

MINI MCR-2-FM-RC - Monitoring block



2904504

<https://www.phoenixcontact.com/us/products/2904504>

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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 (Item No.: 2869728). You can also monitor the supply voltages of MINI MCR-2-PTB(-PT) power terminals (Item 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.

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 2904504 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | C404 |
| Product key | DK112Z |
| GTIN | 4046356857406 |
| Weight per piece (including packing) | 128 g |
| Weight per piece (excluding packing) | 109 g |
| Customs tariff number | 85437090 |
| Country of origin | DE |

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Technical data

Notes

Utilization restriction

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

Product properties

| | |
|----------------|-----------------|
| Product type | Evaluation unit |
| Product family | MINI Analog Pro |
| Configuration | DIP switches |

System properties

Functionality

| | |
|---------------|--------------|
| Configuration | DIP switches |
|---------------|--------------|

Electrical properties

| | |
|---|-----------------|
| Electrical isolation | 2-way isolation |
| Electrical isolation between input and output | yes |
| Maximum temperature coefficient | < 0.01 %/K |

Electrical isolation

| | |
|----------------------|----|
| Overvoltage category | II |
| Pollution degree | 2 |

Electrical isolation Input/output IEC/EN 61010

| | |
|--------------------------|-------------------------|
| Standards/regulations | IEC/EN 61010 |
| Rated insulation voltage | 50 V AC/DC (effective) |
| Test voltage | 1.5 kV AC (50 Hz, 60 s) |
| Insulation | Basic insulation |

Supply

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

Input data

Signal: Voltage

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

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2904504

<https://www.phoenixcontact.com/us/products/2904504>

Output data

Switching: Relay

| | |
|---------------------------|----------|
| Maximum switching voltage | 30 V DC |
| Max. switching current | 50 mA DC |

Signal: Voltage

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

Connection data

| | |
|----------------------------------|--|
| Connection method | Screw connection |
| Stripping length | 10 mm |
| Screw thread | M3 |
| Conductor cross-section rigid | 0.2 mm ² ... 1.5 mm ² (with ferrule) 0.14 mm ² ... 2.5 mm ² (without ferrule) |
| Conductor cross-section flexible | 0.14 mm ² ... 2.5 mm ² |
| Conductor cross-section AWG | 24 ... 12 (flexible) |
| Tightening torque | 0.5 Nm ... 0.6 Nm |

Ex data

| | |
|-----------------------|--------------|
| Ex installation (EPL) | Gc Div. 2 |
|-----------------------|--------------|

Signaling

| | |
|------------------|---|
| Status display | Green LED (supply voltage) Yellow LED (switching output) |
| Error indication | Red LED |

Dimensions

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

Material specifications

| | |
|--|-----------------|
| Color | gray (RAL 7042) |
| Housing material | PBT |
| 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 |

Environmental and real-life conditions

Ambient conditions

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2904504

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| | |
|---|-------------------------------|
| Degree of protection | IP20 (not assessed by UL) |
| Ambient temperature (operation) | -40 °C ... 70 °C |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |
| Altitude | ≤ 2000 m |
| Permissible humidity (operation) | 5 % ... 95 % (non-condensing) |

Approvals

CE

| | |
|-------------|--------------|
| Certificate | CE-compliant |
|-------------|--------------|

ATEX

| | |
|----------------|--------------------------|
| Identification | ⊕ II 3 G Ex ec IIC T4 Gc |
| Certificate | BVS 20 ATEX E 014X |

IECEX

| | |
|----------------|--------------------|
| Identification | Ex ec IIC T4 Gc |
| Certificate | IECEX BVS 20.0010X |

CCC / China-Ex

| | |
|----------------|-----------------|
| Identification | Ex ec IIC T4 Gc |
|----------------|-----------------|

UL, USA/Canada

| | |
|----------------|---------------------------------------|
| Identification | UL 508 Listed |
| | Class I, Div. 2, Groups A, B, C, D T6 |
| | Class I, Zone 2, Group IIC T6 |

Shipbuilding approval

| | |
|-------------|-------------------|
| Certificate | DNV GL TAA00002UA |
|-------------|-------------------|

EAC Ex

| | |
|----------------|---------------------------------|
| Identification | ⊕ Ex ec IIC T4 Gc |
| Certificate | BY/112 02.01 TP012 103.01 00079 |

Shipbuilding data

| | |
|-------------|---|
| Temperature | B |
| Humidity | B |
| Vibration | A |
| EMC | A |
| Enclosure | Required protection according to the Rules shall be provided upon installation on board |

EMC data

| | |
|-------------------------------|--|
| Electromagnetic compatibility | Conformance with EMC directive |
| Noise immunity | EN 61000-6-2 |
| Note | When being exposed to interference, there may be minimal deviations. |

