Motor management - EMM 3- 24DC/500AC-IFS - 2297497

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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.

Your advantages

- 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
GTIN	4 046356 175753
GTIN	4046356175753

Technical data

Note

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

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

Input data

Input name	Device supply

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Technical data

Input data

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	25 mA
Switching threshold	9.6 V DC (“0” signal)
	19.2 V DC (“1” signal)
Input name	Digital inputs
Number of inputs	4 (IN1 - IN4)
Rated actuating voltage U_C	24 V DC
Rated actuating current I_C	3.3 mA

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	< 200 mV
Protective circuit	Suppressor diode
Surge voltage protection	> 33 V DC

Current measurement

Measuring via	External push-through current transformers connected upstream
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	4.5 kW (x amplitude transmission factor for current transformer)
Basic accuracy	typ. 2 %

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
Operating voltage display	Green LED
Status display	LED yellow right rotation (R), LED yellow left rotation (L), LED green data communication
Indication	Red LED

Connection data

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Technical data

Connection data

Connection name	Control circuits
Connection method	Screw connection
Stripping length	8 mm
Screw thread	M3
Conductor cross section solid	0.2 mm² ... 2.5 mm²
Conductor cross section flexible	0.2 mm² ... 2.5 mm²
Conductor cross section AWG	24 ... 14

Connection data 2

Connection name	Load circuit
Connection method	Screw connection
Stripping length	8 mm
Screw thread	M3
Conductor cross section solid	0.2 mm² ... 2.5 mm²
Conductor cross section flexible	0.2 mm² ... 2.5 mm²
Conductor cross section AWG	24 ... 14

Standards and Regulations

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

Insulation characteristics

Rated insulation voltage	500 V
Rated surge voltage	6 kV
Overvoltage category	III
Degree of pollution	2
Designation	Insulation characteristics between the input and output circuits
Insulation	Safe isolation (IEC 60947-1)
Designation	Insulation characteristics between the thermistor input and output
Insulation	Basic insulation (IEC 60947-1)

Conformance/approvals

Designation	ATEX
Identification	# II (2) G [Ex e] [Ex d] [Ex px]
	# II (2) D [Ex t] [Ex p]
Certificate	PTB 10 ATEX 3024
Designation	UL, USA/Canada
Certificate	NKCR.E140324
Designation	Safety Integrity Level (SIL, IEC 61508)
Identification	≤ 1
Additional text	Safe shutdown

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Conformance/approvals

Designation	Safety Integrity Level (SIL, IEC 61508)
Identification	1
Additional text	Motor protection
Designation	Category (ISO 13849)
Identification	≤ 1
Additional text	Safe shutdown
Designation	Performance Level
Identification	≤ b
Additional text	Safe shutdown

Environmental Product Compliance

REACh SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab “Downloads”, Category “Manufacturer's declaration”

