

**LS 5.08/10/90 3.5SN OR BX****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

**Product image**

Similar to illustration

Small, compact and powerful - this PCB terminal with proven clamping yoke connection and 5.08 mm pitch has a capacity of 17.5 A. Conductor outlet direction 90°. Suitable for conductor cross-sections up to 1.5 mm².

**General ordering data**

|              |                                                                                                                                                                                  |
|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Version      | Printed circuit board terminals, 5.08 mm, Number of poles: 10, 90°, Solder pin length (l): 3.5 mm, tinned, orange, Clamping yoke connection, Clamping range, max. : 1.5 mm², Box |
| Order No.    | <a href="#">1912910000</a>                                                                                                                                                       |
| Type         | LS 5.08/10/90 3.5SN OR BX                                                                                                                                                        |
| GTIN (EAN)   | 4032248542406                                                                                                                                                                    |
| Qty.         | 50 pc(s).                                                                                                                                                                        |
| Product data | IEC: 630 V / 17.5 A / 0.08 - 1.5 mm²<br>UL: 300 V / 15 A / AWG 28 - AWG 14                                                                                                       |
| Packaging    | Box                                                                                                                                                                              |

Creation date September 16, 2022 9:35:40 PM CEST

## LS 5.08/10/90 3.5SN OR BX

Weidmüller Interface GmbH &amp; Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

## Technical data

## Dimensions and weights

|                          |           |                 |            |
|--------------------------|-----------|-----------------|------------|
| Depth                    | 8.1 mm    | Depth (inches)  | 0.319 inch |
| Height                   | 13.8 mm   | Height (inches) | 0.543 inch |
| Height of lowest version | 10.3 mm   | Width           | 51.3 mm    |
| Width (inches)           | 2.02 inch | Net weight      | 10.36 g    |

## Environmental Product Compliance

|                |      |                                      |
|----------------|------|--------------------------------------|
| REACH SVHC     | SCIP | bf16c6c7-a337-4c4d-8703-f321e4125514 |
| Lead 7439-92-1 |      |                                      |

## System parameters

|                                              |                             |                                                   |                          |
|----------------------------------------------|-----------------------------|---------------------------------------------------|--------------------------|
| Product family                               | OMNIMATE Signal - series LS | Wire connection method                            | Clamping yoke connection |
| Mounting onto the PCB                        | THT solder connection       | Conductor outlet direction                        | 90°                      |
| Pitch in mm (P)                              | 5.08 mm                     | Pitch in inches (P)                               | 0.2 inch                 |
| Number of poles                              | 10                          | Pin series quantity                               | 1                        |
| Fitted by customer                           | Yes                         | Max. adjacent poles per row                       | 24                       |
| Solder pin length (l)                        | 3.5 mm                      | Solder pin dimensions                             | 0.5 x 1.0 mm             |
| Solder eyelet hole diameter (D)              | 1.3 mm                      | Solder eyelet hole diameter tolerance (D)+ 0,1 mm |                          |
| Number of solder pins per pole               | 1                           | Screwdriver blade                                 | 0.6 x 3.5                |
| Screwdriver blade standard                   | DIN 5264                    | Tightening torque, min.                           | 0.4 Nm                   |
| Tightening torque, max.                      | 0.5 Nm                      | Clamping screw                                    | M 2.5                    |
| Stripping length                             | 6 mm                        | L1 in mm                                          | 45.72 mm                 |
| L1 in inches                                 | 1.8 inch                    | Touch-safe protection acc. to DIN VDE 0470        | IP 20                    |
| Touch-safe protection acc. to DIN VDE 57 106 | Safe from finger touch      | Protection degree                                 | IP20                     |

