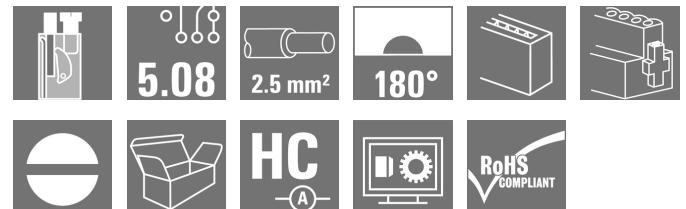


**BLT 5.08HC/20/180F SN OR BX****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

[www.weidmueller.com](http://www.weidmueller.com)**Product image**

Similar to illustration

Female plugs with TOP screw connection system for connecting wires with straight outlet direction and screw flange. The female connectors provide space for labelling and can be coded. HC = High Current.

**General ordering data**

|              |                                                                                                                             |
|--------------|-----------------------------------------------------------------------------------------------------------------------------|
| Version      | PCB plug-in connector, female plug, 5.08 mm, Number of poles: 20, 180°, TOP connection, Clamping range, max. : 2.5 mm², Box |
| Order No.    | <a href="#">1844170000</a>                                                                                                  |
| Type         | BLT 5.08HC/20/180F SN OR BX                                                                                                 |
| GTIN (EAN)   | 4032248356096                                                                                                               |
| Qty.         | 12 pc(s).                                                                                                                   |
| Product data | IEC: 400 V / 27 A / 0.2 - 2.5 mm²<br>UL: 300 V / 17 A / AWG 26 - AWG 14                                                     |
| Packaging    | Box                                                                                                                         |

Creation date March 25, 2021 7:37:20 PM CET

## BLT 5.08HC/20/180F SN OR BX

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## Technical data

## Dimensions and weights

|                |            |                 |            |
|----------------|------------|-----------------|------------|
| Depth          | 31.8 mm    | Depth (inches)  | 1.252 inch |
| Height         | 12.2 mm    | Height (inches) | 0.48 inch  |
| Net weight     | 56.656 g   | Width           | 111.4 mm   |
| Width (inches) | 4.386 inch |                 |            |

## System Parameters

|                                              |                                     |                   |              |
|----------------------------------------------|-------------------------------------|-------------------|--------------|
| Product family                               | OMNIMATE Signal - series BL/SL 5.08 |                   |              |
| Type of connection                           | Field connection                    |                   |              |
| Wire connection method                       | TOP connection                      |                   |              |
| Pitch in mm (P)                              | 5.08 mm                             |                   |              |
| Pitch in inches (P)                          | 0.2 inch                            |                   |              |
| Conductor outlet direction                   | 180°                                |                   |              |
| Number of poles                              | 20                                  |                   |              |
| L1 in mm                                     | 96.52 mm                            |                   |              |
| L1 in inches                                 | 3.8 inch                            |                   |              |
| Number of rows                               | 1                                   |                   |              |
| Pin series quantity                          | 1                                   |                   |              |
| Rated cross-section                          | 2.5 mm <sup>2</sup>                 |                   |              |
| Touch-safe protection acc. to DIN VDE 57 106 | Safe from finger touch              |                   |              |
| Volume resistance                            | ≤5 mΩ                               |                   |              |
| Can be coded                                 | Yes                                 |                   |              |
| Stripping length                             | 13 mm                               |                   |              |
| Clamping screw                               | M 2.5                               |                   |              |
| Screwdriver blade                            | 0.6 x 3.5                           |                   |              |
| Screwdriver blade standard                   | DIN 5264                            |                   |              |
| Plugging cycles                              | 25                                  |                   |              |
| Plugging force/pole, max.                    | 8 N                                 |                   |              |
| Pulling force/pole, max.                     | 7 N                                 |                   |              |
| Tightening torque                            | Torque type                         | Wire connection   |              |
|                                              | Usage information                   | Tightening torque | min. 0.4 Nm  |
|                                              |                                     |                   | max. 0.5 Nm  |
|                                              | Torque type                         | Screw flange      |              |
|                                              | Usage information                   | Tightening torque | min. 0.2 Nm  |
|                                              |                                     |                   | max. 0.25 Nm |

## Material data

|                                       |          |                                       |                            |
|---------------------------------------|----------|---------------------------------------|----------------------------|
| Insulating material                   | PBT      | Colour                                | orange                     |
| Colour chart (similar)                | RAL 2000 | Insulating material group             | IIIa                       |
| Comparative Tracking Index (CTI)      | ≥ 200    | Insulation strength                   | ≥ 10 <sup>8</sup> Ω        |
| UL 94 flammability rating             | V-0      | Contact material                      | CuSn                       |
| 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 <sup>2</sup> |
| Clamping range, max.                    | 2.5 mm <sup>2</sup>  |
| Wire connection cross section AWG, min. | AWG 28               |

