

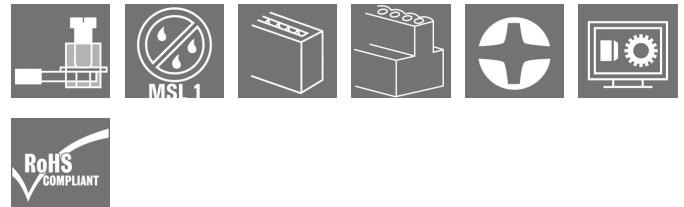
**LHZ-SMT R 1.5SN BK RL****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

**Product image****Naturally, the CH20M system also shows its detailed perfection in the peripheral interface.**

If you are taking into consideration design options, processing, usability, reliability and security, then pin headers and connectors are just as critical in the real world as the entire system.

In every sector, the connection technology is at the top of its class.

- **100% safe** protected against accidental touch
- **100% efficient** fully compatible with reflow soldering
- **100% time and cost savings** During the installation: the quick all-purpose "Multi-Tool" screw head ensures a secure contact, user-friendly operation and less complexity. Additional features, such as the "Wire ready" technology, enable you to minimize wiring costs and increase customer satisfaction.

**General ordering data**

|              |  |
|--------------|--|
| Version      | Printed circuit board terminals, Connection element, right, block assembly, closed side, THT/THR solder connection, Number of poles: 1, Solder pin length (l): 1.5 mm, tinned, black, Tape |
| Order No.    | <a href="#">2418590000</a>   |
| Type         | LHZ-SMT R 1.5SN BK RL  |
| GTIN (EAN)   | 4032248984343  |
| Qty.         | 432 pc(s).   |
| Product data | IEC: 500 V / 0.2 - 2.5 mm <sup>2</sup><br>UL:  |
| Packaging    | Tape   |

## LHZ-SMT R 1.5SN BK RL

Weidmüller Interface GmbH &amp; Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

## Technical data

## Dimensions and weights

|            |         |                 |            |
|------------|---------|-----------------|------------|
| Height     | 16.9 mm | Height (inches) | 0.665 inch |
| Width      | 6 mm    | Width (inches)  | 0.236 inch |
| Length     | 23.5 mm | Length (inches) | 0.925 inch |
| Net weight | 3.306 g |                 |            |

## System Parameters

|                         |                                  |                            |                          |
|-------------------------|----------------------------------|----------------------------|--------------------------|
| Product family          | OMNIMATE Housing - series CH20M6 | Type of connection         | Clamping yoke connection |
| Wire connection method  | Clamping yoke connection         | Conductor outlet direction | 90°                      |
| Number of poles         | 1                                | Number of rows             | 1                        |
| Pin series quantity     | 1                                | Protection degree          | IP20                     |
| Stripping length        | 6 mm                             | Tightening torque, min.    | 0.4 Nm                   |
| Tightening torque, max. | 0.5 Nm                           | Clamping screw             | M 3                      |
| Screwdriver blade       | 0.6 x 3.5                        | Screwdriver blade standard | DIN 5264                 |

## Material data

|                                       |                 |                                       |        |
|---------------------------------------|-----------------|---------------------------------------|--------|
| Insulating material                   | LCP             | Colour                                | black  |
| Colour chart (similar)                | RAL 9011        | Insulating material group             | IIIa   |
| Comparative Tracking Index (CTI)      | 175 ≤ CTI < 400 | Moisture Level (MSL)                  | 1      |
| UL 94 flammability rating             | V-0             | Contact surface                       | tinned |
| Storage temperature, min.             | -40 °C          | Storage temperature, max.             | 70 °C  |
| Operating temperature, min.           | -40 °C          | Operating temperature, max.           | 120 °C |
| Temperature range, installation, min. | -25 °C          | Temperature range, installation, max. | 120 °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 26               | 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                      | 2.5 mm <sup>2</sup>   |
| w. plastic collar ferrule, DIN 46228 pt 4, min. | 0.25 mm <sup>2</sup> | w. plastic collar ferrule, DIN 46228 pt 4, max. | 2.5 mm <sup>2</sup>   |
| w. wire end ferrule, DIN 46228 pt 1, min.       |                      | Reference text                                  | Length of ferrules is to be chosen depending on the product and the rated voltage. The outside diameter of the plastic collar should not be larger than the pitch (P) |
|   | 0.2 mm <sup>2</sup>  |   |   |