## Material data

|                                       |              |                                       |        |
|---------------------------------------|--------------|---------------------------------------|--------|
| Insulating material                   | Wemid (PA)   | Colour                                | orange |
| Colour chart (similar)                | RAL 2000     | Insulating material group             | I      |
| Comparative Tracking Index (CTI)      | ≥ 600        | UL 94 flammability rating             | V-0    |
| Contact material                      | Copper alloy | Contact surface                       | tinned |
| Layer structure of solder connection  | 5...8 µm Sn  | Storage temperature, min.             | -40 °C |
| Storage temperature, max.             | 70 °C        | Operating temperature, min.           | -50 °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.                                                 | 0.08 mm <sup>2</sup> |
| Clamping range, max.                                                 | 1.5 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                                              | 0.08 mm <sup>2</sup> |
| Solid, max. H05(07) V-U                                              | 1.5 mm <sup>2</sup>  |
| Flexible, min. H05(07) V-K                                           | 0.08 mm <sup>2</sup> |
| Flexible, max. H05(07) V-K                                           | 1.5 mm <sup>2</sup>  |
| w. plastic collar ferrule, DIN 46228 pt 4, 0.25 mm <sup>2</sup> min. |                      |

## LS 5.08/10/90 3.5SN OR BX

Weidmüller Interface GmbH &amp; Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

## Technical data

w. plastic collar ferrule, DIN 46228 pt 4, 1.5 mm<sup>2</sup>  
max.w. wire end ferrule, DIN 46228 pt 1, 0.25 mm<sup>2</sup>  
min.w. wire end ferrule, DIN 46228 pt 1, 1.5 mm<sup>2</sup>  
max.

|                     |                                        |                              |                              |      |
|---------------------|----------------------------------------|------------------------------|------------------------------|------|
| Clampable conductor | Cross-section for conductor connection | Type                         | fine-wired                   |      |
|                     |                                        | nominal                      | 0.5 mm <sup>2</sup>          |      |
|                     | wire end ferrule                       | Stripping length             | nominal                      | 8 mm |
|                     |                                        | Recommended wire-end ferrule | <a href="#">H0.5/12 OR</a>   |      |
|                     |                                        | Stripping length             | nominal                      | 6 mm |
|                     |                                        | Recommended wire-end ferrule | <a href="#">H0.5/6</a>       |      |
|                     | Cross-section for conductor connection | Type                         | fine-wired                   |      |
|                     |                                        | nominal                      | 0.75 mm <sup>2</sup>         |      |
|                     | wire end ferrule                       | Stripping length             | nominal                      | 8 mm |
|                     |                                        | Recommended wire-end ferrule | <a href="#">H0.75/12 W</a>   |      |
|                     |                                        | Stripping length             | nominal                      | 6 mm |
|                     |                                        | Recommended wire-end ferrule | <a href="#">H0.75/6</a>      |      |
|                     | Cross-section for conductor connection | Type                         | fine-wired                   |      |
|                     |                                        | nominal                      | 1 mm <sup>2</sup>            |      |
|                     | wire end ferrule                       | Stripping length             | nominal                      | 8 mm |
|                     |                                        | Recommended wire-end ferrule | <a href="#">H1.0/12 GE</a>   |      |
|                     |                                        | Stripping length             | nominal                      | 6 mm |
|                     |                                        | Recommended wire-end ferrule | <a href="#">H1.0/6</a>       |      |
|                     | Cross-section for conductor connection | Type                         | fine-wired                   |      |
|                     |                                        | nominal                      | 0.25 mm <sup>2</sup>         |      |
|                     | wire end ferrule                       | Stripping length             | nominal                      | 8 mm |
|                     |                                        | Recommended wire-end ferrule | <a href="#">H0.25/10 HBL</a> |      |
|                     |                                        | Stripping length             | nominal                      | 5 mm |
|                     |                                        | Recommended wire-end ferrule | <a href="#">H0.25/5</a>      |      |
|                     | Cross-section for conductor connection | Type                         | fine-wired                   |      |
|                     |                                        | nominal                      | 0.34 mm <sup>2</sup>         |      |
|                     | wire end ferrule                       | Stripping length             | nominal                      | 8 mm |
|                     |                                        | Recommended wire-end ferrule | <a href="#">H0.34/10 TK</a>  |      |

