IBS IP 400 ME-ELR 2-3A DI4 - Motor starter

2732907

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The figure shows the version IBS IP 400 ME-ELR R-3A

Electronic motor starter, electronic module without lower part of housing, 2-channel direct starter

Product description

The motor starter modules allow three-phase standard motors to be switched via INTERBUS and are available with two housing variants.
The standard housing in IP54 protection is especially suited for direct use in machines and systems in conveyor technology, whereas the high-grade steel variant in IP67 protection is designed for installation in food industry systems.
Since they are available in different versions, INTERBUS motor control switches cover the most important applications.
The 1 and 2-channel motor starters allow direct drives to be controlled and there are reversing load versions for applications involving different drive directions.
If different speeds are required, the variable frequency drives provide the right control.

Additional features include:
- Easy installation and pluggable connections
- Removable module electronics
- Power networking:
Motor starter 400 V AC / 20 A
Variable frequency drive 500 V AC / 20 A
- Comprehensive status and diagnostics displays on the module
- Startup without bus possible with manual operate function (with VFD also with RS -232)
- Initiator inputs for the connection of sensors and
- High-grade steel housing, which is extremely resistant to cleaning agents and
- Sheet steel housing, ideal for use in the plant, with pluggable cable feed-throughs for ready-assembled cable.

Commercial data

Item number	2732907
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	NULL
Product key	DRFAAA
GTIN	4017918173586
Weight per piece (including packing)	3.299 kg
Weight per piece (excluding packing)	3.299 kg
Customs tariff number	85389091
Country of origin	DE

Technical data

Notes

Utilization restriction

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

Product properties

Type	Stand-alone
Diagnostics messages	Mains failure, phase failure Error message in the diagnostic code (bus) and display via the LED ERR on the module
	Motor connector not plugged in, motor temperature exceeded, thermistor line short-circuited Error message in the diagnostic code (bus) and display via the LED ERR on the module
	Sensor supply failure Error message in the diagnostic code (bus) and display via the LED ERR on the module
	Overcurrent Error message in the diagnostic code (bus) and display via the LED ERR on the module
	Output stage cannot be controlled Error message in the diagnostic code (bus) and display via the LED ERR on the module
	Short-circuit or overload of the digital outputs Message in the diagnostic code
	Module error during self test Message to the master

Electrical properties

Supply: Module electronics

Connection method	POWER-COMBICON
Designation	Terminal strip X13 and X15
Number of positions	2
Permissible conductor cross-section	1.5 mm² ... 4 mm²
Pg screw connection	Pg16R
Supply voltage	24 V DC (U_{S1})
Supply voltage range	20 V DC ... 30 V DC (including ripple)
Supply current	0.17 A (at U_{S1} = 24 V; plus current of digital inputs/outputs)
Ripple	Permissible ripple 3.6 V_{pp} within the permissible voltage range
Max. current carrying capacity	16 A
Derating	from 30 °C 0.1A/K

Electrical isolation/isolation of the voltage ranges

Test voltage: Incoming/outgoing remote bus	350 V AC, 50 Hz, 1 min
Test voltage: Remote bus / supply voltage U_{S1}	350 V AC, 50 Hz, 1 min

Input data

Digital: Digital inputs

Number of inputs	4
Connection method	M12 connector
Connection technology	3-, 4-conductor
Number of positions	5
Input voltage	24 V DC (U_{S1})
Input voltage range "0" signal	-30 V ... 5 V (binary "0")
Input voltage range "1" signal	13 V ... 30 V (binary "1")
Filter time	3 ms
Typical input current per channel	approx. 5 mA (for U_{S1} = 24 V)

Interfaces

INTERBUS

Connection method	MINI COMBICON
Designation connection point	X30 (IN) and X31 (OUT)
Number of positions	10
Permissible conductor cross-section	max. 1.5 mm²

Signaling

Diagnostic messages

Diagnostics	Mains failure, phase failure
Message	Error message in the diagnostic code (bus) and display via the LED ERR on the module

Diagnostic messages

Diagnostics	Motor connector not plugged in, motor temperature exceeded, thermistor line short-circuited
Message	Error message in the diagnostic code (bus) and display via the LED ERR on the module

Diagnostic messages

Diagnostics	Sensor supply failure
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Diagnostic messages

Diagnostics	Overcurrent
Message	Error message in the diagnostic code (bus) and display via the LED ERR on the module