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|                                                                     |                                                                                                                                                                        |                              |                             |
|---------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|-----------------------------|
| Wire connection cross section AWG, max.                             | AWG 14                                                                                                                                                                 |                              |                             |
| Solid, min. H05(07) V-U                                             | 0.2 mm <sup>2</sup>                                                                                                                                                    |                              |                             |
| Solid, max. H05(07) V-U                                             | 2.5 mm <sup>2</sup>                                                                                                                                                    |                              |                             |
| Flexible, min. H05(07) V-K                                          | 0.2 mm <sup>2</sup>                                                                                                                                                    |                              |                             |
| Flexible, max. H05(07) V-K                                          | 1.5 mm <sup>2</sup>                                                                                                                                                    |                              |                             |
| w. plastic collar ferrule, DIN 46228 pt 4, 0.2 mm <sup>2</sup> min. |                                                                                                                                                                        |                              |                             |
| w. plastic collar ferrule, DIN 46228 pt 4, 1.5 mm <sup>2</sup> max. |                                                                                                                                                                        |                              |                             |
| w. wire end ferrule, DIN 46228 pt 1, min.                           | 0.2 mm <sup>2</sup>                                                                                                                                                    |                              |                             |
| w. wire end ferrule, DIN 46228 pt 1, max.                           | 1.5 mm <sup>2</sup>                                                                                                                                                    |                              |                             |
| Plug gauge in accordance with EN 60999 a x b; ø                     | 2.4 mm x 1.5 mm ; 2.4 mm                                                                                                                                               |                              |                             |
| Clampable conductor                                                 | Cross-section for conductor connection                                                                                                                                 | Type                         | fine-wired                  |
|                                                                     |                                                                                                                                                                        | nominal                      | 0.5 mm <sup>2</sup>         |
|                                                                     | wire end ferrule                                                                                                                                                       | Stripping length             | nominal 14 mm               |
|                                                                     |                                                                                                                                                                        | Recommended wire-end ferrule | <a href="#">H0.5/18 OR</a>  |
|                                                                     | Cross-section for conductor connection                                                                                                                                 | Type                         | fine-wired                  |
|                                                                     |                                                                                                                                                                        | nominal                      | 1 mm <sup>2</sup>           |
|                                                                     | wire end ferrule                                                                                                                                                       | Stripping length             | nominal 15 mm               |
|                                                                     |                                                                                                                                                                        | Recommended wire-end ferrule | <a href="#">H1.0/18 GE</a>  |
|                                                                     | Cross-section for conductor connection                                                                                                                                 | Type                         | fine-wired                  |
|                                                                     |                                                                                                                                                                        | nominal                      | 1.5 mm <sup>2</sup>         |
|                                                                     | wire end ferrule                                                                                                                                                       | Stripping length             | nominal 15 mm               |
|                                                                     |                                                                                                                                                                        | Recommended wire-end ferrule | <a href="#">H1.5/18D SW</a> |
| Stripping length                                                    |                                                                                                                                                                        | nominal 12 mm                |                             |
| Recommended wire-end ferrule                                        |                                                                                                                                                                        | <a href="#">H1.5/12</a>      |                             |
| 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. |                              |                             |

**Rated data acc. to IEC**

|                                                                           |                        |                                                                       |                   |
|---------------------------------------------------------------------------|------------------------|-----------------------------------------------------------------------|-------------------|
| tested acc. to standard                                                   | IEC 60664-1, IEC 61984 | Rated current, min. number of poles (Tu=20°C)                         | 27 A              |
| Rated current, max. number of poles (Tu=20°C)                             | 19 A                   | Rated current, min. number of poles (Tu=40°C)                         | 24 A              |
| Rated current, max. number of poles (Tu=40°C)                             | 16 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 100 A |

**Rated data acc. to CSA**

|                                   |        |                                   |        |
|-----------------------------------|--------|-----------------------------------|--------|
| 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) | 15 A   |
| Wire cross-section, AWG, min.     | AWG 26 | Wire cross-section, AWG, max.     | AWG 14 |

## BLT 5.08HC/20/180F SN OR BX

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## Technical data

## Rated data acc. to UL 1059

Institute (cURus)



Certificate No. (cURus)

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) 17 A

Rated current (Use group D / UL 1059) 10 A

Wire cross-section, AWG, min. AWG 26

Wire cross-section, AWG, max. AWG 14

Reference to approval values  
Specifications are maximum values, details - see approval certificate.