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)

## Rated data acc. to IEC

|                                                                           |                        |                                                                       |        |
|---------------------------------------------------------------------------|------------------------|-----------------------------------------------------------------------|--------|
| tested acc. to standard                                                   | IEC 60664-1, IEC 61984 | Rated current, min. number of poles (Tu=20°C)                         | 17.5 A |
| Rated current, max. number of poles (Tu=20°C)                             | 17.5 A                 | Rated current, min. number of poles (Tu=40°C)                         | 17.5 A |
| Rated current, max. number of poles (Tu=40°C)                             | 17.5 A                 | Rated voltage for surge voltage class / pollution degree II/2         | 630 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                   |                                                                       |        |

Creation date September 16, 2022 9:35:40 PM CEST

Catalogue status 09.09.2022 / We reserve the right to make technical changes.

## LS 5.08/10/90 3.5SN OR BX

Weidmüller Interface GmbH &amp; Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

## Technical data

## Rated data acc. to CSA

Institute (CSA)



Certificate No. (CSA)

200039-1815154

Rated voltage (Use group B / CSA) 300 V

Rated voltage (Use group D / CSA) 300 V

Rated current (Use group B / CSA) 20 A

Rated current (Use group D / CSA) 10 A

Wire cross-section, AWG, min. AWG 28

Wire cross-section, AWG, max. AWG 14

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

## 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) 15 A

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

Wire cross-section, AWG, min. AWG 28

Wire cross-section, AWG, max. AWG 14

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

## Packing

|           |        |            |        |
|-----------|--------|------------|--------|
| Packaging | Box    | VPE length | 317 mm |
| VPE width | 212 mm | VPE height | 28 mm  |

## 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.

Notes

- 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.
- Long term storage of the product with average temperature of 50 °C and average humidity 70%, 36 months

**LS 5.08/10/90 3.5SN OR BX****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

[www.weidmueller.com](http://www.weidmueller.com)**Technical data****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 – STEP</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Engineering Data                            | <a href="#">EPLAN, WSCAD</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Catalogues                                  | <a href="#">Catalogues in PDF-format</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Brochures                                   | <a href="#">FL DRIVES EN</a><br><a href="#">FL ANALO.SIGN.CONV. EN</a><br><a href="#">MB DEVICE MANUF. EN</a><br><a href="#">FL DRIVES DE</a><br><a href="#">FL BUILDING SAFETY EN</a><br><a href="#">FL APPL LED LIGHTING EN</a><br><a href="#">FL INDUSTR.CONTROLS EN</a><br><a href="#">FL MACHINE SAFETY EN</a><br><a href="#">FL HEATING ELECTR EN</a><br><a href="#">FL APPL INVERTER EN</a><br><a href="#">FL BASE STATION EN</a><br><a href="#">FL ELEVATOR EN</a><br><a href="#">FL POWER SUPPLY 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> |

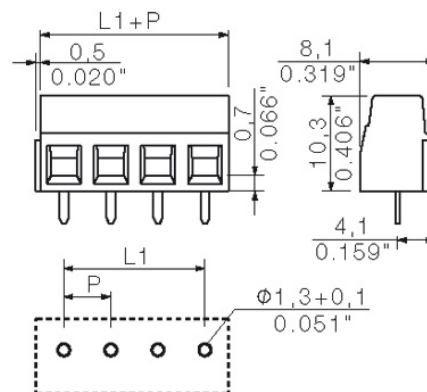
## LS 5.08/10/90 3.5SN OR BX

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

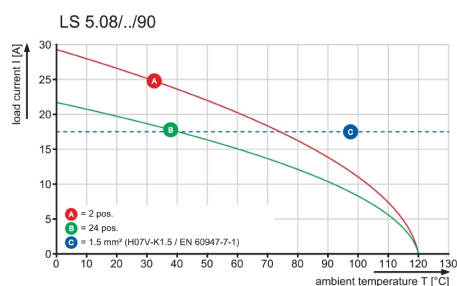
[www.weidmueller.com](http://www.weidmueller.com)

