


FLM DIO 16/16 M12/8-DIAG

Order No.: 2736738

<http://eshop.phoenixcontact.de/phoenix/treeViewClick.do?UID=2736738>

The local bus device has digital inputs and outputs. Functions: 16 digital inputs, 3 ms filter time, 16 digital outputs of 500 mA each, 500 kbaud/2 Mbaud selection, diagnostics strategy, short-circuit/overload protection, 8-pos. M12 fast connection technology.

| Commercial data | |
|--------------------------|--|
| GTIN (EAN) |  4 046356 042642 |
| sales group | L081 |
| Pack | 1 pcs. |
| Customs tariff | 85176200 |
| Catalog page information | Page 257 (AX-2011) |

Product notesWEEE/RoHS-compliant since:
11/20/2007

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| Technical data | |
|---------------------|--------|
| General data | |
| Width | 70 mm |
| Height | 178 mm |
| Depth | 50 mm |

| | |
|--|---|
| Drill hole spacing | 168 mm |
| Weight | 400 g |
| Mounting type | Wall mounting |
| Ambient temperature (operation) | -25 °C ... 60 °C |
| Ambient temperature (storage/transport) | -25 °C ... 85 °C |
| Permissible humidity (storage/transport) | 95 % |
| Air pressure (operation) | 80 kPa ... 106 kPa (up to 2000 m above sea level) |
| Air pressure (storage/transport) | 70 kPa ... 106 kPa (up to 3000 m above sea level) |
| Degree of protection | IP65/67 |
| Protection class | III, IEC 61140, EN 61140, VDE 0140-1 |
| Test section | To I/O 500 V DC 1 min |

Interface

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|------------------------------|-------------------------------------|
| Name | Local bus |
| Connection method | M12 connector, B-coded |
| Designation connection point | Copper cable |
| Transmission speed | 500 kBaud/ 2 MBaud, can be selected |
| Number of positions | 5 |

Power supply for module electronics

| | |
|----------------------|--|
| Connection method | M12 male connector |
| Name | U_L |
| Supply voltage | 24 V DC |
| Supply voltage range | 18 V DC ... 30 V DC IEC 61131-2 (including ripple) |

Fieldline potential routing

| | |
|--------------------------------|--|
| Voltage supply U_L | 24 V DC |
| Power supply at U_L | max. 4 A |
| Current consumption from U_L | max. 100 mA (At 2 Mbaud) |
| | Typ. 80 mA (At 2 Mbaud) |
| | max. 75 mA (At 500 kBaud) |
| | Typ. 60 mA (At 500 kBaud) |
| Voltage supply U_S | 24 V DC |
| Power supply at U_S | max. 4 A |
| Current consumption from U_S | Typ. 20 mA (plus power supply for sensors) |
| | max. 1.2 A |
| | max. 1.2 A |

| | |
|----------------------------------|------------|
| Voltage supply U_{A11} | 24 V DC |
| Power supply at U_{A11} | max. 4 A |
| Current consumption at U_{A11} | Typ. 15 mA |
| | max. 4 A |
| Voltage supply U_{A12} | 24 V DC |
| Power supply at U_{A12} | max. 4 A |
| Current consumption at U_{A12} | Typ. 15 mA |
| | max. 4 A |

Digital inputs

| | |
|------------------------------------|--|
| Input name | Digital inputs |
| Connection method | M12 plug connector, 8-pos. 2, 3-wire |
| Number of inputs | 16 |
| Protective circuit | Short-circuit protection, overload protection of the sensor supply Protection against polarity reversal |
| Filter time | 3 ms |
| Input characteristic curve | IEC 61131-2 type 1 |
| Input voltage | 24 V DC |
| Input voltage range "0" signal | -30 V DC ... 5 V DC |
| Input voltage range "1" signal | 13 V DC ... 30 V DC |
| Delay at signal change from 0 to 1 | 3 ms |
| Delay at signal change from 1 to 0 | 3 ms |

