

BLZ 5.00/12/180 SN BK BX

Weidmüller Interface GmbH & Co. KG
 Klingenbergstraße 26
 D-32758 Detmold
 Germany

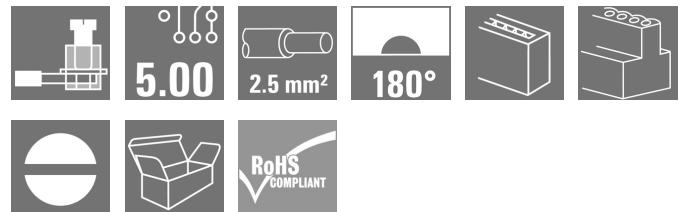
www.weidmueller.com

Product image



Similar to illustration

Do not use product for new developments



Female plugs with clamping-yoke screw for wire connection with straight (180°) outlet direction. The female plugs provide space for labelling and can be coded.

General ordering data

| | |
|--------------|---|
| Version | PCB plug-in connector, female plug, 5.00 mm, Number of poles: 12, 180°, Clamping yoke connection, Clamping range, max.: 3.31 mm², Box |
| Order No. | 1602990000 |
| Type | BLZ 5.00/12/180 SN BK BX |
| GTIN (EAN) | 4008 190177058 |
| Qty. | 40 pc(s). |
| Product data | IEC: 400 V / 19 A / 0.5 - 2.5 mm² UL: 300 V / 15 A / AWG 26 - AWG 12 |
| Packaging | Box |

Creation date December 4, 2023 8:52:53 AM CET [This article will no longer be available in the future.](#)

Available until 2023-07-30

Alternative product [1955470000](#)

Catalogue status 24.11.2023 / We reserve the right to make technical changes.

BLZ 5.00/12/180 SN BK BX
Weidmüller Interface GmbH & Co. KG

 Klingenbergstraße 26
 D-32758 Detmold
 Germany

www.weidmueller.com
Technical data
Dimensions and weights

| | | | |
|------------|----------|-----------------|------------|
| Depth | 20.1 mm | Depth (inches) | 0.791 inch |
| Height | 15.2 mm | Height (inches) | 0.598 inch |
| Width | 60 mm | Width (inches) | 2.362 inch |
| Net weight | 19.475 g | | |

System Parameters

| | | | |
|--|-------------------------------------|--|------------------------------|
| Product family | OMNIMATE Signal - series BL/SL 5.00 | Type of connection | Field connection |
| Wire connection method | Clamping yoke connection | Pitch in mm (P) | 5 mm |
| Pitch in inches (P) | 0.197 inch | Conductor outlet direction | 180° |
| Number of poles | 12 | L1 in mm | 55 mm |
| L1 in inches | 2.167 inch | Number of rows | 1 |
| Pin series quantity | 1 | Rated cross-section | 2.5 mm ² |
| Touch-safe protection acc. to DIN VDE 57 106 | Safe from finger touch | Touch-safe protection acc. to DIN VDE 0470 | IP20 plugged/ IP10 unplugged |
| Protection degree | IP20 | Volume resistance | ≤5 mΩ |
| Can be coded | Yes | Stripping length | 7 mm |
| Tightening torque, min. | 0.4 Nm | Tightening torque, max. | 0.5 Nm |
| Clamping screw | M 2.5 | Screwdriver blade | 0.6 x 3.5 |
| Screwdriver blade standard | DIN 5264 | Plugging cycles | 25 |
| Plugging force/pole, max. | 10 N | Pulling force/pole, max. | 8 N |

Material data

| | | | |
|---------------------------------------|----------------------------|---------------------------------------|--------|
| Insulating material | PBT | Colour | black |
| Colour chart (similar) | RAL 9011 | Insulating material group | IIIa |
| Comparative Tracking Index (CTI) | ≥ 200 | UL 94 flammability rating | V-0 |
| Contact material | Cu-alloy | Contact surface | tinned |
| Layer structure of plug contact | 4...8 μm Sn hot-dip tinned | Storage temperature, min. | -40 °C |
| Storage temperature, max. | 70 °C | Operating temperature, min. | -50 °C |
| Operating temperature, max. | 100 °C | Temperature range, installation, min. | -25 °C |
| Temperature range, installation, max. | 100 °C | | |

