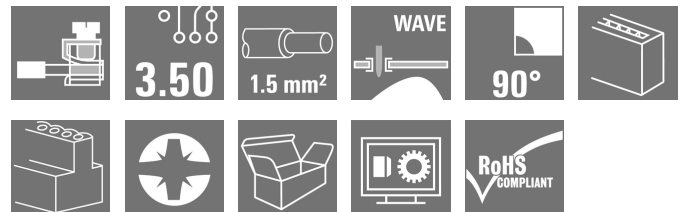


**PS 3.50/02/90 3.5SN BK BX****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

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

Similar to illustration

Very small and compact PCB terminal with leaf spring connection at 3.5 mm pitch, conductor outlet direction 90°. Suitable for conductor cross-sections up to 1.5 mm<sup>2</sup>.

**General ordering data**

|              |                                                                                                                                                                                              |
|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Version      | Printed circuit board terminals, 3.50 mm, Number of poles: 2, 90°, Solder pin length (l): 3.5 mm, tinned, black, Pressure clamp connection, Clamping range, max. : 1.5 mm <sup>2</sup> , Box |
| Order No.    | <a href="#">1811180000</a>                                                                                                                                                                   |
| Type         | PS 3.50/02/90 3.5SN BK BX                                                                                                                                                                    |
| GTIN (EAN)   | 4032248290161                                                                                                                                                                                |
| Qty.         | 100 pc(s).                                                                                                                                                                                   |
| Product data | IEC: 320 V / 17.5 A / 0.2 - 1.5 mm <sup>2</sup><br>UL: 300 V / 10 A / AWG 28 - AWG 16                                                                                                        |
| Packaging    | Box                                                                                                                                                                                          |

Creation date September 16, 2022 11:56:50 AM CEST

## PS 3.50/02/90 3.5SN BK BX

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## Technical data

## Dimensions and weights

|                          |            |                 |            |
|--------------------------|------------|-----------------|------------|
| Depth                    | 6.8 mm     | Depth (inches)  | 0.268 inch |
| Height                   | 11.9 mm    | Height (inches) | 0.469 inch |
| Height of lowest version | 8.4 mm     | Width           | 7.46 mm    |
| Width (inches)           | 0.294 inch | Net weight      | 0.848 g    |

## Environmental Product Compliance

|            |                |      |                                      |
|------------|----------------|------|--------------------------------------|
| REACH SVHC | Lead 7439-92-1 | SCIP | 92756f44-b3ae-437b-8a77-8ecb45fe4af6 |
|------------|----------------|------|--------------------------------------|

## System parameters

|                                              |                        |                                            |                           |
|----------------------------------------------|------------------------|--------------------------------------------|---------------------------|
| Product family                               | PS                     | Wire connection method                     | Pressure clamp connection |
| Mounting onto the PCB                        | THT solder connection  | Conductor outlet direction                 | 90°                       |
| Pitch in mm (P)                              | 3.5 mm                 | Pitch in inches (P)                        | 0.138 inch                |
| Number of poles                              | 2                      | Pin series quantity                        | 1                         |
| Fitted by customer                           | Yes                    | Max. adjacent poles per row                | 24                        |
| Solder pin length (l)                        | 3.5 mm                 | Solder pin dimensions                      | d = 0.8 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                          | 0.4 x 2.5                 |
| Screwdriver blade standard                   | DIN 5264               | Tightening torque, min.                    | 0.2 Nm                    |
| Tightening torque, max.                      | 0.25 Nm                | Clamping screw                             | M 2                       |
| Stripping length                             | 4 mm                   | L1 in mm                                   | 3.5 mm                    |
| L1 in inches                                 | 0.138 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                                | black                       |
| Colour chart (similar)                | RAL 9011             | Insulating material group             | I                           |
| Comparative Tracking Index (CTI)      | ≥ 600                | UL 94 flammability rating             | V-0                         |
| Contact material                      | Copper alloy         | Contact surface                       | tinned                      |
| Coating                               | 1-3 µm Ni, 4-6 µm SN | Layer structure of solder connection  | 1.5...3 µm Ni / 4...6 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                      |

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## Technical data

## 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 16               |
| Solid, min. H05(07) V-U                         | 0.2 mm <sup>2</sup>                                                                                                                                                   | Solid, max. H05(07) V-U                         | 1.5 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, min. | 0.25 mm <sup>2</sup>                                                                                                                                                  | w. plastic collar ferrule, DIN 46228 pt 4, max. | 0.75 mm <sup>2</sup> |
| w. wire end ferrule, DIN 46228 pt 1, min.       | 0.25 mm <sup>2</sup>                                                                                                                                                  | w. wire end ferrule, DIN 46228 pt 1, max.       | 0.75 mm <sup>2</sup> |
| 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         | 320 V  |
| Rated voltage for surge voltage class / pollution degree III/2            | 160 V                  | Rated voltage for surge voltage class / pollution degree III/3        | 160 V  |
| Rated impulse voltage for surge voltage class/ pollution degree II/2      | 2.5 kV                 | Rated impulse voltage for surge voltage class/ pollution degree III/2 | 2.5 kV |
| Rated impulse voltage for surge voltage class/ contamination degree III/3 | 2.5 kV                 |                                                                       |        |