Drawings

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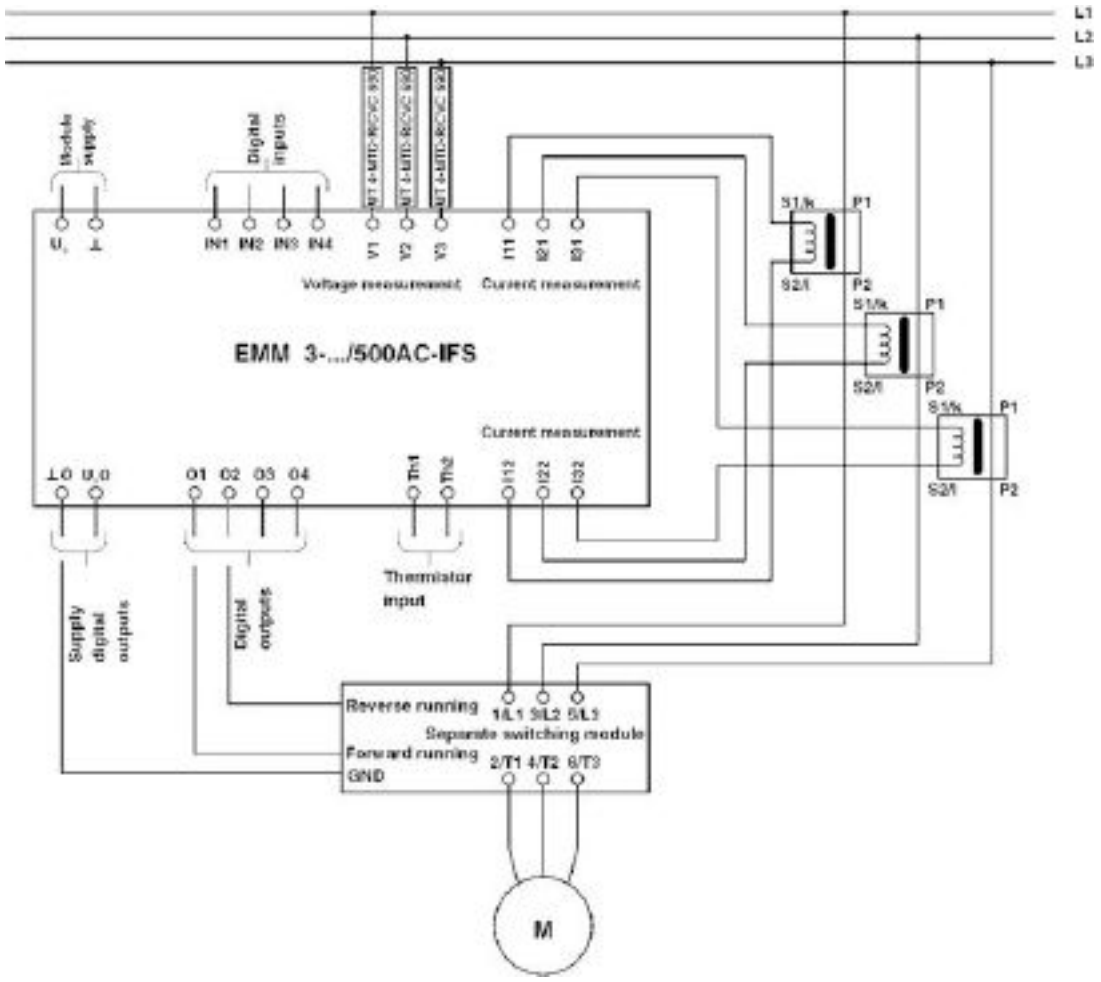
Connection diagram



