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## Motor management - EMM 3-230AC/500AC-IFS - 2297507

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Electronic motor management for operation with external current transformer- active power measurement for overload and underload monitoring of motors and systems for optimum protection for all performance classes. Freely parameterizable switching and signaling thresholds.

The figure shows version: EMM 3-24DC/500AC-16

### Product Features

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



### Key commercial data

Packing unit	1 pc
Weight per Piece (excluding packing)	444.0 GRM
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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#### 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

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## Technical data

### Ambient conditions

Degree of protection	IP20
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### Input data

Input name	Device supply
Rated control supply voltage $U_S$	230 V AC
Voltage range with reference to $U_S$	0.4 ... 1.1
Rated control supply current $I_S$	10 mA
Switching threshold "0" signal, voltage	48 V AC
Switching threshold "1" signal voltage	96 V AC
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 $U_N$	5 A (Secondary external converter)

### 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

### Output data, signaling contact

Designation	Current measurement
Measuring via	External push-through current transformers connected upstream
Basic accuracy	typ. 0.5 %
Designation	Voltage measurement/phase-to-neutral voltage
Voltage range	0 V AC ... 350 V AC (Phase-to-neutral voltage)
Basic accuracy	typ. 0.75 %
Designation	Power measurement
Basic accuracy	typ. 2 %

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## Technical data

### Connection data

Connection method	Screw connection
Conductor cross section solid min.	0.14 mm <sup>2</sup>
Conductor cross section solid max.	2.5 mm <sup>2</sup>
Conductor cross section stranded min.	0.14 mm <sup>2</sup>
Conductor cross section stranded max.	2.5 mm <sup>2</sup>
Conductor cross section AWG/kcmil min.	26
Conductor cross section AWG/kcmil max	12

### 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	Low voltage switching device
Standards/regulations	EN 60947
	EN 60947-4-2
Designation	Power station requirements
Standards/regulations	DWR 1300 / ZXX01/DD/7080.8d
Designation	Noise immunity
Standards/regulations	EN 61000-6-2
	EN 61000-6-3
	EN 61000-6-4
Rated surge voltage / insulation	6 kV/safe isolation
Rated insulation voltage	500 V
Pollution degree	2
Surge voltage category	III

## 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	27371601



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## Classifications

### ETIM

ETIM 2.0	EC000066
ETIM 3.0	EC000066
ETIM 4.0	EC000066
ETIM 5.0	EC001437

### UNSPSC

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

## Approvals

### Approvals

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#### Approvals

UL Listed / cUL Listed / cULus Listed

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#### Ex Approvals

ATEX


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#### Approvals submitted

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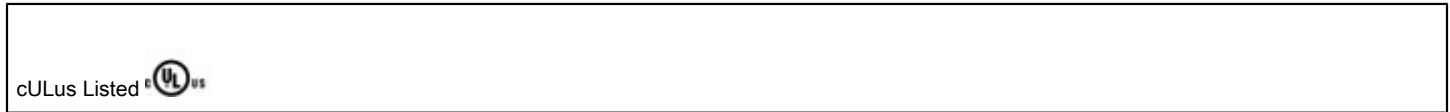
### Approval details

UL Listed 
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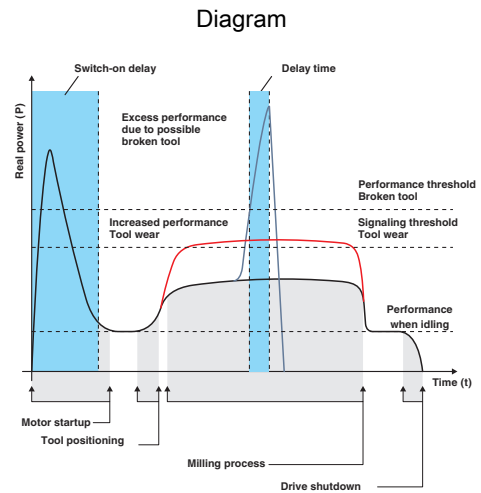
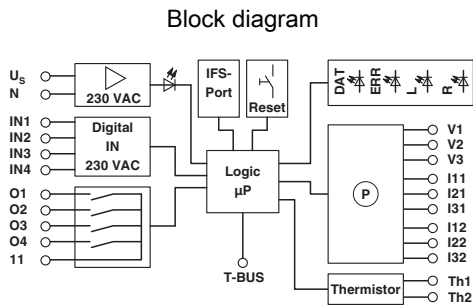
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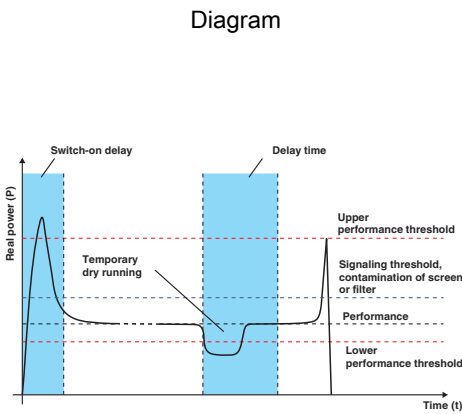
## Approvals