# Drawings

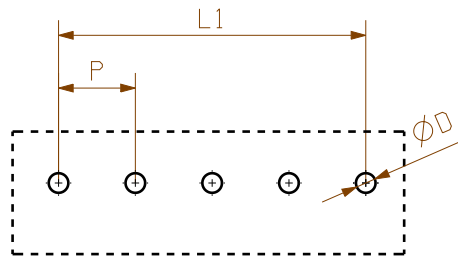
## Dimensional drawing



## Graph



WEITERGABE SOWIE Vervielfaeltigung dieses Dokuments, Verwertung und Mittheilung seines Inhalts sind verboten, soweit nicht Ausdruecklich gestattet.  
Zuwaenderungen Verpflichten zu Schadenersatz. Alle Rechte fuer den Fall der Patent-, Gebrauchs- oder Geschmacksmustereintragung 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. ALL RIGHTS RESERVED IN THE EVENT OF THE GRANT OF A PATENT, UTILITY MODEL OR DESIGN.



PCB LAYOUT



KUNDENZEICHNUNG  
CUSTOMER DRAWING

|    |         |           |
|----|---------|-----------|
| 12 | 55.88   | 2.20      |
| 11 | 50.80   | 2.00      |
| 10 | 45.72   | 1.80      |
| 9  | 40.64   | 1.60      |
| 8  | 35.56   | 1.40      |
| 7  | 30.48   | 1.20      |
| 6  | 25.40   | 1.00      |
| 5  | 20.32   | 0.80      |
| 4  | 15.24   | 0.60      |
| 3  | 10.16   | 0.40      |
| 2  | 5.08    | 0.20      |
| N  | L1 [mm] | L1 [inch] |

For the mounting of PCBs, it should be noted that the rated data stated here relates only to the PCB components alone.  
The necessary creepage and clearance paths must be observed in connection with the respective applicant in accordance to IEC 664 / VDE 0110.  
The current-carrying capacity and pitch tolerance is to be determined according to DIN IEC 326 part 3 very fine.

Weidmüller PCB components are tested to the DIN EN 61984 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.

|                                                              |  |                           |  |                                                              |            |  |
|--------------------------------------------------------------|--|---------------------------|--|--------------------------------------------------------------|------------|--|
| METRIC TOLERANCES<br>X. = ±0.3<br>X.X = ±0.1<br>X.XX = ±0.05 |  | 61484/5<br>22.12.11 SHI_S |  | 01                                                           | CAT.NO.: . |  |
| MODIFICATION                                                 |  | DRAWN                     |  | 01.04.2005                                                   | ZHOV_N     |  |
| RESPONSIBLE                                                  |  | CHECKED                   |  | 20.07.2007                                                   | SICKES_A   |  |
| APPROVED                                                     |  | XU_S                      |  | PRODUCT FILE: LS 5.08                                        |            |  |
| SCALE: 2/1                                                   |  | SUPERSEDES: 2 33380/05    |  | SUPERSEDED BY: .                                             |            |  |
| DRAWN                                                        |  | DATE                      |  | NAME                                                         |            |  |
| RESPONSIBLE                                                  |  | CHECKED                   |  | APPROVED                                                     |            |  |
| APPROVED                                                     |  | XU_S                      |  | XU_S                                                         |            |  |
| C 41703                                                      |  | 05                        |  | C 41703 05                                                   |            |  |
| DRAWING NO.                                                  |  | ISSUE NO.                 |  | LS 5.08/.../90 3.5 ...<br>LEITERPLATTENKLEMM<br>PCB TERMINAL |            |  |
| 7064                                                         |  |                           |  |                                                              |            |  |

## 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.