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

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Block diagram

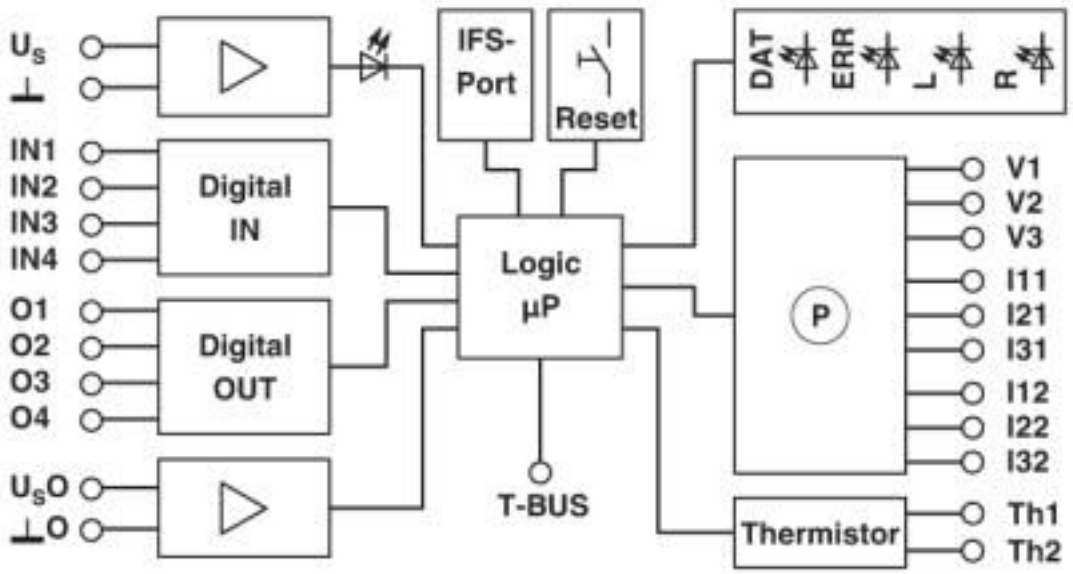

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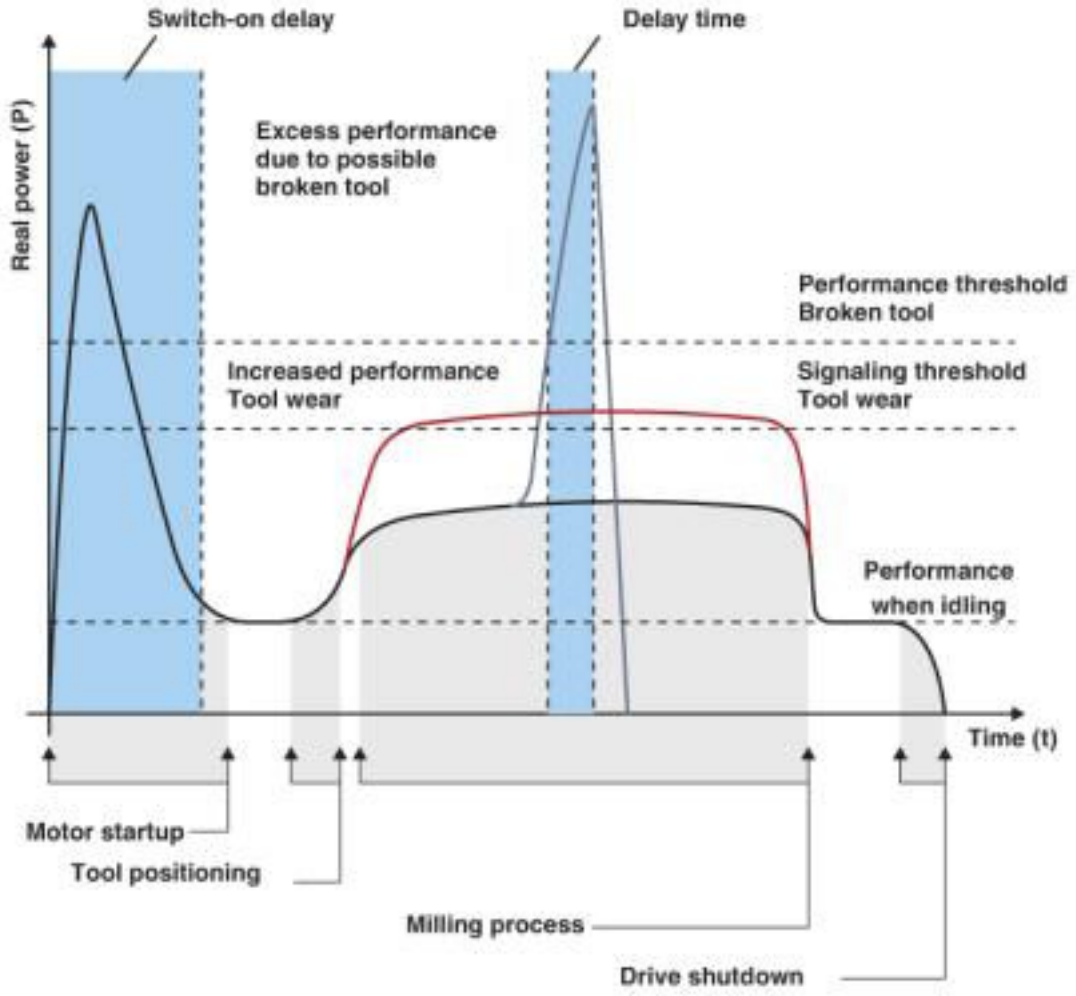
Diagram