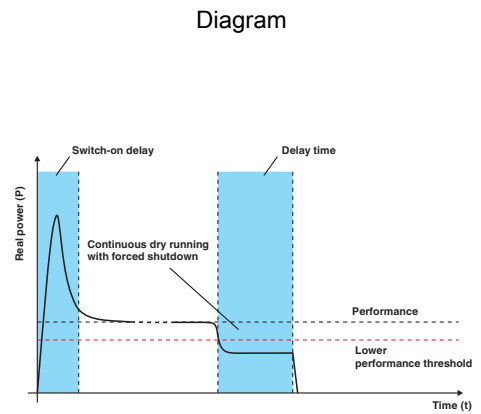
## Drawings



Status monitoring: machine tool for milling



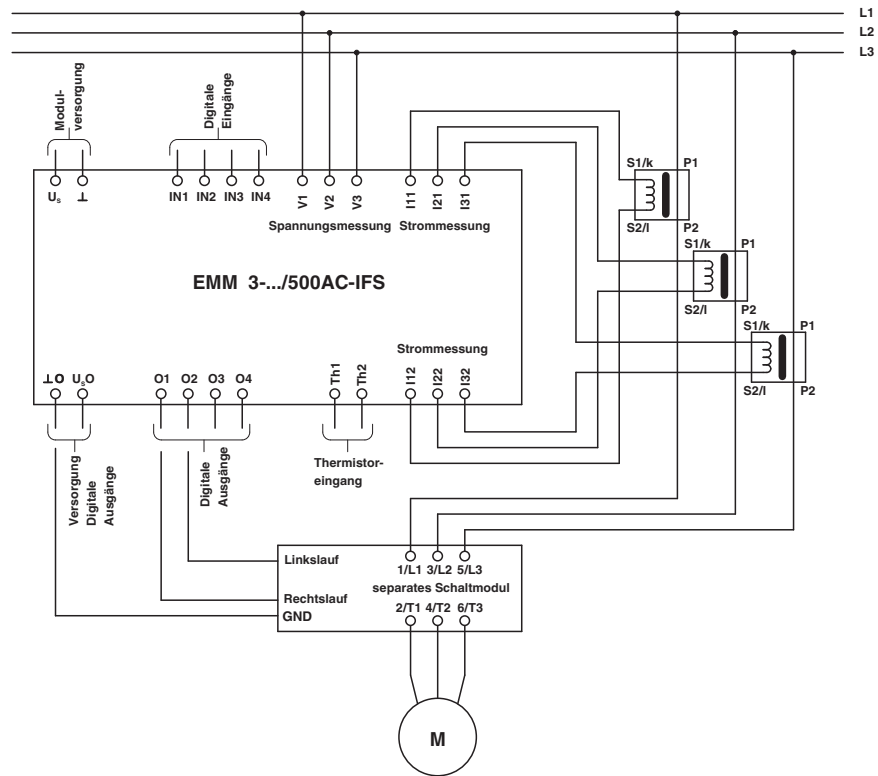
Status monitoring: air bubbles in motor-operated pumps



Status monitoring: dry run in motor-operated pumps

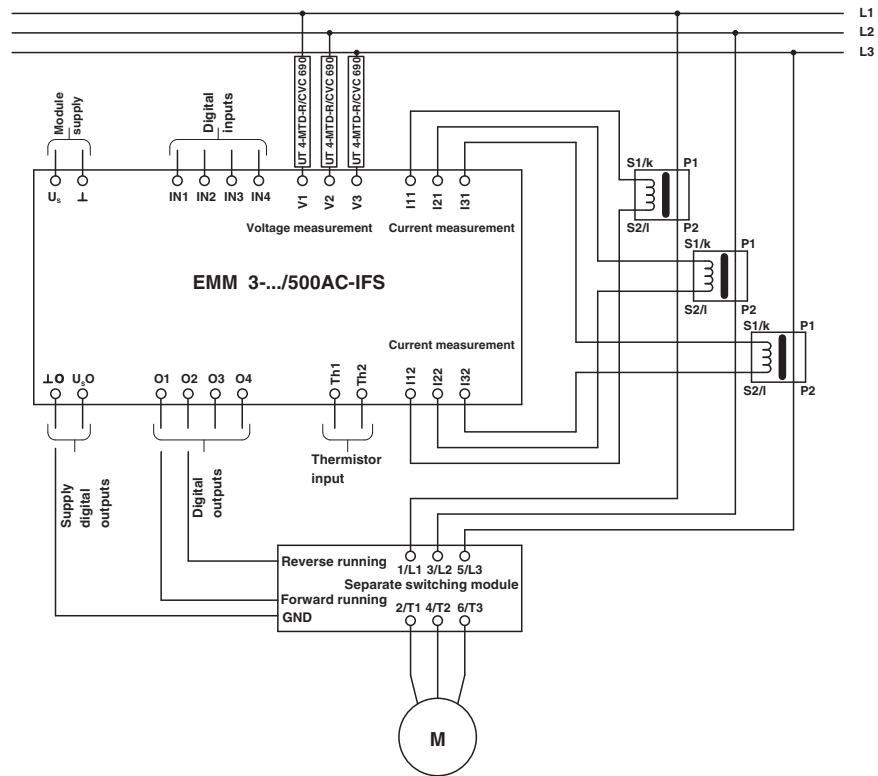
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Connection diagram



# Motor management - EMM 3-230AC/500AC-IFS - 2297507

Connection diagram



EMM 3-.../500AC-IFS with connected CONTACTRON VOLTAGE CONVERTER