EMM ... IFS, comprising CONTACTRON-DTM-IFS, USB programming adapter, and user manual on CD.

Data cable preassembled

Data cable - IFS-USB-DATACABLE - 2320500



Used for communicating between industrial PCs and Phoenix Contact devices with the 12-pos. IFS data port, such as QUINT UPS or TRIO UPS.

DIN rail connector

Motor management - EMM 3-230AC/500AC-16-IFS - 2297536

Accessories

DIN rail connector - ME 22,5 TBUS 1,5/ 5-ST-3,81 GN - 2707437



Plug component, Nominal current: 8 A, Nominal current (Ex): 8 A, Nominal voltage (Ex): 125 V, Number of positions: 5, Pitch: 3.81 mm, Articles with gold-plated contacts, bus connectors for connecting with electronic housings

Gateways/Proxies

Data interface - EM-PB-GATEWAY-IFS - 2297620



Gateway for the connection of up to 32 INTERFACE system devices to a higher-level controller via PROFIBUS DP. The INTERFACE system devices are connected to the Gateway via DIN rail connectors, the DIN rail connectors are provided.

Data interface - EM-RS232-GATEWAY-IFS - 2901526



Gateway for the connection of up to 32 INTERFACE system devices to a higher-level controller via Modbus/RS-232. The INTERFACE system devices are connected to the Gateway via DIN rail connectors, the DIN rail connectors are provided.

Data interface - EM-RS485-GATEWAY-IFS - 2901527



Gateway for the connection of up to 32 INTERFACE system devices to a higher-level controller via Modbus/RS-485. The INTERFACE system devices are connected to the Gateway via DIN rail connectors, the DIN rail connectors are provided.

Data interface - EM-MODBUS-GATEWAY-IFS - 2901528



Gateway for the connection of up to 32 INTERFACE system devices via Modbus/TCP to a higher-level controller. The INTERFACE system devices are connected to the Gateway via DIN rail connectors, the DIN rail connectors are provided.

Motor management - EMM 3-230AC/500AC-16-IFS - 2297536

Accessories

Data interface - EM-DNET-GATEWAY-IFS - 2901529



Gateway for the connection of up to 32 INTERFACE system devices to a higher-level controller via DeviceNet™. The INTERFACE system devices are connected to the Gateway via DIN rail connectors, the DIN rail connectors are provided.

Data interface - EM-CAN-GATEWAY-IFS - 2901504



Gateway for the connection of up to 32 INTERFACE system devices to a higher-level controller via CANopen®. The INTERFACE system devices are connected to the Gateway via DIN rail connectors, the DIN rail connectors are provided.

Data interface - EM-PNET-GATEWAY-IFS - 2904472



Gateway for the connection of up to 32 INTERFACE system devices via PROFINET to a higher-level controller. The INTERFACE system devices are connected to the Gateway via DIN rail connectors, the DIN rail connectors are provided.

Data interface - EM-ETH-GATEWAY-IFS - 2901988



Gateway for the connection of up to 32 INTERFACE system devices to a higher-level controller via EtherNet/IP™. The INTERFACE system devices are connected to the Gateway via DIN rail connectors, the DIN rail connectors are provided.

Memory block

Memory block - IFS-CONFSTICK-L - 2901103



Multi-functional memory block with handle for the INTERFACE system; for easy storage and back up of the configuration.

Motor management - EMM 3-230AC/500AC-16-IFS - 2297536

Accessories

Memory block - IFS-CONFSTICK - 2986122



Multi-functional memory block for the INTERFACE system for easy storage and backup of the configuration.

PCB plug

Printed-circuit board connector - MC 1,5/ 5-ST-3,81 - 1803604



Plug component, Nominal current: 8 A, Rated voltage (III/2): 160 V, Number of positions: 5, Pitch: 3.81 mm, Connection method: Screw connection with tension sleeve, Color: green, Contact surface: Tin

Printed-circuit board connector - IMC 1,5/ 5-ST-3,81 - 1857919



Plug component, Nominal current: 8 A, Rated voltage (III/2): 160 V, Number of positions: 5, Pitch: 3.81 mm, Connection method: Screw connection with tension sleeve, Color: green, Contact surface: Tin

Plug - IMC 1,5/ 5-ST-3,81SET IL IFS 2M - 1784729

Assembled connecting cable, IL-IFS, 2 m in length

Required add-on products

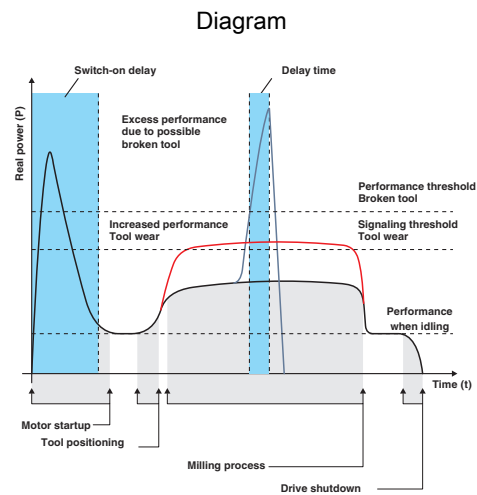
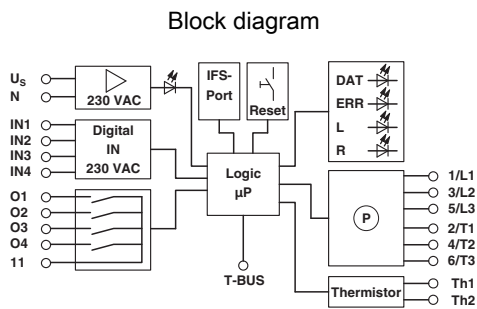
Data cable - IFS-USB-DATACABLE - 2320500