Digital outputs

| | |
|------------------------------------|---|
| Output name | Digital outputs |
| Connection method | M12 plug connector, 8-pos. 2-wire |
| Number of outputs | 16 |
| Protective circuit | Short-circuit protection, overload protection of the sensor supply Polarity protection diode |
| Maximum output current per channel | 500 mA |

| Accessories | | |
|------------------------|--------------------------------|--|
| Item | Designation | Description |
| Cable/conductor | | |
| 1518368 | SAC-5P- 2,0-186/FS SCO | Sensor/Actuator cable, 5-position, PUR, Black-gray RAL 7021, Free conductor end, on Socket, straight M12-SPEEDCON, A-coded, Cable length: 2 m |
| 1507117 | SAC-5P- 2,0-900/M12FSB | Bus system cable, INTERBUS, 5-position, PUR halogen-free, Green RAL 6017, shielded, Free conductor end, on Socket, straight M12, B-coded, Cable length: 2 m |
| 1518371 | SAC-5P- 5,0-186/FS SCO | Sensor/Actuator cable, 5-position, PUR, Black-gray RAL 7021, Free conductor end, on Socket, straight M12-SPEEDCON, A-coded, Cable length: 5 m |
| 1507120 | SAC-5P- 5,0-900/M12FSB | Bus system cable, INTERBUS, 5-position, PUR halogen-free, Green RAL 6017, shielded, Free conductor end, on Socket, straight M12, B-coded, Cable length: 5 m |
| 1518384 | SAC-5P-10,0-186/FS SCO | Sensor/Actuator cable, 5-position, PUR, Black-gray RAL 7021, Free conductor end, on Socket, straight M12-SPEEDCON, A-coded, Cable length: 10 m |
| 1507133 | SAC-5P-10,0-900/M12FSB | Bus system cable, INTERBUS, 5-position, PUR halogen-free, Green RAL 6017, shielded, Free conductor end, on Socket, straight M12, B-coded, Cable length: 10 m |
| 1518397 | SAC-5P-15,0-186/FS SCO | Sensor/Actuator cable, 5-position, PUR, Black-gray RAL 7021, Free conductor end, on Socket, straight M12-SPEEDCON, A-coded, Cable length: 15 m |
| 1507146 | SAC-5P-15,0-900/M12FSB | Bus system cable, INTERBUS, 5-position, PUR halogen-free, Green RAL 6017, shielded, Free conductor end, on Socket, straight M12, B-coded, Cable length: 15 m |
| 1507162 | SAC-5P-M12MSB/ 0,3-900/ M12FSB | Bus system cable, INTERBUS, 5-position, PUR halogen-free, Green RAL 6017, shielded, Plug, straightLink:M12, B-coded, on Socket, straight M12, B-coded, Cable length: 0.3 m |
| 1507175 | SAC-5P-M12MSB/ 0,5-900/ M12FSB | Bus system cable, INTERBUS, 5-position, PUR halogen-free, Green RAL 6017, shielded, Plug, straightLink:M12, B-coded, on Socket, straight M12, B-coded, Cable length: 0.5 m |
| 1507188 | SAC-5P-M12MSB/ 1,0-900/ M12FSB | Bus system cable, INTERBUS, 5-position, PUR halogen-free, Green RAL 6017, shielded, Plug, straightLink:M12, B-coded, on Socket, straight M12, B-coded, Cable length: 1 m |
| 1507065 | SAC-5P-M12MSB/ 2,0-900 | Bus system cable, INTERBUS, 5-position, PUR halogen-free, Green RAL 6017, shielded, Plug, straightLink:M12, B-coded, on Free conductor end, Cable length: 2 m |
| 1507191 | SAC-5P-M12MSB/ 2,0-900/ M12FSB | Bus system cable, INTERBUS, 5-position, PUR halogen-free, Green RAL 6017, shielded, Plug, straightLink:M12, B-coded, on Socket, straight M12, B-coded, Cable length: 2 m |
| 1507078 | SAC-5P-M12MSB/ 5,0-900 | Bus system cable, INTERBUS, 5-position, PUR halogen-free, Green RAL 6017, shielded, Plug, straightLink:M12, B-coded, on Free conductor end, Cable length: 5 m |

