

## Temperature measuring transducer - MACX MCR-TS-I-OLP - 2908662

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Output loop-powered temperature transducer, two universal inputs for thermocouples, resistance and voltage sensor, HART communication, freely configurable, installable in Zone 2, SIL 2/3



### Key Commercial Data

|                                      |                                                                                                         |
|--------------------------------------|---------------------------------------------------------------------------------------------------------|
| Packing unit                         | 1 pc                                                                                                    |
| GTIN                                 | <br>4 055626 355450 |
| GTIN                                 | 4055626355450                                                                                           |
| Weight per Piece (excluding packing) | 171.800 g                                                                                               |
| Custom tariff number                 | 85437090                                                                                                |
| Country of origin                    | Germany                                                                                                 |

### Technical data

#### Dimensions

|        |          |
|--------|----------|
| Width  | 12.5 mm  |
| Height | 99 mm    |
| Depth  | 114.5 mm |

#### Ambient conditions

|                                         |                               |
|-----------------------------------------|-------------------------------|
| Ambient temperature (operation)         | -40 °C ... 85 °C              |
|                                         | -40 °C ... 70 °C (SIL active) |
| Ambient temperature (storage/transport) | -40 °C ... 100 °C             |
| Maximum altitude                        | ≤ 4000 m (Above sea level)    |
| Permissible humidity (operation)        | 5 % ... 95 % (non-condensing) |
| Degree of protection                    | IP20                          |

#### Input data

|                                     |                                  |
|-------------------------------------|----------------------------------|
| Sensor types (RTD) that can be used | Pt, Ni, Cu sensors: 2, 3, 4-wire |
|-------------------------------------|----------------------------------|

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## Technical data

### Input data

|                                    |                                                                      |
|------------------------------------|----------------------------------------------------------------------|
| Sensor types that can be used (TC) | A, B, C, D, E, J, K, L, N, R, S, T, U                                |
| Linear resistance measuring range  | 10 $\Omega$ ... 2000 $\Omega$ (Minimum measuring span: 10 $\Omega$ ) |
| Temperature measuring range        | -250 °C ... 2500 °C (Range depending on the sensor type)             |
|                                    | -200 °C ... 850 °C (Pt 100)                                          |

### Output data

|                           |                |
|---------------------------|----------------|
| Configurable/programmable | no             |
| Current output signal     | 4 mA ... 20 mA |
|                           | 20 mA ... 4 mA |
| Max. output current       | 23 mA          |

### Power supply

|                      |                            |
|----------------------|----------------------------|
| Supply voltage range | 12 V ... 42 V (Standard)   |
|                      | 12 V ... 32 V (SIL active) |

### Connection data

|                                  |                                             |
|----------------------------------|---------------------------------------------|
| Connection method                | Screw connection                            |
| Stripping length                 | 7 mm                                        |
| Screw thread                     | M3                                          |
| Conductor cross section solid    | 0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |
| Conductor cross section flexible | 0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |
| Conductor cross section AWG      | 24 ... 14                                   |
| Torque                           | 0.5 Nm ... 0.6 Nm                           |

### General

|                      |                                        |
|----------------------|----------------------------------------|
| Overvoltage category | II                                     |
| Degree of pollution  | 2                                      |
| Color                | gray                                   |
| Conformance          | CE-compliant                           |
| ATEX                 | # II 3G Ex nA IIC T6...T4 Gc           |
| UL, USA/Canada       | UL 61010 Recognized                    |
| FM approval          | NI, Class I, Div. 2, Groups A, B, C, D |
| CSA                  | NI / Class I / Div. 2 / ABCD T6/T5/T4  |

### Standards and Regulations

|                |                                        |
|----------------|----------------------------------------|
| Conformance    | CE-compliant                           |
| ATEX           | # II 3G Ex nA IIC T6...T4 Gc           |
| UL, USA/Canada | UL 61010 Recognized                    |
| FM approval    | NI, Class I, Div. 2, Groups A, B, C, D |
| CSA            | NI / Class I / Div. 2 / ABCD T6/T5/T4  |

### Environmental Product Compliance

|            |                                                         |
|------------|---------------------------------------------------------|
| China RoHS | Environmentally friendly use period: unlimited = EFUP-e |
|------------|---------------------------------------------------------|