## Packing

|           |        |            |        |
|-----------|--------|------------|--------|
| Packaging | Box    | VPE length | 25 mm  |
| VPE width | 135 mm | VPE height | 345 mm |

## Type tests

|                                              |                |                                                                                    |                               |
|----------------------------------------------|----------------|------------------------------------------------------------------------------------|-------------------------------|
| Test: Durability of markings                 | Standard       | DIN EN 61984 section 7.3.2 / 09.02 taking pattern from DIN EN 60068-2-70 / 07.96   |                               |
|                                              | Test           | mark of origin, type of material, date clock                                       |                               |
|                                              | Evaluation     | available                                                                          |                               |
|                                              | Test           | durability                                                                         |                               |
|                                              | Evaluation     | passed                                                                             |                               |
| Test: Misengagement (Non-interchangeability) | Standard       | DIN EN 61984 section 6.3 and 6.9.1 / 09.02, DIN EN 60512-13-5 / 11.06              |                               |
|                                              | Test           | 180° turned with coding elements                                                   |                               |
|                                              | Evaluation     | passed                                                                             |                               |
|                                              | Test           | visual examination                                                                 |                               |
|                                              | Evaluation     | passed                                                                             |                               |
| Test: Clampable cross section                | Standard       | DIN EN 60999-1 section 7 and 9.1 / 12.00, DIN EN 60947-1 section 8.2.4.5.1 / 12.02 |                               |
|                                              | Conductor type | Type of conductor and conductor cross-section                                      | solid 0.08 mm <sup>2</sup>    |
|                                              |                | Type of conductor and conductor cross-section                                      | stranded 0.08 mm <sup>2</sup> |
|                                              |                | Type of conductor and conductor cross-section                                      | solid 2.5 mm <sup>2</sup>     |
|                                              |                | Type of conductor and conductor cross-section                                      | stranded 2.5 mm <sup>2</sup>  |
|                                              |                | Type of conductor and conductor cross-section                                      | AWG 26/1                      |
|                                              |                | Type of conductor and conductor cross-section                                      | AWG 26/19                     |
|                                              |                | Type of conductor and conductor cross-section                                      | AWG 14/1                      |
|                                              |                | Type of conductor and conductor cross-section                                      | AWG 14/19                     |
|                                              | Evaluation     | passed                                                                             |                               |

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**Technical data**

Test for damage to and accidental loosening of conductors

|                |                                               |                              |
|----------------|-----------------------------------------------|------------------------------|
| Standard       | DIN EN 60999-1 section 9.4 / 12.00            |                              |
| Requirement    | 0.2 kg                                        |                              |
| Conductor type | Type of conductor and conductor cross-section | AWG 28/1                     |
|                | Type of conductor and conductor cross-section | AWG 26/19                    |
| Evaluation     | passed                                        |                              |
| Requirement    | 0.3 kg                                        |                              |
| Conductor type | Type of conductor and conductor cross-section | solid 0.5 mm <sup>2</sup>    |
|                | Type of conductor and conductor cross-section | stranded 0.5 mm <sup>2</sup> |
| Evaluation     | passed                                        |                              |
| Requirement    | 0.7 kg                                        |                              |
| Conductor type | Type of conductor and conductor cross-section | solid 2.5 mm <sup>2</sup>    |
|                | Type of conductor and conductor cross-section | stranded 2.5 mm <sup>2</sup> |
|                | Type of conductor and conductor cross-section | AWG 14/1                     |
|                | Type of conductor and conductor cross-section | AWG 14/19                    |
| Evaluation     | passed                                        |                              |

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**Technical data**

|               |                |                                               |                              |
|---------------|----------------|-----------------------------------------------|------------------------------|
| Pull-out test | Standard       | DIN EN 60999-1 section 9.5 / 12.00            |                              |
|               | Requirement    | ≥5 N                                          |                              |
|               | Conductor type | Type of conductor and conductor cross-section | AWG 28/1                     |
|               | Evaluation     | passed                                        |                              |
|               | Requirement    | ≥10 N                                         |                              |
|               | Conductor type | Type of conductor and conductor cross-section | AWG 26/19                    |
|               | Evaluation     | passed                                        |                              |
|               | Requirement    | ≥20 N                                         |                              |
|               | Conductor type | Type of conductor and conductor cross-section | solid 0.5 mm <sup>2</sup>    |
|               |                | Type of conductor and conductor cross-section | stranded 0.5 mm <sup>2</sup> |
|               | Evaluation     | passed                                        |                              |
|               | Requirement    | ≥40 N                                         |                              |
|               | Conductor type | Type of conductor and conductor cross-section | AWG 14/1                     |
|               |                | Type of conductor and conductor cross-section | AWG 14/19                    |
|               | Evaluation     | passed                                        |                              |
|               | Requirement    | ≥50 N                                         |                              |
|               | Conductor type | Type of conductor and conductor cross-section | solid 2.5 mm <sup>2</sup>    |
|               |                | Type of conductor and conductor cross-section | stranded 2.5 mm <sup>2</sup> |
|               | Evaluation     | passed                                        |                              |