Conductors suitable for connection

| | | | |
|---|-------------------------|---|--|
| Clamping range, min. | 0.13 mm ² | Clamping range, max. | 3.31 mm ² |
| Wire connection cross section AWG, min. | AWG 26 | Wire connection cross section AWG, max. | AWG 12 |
| Solid, min. H05(07) V-U | 0.5 mm ² | Solid, max. H05(07) V-U | 2.5 mm ² |
| Flexible, min. H05(07) V-K | 0.5 mm ² | Flexible, max. H05(07) V-K | 2.5 mm ² |
| w. plastic collar ferrule, DIN 46228 pt 4, min. | 0.5 mm ² | w. plastic collar ferrule, DIN 46228 pt 4, max. | 2.5 mm ² |
| w. wire end ferrule, DIN 46228 pt 1, min. | 0.5 mm ² | w. wire end ferrule, DIN 46228 pt 1, max. | 2.5 mm ² |
| Plug gauge in accordance with EN 60999 a x b; ø | | Reference text | The outside diameter of the plastic collar should not be larger than the pitch (P), Length of ferrules is to be chosen depending on the product and the rated voltage. |
| | 2.8 mm x 2.0 mm; 2.4 mm | | |

BLZ 5.00/12/180 SN BK BX

Weidmüller Interface GmbH & Co. KG
 Klingenbergstraße 26
 D-32758 Detmold
 Germany


www.weidmueller.com

Technical data


Rated data acc. to IEC

| | | | |
|---|------------------------|---|-------------------|
| tested acc. to standard | IEC 60664-1, IEC 61984 | Rated current, min. number of poles (Tu=20°C) | 19 A |
| Rated current, max. number of poles (Tu=20°C) | 14.5 A | Rated current, min. number of poles (Tu=40°C) | 16 A |
| Rated current, max. number of poles (Tu=40°C) | 12.5 A | Rated voltage for surge voltage class / pollution degree II/2 | 400 V |
| Rated voltage for surge voltage class / pollution degree III/2 | 320 V | Rated voltage for surge voltage class / pollution degree III/3 | 250 V |
| Rated impulse voltage for surge voltage class/ pollution degree II/2 | 4 kV | Rated impulse voltage for surge voltage class/ pollution degree III/2 | 4 kV |
| Rated impulse voltage for surge voltage class/ contamination degree III/3 | 4 kV | Short-time withstand current resistance | 3 x 1s with 120 A |

Rated data acc. to CSA

| | | | |
|-----------------------------------|---|-----------------------------------|----------------|
| Institute (CSA) |  | Certificate No. (CSA) | 200039-1121690 |
| Rated voltage (Use group B / CSA) | 300 V | Rated voltage (Use group D / CSA) | 300 V |
| Rated current (Use group B / CSA) | 15 A | Rated current (Use group D / CSA) | 10 A |
| Wire cross-section, AWG, min. | AWG 26 | Wire cross-section, AWG, max. | AWG 12 |
| Reference to approval values | Specifications are maximum values, details - see approval certificate. | | |

Rated data acc. to UL 1059

| | | | |
|---------------------------------------|---|---------------------------------------|--------|
| Institute (UR) |  | Certificate No. (UR) | E60693 |
| Rated voltage (Use group B / UL 1059) | 300 V | Rated voltage (Use group D / UL 1059) | 300 V |
| Rated current (Use group B / UL 1059) | 15 A | Rated current (Use group D / UL 1059) | 10 A |
| Wire cross-section, AWG, min. | AWG 26 | Wire cross-section, AWG, max. | AWG 12 |
| Reference to approval values | Specifications are maximum values, details - see approval certificate. | | |

Packing

| | | | |
|-----------|--------|------------|--------|
| Packaging | Box | VPE length | 298 mm |
| VPE width | 176 mm | VPE height | 25 mm |

Classifications

| | | | |
|-------------|-------------|-------------|-------------|
| ETIM 6.0 | EC002638 | ETIM 7.0 | EC002638 |
| ETIM 8.0 | EC002638 | ETIM 9.0 | EC002638 |
| ECLASS 9.0 | 27-44-03-09 | ECLASS 9.1 | 27-44-03-09 |
| ECLASS 10.0 | 27-44-03-09 | ECLASS 11.0 | 27-46-02-02 |
| ECLASS 12.0 | 27-46-02-02 | ECLASS 13.0 | 27460202 |