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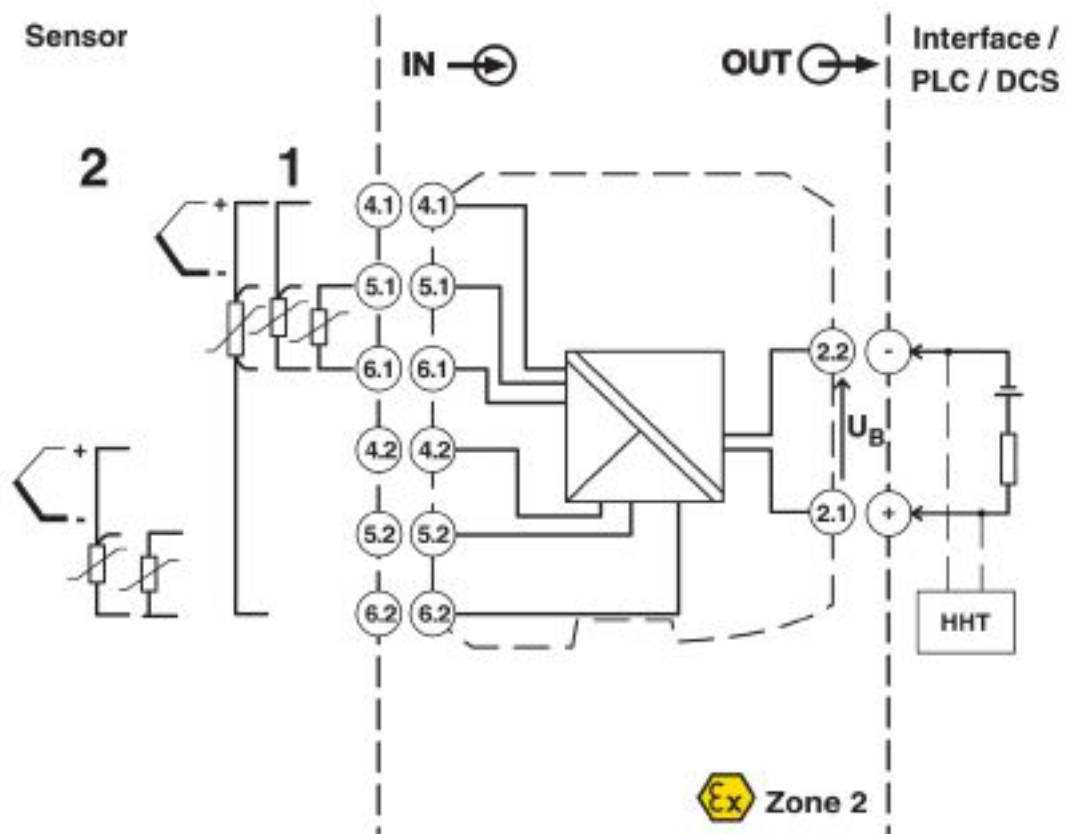
### Technical data

#### Environmental Product Compliance

|  |                                                |
|--|------------------------------------------------|
|  | No hazardous substances above threshold values |
|--|------------------------------------------------|

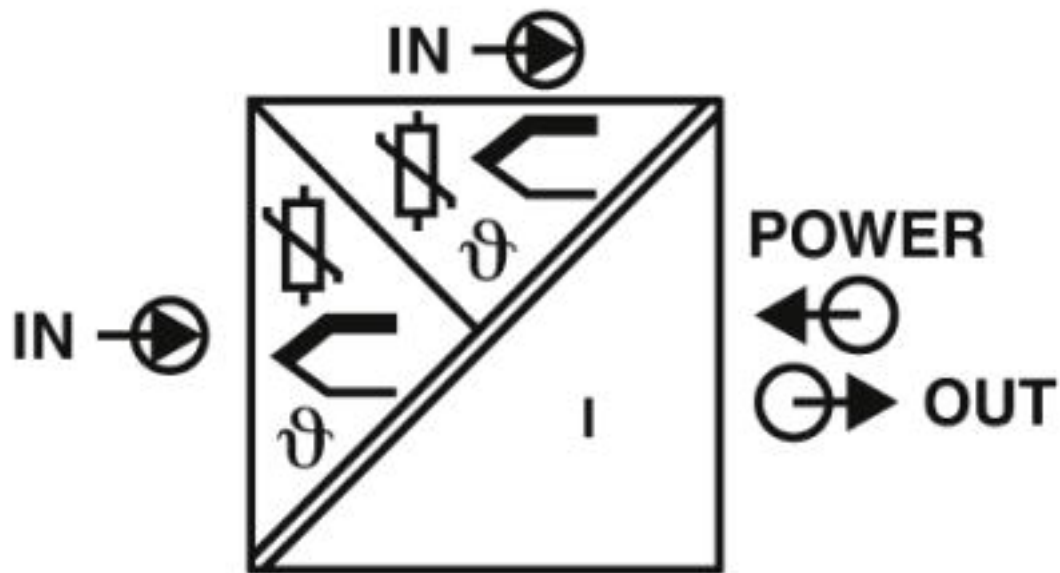
### Drawings

Block diagram



Temperature measuring transducer - MACX MCR-TS-I-OLP - 2908662

Pictogram



Classifications

eCl@ss

|            |          |
|------------|----------|
| eCl@ss 4.0 | 27200200 |
| eCl@ss 4.1 | 27200200 |
| eCl@ss 5.0 | 27200200 |
| eCl@ss 5.1 | 27200200 |
| eCl@ss 6.0 | 27200200 |
| eCl@ss 7.0 | 27200206 |
| eCl@ss 8.0 | 27200206 |
| eCl@ss 9.0 | 27210129 |