**Classifications**

|             |             |             |             |
|-------------|-------------|-------------|-------------|
| ETIM 6.0    | EC002638    | ETIM 7.0    | 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 |

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**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"> <li>• Additional colours on request</li> <li>• Gold-plated contact surfaces on request</li> <li>• Rated current related to rated cross-section &amp; min. No. of poles.</li> <li>• Wire end ferrule without plastic collar to DIN 46228/1</li> <li>• Wire end ferrule with plastic collar to DIN 46228/4</li> <li>• Crimp form A for wire end ferrules with PZ 6/5 crimping tool are recommended for the largest cable sizes.</li> <li>• P on drawing = pitch</li> <li>• 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.</li> <li>• Long term storage of the product with average temperature of 50 °C and average humidity 70%, 36 months</li> </ul> |

**Approvals**

Approvals



|                       |         |
|-----------------------|---------|
| ROHS                  | Conform |
| UL File Number Search | E60693  |

**Downloads**

|                                             |                                                                                                                    |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| Approval/Certificate/Document of Conformity | <a href="#">CB Certificate</a><br><a href="#">CB Testreport</a><br><a href="#">Declaration of the Manufacturer</a> |
| Engineering Data                            | <a href="#">STEP</a>                                                                                               |
| Engineering Data                            | <a href="#">WSCAD</a>                                                                                              |

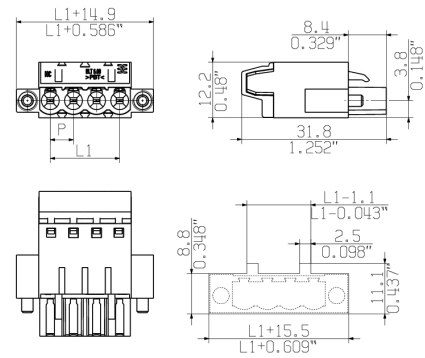
## BLT 5.08HC/20/180F SN OR BX

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D-32758 Detmold  
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# Drawings

