

# IB IL MBUS-PAC - Communication module



2701927

<https://www.phoenixcontact.com/nl/products/2701927>

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Inline, M-Bus master; for the connection of M-Bus devices; transmission speed in the local bus: 500 kbps; degree of protection: IP20; including Inline connectors and marking fields

## Product description

The terminal is designed for use within an Inline station. It enables communication with standard M-Bus meters in accordance with EN 13757. The M-Bus master terminal is intended exclusively for use within the Emalytics solution. Emalytics is the Phoenix Contact solution for building management and automation.

## Your advantages

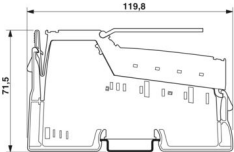
- M-Bus connection for up to 30 devices
- Transmission speed can be set from 300 baud to 19,200 baud
- Parameterization and data exchange via process data

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 2701927       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | DRHABA        |
| Product key                          | DRHABA        |
| GTIN                                 | 4046356902106 |
| Weight per piece (including packing) | 165 g         |
| Weight per piece (excluding packing) | 125 g         |
| Customs tariff number                | 85389099      |
| Country of origin                    | DE            |

## Technical data

### Dimensions

|                     |                                                                                    |
|---------------------|------------------------------------------------------------------------------------|
| Dimensional drawing |  |
| Width               | 24.4 mm                                                                            |
| Height              | 119.8 mm                                                                           |
| Depth               | 71.5 mm                                                                            |
| Note on dimensions  | Housing dimensions                                                                 |

### Notes

|                     |                         |
|---------------------|-------------------------|
| Note on application |                         |
| Note on application | Only for industrial use |

### Interfaces

|                      |                                        |
|----------------------|----------------------------------------|
| Inline local bus     |                                        |
| Number of interfaces | 2                                      |
| Connection method    | Inline data jumper                     |
| Transmission speed   | 500 kbps                               |
| M-Bus                |                                        |
| Connection method    | Inline connector                       |
| Transmission speed   | 300 Baud ... 19200 Baud (configurable) |
| Transmission physics | Copper                                 |

### System properties

|                      |         |
|----------------------|---------|
| Module               |         |
| ID code (dec.)       | 191     |
| ID code (hex)        | BF      |
| Length code (hex)    | 10      |
| Length code (dec)    | 16      |
| Process data channel | 256 bit |
| Input address area   | 32 Byte |
| Output address area  | 32 Byte |
| Register length      | 256 bit |

### Product properties

|                |        |
|----------------|--------|
| Product family | Inline |
|----------------|--------|

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|                       |                                                |
|-----------------------|------------------------------------------------|
| Type                  | modular                                        |
| Installation location | Control cabinet                                |
| Scope of supply       | including Inline connectors and marking fields |
| Operating mode        | Process data mode with 16 words                |
| Special properties    | for the connection of M-Bus devices            |

## Insulation characteristics

|                      |                              |
|----------------------|------------------------------|
| Overvoltage category | II (IEC 60664-1, EN 60664-1) |
| Pollution degree     | 2 (IEC 60664-1, EN 60664-1)  |

## Electrical properties

|                   |            |
|-------------------|------------|
| Power dissipation | max. 1.6 W |
|-------------------|------------|

### Potentials: Communications power ( $U_L$ )

|                   |                               |
|-------------------|-------------------------------|
| Supply voltage    | 7.5 V DC (via voltage jumper) |
| Current draw      | max. 90 mA<br>typ. 65 mA      |
| Power consumption | max. 675 mW<br>typ. 488 mW    |

### Potentials: Main circuit supply ( $U_M$ )

|                      |                                                                                                                     |
|----------------------|---------------------------------------------------------------------------------------------------------------------|
| Supply voltage       | 24 V DC (via voltage jumper)                                                                                        |
| Supply voltage range | 19.2 V DC ... 30 V DC (including all tolerances, including ripple)                                                  |
| Current draw         | max. 160 mA<br>typ. 56 mA (for 10 unit loads; see example calculation)<br>typ. 26 mA (without connected unit loads) |

### Electrical isolation/isolation of the voltage ranges

|                                                          |                        |
|----------------------------------------------------------|------------------------|
| Test voltage: M-Bus / 7.5 V supply (bus logic)           | 500 V AC, 50 Hz, 1 min |
| Test voltage: M-Bus / 24 V supply $U_M$                  | 500 V AC, 50 Hz, 1 min |
| Test voltage: M-Bus/functional ground                    | 500 V AC, 50 Hz, 1 min |
| Test voltage: 7.5 V supply (bus logic)/functional ground | 500 V AC, 50 Hz, 1 min |
| Test voltage: 24 V supply ( $U_M$ )/functional ground    | 500 V AC, 50 Hz, 1 min |

## Connection data

### Connection technology

|                 |                  |
|-----------------|------------------|
| Connection name | Inline connector |
|-----------------|------------------|