Diagnostic messages

Diagnostics	Output stage cannot be controlled
Message	Error message in the diagnostic code (bus) and display via the LED ERR on the module

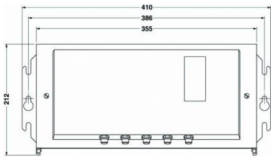
Diagnostic messages

Diagnostics	Short-circuit or overload of the digital outputs
Message	Message in the diagnostic code

Diagnostic messages

Diagnostics	Module error during self test
Message	Message to the master

Dimensions

Dimensional drawing	
Width	355 mm
Height	180 mm
Depth	100 mm
Drill hole spacing	386 mm
Note on dimensions	Module electronics without lower part

Material specifications

Housing material	Sheet-steel housing, IP54

Mechanical properties

Technical data

Drill hole spacing	386 mm

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP54
Ambient temperature (operation)	-20 °C ... 55 °C (non-condensing)
Note	Notes on operation Line protection for the network supply line, max. 20 A. Observe derating of the POWER-COMBICON connector
	Notes on operation Permitted network type TN network, TT network, IT network available on request
Air pressure (operation)	86 kPa ... 106 kPa (up to 2000 m above sea level)
Air pressure (storage/transport)	86 kPa ... 106 kPa (up to 2000 m above sea level)
Ambient temperature (storage/transport)	-25 °C ... 75 °C
Permissible humidity (operation)	4 % ... 100 % (non-condensing)
Permissible humidity (storage/transport)	75 % (slight temporary condensation may sometimes appear on the housing)

Mechanical test

Shock in accordance with EN 60068-2-27/IEC 60068-2-27	10g, evaluation criterion 1

Vibration resistance in accordance with EN 60068-2-6/IEC 60068-2-6	2g, evaluation criterion 1

Standards and regulations

Protection class	I (IEC 61140, EN 61140, VDE 0140-1)
Noise emission	Test of emitted interference, housing, in acc. with EN 50081-2:1993 EN 55011:1991 class A

Air clearances and creepage distances

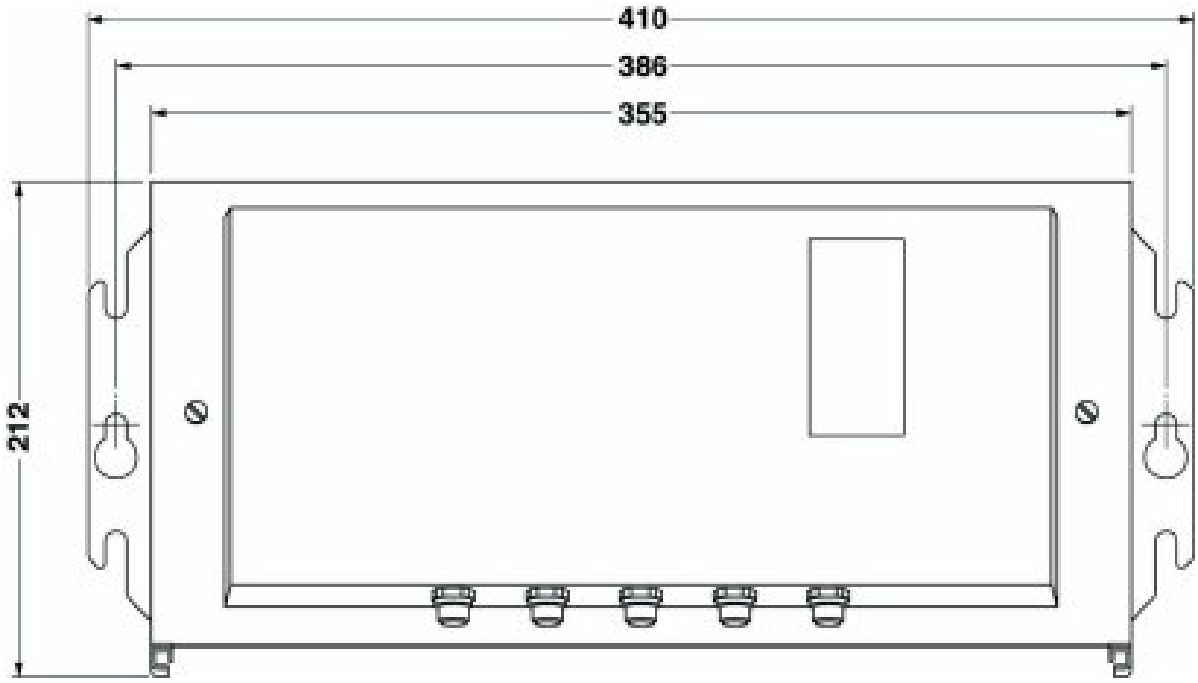
Air clearances and creepage distances	in accordance with EN 50178: 1998

