

**BLT 5.08HC/24/180LR SN BK BX****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

**Product image**

Similar to illustration

Female plugs with TOP screw connection system for connecting wires with straight wire outlet and release latch mechanism. 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: 24, 180°, TOP connection, Clamping range, max. : 2.5 mm², Box |
| Order No.    | <a href="#">1894370000</a>                                                                                                  |
| Type         | BLT 5.08HC/24/180LR SN BK BX                                                                                                |
| GTIN (EAN)   | 4032248508709                                                                                                               |
| 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 26, 2021 5:54:25 AM CET

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**Technical data****Dimensions and weights**

|                |            |                 |            |
|----------------|------------|-----------------|------------|
| Depth          | 31.8 mm    | Depth (inches)  | 1.252 inch |
| Height         | 15.1 mm    | Height (inches) | 0.594 inch |
| Net weight     | 76.333 g   | Width           | 131.74 mm  |
| Width (inches) | 5.187 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                              | 24                                  |                   |                            |
| L1 in mm                                     | 116.84 mm                           |                   |                            |
| L1 in inches                                 | 4.6 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<br>max. 0.5 Nm |

**Material data**

|                                       |          |                                       |                            |
|---------------------------------------|----------|---------------------------------------|----------------------------|
| Insulating material                   | PBT      | Colour                                | black                      |
| Colour chart (similar)                | RAL 9011 | 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               |
| 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>  |

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**Technical data**

|                                                                     |                                                                                                                                                                        |                              |                             |
|---------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|-----------------------------|
| 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 |

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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 0

VPE width 0

VPE height 0

## 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>                                                                                              |

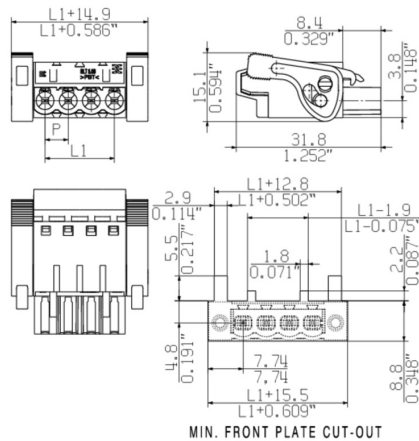
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## Drawings