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|---------|-----------------------------------|---|
| 1507201 | SAC-5P-M12MSB/ 5,0-900/ M12FSB | Bus system cable, INTERBUS, 5-position, PUR halogen-free, Green RAL 6017, shielded, Plug, straightLink:M12, B-coded, on Socket, straight M12, B-coded, Cable length: 5 m |
| 1507081 | SAC-5P-M12MSB/10,0-900 | Bus system cable, INTERBUS, 5-position, PUR halogen-free, Green RAL 6017, shielded, Plug, straightLink:M12, B-coded, on Free conductor end, Cable length: 10 m |
| 1507214 | SAC-5P-M12MSB/10,0-900/ M12FSB | Bus system cable, INTERBUS, 5-position, PUR halogen-free, Green RAL 6017, shielded, Plug, straightLink:M12, B-coded, on Socket, straight M12, B-coded, Cable length: 10 m |
| 1507094 | SAC-5P-M12MSB/15,0-900 | Bus system cable, INTERBUS, 5-position, PUR halogen-free, Green RAL 6017, shielded, Plug, straightLink:M12, B-coded, on Free conductor end, Cable length: 15 m |
| 1507227 | SAC-5P-M12MSB/15,0-900/ M12FSB | Bus system cable, INTERBUS, 5-position, PUR halogen-free, Green RAL 6017, shielded, Plug, straightLink:M12, B-coded, on Socket, straight M12, B-coded, Cable length: 15 m |
| 1518407 | SAC-5P-MS/ 0,3-186/FS SCO | Sensor/Actuator cable, 5-position, PUR, Black-gray RAL 7021, Plug, straightLink:M12-SPEEDCON, A-coded, on Socket, straight M12-SPEEDCON, A-coded, Cable length: 0.3 m |
| 1518410 | SAC-5P-MS/ 0,5-186/FS SCO | Sensor/Actuator cable, 5-position, PUR, Black-gray RAL 7021, Plug, straightLink:M12-SPEEDCON, A-coded, on Socket, straight M12-SPEEDCON, A-coded, Cable length: 0.5 m |
| 1518423 | SAC-5P-MS/ 1,0-186/FS SCO | Sensor/Actuator cable, 5-position, PUR, Black-gray RAL 7021, Plug, straightLink:M12-SPEEDCON, A-coded, on Socket, straight M12-SPEEDCON, A-coded, Cable length: 1 m |
| 1518326 | SAC-5P-MS/ 2,0-186 SCO | Sensor/Actuator cable, 5-position, PUR, Black-gray RAL 7021, Plug, straightLink:M12-SPEEDCON, A-coded, on Free conductor end, Cable length: 2 m |
| 1518436 | SAC-5P-MS/ 2,0-186/FS SCO | Sensor/Actuator cable, 5-position, PUR, Black-gray RAL 7021, Plug, straightLink:M12-SPEEDCON, A-coded, on Socket, straight M12-SPEEDCON, A-coded, Cable length: 2 m |
| 1518339 | SAC-5P-MS/ 5,0-186 SCO | Sensor/Actuator cable, 5-position, PUR, Black-gray RAL 7021, Plug, straightLink:M12-SPEEDCON, A-coded, on Free conductor end, Cable length: 5 m |
| 1518449 | SAC-5P-MS/ 5,0-186/FS SCO | Sensor/Actuator cable, 5-position, PUR, Black-gray RAL 7021, Plug, straightLink:M12-SPEEDCON, A-coded, on Socket, straight M12-SPEEDCON, A-coded, Cable length: 5 m |
| 1518342 | SAC-5P-MS/10,0-186 SCO | Sensor/Actuator cable, 5-position, PUR, Black-gray RAL 7021, Plug, straightLink:M12-SPEEDCON, A-coded, on Free conductor end, Cable length: 10 m |
| 1518452 | SAC-5P-MS/10,0-186/FS SCO | Sensor/Actuator cable, 5-position, PUR, Black-gray RAL 7021, Plug, straightLink:M12-SPEEDCON, A-coded, on Socket, straight M12-SPEEDCON, A-coded, Cable length: 10 m |
| 1518355 | SAC-5P-MS/15,0-186 SCO | Sensor/Actuator cable, 5-position, PUR, Black-gray RAL 7021, Plug, straightLink:M12-SPEEDCON, A-coded, on Free conductor end, Cable length: 15 m |
| 1518465 | SAC-5P-MS/15,0-186/FS SCO | Sensor/Actuator cable, 5-position, PUR, Black-gray RAL 7021, Plug, straightLink:M12-SPEEDCON, A-coded, on Socket, straight M12-SPEEDCON, A-coded, Cable length: 15 m |