Noise emission

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| | |
|-----------------------|--------------|
| Standards/regulations | EN 61000-6-4 |
|-----------------------|--------------|

Electrostatic discharge

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|-----------------------|--------------|
| Standards/regulations | EN 61000-4-2 |
|-----------------------|--------------|

Electrostatic discharge

| | |
|----------|---|
| Comments | Safety measures must be taken to prevent electrostatic discharge. |
|----------|---|

Electromagnetic HF field

| | |
|-----------------------|--------------------------|
| Designation | Electromagnetic RF field |
| Standards/regulations | EN 61000-4-3 |

Fast transients (burst)

| | |
|-----------------------|-------------------------|
| Designation | Fast transients (burst) |
| Standards/regulations | EN 61000-4-4 |

Surge current load (surge)

| | |
|-----------------------|--------------|
| Standards/regulations | EN 61000-4-5 |
|-----------------------|--------------|

Conducted interference

| | |
|-----------------------|-------------------------|
| Designation | Conducted interferences |
| Standards/regulations | EN 61000-4-6 |

Standards and regulations

| | |
|----------------------|-----------------|
| Electrical isolation | 2-way isolation |
|----------------------|-----------------|

GB Standard

| | |
|-----------------------|-------------|
| Standards/regulations | GB/T 3836.1 |
| | GB/T 3836.3 |

Mounting

| | |
|-------------------|-------------------|
| Mounting type | DIN rail mounting |
| Mounting position | any |

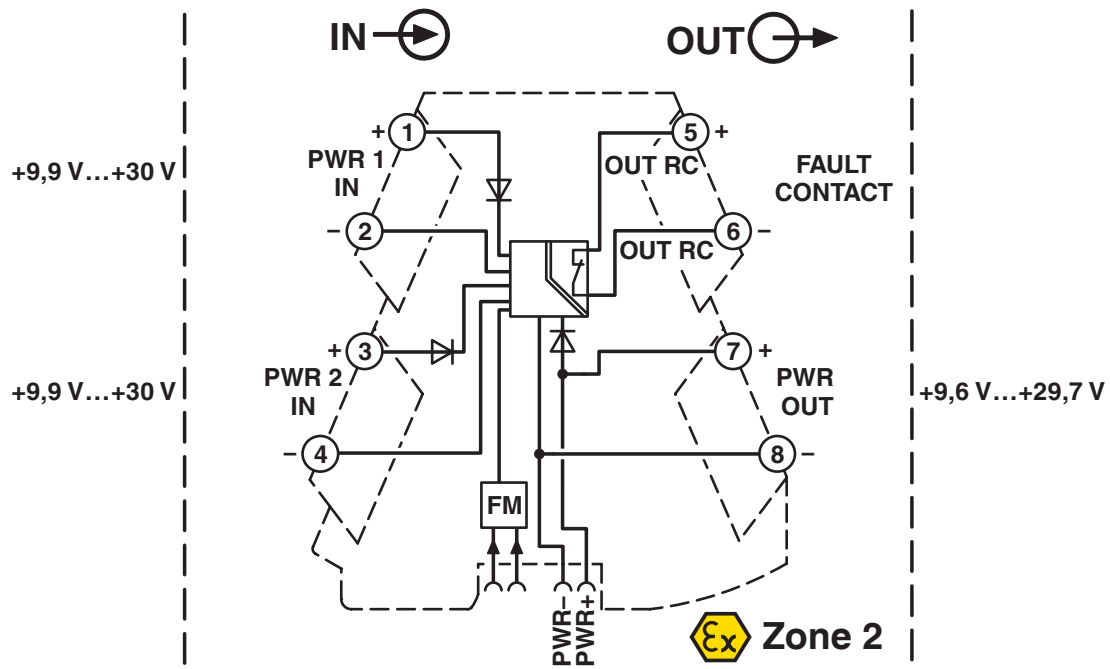
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2904504

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Drawings

Block diagram



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2904504

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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2904504>



UL Listed

Approval ID: FILE E 238705



cUL Listed

Approval ID: FILE E 238705

DNV

Approval ID: TAA00002UA



IECEx

Approval ID: IECEx BVS 20.0010X



cUL Listed

Approval ID: E196811



UL Listed

Approval ID: E196811



ATEX

Approval ID: BVS 20 ATEX E 014X



EAC Ex

Approval ID: TP012 103.01 00079



CCC

Approval ID: 2022122309115969

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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-13.0 | 27371392 |
| ECLASS-15.0 | 27371392 |

ETIM

| | |
|-----------|----------|
| ETIM 10.0 | EC002886 |
|-----------|----------|

UNSPSC

| | |
|-------------|----------|
| UNSPSC 21.0 | 39121100 |
|-------------|----------|

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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 | 18f90d4b-5e22-4afe-9caf-f196c29734e6 |

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