### Inline connector

|                                   |                                              |
|-----------------------------------|----------------------------------------------|
| Connection method                 | Spring-cage connection                       |
| Conductor cross-section, rigid    | 0.08 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> |
| Conductor cross-section, flexible | 0.08 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> |
| Conductor cross-section AWG       | 28 ... 16                                    |
| Stripping length                  | 8 mm                                         |

## Environmental and real-life conditions

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## Ambient conditions

|                                          |                                                   |
|------------------------------------------|---------------------------------------------------|
| Ambient temperature (operation)          | -25 °C ... 55 °C                                  |
| Degree of protection                     | IP20                                              |
| Air pressure (operation)                 | 70 kPa ... 106 kPa (up to 3000 m above sea level) |
| Air pressure (storage/transport)         | 70 kPa ... 106 kPa (up to 3000 m above sea level) |
| Ambient temperature (storage/transport)  | -25 °C ... 85 °C                                  |
| Permissible humidity (operation)         | 10 % ... 95 % (non-condensing)                    |
| Permissible humidity (storage/transport) | 10 % ... 95 % (non-condensing)                    |

## Standards and regulations

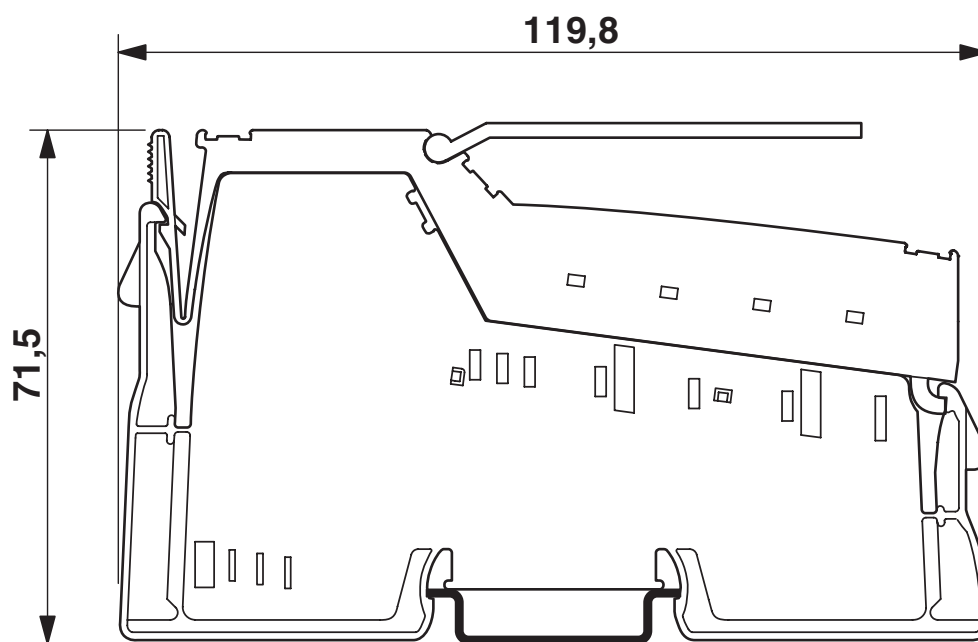
|                  |                                       |
|------------------|---------------------------------------|
| Protection class | III (IEC 61140, EN 61140, VDE 0140-1) |
|------------------|---------------------------------------|

## Mounting

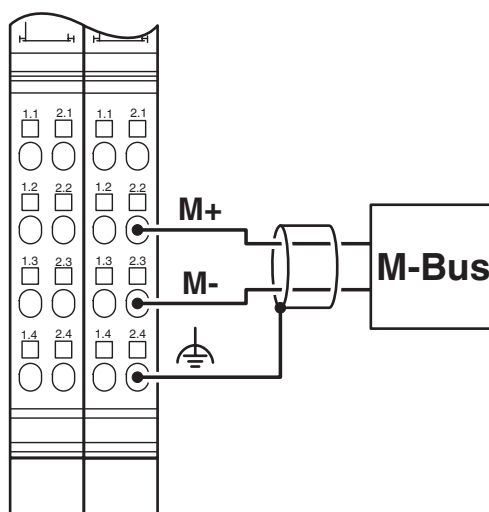
|               |                   |
|---------------|-------------------|
| Mounting type | DIN rail mounting |
|---------------|-------------------|

## Drawings

Dimensional drawing



Connection diagram



Connection of the M-Bus

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27242608 |
| ECLASS-15.0 | 27242608 |

### ETIM

|           |          |
|-----------|----------|
| ETIM 10.0 | EC001604 |
|-----------|----------|

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 32151600 |
|-------------|----------|

## Environmental product compliance

### EU RoHS

|                                         |              |
|-----------------------------------------|--------------|
| Fulfills EU RoHS substance requirements | Yes          |
| Exemption                               | 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                                | 130b69a7-7409-4f77-9342-08e845d711aa |