## Rated data acc. to CSA

|                                   |                                                                                     |                                   |                |
|-----------------------------------|-------------------------------------------------------------------------------------|-----------------------------------|----------------|
| Institute (CSA)                   |  | Certificate No. (CSA)             | 200039-1815154 |
| Rated voltage (Use group B / CSA) | 300 V                                                                               | Rated current (Use group B / CSA) | 10 A           |
| Wire cross-section, AWG, min.     | AWG 28                                                                              | Wire cross-section, AWG, max.     | AWG 16         |
| 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) | 10 A                                                                                | Rated current (Use group D / UL 1059) | 10 A   |
| Wire cross-section, AWG, min.         | AWG 28                                                                              | Wire cross-section, AWG, max.         | AWG 16 |
| Reference to approval values          | Specifications are maximum values, details - see approval certificate.              |                                       |        |

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## Technical data

## Packing

|           |       |            |       |
|-----------|-------|------------|-------|
| Packaging | Box   | VPE length | 99 mm |
| VPE width | 90 mm | VPE height | 39 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          | <ul style="list-style-type: none"> <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>• The data given under CSA relates to a cUL approval - E60693</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>• It is necessary to hold the insulating body of the one or two pole terminal when tightening the screw</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   | UL Website |
| Certificate No. (cURus) | E60693     |

## PS 3.50/02/90 3.5SN BK BX

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# Technical data

## Downloads

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

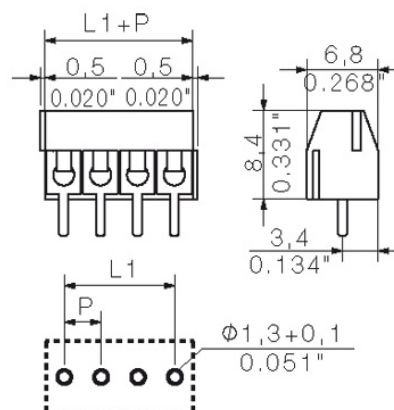
## PS 3.50/02/90 3.5SN BK BX

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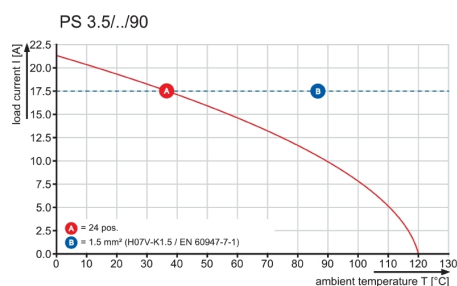
[www.weidmueller.com](http://www.weidmueller.com)