BLZ 5.00/12/180 SN BK BX

Weidmüller Interface GmbH & Co. KG
 Klingenbergstraße 26
 D-32758 Detmold
 Germany

www.weidmueller.com

Technical data**Important note**

| | |
|----------------|---|
| IPC conformity | Conformity: The products are developed, manufactured and delivered according international recognized standards and norms and comply with the assured properties in the data sheet resp. fulfill decorative properties in accordance with IPC-A-610 "Class 2". Further claims on the products can be evaluated on request. |
| Notes | <ul style="list-style-type: none"> • Additional variants on request • Gold-plated contact surfaces on request • Rated current related to rated cross-section & min. No. of poles. • Wire end ferrule without plastic collar to DIN 46228/1 • Wire end ferrule with plastic collar to DIN 46228/4 • P on drawing = pitch • Rated data refer only to the component itself. Clearance and creepage distances to other components are to be designed in accordance with the relevant application standards. • In accordance with IEC 61984, OMNIMATE-connectors are connectors without breaking capacity (COC). During designated use, connectors are not allowed to be engaged or disengaged when live or under load • Long term storage of the product with average temperature of 50 °C and maximum humidity 70%, 36 months |

Approvals

Approvals



| | |
|-----------------------|------------|
| ROHS | Conform |
| UL File Number Search | UL Website |
| Certificate No. (UR) | E60693 |

Downloads

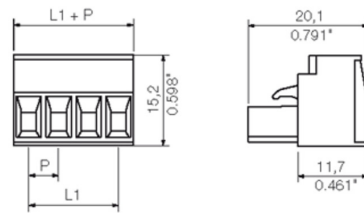
| | |
|---|---|
| Approval/Certificate/Document of Conformity | Declaration of the Manufacturer |
| Catalogues | Catalogues in PDF-format |
| Brochures | FL DRIVES EN MB DEVICE MANUF. EN FL DRIVES DE FL BUILDING SAFETY EN FL APPL LED LIGHTING EN FLIndustr.CONTROLS EN FL MACHINE SAFETY EN FL HEATING ELECTR EN FL APPL INVERTER EN FL BASE STATION EN FL ELEVATOR EN FL POWER SUPPLY EN FL 72H SAMPLE SER EN PO OMNIMATE EN |

BLZ 5.00/12/180 SN BK BX

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 26
D-32758 Detmold
Germany

www.weidmueller.com

Dimensional drawing



BLZ 5.00/12/180 SN BK BX

Weidmüller Interface GmbH & Co. KG
 Klingenbergstraße 26
 D-32758 Detmold
 Germany

www.weidmueller.com

Accessories

Coding elements



Only connects what is supposed to be connected: the right connection at the right place.

Coding elements and locking devices clearly assign connecting elements during the manufacturing process and operation

The coding elements and locking devices are inserted prior to assembly or during the cable assembly phase. The Weidmüller alternative: configure online using the variant configurator to precode prior to delivery.

Incorrect assembly on the circuit board and incorrect plugging of connecting elements is no longer possible. The advantage: no troubleshooting during manufacture and no operational errors by the user.

General ordering data

| Type | BLZ/SL KO BK BX | Version | Product data | Packaging |
|------------|----------------------------|--|--------------|-----------|
| Order No. | 1545710000 | PCB plug-in connector, Accessories, Coding element, black, Number | | Box |
| GTIN (EAN) | 4008190087142 | of poles: 1 | | |
| Qty. | 50 pc(s). | | | |
| Type | BLZ/SL KO OR BX | Version | Product data | Packaging |
| Order No. | 1573010000 | PCB plug-in connector, Accessories, Coding element, orange, Number | | Box |
| GTIN (EAN) | 4008190048396 | of poles: 1 | | |
| Qty. | 100 pc(s). | | | |

BLZ 5.00/12/180 SN BK BX

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 26
D-32758 Detmold
Germany

www.weidmueller.com

Accessories

Cover hoods



Effective protection, optimised ergonomics and closed design:

From the strain relief on the connected conductors and the visual/contact protection and the disconnection aid: the optional retrofit hoods perform mechanical, visual and haptic functions.

The two half shells clip together securely, enclose the plug completely and offer the following functions:

- Cable ties or integrated cable clips provide strain relief.
- Marked with dekafix labels or adhesive strips
- Mounting side by side without losing poles or displacing the pitch
- Compatible: suitable for plugs with or without a flange or mounting bracket
- Flexible: 1-3 cable outlets leading in different directions available depending on the size

Weidmüller hoods offer added stability, better identification, complete compatibility and versatility. The result: maximum reliability and user-friendliness in any application.

