

## Monitoring module - MINI MCR-2-FM-RC - 2904504

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)



Fault monitoring module with plug-in connection technology for evaluating and reporting group errors from the FM system and for monitoring the supply voltages. Error message via N/C contact. Screw connection technology, standard configuration

### Product Description

The fault monitoring module with plug-in connection technology is used to evaluate and report group errors from the fault monitoring system of up to 115 connected MINI Analog Pro signal conditioners via the ME 6,2 TBUS-2 DIN rail connector (Order No.: 2869728). You can also monitor the supply voltages of MINI MCR-2-PTB(-PT) power terminals (Order No.: 2902066, 2902067). Drawing off the supply is also possible. The error is reported via an N/C contact. The error reporting module supports NFC communication.



### Key Commercial Data

|                                      |                                                                                                         |
|--------------------------------------|---------------------------------------------------------------------------------------------------------|
| Packing unit                         | 1 pc                                                                                                    |
| GTIN                                 | <br>4 046356 857406 |
| GTIN                                 | 4046356857406                                                                                           |
| Weight per Piece (excluding packing) | 40.000 g                                                                                                |
| Custom tariff number                 | 85437090                                                                                                |
| Country of origin                    | Germany                                                                                                 |

### Technical data

#### Note

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

#### Dimensions

|        |           |
|--------|-----------|
| Width  | 6.2 mm    |
| Height | 109.81 mm |
| Depth  | 119.2 mm  |

# Monitoring module - MINI MCR-2-FM-RC - 2904504

## Technical data

### Ambient conditions

|                                         |                                                                                   |
|-----------------------------------------|-----------------------------------------------------------------------------------|
| Ambient temperature (operation)         | -40 °C ... 70 °C                                                                  |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C                                                                  |
| Maximum altitude                        | ≤ 2000 m                                                                          |
| Permissible humidity (operation)        | 5 % ... 95 % (non-condensing)                                                     |
| Degree of protection                    | IP20 (not assessed by UL)                                                         |
| Noise immunity                          | EN 61000-6-2 When being exposed to interference, there may be minimal deviations. |

### Input data

|                          |                                         |
|--------------------------|-----------------------------------------|
| Description of the input | Voltage input for redundancy monitoring |
| Number of inputs         | 1                                       |
| Voltage input signal     | 9.9 V DC ... 30 V DC                    |

### Output data

|                       |                        |
|-----------------------|------------------------|
| Number of outputs     | 1                      |
| Voltage output signal | 9.6 V DC ... 29.7 V DC |
| Max. output current   | 3.2 A                  |

### Switching output

|                           |                  |
|---------------------------|------------------|
| Output name               | Switching output |
| Maximum switching voltage | 30 V DC          |
| Max. switching current    | 50 mA DC         |

### Power supply

|                          |                                                                                                                                                                                                                |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Supply voltage range     | 9.6 V DC ... 30 V DC (The DIN rail bus connector (ME 6,2 TBUS-2 1,5/5-ST-3,81 GN, Order No. 2869728) can be used to bridge the supply voltage. It can be snapped onto a 35 mm DIN rail according to EN 60715)) |
| Max. current consumption | < 16 mA (at 24 V DC)                                                                                                                                                                                           |
| Power consumption        | < 410 mW (at 24 V DC)                                                                                                                                                                                          |

### Connection data

|                                  |                                                                |
|----------------------------------|----------------------------------------------------------------|
| Connection method                | Screw connection                                               |
| Stripping length                 | 10 mm                                                          |
| Screw thread                     | M3                                                             |
| Conductor cross section solid    | 0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> (with ferrule)     |
|                                  | 0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> (without ferrule) |
| Conductor cross section flexible | 0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>                   |
| Conductor cross section AWG      | 24 ... 12 (flexible)                                           |
| Torque                           | 0.5 Nm ... 0.6 Nm                                              |

### General

|                                 |            |
|---------------------------------|------------|
| Maximum temperature coefficient | < 0.01 %/K |
|---------------------------------|------------|