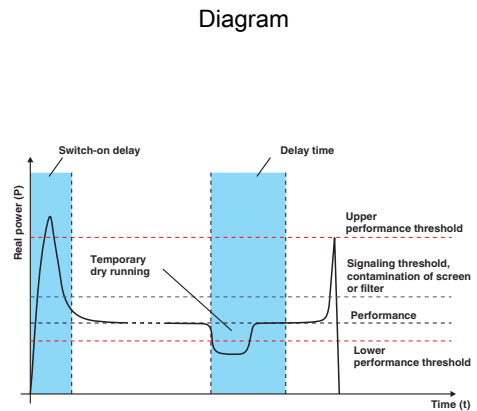
Used for communicating between industrial PCs and Phoenix Contact devices with the 12-pos. IFS data port, such as QUINT UPS or TRIO UPS.

Drawings

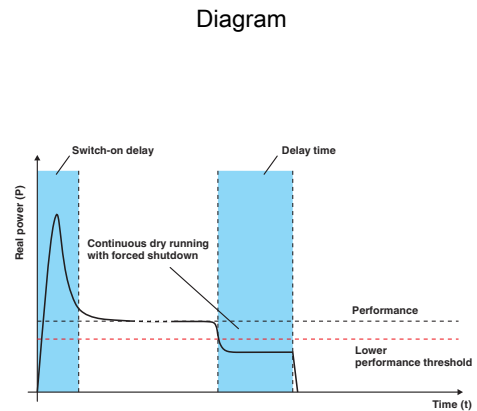
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Status monitoring: machine tool for milling



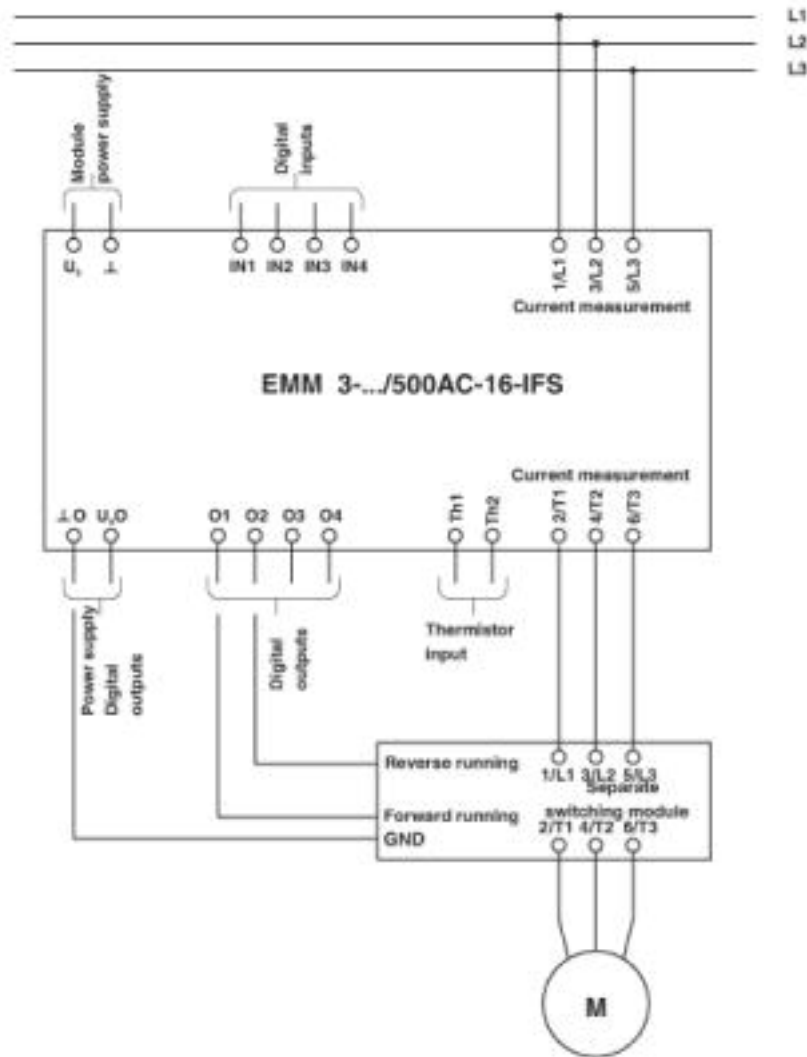
Status monitoring: air bubbles in motor-operated pumps



Status monitoring: dry run in motor-operated pumps

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Connection diagram



Mouser Electronics

Authorized Distributor

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