



#### General ordering data

|                  |  |
|------------------|--|
| Order No.        | 1639110000   |
| Part designation | BL 3.5/12/90F SN OR  |
| Version          | PCB plug-in connector, Female connectors, Clamping yoke connection, Clamping range, max.: 1.5 mm <sup>2</sup> , Pitch: 3.50 mm, No. of poles: 12, 90°, Box |
| EAN              | 4008190276652  |
| Qty.             | 50 pc(s).  |

#### System parameters

|   |                          |
|---|--------------------------|
| Conductor connection system               | Clamping yoke connection |
| Outgoing direction of conductor           | 90°                      |
| Pitch                                     | 3.5 mm                   |
| Pitch in inch                             | 0.138 inch               |
| No. of poles                              | 12                       |
| No. of rows                               | 1                        |
| Screwdriver blade                         | 0.4 x 2.5                |
| Screwdriver blade standard                | DIN 5264                 |
| Tightening torque, min.                   | 0.2                      |
| Tightening torque, max.                   | 0.25 Nm                  |
| Clamping screw                            | M 2                      |
| Stripping length                          | 6 mm                     |
| L1 in mm                                  | 38.5 mm                  |
| L1 in inch                                | 1.516 inch               |
| Electric shock protection to DIN VDE 0470 | IP 20                    |
| Electric shock protection to DIN VDE 0470 | Safe from finger touch   |

#### Material data

|                           |                     |
|---------------------------|---------------------|
| Insulating material       | PBT                 |
| Colour                    | orange              |
| colour chart              | Similar to RAL 2000 |
| Insulating material group | IIIa                |
| Flammability class UL 94  | V-0                 |
| CTI                       | >= 200              |

#### Material data

|                       |              |
|-----------------------|--------------|
| Contact base material | Copper alloy |
| Contact surface       | tinned       |

#### Connectable conductors

|   |                      |
|---|----------------------|
| Clamping range, min.                              | 0.08 mm <sup>2</sup> |
| Clamping range, max.                              | 1.5 mm <sup>2</sup>  |
| AWG, min.   | 14                   |
| AWG, max.   | 28                   |
| 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>  |
| With wire end ferrule, acc. to DIN 46 228/1, min. | 0.2 mm <sup>2</sup>  |
| With wire end ferrule, acc. to DIN 46 228/1, max. | 1.5 mm <sup>2</sup>  |
| w. plastic collar ferrule, DIN 46228 pt 4, min.   | 0.2 mm <sup>2</sup>  |
| w. plastic collar ferrule, DIN 46228 pt 4, max.   | 1.5 mm <sup>2</sup>  |
| Gauge to EN 60999 a x b; ø                        | 2.4 mm x 1.5 mm;     |

#### DIN IEC rating data

|  |                   |
|--|-------------------|
| Rated current, min. No. pins (Tu=20°C)   | 12 A              |
| Rated current, max. No. pins (Tu=20°C)   | 10 A              |
| Rated current, min. No. pins (Tu=40°C)   | 10 A              |
| Rated current, max. No. pins (Tu=40°C)   | 8 A               |
| Rated voltage for overvoltage class/pollution severity II/2                    | 320 V             |
| Rated voltage for overvoltage class/pollution severity III/2                   | 160 V             |
| Rated voltage for overvoltage class/pollution severity III/3                   | 160 V             |
| Rated impulse withstand voltage for overvoltage class/pollution severity II/2  | 2.5 kV            |
| Rated impulse withstand voltage for overvoltage class/pollution severity III/2 | 2.5 kV            |
| Rated impulse withstand voltage for overvoltage class/pollution severity III/3 | 2.5 kV            |
| Short-time withstand current resistance  | 3 x 1s with 100 A |

#### CSA rating data

|                                    |       |
|------------------------------------|-------|
| Rated voltage (Use group D)        | 300 V |
| Rated current (Use group D)        | 10 A  |
| AWG conductor (field wiring), min. | 28    |
| AWG conductor (field wiring), max. | 14    |

#### UL 1059 rating data

|                             |       |
|-----------------------------|-------|
| Rated voltage (Use group D) | 300 V |
| Rated current (Use group D) | 8 A   |
| AWG conductor, min.         | 28    |
| AWG conductor, max.         | 14    |

### Approvals

Approvals institutes



### Classifications

|            |             |
|------------|-------------|
| ETIM 2.0   | NK          |
| ETIM 3.0   | EC001284    |
| eClass 4.1 | 27-26-07-01 |
| eClass 5.0 | 27-26-07-01 |
| eClass 5.1 | 27-26-07-04 |