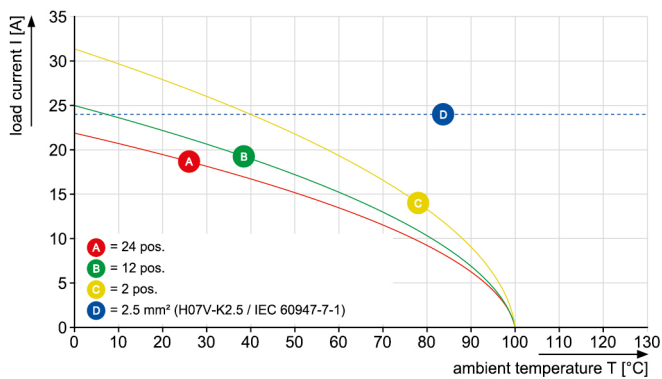
## Dimensional drawing



MIN. FRONT PLATE CUT-OUT

## Graph

BLT 5.08HC/./180 - SL-SMT 5.08HC/./90



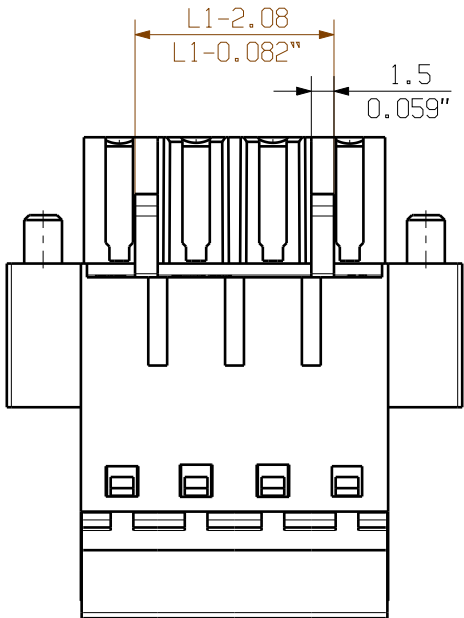
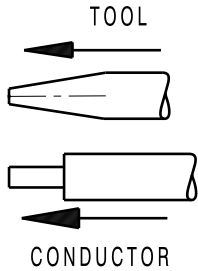
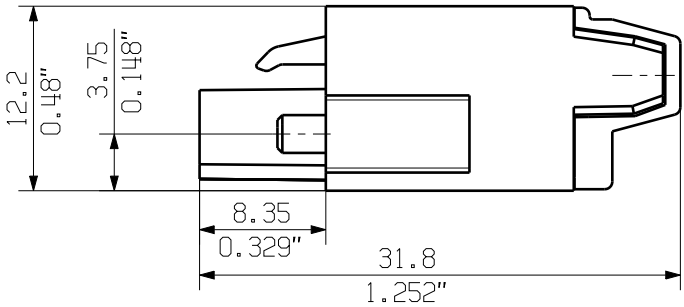
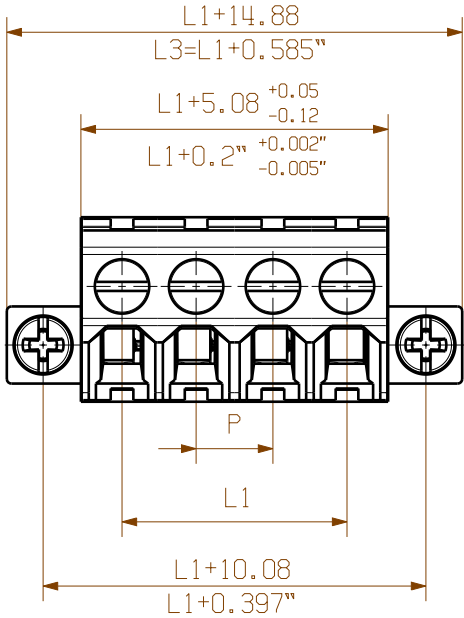


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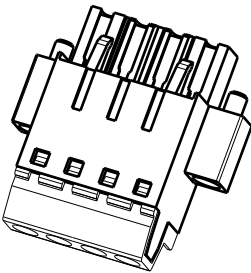
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MASSE OHNE TOLERANZ SIND KEINE PRUEFMASSE  
DIMS. WITHOUT TOLERANCE ARE NOT CONTROL DIMS.

DIE DEUTSCHE VERSION IST VERBINDLICH  
THE GERMAN VERSION IS BINDING



1:1



P=PITCH

SHOWN: BLT 5.08HC/04/180F

P = 5.08 RASTER/PITCH

n = POLZAHL/NO OF POLES

|                    |            |              |
|--------------------|------------|--------------|
| 24                 | 106.84     | 4.600        |
| 23                 | 111.76     | 4.400        |
| 22                 | 106.68     | 4.200        |
| 21                 | 101.60     | 4.000        |
| 20                 | 96.52      | 3.800        |
| 19                 | 91.44      | 3.600        |
| 18                 | 86.36      | 3.400        |
| 17                 | 81.28      | 3.200        |
| 16                 | 76.20      | 3.000        |
| 15                 | 71.12      | 2.800        |
| 14                 | 66.04      | 2.600        |
| 13                 | 60.96      | 2.400        |
| 12                 | 55.88      | 2.200        |
| 11                 | 50.80      | 2.000        |
| 10                 | 45.72      | 1.800        |
| 9                  | 40.64      | 1.600        |
| 8                  | 35.56      | 1.400        |
| 7                  | 30.48      | 1.200        |
| 6                  | 25.40      | 1.000        |
| 5                  | 20.32      | 0.800        |
| 4                  | 15.24      | 0.600        |
| 3                  | 10.16      | 0.400        |
| 2                  | 5.08       | 0.200        |
| n POLZAHL<br>POLES | L1<br>[mm] | L1<br>[inch] |

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 with 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 components are used to the intended purpose, all requirements with respect to the occurring of electrical, mechanical, thermic and corrosive stress will be satisfied.

GENERAL TOLERANCE:  
DIN ISO 2768-m

SCALE: 2/1

SUPERSEDES: .

78309/4  
01.04.15 HERTEL\_S03

MODIFICATION

|             | DATE       | NAME      |
|-------------|------------|-----------|
| DRAWN       | 10.07.2003 | KNOTH_G   |
| RESPONSIBLE |            | HERTEL_S  |
| CHECKED     | 01.04.2015 | HELI_S_MA |
| APPROVED    |            | LANG_T    |

**BLT 5.08HC/.. /180...**  
BUCHSENLEISTE  
SOCKET BLOCK

PRODUCT FILE: BLT 5.08

CAT.NO.: .

**C 36024** **14**

DRAWING NO. SHEET 01 OF 02 SHEETS

ISSUE NO.

7143