# Monitoring module - MINI MCR-2-FM-RC - 2904504

## Technical data

### General

|                                                        |                                                                                   |
|--------------------------------------------------------|-----------------------------------------------------------------------------------|
| Test voltage                                           | 1500 V AC (50 Hz, 1 min.)                                                         |
| Status display                                         | Yellow LED (switching output)                                                     |
| Electrical isolation                                   | Basic insulation according to EN 61010                                            |
| Overvoltage category                                   | II                                                                                |
| Degree of pollution                                    | 2                                                                                 |
| Rated insulation voltage                               | 50 V AC/DC (effective)                                                            |
| Test voltage input/output                              | 1.5 kV AC (50 Hz, 1 min.)                                                         |
| Electromagnetic compatibility                          | Conformance with EMC directive                                                    |
| Noise emission                                         | EN 61000-6-4                                                                      |
| Noise immunity                                         | EN 61000-6-2 When being exposed to interference, there may be minimal deviations. |
| Housing material                                       | PBT                                                                               |
| Mounting position                                      | any                                                                               |
| Conformance                                            | CE-compliant                                                                      |
| ATEX                                                   | # II 3 G Ex nA IIC T4 Gc X                                                        |
| UL, USA/Canada                                         | UL 508 Listed                                                                     |
|                                                        | Class I, Div. 2, Groups A, B, C, D T6                                             |
|                                                        | Class I, Zone 2, Group IIC T6                                                     |
| Certificate of classification                          | DNV GL 14445-15HH                                                                 |
| Fire protection for rail vehicles (DIN EN 45545-2) R22 | HL 1 - HL 2                                                                       |
| Fire protection for rail vehicles (DIN EN 45545-2) R23 | HL 1 - HL 2                                                                       |
| Fire protection for rail vehicles (DIN EN 45545-2) R24 | HL 1 - HL 2                                                                       |

### Standards and Regulations

|                               |                                        |
|-------------------------------|----------------------------------------|
| Electromagnetic compatibility | Conformance with EMC directive         |
| Noise emission                | EN 61000-6-4                           |
| Standards/regulations         | EN 61000-4-2                           |
| Designation                   | Electromagnetic RF field               |
| Standards/regulations         | EN 61000-4-3                           |
|                               | EN 61000-4-4                           |
|                               | EN 61000-4-5                           |
| Designation                   | Conducted interferences                |
| Standards/regulations         | EN 61000-4-6                           |
| Electrical isolation          | Basic insulation according to EN 61010 |
| Conformance                   | CE-compliant                           |
| ATEX                          | # II 3 G Ex nA IIC T4 Gc X             |
| UL, USA/Canada                | UL 508 Listed                          |
|                               | Class I, Div. 2, Groups A, B, C, D T6  |

Monitoring module - MINI MCR-2-FM-RC - 2904504

Technical data

Standards and Regulations

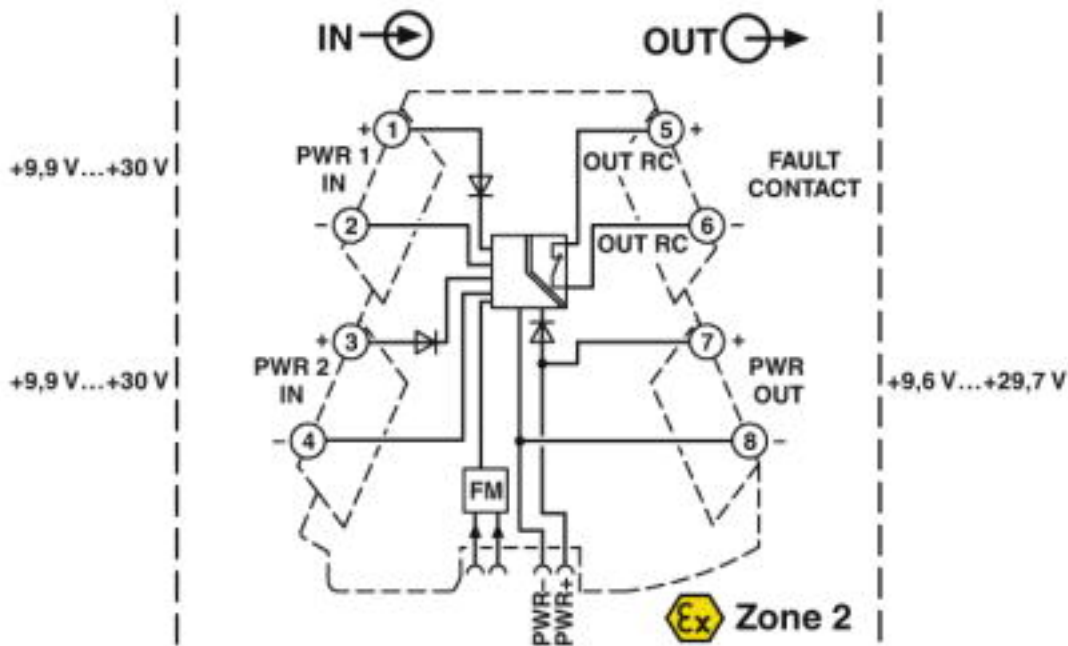
|  |                               |
|--|-------------------------------|
|  | Class I, Zone 2, Group IIC T6 |
|--|-------------------------------|