Mounting

Mounting type	Panel mounting

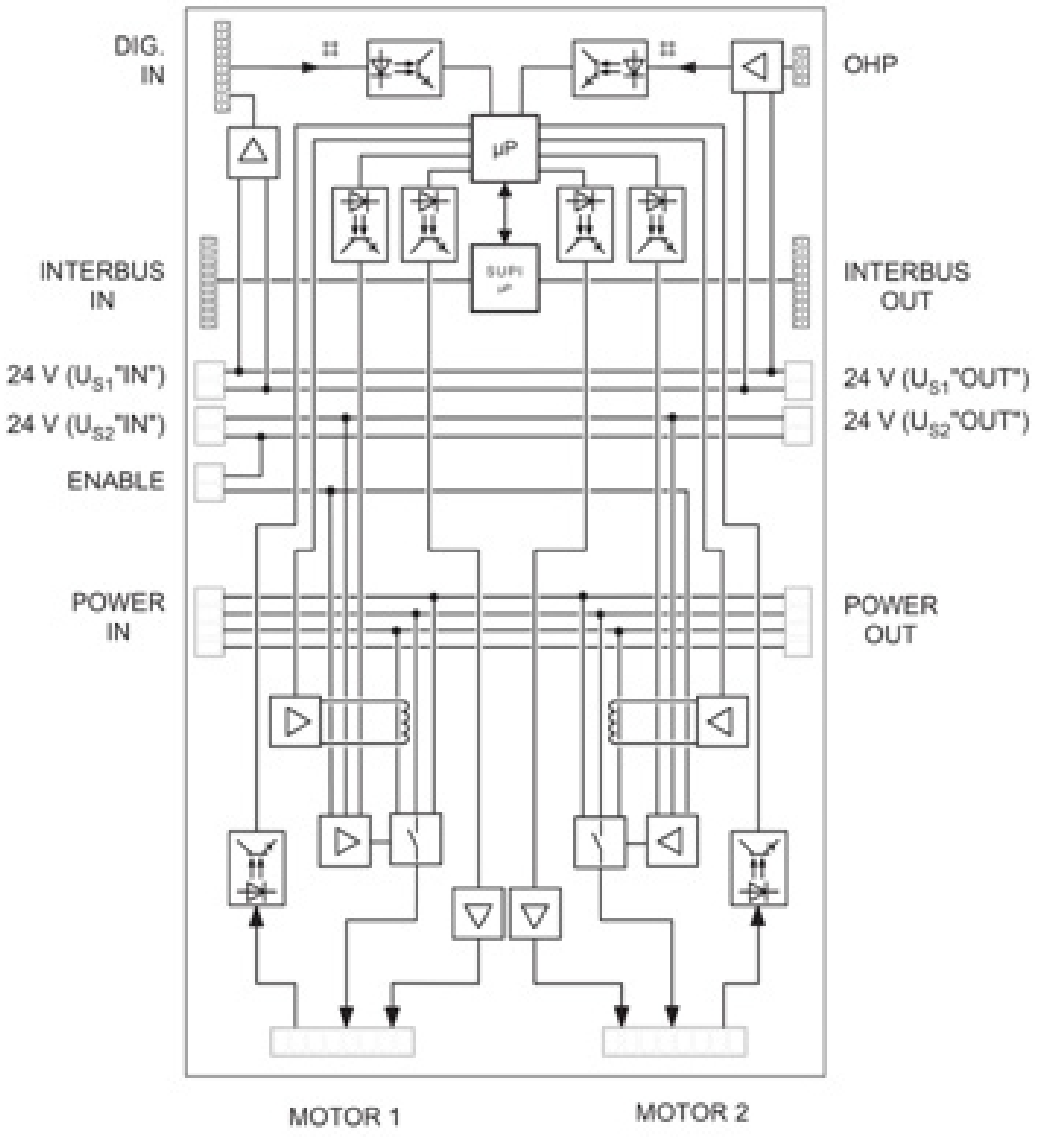
Drawings

Dimensional drawing



The figure shows the product with lower part of the housing

Block diagram



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)

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