### Similar products

| Order No.  | Part designation   | Version   |
|------------|--------------------|---|
| 1639010000 | BL 3.5/2/90F SN OR | PCB plug-in connector, Female connectors, Clamping yoke connection, Clamping range, max.: 1.5 mm <sup>2</sup> , Pitch: 3.50 mm, No. of poles: 2, 90°, Box |
| 1639240000 | BL 3.5/2/90F SN SW | PCB plug-in connector, Female connectors, Clamping yoke connection, Clamping range, max.: 1.5 mm <sup>2</sup> , Pitch: 3.50 mm, No. of poles: 2, 90°, Box |
| 1639020000 | BL 3.5/3/90F SN OR | PCB plug-in connector, Female connectors, Clamping yoke connection, Clamping range, max.: 1.5 mm <sup>2</sup> , Pitch: 3.50 mm, No. of poles: 3, 90°, Box |
| 1639250000 | BL 3.5/3/90F SN SW | PCB plug-in connector, Female connectors, Clamping yoke connection, Clamping range, max.: 1.5 mm <sup>2</sup> , Pitch: 3.50 mm, No. of poles: 3, 90°, Box |
| 1639030000 | BL 3.5/4/90F SN OR | PCB plug-in connector, Female connectors, Clamping yoke connection, Clamping range, max.: 1.5 mm <sup>2</sup> , Pitch: 3.50 mm, No. of poles: 4, 90°, Box |
| 1639260000 | BL 3.5/4/90F SN SW | PCB plug-in connector, Female connectors, Clamping yoke connection, Clamping range, max.: 1.5 mm <sup>2</sup> , Pitch: 3.50 mm, No. of poles: 4, 90°, Box |
| 1639040000 | BL 3.5/5/90F SN OR | PCB plug-in connector, Female connectors, Clamping yoke connection, Clamping range, max.: 1.5 mm <sup>2</sup> , Pitch: 3.50 mm, No. of poles: 5, 90°, Box |
| 1639270000 | BL 3.5/5/90F SN SW | PCB plug-in connector, Female connectors, Clamping yoke connection, Clamping range, max.: 1.5 mm <sup>2</sup> , Pitch: 3.50 mm, No. of poles: 5, 90°, Box |
| 1639050000 | BL 3.5/6/90F SN OR | PCB plug-in connector, Female connectors, Clamping yoke connection, Clamping range, max.: 1.5 mm <sup>2</sup> , Pitch: 3.50 mm, No. of poles: 6, 90°, Box |
| 1639280000 | BL 3.5/6/90F SN SW | PCB plug-in connector, Female connectors, Clamping yoke connection, Clamping range, max.: 1.5 mm <sup>2</sup> , Pitch: 3.50 mm, No. of poles: 6, 90°, Box |
| 1639060000 | BL 3.5/7/90F SN OR | PCB plug-in connector, Female connectors, Clamping yoke connection, Clamping range, max.: 1.5 mm <sup>2</sup> , Pitch: 3.50 mm, No. of poles: 7, 90°, Box |