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

Block diagram



Classifications

eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27371392 |
| eCl@ss 4.0    | 27378000 |
| eCl@ss 4.1    | 27378000 |
| eCl@ss 5.0    | 27379100 |
| eCl@ss 5.1    | 27379100 |
| eCl@ss 6.0    | 27379200 |

## Monitoring module - MINI MCR-2-FM-RC - 2904504

### Classifications

#### eCl@ss

|            |          |
|------------|----------|
| eCl@ss 7.0 | 27379201 |
| eCl@ss 8.0 | 27379201 |
| eCl@ss 9.0 | 27379201 |

#### ETIM

|          |          |
|----------|----------|
| ETIM 4.0 | EC002498 |
| ETIM 5.0 | EC002498 |
| ETIM 6.0 | EC002498 |
| ETIM 7.0 | EC002498 |

#### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 26121604 |
| UNSPSC 7.0901 | 26121604 |
| UNSPSC 11     | 26121604 |
| UNSPSC 12.01  | 26121604 |
| UNSPSC 13.2   | 26121604 |
| UNSPSC 18.0   | 39121421 |
| UNSPSC 19.0   | 39121421 |
| UNSPSC 20.0   | 39121421 |
| UNSPSC 21.0   | 39121421 |

### Approvals

#### Approvals

##### Approvals

GL / UL Listed / cUL Listed / cULus Listed

##### Ex Approvals

ATEX / UL Listed / cUL Listed / EAC Ex / cULus Listed

#### Approval details

|    |                                                                                     |                                                                                   |             |
|----|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------|
| GL |  | <a href="https://approvalfinder.dnvgl.com/">https://approvalfinder.dnvgl.com/</a> | 14445-15 HH |
|----|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------|

## Monitoring module - MINI MCR-2-FM-RC - 2904504

### Approvals

UL Listed



<http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm>

FILE E 238705

cUL Listed



<http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm>

FILE E 238705

cULus Listed



### Accessories

#### Accessories

#### Communication module

##### Communication module - MINI MCR-2-V8-MOD-RTU - 2905634



Eight MINI Analog Pro signal conditioners and measuring transducers can be quickly and easily integrated into a Modbus/RTU network via a communication adapter.

##### Communication module - MINI MCR-2-V8-MOD-TCP - 2905635



Eight MINI Analog Pro signal conditioners and measuring transducers can be quickly and easily integrated into a Modbus/TCP network via a communication adapter.

##### Communication module - MINI MCR-2-V8-PB-DP - 2905636



Eight MINI Analog Pro signal conditioners and measuring transducers can be quickly and easily integrated into a PROFIBUS DP network via a communication adapter.

## Monitoring module - MINI MCR-2-FM-RC - 2904504

### Accessories

#### Device marking

##### Marker for end clamp - UCT-EM (30X5) - 0801505



Marker for end clamp, Sheet, white, unlabeled, can be labeled with: TOPMARK NEO, TOPMARK LASER, BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: snapped into marker carrier, lettering field size: 30 x 5 mm, Number of individual labels: 24

---

##### Marker for end clamp - UCT-EM (30X5) YE - 0830340



Marker for end clamp, Sheet, yellow, unlabeled, can be labeled with: TOPMARK NEO, TOPMARK LASER, BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: snapped into marker carrier, lettering field size: 30 x 5 mm, Number of individual labels: 24

---

##### 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

---

##### Plastic label - UC-EMLP (15X5) YE - 0822615



Plastic label, Sheet, yellow, 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

---

##### Plastic label - UC-EMLP (15X5) SR - 0828095



Plastic label, Sheet, silver, 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

## Monitoring module - MINI MCR-2-FM-RC - 2904504

### Accessories

#### 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 - US-EMLP (15X5) YE - 0828873



Plastic label, Card, yellow, 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 - US-EMLP (15X5) SR - 0828874



Plastic label, Card, silver, 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

### DIN rail connector

#### DIN rail bus connectors - ME 6,2 TBUS-2 1,5/5-ST-3,81 GY - 2695439



DIN rail connector (TBUS), 5-pos., for bridging the supply voltage, can be snapped onto NS 35/... DIN rails according to EN 60715

#### DIN rail bus connectors - ME 6,2 TBUS-2 1,5/5-ST-3,81 GN - 2869728



DIN rail connector for DIN rail mounting. Universal for TBUS housing. Gold-plated contacts, 5-pos.