# Drawings

## Dimensional drawing



## Graph



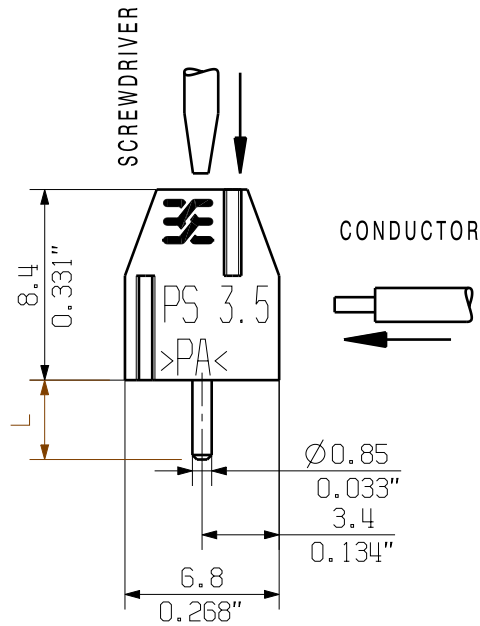
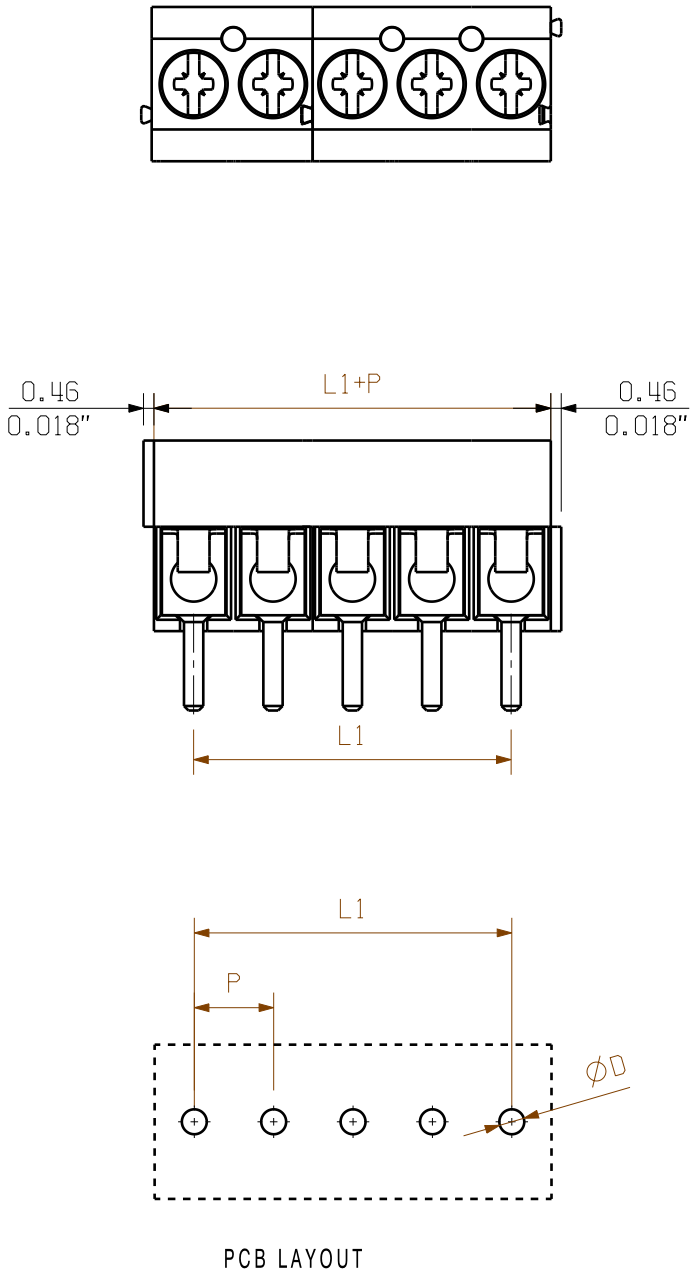
WEITERGABE SOWIE VERVIELFÄLTIGUNG DIESES DOKUMENTS, VERWERTUNG UND MITTEILUNG SEINES INHALTS SIND VERBOTEN, SOWEIT NICHT AUSDRUECKLICH GESTATTET.  
ZUWIDERHANDLUNGEN VERPFLICHTEN ZU SCHADENERSATZ. ALLE RECHTE FUER DEN FALL DER PATENT-, GEBRAUCHSMUSTER- ODER GESCHMACKSMUSTEREINTRAGUNG VORBEHALTEN.  
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WEIDMUELLER INTERFACE GmbH & Co.KG

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

DIE DEUTSCHE VERSION IST VERBINDLICH  
THE GERMAN VERSION IS BINDING

06



| STIFTLÄNGE L<br>PIN LENGTH L | TOLERANZ<br>TOLERANCE |
|------------------------------|-----------------------|
| 3.5                          | 0.2<br>-0.2           |

KUNDENZEICHNUNG  
CUSTOMER DRAWING

|    |         |           |
|----|---------|-----------|
| 16 | 52.50   | 2.068     |
| 15 | 49.00   | 1.930     |
| 14 | 45.50   | 1.792     |
| 13 | 42.00   | 1.654     |
| 12 | 38.50   | 1.516     |
| 11 | 35.00   | 1.378     |
| 10 | 31.50   | 1.240     |
| 9  | 28.00   | 1.102     |
| 8  | 24.50   | 0.965     |
| 7  | 21.00   | 0.827     |
| 6  | 17.50   | 0.689     |
| 5  | 14.00   | 0.551     |
| 4  | 10.50   | 0.413     |
| 3  | 7.00    | 0.276     |
| 2  | 3.50    | 0.138     |
| 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.

|                                      |  |                          |        |              |                                                          |  |
|--------------------------------------|--|--------------------------|--------|--------------|----------------------------------------------------------|--|
| GENERAL TOLERANCE:<br>DIN ISO 2768-m |  | 85497/5<br>08.01.16 MA_J |        | 01           | CAT.NO.: .                                               |  |
| RoHS COMPLIANT                       |  | MAX. NRN./NOS.           |        | MODIFICATION |                                                          |  |
| DRAWN                                |  | 12.04.2005               | HE_J   |              | PS 3.5/.../90 ...<br>LEITERPLATTENKLEMME<br>PCB TERMINAL |  |
| RESPONSIBLE                          |  | MA_J                     |        |              |                                                          |  |
| CHECKED                              |  | 08.01.2016               | ZHOU_N |              |                                                          |  |
| SCALE: 3/1                           |  | APPROVED                 |        | XU_S         | PRODUCT FILE: PS 3.5                                     |  |
| SUPERSEDES: .                        |  |                          |        |              | 7061                                                     |  |

**Weidmüller**

C 41693 06

DRAWING NO. SHEET 01 OF 01 SHEETS

ISSUE NO.

## Recommended wave soldering profiles

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### 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.