General ordering data

| Type | BLZ AH 12 SW | Version | Product data | Packaging |
|------------|----------------------------|--|--------------|-----------|
| Order No. | 1705300000 | PCB plug-in connector, Accessories, Hood, black, Number of poles: 12 | | Box |
| GTIN (EAN) | 4008190333058 | | | |
| Qty. | 10 pc(s). | | | |

Strain reliefs



For frequent load changes: the "trailer coupling" for plug-in connectors.

The strain relief can do more than just relieve the strain on conductors:

Simply clip onto the plug and

- bundle conductors
- guide cables
- use as a connection and disconnection aid

No damage to the connecting points, clear, tidy wiring and easy to handle.

User advantages: permanent heavy-duty connections for harsh industrial environments and convenient operation ensure improved system availability.

General ordering data

| Type | BLZ 5.00 ZE04 OR BX | Version | Product data | Packaging |
|------------|----------------------------|---|--------------|-----------|
| Order No. | 1652100000 | PCB plug-in connector, Accessories, Strain relief, orange, Number of poles: 4 | | Box |
| GTIN (EAN) | 4008190401771 | | | |
| Qty. | 50 pc(s). | | | |

Data sheet

BLZ 5.00/12/180 SN BK BX

Weidmüller Interface GmbH & Co. KG
 Klingenbergstraße 26
 D-32758 Detmold
 Germany

www.weidmueller.com

Accessories

| Type | BLZ 5.00 ZE08 BK BX | Version | Product data | Packaging |
|------------|----------------------------|--|--------------|-----------|
| Order No. | 1652060000 | PCB plug-in connector, Accessories, Strain relief, black, Number of | | Box |
| GTIN (EAN) | 4008190401733 | poles: 8 | | |
| Qty. | 50 pc(s). | | | |
| Type | BLZ 5.00 ZE08 OR BX | Version | Product data | Packaging |
| Order No. | 1652040000 | PCB plug-in connector, Accessories, Strain relief, orange, Number of | | Box |
| GTIN (EAN) | 4008190401719 | poles: 8 | | |
| Qty. | 50 pc(s). | | | |

MASSE OHNE TOLERANZ SIND KEINE PRUEFMASSE
 DIMS. WITHOUT TOLERANCE ARE NOT CONTROL DIMS.

DIE DEUTSCHE VERSION IST VERBINDLICH
 THE GERMAN VERSION IS BINDING

Technical Data

Rev.

Material data

| | |
|--|-----------------------|
| Insulation material type | PBT |
| Insulation material colours | see order sheet |
| Insulation material flammability class | UL94 V-0 |
| Insulation resistance | >10 ⁵ MOhm |
| Contact base material | Cu-alloy |
| Contact plating | tin plated |

System characteristic values

| | | |
|---|------------------|---------------------------|
| | with counterpart | SL5.00 180° |
| Pitch P | mm/inch | 5.00/0.197 |
| Number of rows | | 1 |
| Dielectric strength (r.m.s withstand voltage) | kV | >2.21 |
| Mechanical operating cycles acc. to DIN IEC 512 | | 25 |
| Pull in force (max) | N/pole | 10 |
| Pull out force (max) | N/pole | 8 |
| Through resistance (typical) | mOhm | 2.0 |
| Operating temperature range | °C | -55...+100 |
| Degree of protection acc. to VDE 0106 (plugged/unplugged) | | finger safe / finger safe |
| Degree of protection acc. to DIN EN 60529 (plugged/unplugged) | | IP20 / IP20 |
| Conductor connection method | | clamping yoke |
| Screw size | | M2.5 |
| Screw torque max acc. to EN 60999 | Nm | 0.4 |
| Screw driver type | | SD 0.6 x 3.5 |

Application notes

| | | |
|--------------------------------|--------|-----------------|
| Coding possibility | yes/no | yes (accessory) |
| Joinable without loss of pitch | yes/no | yes |
| Manual assembly of modules | yes/no | no |
| Max number of poles | n | 24 |