ETIM

|          |          |
|----------|----------|
| ETIM 2.0 | EC001446 |
| ETIM 3.0 | EC001446 |
| ETIM 4.0 | EC001446 |
| ETIM 5.0 | EC001446 |
| ETIM 6.0 | EC002919 |
| ETIM 7.0 | EC002919 |

Approvals

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UL Recognized / cUL Recognized / Functional Safety / EAC / cULus Recognized

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## Approvals

Ex Approvals

ATEX / FM approved / CSA

## Approval details

|                   |                                                                                     |                                                                                                                                                       |                          |
|-------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| UL Recognized     |    | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 198586            |
| cUL Recognized    |    | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 198586            |
| Functional Safety |                                                                                     | <a href="http://www.tuev-sued.de">http://www.tuev-sued.de</a>                                                                                         | Z10 17 09 29429 006      |
| EAC               |  |                                                                                                                                                       | RU C-<br>DE.A*30.B.01082 |
| cULus Recognized  |  |                                                                                                                                                       |                          |

## Accessories

Accessories

Device marking

Plastic label - UC-EMLP (11X9) - 0819291



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: 11 x 9 mm, Number of individual labels: 10

Plastic label - UC-EMLP (11X9) YE - 0822602



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: 11 x 9 mm, Number of individual labels: 10

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## Accessories

### Plastic label - UC-EMLP (11X9) SR - 0828094



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: 11 x 9 mm, Number of individual labels: 10

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### Plastic label - US-EMLP (11X9) - 0828789



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: 11 x 9 mm, Number of individual labels: 135

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### Plastic label - US-EMLP (11X9) YE - 0828871



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: 11 x 9 mm, Number of individual labels: 135

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### Plastic label - US-EMLP (11X9) SR - 0828872



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: 11 x 9 mm, Number of individual labels: 135

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### Device marker - LS-EMLP (11X9) WH - 0831678



Device marker, Sheet, white, unlabeled, can be labeled with: TOPMARK NEO, TOPMARK LASER, mounting type: adhesive, lettering field size: 11 x 9 mm, Number of individual labels: 255

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## Accessories

Device marker - LS-EMLP (11X9) YE - 0831732

Device marker, Sheet, yellow, unlabeled, can be labeled with: TOPMARK NEO, TOPMARK LASER, mounting type: adhesive, lettering field size: 11 x 9 mm, Number of individual labels: 255



Device marker - LS-EMLP (11X9) SR - 0831705

Device marker, Sheet, silver, unlabeled, can be labeled with: TOPMARK NEO, TOPMARK LASER, mounting type: adhesive, lettering field size: 11 x 9 mm, Number of individual labels: 255



## Insulating sleeve

Insulating sleeve - MPS-IH BK - 0201731

Insulating sleeve, color: black



Insulating sleeve - MPS-IH GY - 0201728

Insulating sleeve, color: gray



Insulating sleeve - MPS-IH GN - 0201702

Insulating sleeve, color: green



## Temperature measuring transducer - MACX MCR-TS-I-OLP - 2908662

### Accessories

Insulating sleeve - MPS-IH YE - 0201692

Insulating sleeve, color: yellow



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Insulating sleeve - MPS-IH BU - 0201689

Insulating sleeve, color: blue



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Insulating sleeve - MPS-IH RD - 0201676

Insulating sleeve, color: red



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Insulating sleeve - MPS-IH WH - 0201663

Insulating sleeve, color: white



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Labeled device marker

Plastic label - UC-EMLP (11X9) CUS - 0824547



Plastic label, can be ordered: by sheet, white, labeled according to customer specifications, mounting type: adhesive, lettering field size: 11 x 9 mm

## Temperature measuring transducer - MACX MCR-TS-I-OLP - 2908662

### Accessories

Plastic label - UC-EMLP (11X9) YE CUS - 0824548



Plastic label, can be ordered: by sheet, yellow, labeled according to customer specifications, mounting type: adhesive, lettering field size: 11 x 9 mm

Plastic label - UC-EMLP (11X9) SR CUS - 0828098



Plastic label, can be ordered: by sheet, silver, labeled according to customer specifications, mounting type: adhesive, lettering field size: 11 x 9 mm, Number of individual labels: 10

### Programming adapter

Programming adapter - MCR-PAC-T-USB - 2309000



Programming adapter with USB and T port interface, 2.4 m for programming FA MCR-..., MCR-...-LP-..., and MCR-...-HT-... modules

### Programming cable

Cable adapter - GW HART USB MODEM - 1003824



USB HART modem cable for communication between a PC and HART devices, cable length: 1m.

### Test plug terminal block

Test plugs - MPS-MT - 0201744



Test plugs, with solder connection up to 1 mm<sup>2</sup> conductor cross section, color: gray