Status monitoring: machine tool for milling

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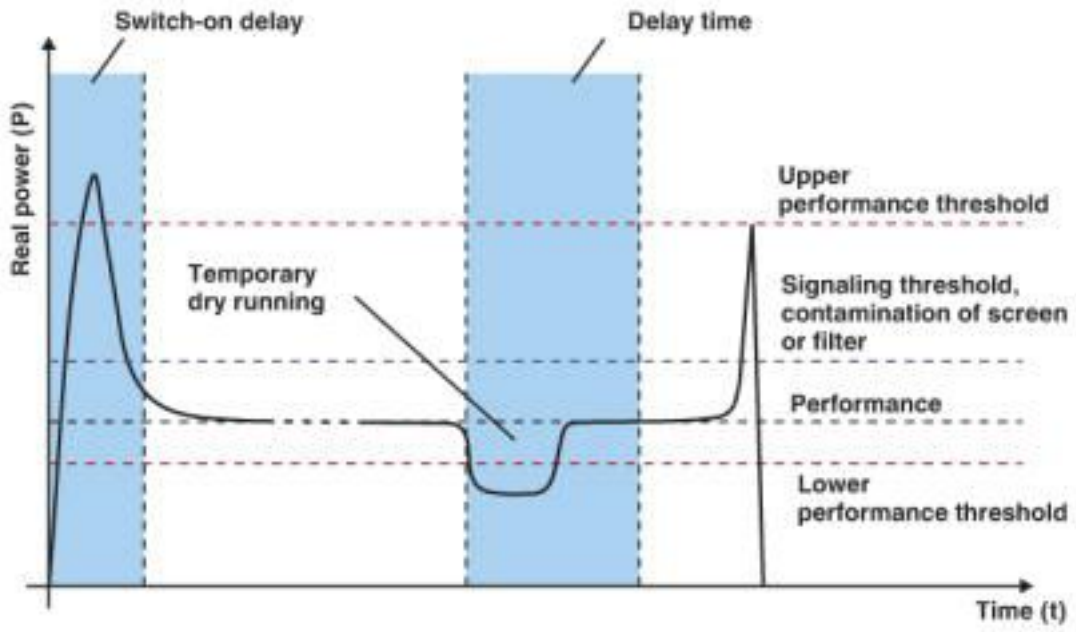
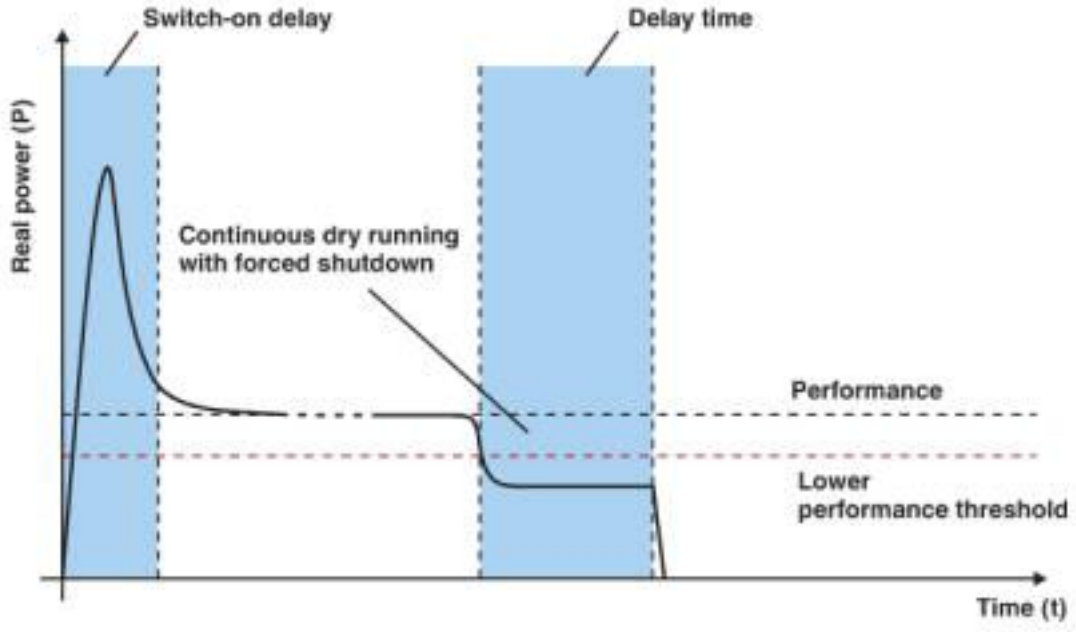
Diagram