Conductor

| | | |
|---|-----------------|----------------|
| Clamping range | mm ² | 0.08...2.5 |
| "e" solid H05(07) V-U | mm ² | 0.5...2.5 |
| "f" flexible H05(07) V-K | mm ² | 0.5...2.5 |
| "f" with ferrule acc. to DIN 46228/1 | mm ² | 0.5...2.5 |
| ... with plastic collar acc. to DIN 46228/4 | mm ² | 0.5...1.5 |
| Conductor insulation stripping length | mm/inch | 7/0.276 |
| Conductor insulation diameter max. | mm | n.a. |
| Two wire clamping range | mm ² | n.a. |
| Gauge to EN 60999 (a x b ; Ø) | mm | 2.8 x 2.4; 2.4 |

IEC 664-1 / VDE0110 (4.97) rated data

| | | |
|---|-----------------|-------------------------|
| Rated cross section acc. to EN 60999 | mm ² | 2.5 |
| Rated current @ 20°C ambient (together with SL5.00/2) | A | 18 |
| Rated current @ 40°C ambient (together with SL5.00/2) | A | 15 |
| Overvoltage category / Pollution degree | | III/3 III/2 II/2 |
| Rated voltage | V | 250 320 400 |
| Rated impulse voltage | kV | 4.0 4.0 4.0 |

UL 1059 rated data



| | | | | |
|--|---|---------|---|-----|
| Rated voltage | V | 300 | - | 300 |
| Rated current | A | 15 | - | 10 |
| AWG wire range (field wiring / factory wiring) | | 22...12 | | |

CSA C22.2 rated data



| | | | | |
|--|---|---------|---|-----|
| Rated voltage | V | 300 | - | 300 |
| Rated current | A | 15 | - | 10 |
| AWG wire range (field wiring / factory wiring) | | 26...12 | | |

Packaging

carton

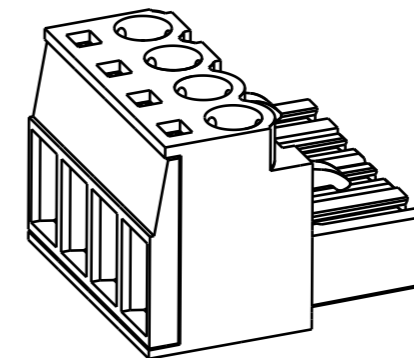
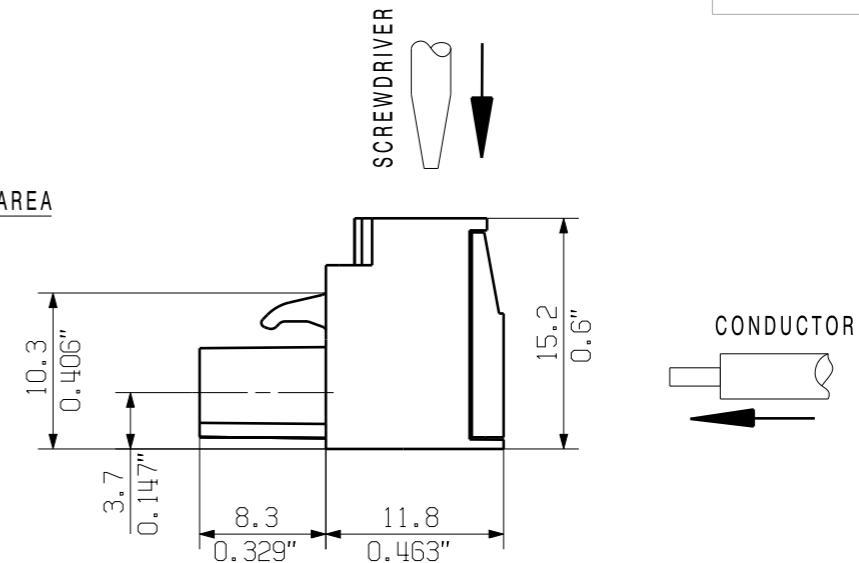
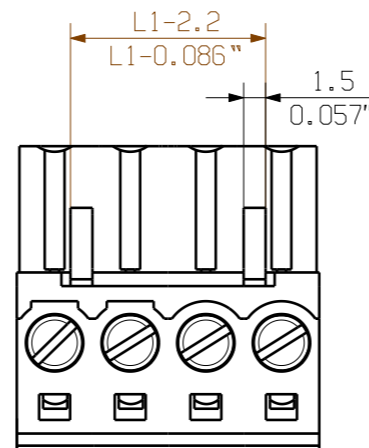
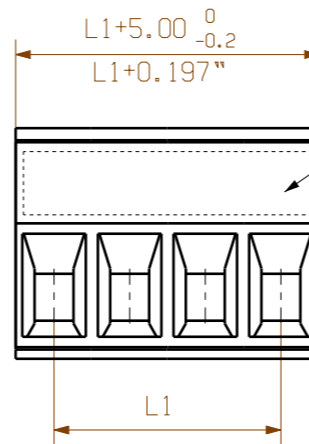
Downloads