Marking

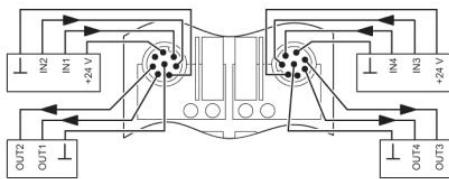
| | | |
|---------|-------------------|---|
| 0809735 | ZBF 12:UNBEDRUCKT | Zack strip, flat, unprinted, 5-section, divisible, for labeling by the customer |
|---------|-------------------|---|

Plug/Adapter

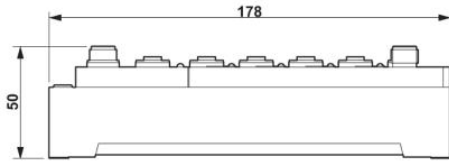
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|---------|--------------------------------|---|
| 1518481 | SAC-5P-MS/ 0,13-186/FS SCO | Sensor/Actuator cable, 5-position, PUR, Black-gray RAL 7021, Plug, straightLink:M12-SPEEDCON, A-coded, on Socket, straight M12-SPEEDCON, A-coded, Cable length: 0.13 m |
| 1518478 | SAC-5P-MSB/0,13-PUR/FSB SCO SH | Sensor/Actuator cable, 5-position, PUR halogen-free, Black-gray RAL 7021, shielded, Plug, straightLink:M12-SPEEDCON, B-coded, on Socket, straight M12-SPEEDCON, B-coded, Cable length: 0.13 m |
| 1513606 | SACC-M12FRB-5SC SH | Sensor/actuator connector, female, angled, 5-pos., M12, shielded, B-coded, spring-cage connection, metal knurl, cable cross section max. 8 mm |
| 1508200 | SACC-M12FS-5SC M | Sensor/actuator connector, female, straight, 5-pos., M12, A-coded, spring-cage connection, metal knurl, cable cross section max. 8 mm |
| 1507777 | SACC-M12FSB-5CON-PG9 SH AU | Bus system plug connector, female, straight, 5-pos., M12, shielded, gold-plated contacts, B-coded, screw connection, metal knurl, cable screw connection Pg9 |
| 1513596 | SACC-M12FSB-5SC SH | Sensor/actuator connector, female, straight, 5-pos., M12, shielded, B-coded, spring-cage connection, metal knurl, cable cross section max. 8 mm |
| 1513583 | SACC-M12MRB-5SC SH | Sensor/actuator connector, male, angled, 5-pos., M12, shielded, B-coded, spring-cage connection, metal knurl, cable cross section max. 8 mm |
| 1508187 | SACC-M12MS-5SC M | Sensor/actuator connector, male, straight, 5-pos., M12, A-coded, spring-cage connection, metal knurl, cable cross section max. 8 mm |
| 1507764 | SACC-M12MSB-5CON-PG9 SH AU | Bus system plug connector, male straight, 5-pos., M12, shielded, gold-plated contacts, B-coded, screw connection, metal knurl, cable screw connection Pg9 |
| 1513570 | SACC-M12MSB-5SC SH | Sensor/actuator connector, male, straight, 5-pos., M12, shielded, B-coded, spring-cage connection, metal knurl, cable cross section max. 8 mm |

Diagrams/Drawings

Connection diagram



Dimensioned drawing



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