## Rated data acc. to IEC

|   |                        |   |       |
|---|------------------------|---|-------|
| tested acc. to standard   | IEC 60664-1, IEC 61984 | Rated current, max. number of poles (Tu=20°C)                         | 13 A  |
| Rated current, max. number of poles (Tu=40°C)                             | 13 A                   | Rated voltage for surge voltage class / pollution degree II/2         | 500 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                   |   |       |

## LHZ-SMT R 1.5SN BK RL

Weidmüller Interface GmbH &amp; Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

## Technical data

## Rated data acc. to UL 1059

Institute (cURus)



Certificate No. (cURus)

E60693

Reference to approval values

Specifications are maximum values, details - see approval certificate.

## General data

|                   |       |                        |          |
|-------------------|-------|------------------------|----------|
| Colour            | black | Colour chart (similar) | RAL 9011 |
| Protection degree | IP20  |                        |          |

## Material data

|                                  |                      |                           |     |
|----------------------------------|----------------------|---------------------------|-----|
| Comparative Tracking Index (CTI) | $175 \leq CTI < 400$ | Insulating material       | LCP |
| Insulating material group        | IIIa                 | UL 94 flammability rating | V-0 |

## Classifications

|             |             |             |             |
|-------------|-------------|-------------|-------------|
| ETIM 6.0    | EC002643    | ETIM 7.0    | EC002643    |
| ETIM 8.0    | EC002643    | ECLASS 9.0  | 27-44-04-01 |
| ECLASS 9.1  | 27-44-04-01 | ECLASS 10.0 | 27-44-04-01 |
| ECLASS 11.0 | 27-46-01-01 | ECLASS 12.0 | 27-46-01-01 |

## 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.

## Approvals

Approvals



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

## Downloads

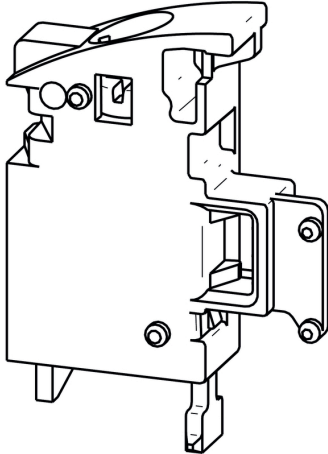
|   |   |
|---|---|
| Approval/Certificate/Document of Conformity | <a href="#">Declaration of the Manufacturer</a>   |
| Engineering Data                            | <a href="#">CAD data – PCB Reference Layout</a><br><a href="#">CAD data – STEP</a>  |
| Engineering Data                            | <a href="#">EPLAN, WSCAD</a>  |
| Catalogues                                  | <a href="#">Catalogues in PDF-format</a>  |
| Brochures                                   | <a href="#">FL ANALO.SIGN.CONV. EN</a><br><a href="#">MB DEVICE MANUF. EN</a><br><a href="#">FL MACHINE SAFETY EN</a><br><a href="#">FL 72H SAMPLE SER EN</a><br><a href="#">PO OMNIMATE EN</a><br><a href="#">PO OMNIMATE EN</a> |

### LHZ-SMT R 1.5SN BK RL

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

[www.weidmueller.com](http://www.weidmueller.com)