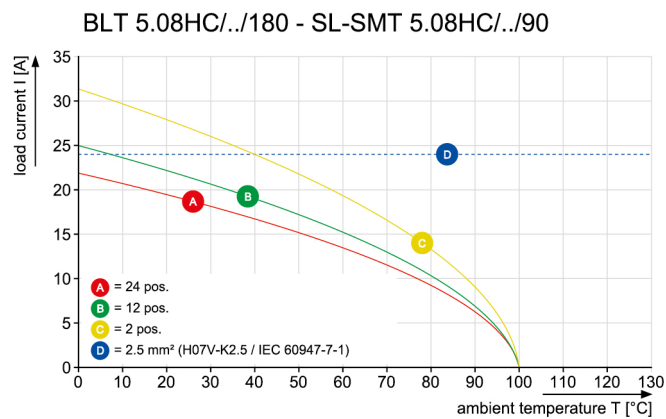
### Dimensional drawing



### Dimensional drawing



### Graph



### Product benefits



Self-locking  
Immediately on plugging in

### Product benefits



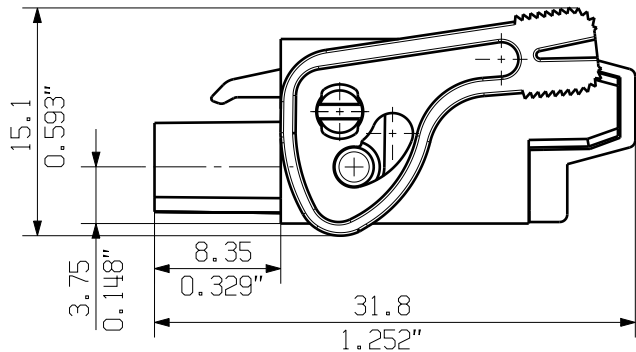
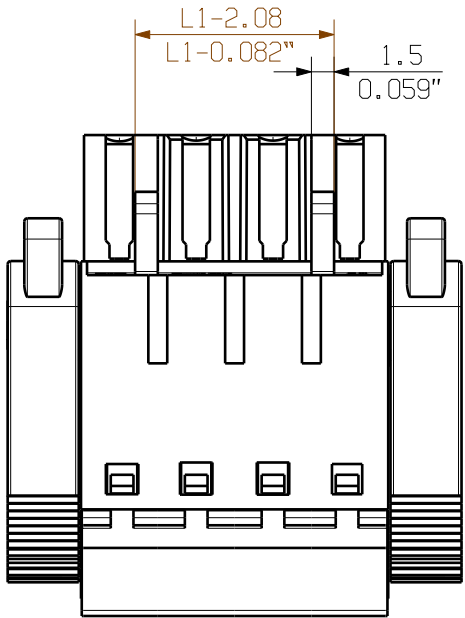
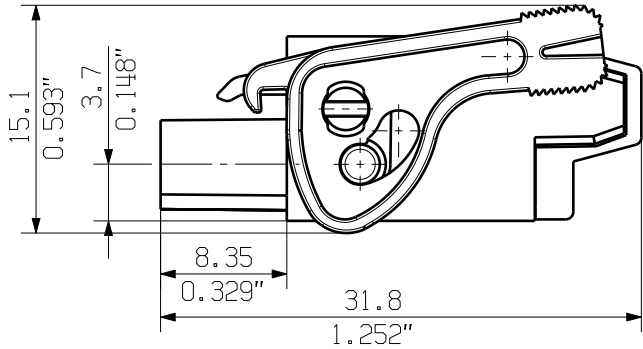
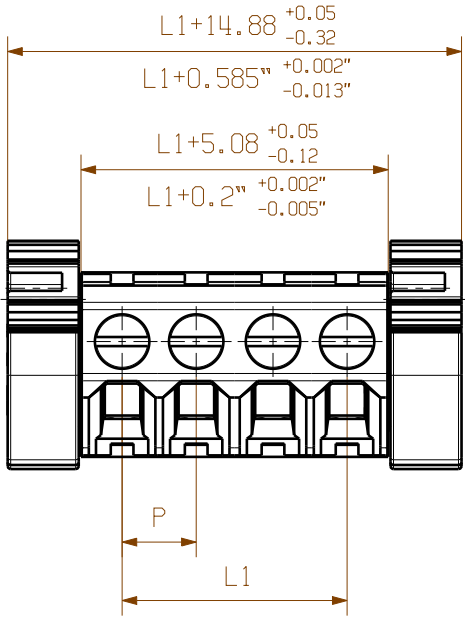
Gentle unlocking  
Low mechanical stress

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DIMS. WITHOUT TOLERANCE ARE NOT CONTROL DIMS.

DIE DEUTSCHE VERSION IST VERBINDLICH  
THE GERMAN VERSION IS BINDING



|    |        |       |
|----|--------|-------|
| 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 |

P=PITCH

P = 5.08 RASTER/PITCH

SHOWN: BLT 5.08HC/04/180LR AND BLT 5.08HC/04/180LH

n = POLZAHL/NO OF POLES

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

|               |                                      |            |              |                                                        |
|---------------|--------------------------------------|------------|--------------|--------------------------------------------------------|
|               | 78309/4<br>01.04.15 HERTEL_S 01      |            | CAT.NO.: .   |                                                        |
|               | GENERAL TOLERANCE:<br>DIN ISO 2768-m |            | MODIFICATION |                                                        |
|               | DRAWN                                | 10.07.2003 | NAME         | BLT 5.08HC/.. /180...<br>BUCHSENLEISTE<br>SOCKET BLOCK |
|               | RESPONSIBLE                          |            | HERTEL_S     |                                                        |
| SCALE: 2/1    | CHECKED                              | 01.04.2015 | HELIS_MA     |                                                        |
| SUPERSEDES: . | APPROVED                             |            | LANG_T       | PRODUCT FILE: BLT 5.08                                 |

CAT.NO.: .

C 36024 14

DRAWING NO. SHEET 02 OF 02 SHEETS

ISSUE NO.

7143