www.weidmueller.de

- Without locking latches
- Sum of ambient temperature and temperature rise
- Referred to rated cross section and maximum pole number

n.a. = not applicable

Subject to technical changes



| | | |
|----|---------|-----------|
| 24 | 115,00 | 4,531 |
| 23 | 110,00 | 4,334 |
| 22 | 105,00 | 4,137 |
| 21 | 100,00 | 3,940 |
| 20 | 95,00 | 3,743 |
| 19 | 90,00 | 3,546 |
| 18 | 85,00 | 3,349 |
| 17 | 80,00 | 3,152 |
| 16 | 75,00 | 2,955 |
| 15 | 70,00 | 2,758 |
| 14 | 65,00 | 2,561 |
| 13 | 60,00 | 2,364 |
| 12 | 55,00 | 2,167 |
| 11 | 50,00 | 1,970 |
| 10 | 45,00 | 1,773 |
| 9 | 40,00 | 1,576 |
| 8 | 35,00 | 1,379 |
| 7 | 30,00 | 1,182 |
| 6 | 25,00 | 0,985 |
| 5 | 20,00 | 0,788 |
| 4 | 15,00 | 0,591 |
| 3 | 10,00 | 0,394 |
| 2 | 5,00 | 0,197 |
| n | L1 [mm] | L1 [Inch] |

SHOWN: BLZ 5.00/4

For the mounting of PCBs, it should be noted that the rated data given in the catalogue relates only to the connection elements. The necessary creepage and clearance paths must be observed in connection with the respective applicant in accordance to VDE 0110. The current-carrying capacity and pitch tolerance is to be determined according to DIN IEC 326 part 3 very fine.

Weidmüller connectors are tested to the DIN VDE 0627 standard, and are valid for its field of application. Provided that the connectors are used to the intended purpose, all requirements with respect to the occurring of electrical, mechanical, thermic and corrosive stress will be satisfied.

| | | | | |
|---------------------------|---|------------------|---|--|
| | METRIC TOLERANCES: X. = ±0.3 X.X = ±0.1 X.XX = ±0.05 | | CAT.NO.: | |
| | 43216/5 11.05.09 HELIS_MA 00 | | C 18227 28 | |
| MODIFICATION | | | | DRAWING NO. ISSUE NO. SHEET 02 OF 06 SHEETS |
| | DATE 10.12.2007 | NAME HELIS_MA | BLZ 5.00/.../ 180 (B) BUCHSENLEISTE SOCKET BLOCK | |
| RESPONSIBLE | HECKERT_S | HECKERT_M | | |
| SCALE: 2/1 SUPERSEDES: | CHECKED 13.05.2009 | HECKERT_M | | |
| APPROVED | | HECKERT_M | PRODUCT FILE: BLZ 5.00 7146 | |

WEITERGABE SOWIE VERVIELFÄLTIGUNG DIESES DOKUMENTS, VERWERTUNG UND MITTEILUNG SEINES INHALTS SIND VERBOTEN, SOWEIT NICHT AUSDRUECKLICH GESTATTET.
 ZUWIDERHANDLUNGEN VERPFLICHTEN ZU SCHADENERSATZ. ALLE RECHTE FUER DEN FALL DER PATENT-, GEBRAUCHSMUSTER-, ODER GESCHMACKSMUSTERERTRAGUNG VORBEHALTEN.
 THE REPRODUCTION, DISTRIBUTION AND UTILIZATION OF THIS DOCUMENT AS WELL AS THE COMMUNICATION OF ITS CONTENTS TO OTHERS WITHOUT EXPLICIT AUTHORIZATION IS PROHIBITED.
 OFFENDERS WILL BE HELD LIABLE FOR THE PAYMENT OF DAMAGES. WEIDMUELLER EXCLUSIVELY RESERVES THE RIGHT TO FILE FOR PATENTS, UTILITY MODELS OR DESIGNS.
 © WEIDMUELLER INTERFACE GmbH & Co.KG