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| 1639290000 | BL 3.5/7/90F SN SW  | PCB plug-in connector, Female connectors, Clamping yoke connection, Clamping range, max.: 1.5 mm <sup>2</sup> , Pitch: 3.50 mm, No. of poles: 7, 90°, Box  |
| 1639070000 | BL 3.5/8/90F SN OR  | PCB plug-in connector, Female connectors, Clamping yoke connection, Clamping range, max.: 1.5 mm <sup>2</sup> , Pitch: 3.50 mm, No. of poles: 8, 90°, Box  |
| 1639300000 | BL 3.5/8/90F SN SW  | PCB plug-in connector, Female connectors, Clamping yoke connection, Clamping range, max.: 1.5 mm <sup>2</sup> , Pitch: 3.50 mm, No. of poles: 8, 90°, Box  |
| 1639080000 | BL 3.5/9/90F SN OR  | PCB plug-in connector, Female connectors, Clamping yoke connection, Clamping range, max.: 1.5 mm <sup>2</sup> , Pitch: 3.50 mm, No. of poles: 9, 90°, Box  |
| 1639310000 | BL 3.5/9/90F SN SW  | PCB plug-in connector, Female connectors, Clamping yoke connection, Clamping range, max.: 1.5 mm <sup>2</sup> , Pitch: 3.50 mm, No. of poles: 9, 90°, Box  |
| 1639090000 | BL 3.5/10/90F SN OR | PCB plug-in connector, Female connectors, Clamping yoke connection, Clamping range, max.: 1.5 mm <sup>2</sup> , Pitch: 3.50 mm, No. of poles: 10, 90°, Box |
| 1639320000 | BL 3.5/10/90F SN SW | PCB plug-in connector, Female connectors, Clamping yoke connection, Clamping range, max.: 1.5 mm <sup>2</sup> , Pitch: 3.50 mm, No. of poles: 10, 90°, Box |
| 1639100000 | BL 3.5/11/90F SN OR | PCB plug-in connector, Female connectors, Clamping yoke connection, Clamping range, max.: 1.5 mm <sup>2</sup> , Pitch: 3.50 mm, No. of poles: 11, 90°, Box |
| 1639330000 | BL 3.5/11/90F SN SW | PCB plug-in connector, Female connectors, Clamping yoke connection, Clamping range, max.: 1.5 mm <sup>2</sup> , Pitch: 3.50 mm, No. of poles: 11, 90°, Box |
| 1639340000 | BL 3.5/12/90F SN SW | PCB plug-in connector, Female connectors, Clamping yoke connection, Clamping range, max.: 1.5 mm <sup>2</sup> , Pitch: 3.50 mm, No. of poles: 12, 90°, Box |
| 1639120000 | BL 3.5/13/90F SN OR | PCB plug-in connector, Female connectors, Clamping yoke connection, Clamping range, max.: 1.5 mm <sup>2</sup> , Pitch: 3.50 mm, No. of poles: 13, 90°, Box |
| 1639350000 | BL 3.5/13/90F SN SW | PCB plug-in connector, Female connectors, Clamping yoke connection, Clamping range, max.: 1.5 mm <sup>2</sup> , Pitch: 3.50 mm, No. of poles: 13, 90°, Box |
| 1639130000 | BL 3.5/14/90F SN OR | PCB plug-in connector, Female connectors, Clamping yoke connection, Clamping range, max.: 1.5 mm <sup>2</sup> , Pitch: 3.50 mm, No. of poles: 14, 90°, Box |
| 1639360000 | BL 3.5/14/90F SN SW | PCB plug-in connector, Female connectors, Clamping yoke connection, Clamping range, max.: 1.5 mm <sup>2</sup> , Pitch: 3.50 mm, No. of poles: 14, 90°, Box |
| 1639140000 | BL 3.5/15/90F SN OR | PCB plug-in connector, Female connectors, Clamping yoke connection, Clamping range, max.: 1.5 mm <sup>2</sup> , Pitch: 3.50 mm, No. of poles: 15, 90°, Box |
| 1639370000 | BL 3.5/15/90F SN SW | PCB plug-in connector, Female connectors, Clamping yoke connection, Clamping range, max.: 1.5 mm <sup>2</sup> , Pitch: 3.50 mm, No. of poles: 15, 90°, Box |
| 1639150000 | BL 3.5/16/90F SN OR | PCB plug-in connector, Female connectors, Clamping yoke connection, Clamping range, max.: 1.5 mm <sup>2</sup> , Pitch: 3.50 mm, No. of poles: 16, 90°, Box |

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| 1639380000 | BL 3.5/16/90F SN SW | PCB plug-in connector, Female connectors, Clamping yoke connection, Clamping range, max.: 1.5 mm <sup>2</sup> , Pitch: 3.50 mm, No. of poles: 16, 90°, Box |
| 1639160000 | BL 3.5/17/90F SN OR | PCB plug-in connector, Female connectors, Clamping yoke connection, Clamping range, max.: 1.5 mm <sup>2</sup> , Pitch: 3.50 mm, No. of poles: 17, 90°, Box |
| 1639390000 | BL 3.5/17/90F SN SW | PCB plug-in connector, Female connectors, Clamping yoke connection, Clamping range, max.: 1.5 mm <sup>2</sup> , Pitch: 3.50 mm, No. of poles: 17, 90°, Box |
| 1639170000 | BL 3.5/18/90F SN OR | PCB plug-in connector, Female connectors, Clamping yoke connection, Clamping range, max.: 1.5 mm <sup>2</sup> , Pitch: 3.50 mm, No. of poles: 18, 90°, Box |
| 1639400000 | BL 3.5/18/90F SN SW | PCB plug-in connector, Female connectors, Clamping yoke connection, Clamping range, max.: 1.5 mm <sup>2</sup> , Pitch: 3.50 mm, No. of poles: 18, 90°, Box |
| 1639180000 | BL 3.5/19/90F SN OR | PCB plug-in connector, Female connectors, Clamping yoke connection, