

# EMM 3-24DC/500AC-160-EXM-IFS - Motor management



2908603

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Electronic machine management for operation with an external current transformer (160 A) - precise energy measurement and active power measurement of motors, machines, and other 3-phase loads. Freely configurable switching/signaling thresholds. Order cables separately.

## Product description

Electronic machine management for operation with external current transformers (160 A) – Precise energy measurement, real power measurement, current and voltage measurement of motors, machines or other 3-phase loads. Freely parameterizable switching and signaling thresholds. As an option, can be networked with all common fieldbus systems via a gateway.

## Commercial data

Item number	2908603
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	C475
Product key	DK7522
GTIN	4055626311784
Weight per piece (including packing)	1,050 g
Weight per piece (excluding packing)	1,115.7 g
Customs tariff number	85371098
Country of origin	DE

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## Technical data

### Product properties

Product type	Electronic motor manager
Product family	CONTACTRON
Operating mode	100% operating factor

### Electrical properties

Number of phases	3
Maximum power dissipation for nominal condition	2.5 W

### Supply

Rated control circuit supply voltage $U_S$	24 V DC
Control supply voltage range	19.2 V DC ... 30 V DC
Rated control supply current $I_S$	< 33 mA

### Insulation characteristics

Rated insulation voltage	500 V
Rated surge voltage	6 kV
Overvoltage category	III
Degree of pollution	2

### Input data

#### Digital inputs

Number of inputs	4 (IN1 - IN4)
Rated actuating voltage $U_C$	24 V DC
Triggering voltage range	19.2 V DC ... 30 V DC
Rated actuating current $I_C$	3.3 mA
Switching threshold	9.6 V ("0" signal) 19.2 V ("1" signal)

#### Supply for digital outputs

Nominal supply voltage	24 V DC
Nominal supply voltage range	19.2 V DC ... 30 V DC

#### Power measurement

Basic accuracy	typ. 0.25 % (Tu= 20 °C, U= 400 V, Cos Phi= 0,8)
Power range	350 W ... 111 kW (400 V AC)

#### Voltage measurement/star voltage

Basic accuracy	typ. 0.5 %
Voltage range	42 V AC ... 550 V AC

#### Current measurement

Basic accuracy	typ. 0.5 %
Current range	0.5 A ... 160 A

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Measuring via	External push-through current transformers connected upstream
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## 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	24 V DC (semiconductor output)
Output voltage range	19.2 V DC ... 30 V DC
Continuous load current	500 mA
Residual voltage	< 100 mV
Protective circuit	Suppressor diode
Surge voltage protection	> 33 V DC

## Connection data

### Control circuits

Connection method	Screw connection
Stripping length	8 mm
Screw thread	M3
Conductor cross-section rigid	0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross-section flexible	0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross-section AWG	26 ... 12
Tightening torque	0.5 Nm ... 0.6 Nm (5-7 lbs-in)

### Load circuit

Connection method	Screw connection
Stripping length	8 mm
Screw thread	M3
Conductor cross-section rigid	0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross-section flexible	0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross-section AWG	26 ... 12
Tightening torque	0.5 Nm ... 0.6 Nm (5-7 lbs-in)

### Signal connection on electronic management module (EMM)

Connection method	D-SUB pin strip
Number of connections	1
Number of positions	9

### Signal connection on current transformer module

Connection method	D-SUB socket strip
Number of connections	1
Number of positions	9

## Signaling

Status display	LED (yellow)
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Operating voltage display	Green LED
Error indication	Red LED
Data communication display	green LED

## Dimensions

Width	22.5 mm
Width Current transformer	177 mm
Height	99 mm
Height Current transformer	75 mm
Depth	114.5 mm
Depth Current transformer	88 mm
Diameter	23 mm

## Current transformer

Designation	Ext 160 CT
Width	177 mm
Height	75 mm
Depth	88 mm
Primary round conductor (diameter)	23 mm

## Material specifications

Color	gray (RAL 7042)
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## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-25 °C ... 70 °C
Ambient temperature (storage/transport)	-40 °C ... 80 °C

## Approvals

### UKCA

Certificate	UKCA-compliant
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## Standards and regulations

### Standards/regulations

Standards/regulations	EN 60947-1
	EN 60947-4-2
	EN 61000-6-2
	EN 61000-6-3

## Mounting

Mounting type	DIN rail mounting
Assembly note	in rows with zero spacing
Mounting position	any

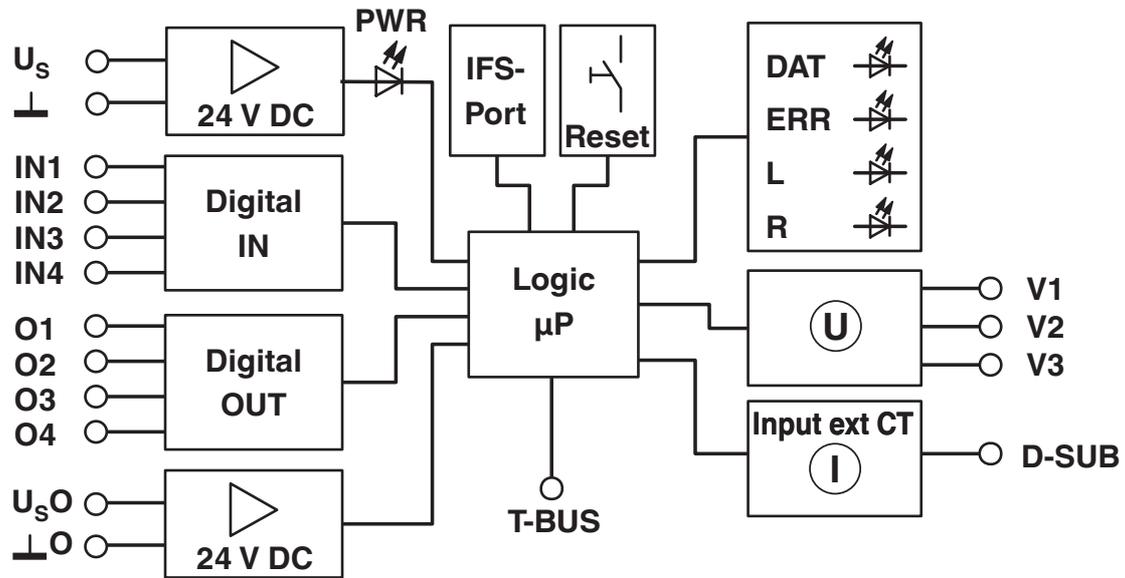
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## Drawings

Block diagram



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## Approvals

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**EAC**

Approval ID: RU\*C-DE.\*08.B.00520\*



**UL Listed**

Approval ID: E140324



**cUL Listed**

Approval ID: E140324

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## Classifications

### ECLASS

ECLASS-13.0

27370804

### ETIM

ETIM 9.0

EC002572

### UNSPSC

UNSPSC 21.0

39121100

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## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	6(c), 7(a), 7(c)-I

### China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

### EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
SCIP	bfaa1548-ddd3-4961-aeac-1d7cdfdc222c

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