## Monitoring module - MINI MCR-2-FM-RC - 2904504

### Accessories

#### Labeled device marker

Marker for end clamp - UCT-EM (30X5) CUS - 0801589



Marker for end clamp, can be ordered: by sheet, white, labeled according to customer specifications, mounting type: snapped into marker carrier, lettering field size: 30 x 5 mm, Number of individual labels: 24

---

Marker for end clamp - UCT-EM (30X5) YE CUS - 0830348



Marker for end clamp, can be ordered: by sheet, yellow, labeled according to customer specifications, mounting type: snapped into marker carrier, lettering field size: 30 x 5 mm, Number of individual labels: 24

---

Plastic label - UC-EMLP (15X5) CUS - 0824550



Plastic label, can be ordered: by sheet, white, labeled according to customer specifications, mounting type: adhesive, lettering field size: 15 x 5 mm

---

Plastic label - UC-EMLP (15X5) YE CUS - 0824551



Plastic label, can be ordered: by sheet, yellow, labeled according to customer specifications, mounting type: adhesive, lettering field size: 15 x 5 mm

---

Plastic label - UC-EMLP (15X5) SR CUS - 0828099



Plastic label, can be ordered: by sheet, silver, labeled according to customer specifications, mounting type: adhesive, lettering field size: 15 x 5 mm, Number of individual labels: 10

## Monitoring module - MINI MCR-2-FM-RC - 2904504

### Accessories

#### Plastic label - US-EMLP (15X5) CUS - 0830076



Plastic label, can be ordered: By card, white, labeled according to customer specifications, mounting type: adhesive, lettering field size: 15 x 5 mm, Number of individual labels: 189

---

#### Plastic label - US-EMLP (15X5) YE CUS - 0830077



Plastic label, can be ordered: By card, yellow, labeled according to customer specifications, mounting type: adhesive, lettering field size: 15 x 5 mm, Number of individual labels: 189

---

#### Plastic label - US-EMLP (15X5) SR CUS - 0830078



Plastic label, can be ordered: By card, silver, labeled according to customer specifications, mounting type: adhesive, lettering field size: 15 x 5 mm, Number of individual labels: 189

---

### Power module

#### Power terminal block - MINI MCR-2-PTB - 2902066



Power terminal with plug-in connection technology for delivering the supply voltage to the DIN rail connector. Monitoring of the supply voltages in combination with the fault monitoring module. Screw connection technology

---

#### Power terminal block - MINI MCR-2-PTB-PT - 2902067



Power terminal with plug-in connection technology for delivering the supply voltage to the DIN rail connector. Monitoring of the supply voltages in combination with the fault monitoring module. Push-in connection technology

## Monitoring module - MINI MCR-2-FM-RC - 2904504

### Accessories

#### Power supply

Power supply unit - MINI-SYS-PS-100-240AC/24DC/1.5 - 2866983



Primary-switched MINI POWER supply for DIN rail mounting, input: 1-phase, output: 24 V DC/1.5 A

---

Power supply unit - MINI-PS-100-240AC/24DC/1.5/EX - 2866653



Primary-switched power supply MINI POWER for DIN rail mounting, input: 1-phase, output: 24 V DC/1,5 A, for the potentially explosive area

---

#### System adapter

System adapter - MINI MCR-2-V8-FLK 16 - 2901993



Eight MINI Analog Pro signal conditioners and measuring transducers can be connected to a controller with minimal cabling effort and without any errors using system adapters and system cabling.

---

#### Terminal marking

Marker strip - SK 5,0 WH:REEL - 0805221



Marker strip, Roll, white, unlabeled, can be labeled with: THERMOMARK ROLL 2.0, THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, mounting type: adhesive, for terminal block width: 5 mm, lettering field size: continuous x 5 mm, Number of individual labels: 90000

---