Status monitoring: air bubbles in motor-operated pumps

Diagram



Status monitoring: dry run in motor-operated pumps

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Classifications

eCl@ss

eCl@ss 10.0.1	27370804
eCl@ss 4.0	27371100
eCl@ss 4.1	27371100
eCl@ss 5.0	27371600
eCl@ss 5.1	27371600
eCl@ss 6.0	27370800
eCl@ss 7.0	27370804
eCl@ss 8.0	27370804
eCl@ss 9.0	27370804

ETIM

ETIM 4.0	EC002572
ETIM 5.0	EC002572
ETIM 6.0	EC002572
ETIM 7.0	EC002572

UNSPSC

UNSPSC 6.01	30211915
UNSPSC 7.0901	39121514
UNSPSC 11	39121514
UNSPSC 12.01	39121514
UNSPSC 13.2	39121104
UNSPSC 18.0	39121104
UNSPSC 19.0	39121104
UNSPSC 20.0	39121104
UNSPSC 21.0	39121104

Approvals

Approvals

Approvals

UL Listed / cUL Listed / EAC / cULus Listed

Ex Approvals

ATEX

Approval details

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Approvals

UL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 140324
cUL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 140324
EAC			RU*C-DE.*08.B.00520*
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.

Connector set

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

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

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.

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Accessories

Device marking

Plastic label - US-EMLP (15X5) - 0828790

Plastic label, Card, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: adhesive, lettering field size: 15 x 5 mm, Number of individual labels: 189

Plastic label - UC-EMLP (15X5) - 0819301

Plastic label, Sheet, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: adhesive, lettering field size: 15 x 5 mm, Number of individual labels: 10

DIN rail connector

DIN rail bus connectors - ME 22,5 TBUS 1,5/ 5-ST-3,81 GY - 2201937

DIN rail connector, nominal current: 8 A, rated voltage (III/2): 125 V, number of positions: 5, pitch: 3.81 mm, color: gray, mounting: DIN rail, Item with gold-plated contacts, bus connectors for connecting with electronics housings, 5 parallel contacts

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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.

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Accessories

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.

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.

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Accessories

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.

Memory block - IFS-CONFSTICK - 2986122

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

PCB plug

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

PCB connector, nominal current: 8 A, rated voltage (III/2): 160 V, nominal cross section: 1.5 mm², number of positions: 5, pitch: 3.81 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

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

PCB connector, nominal current: 8 A, rated voltage (III/2): 160 V, nominal cross section: 1.5 mm², number of positions: 5, pitch: 3.81 mm, connection method: Screw connection with tension sleeve, color: green, contact surface: Tin

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Voltage transducer

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Accessories

Feed-through terminal block - UT 4-MTD-R/CVC 690/SET - 2901667

The voltage transducer set makes it possible to insert the electronic motor management module (EMM 3-.../500AC-IFS) in 690 V mains.

Necessary 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.

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