## Drawings



### Example of use



## Recommended reflow soldering profile

**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 16

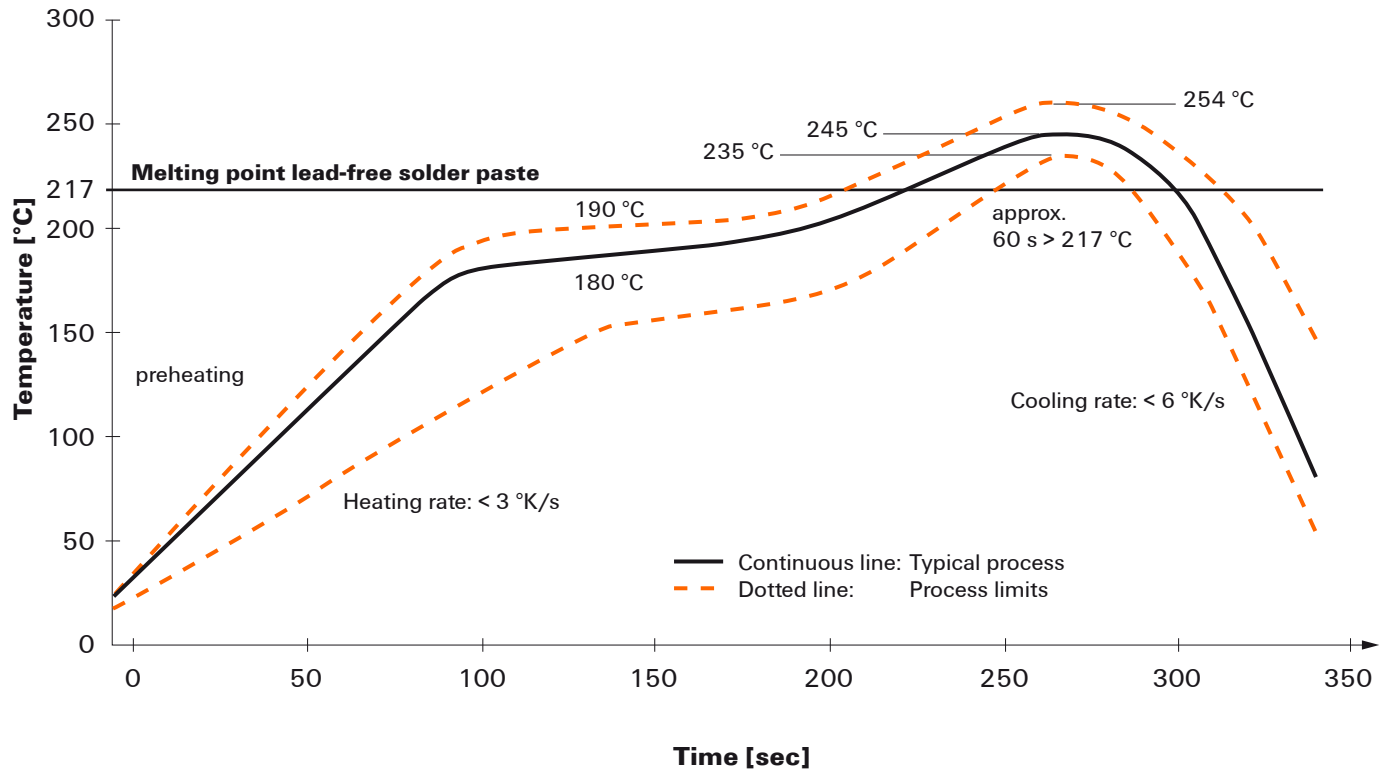
D-32758 Detmold

Germany

Fon: +49 5231 14-0

Fax: +49 5231 14-292083

www.weidmueller.com



## Reflow soldering profile

The perfect soldering profile for SMT Surface Mount Technology is one the most exiting question in SMT production. But there are more than one correct answer: The diagram of temperature-on-time is related to processing features of solder paste and to maximum load of components.

We have to consider the following parameters:

- Time for pre heating
- Maximum temperature
- Time above melting point
- Time for cooling
- Maximum heating rate
- Maximum cooling rate

We recommend a typical solder profile with associated process limits. With preheating components and board are prepared smoothly for the solder phase. Heating rate is typically  $\leq +3\text{K/s}$ . In parallel the solder paste is 'activated'. The time above melting point of 217°C the paste gets liquid and components and boards begin to connect. The maximum temperature of 245°C to 254°C should stay between 10 and 40 seconds. In the cooling phase at  $\geq -6\text{K/s}$  solder is cured. Board and components cool down while avoiding cold cracks.

## Recommended wave soldering profiles

**Weidmüller Interface GmbH & Co. KG**  
Klingenbergstraße 16  
D-32758 Detmold  
Germany  
Fon: +49 5231 14-0  
Fax: +49 5231 14-292083  
[www.weidmueller.com](http://www.weidmueller.com)

### Single Wave:



### Double Wave:



### Wave soldering profiles

Wired connection elements should be processed in accordance with the DIN EN 61760-1 standard. We have included two recommendations for practical wave soldering profiles, with which Weidmüller PCB terminals and connectors are qualified.

When choosing a suitable profile for your application, the following factors also need to be considered:

- PCB thickness
- Proportion of Cu in the layers
- Single/double-sided assembly
- Product range
- Heating and cooling rates

The single and double wave profiles each indicate the recommended operating range, including the maximum soldering temperature of 260°C. In practice, the maximum soldering temperature is quite often well below the above maximum profile.

We reserve the right to make technical changes.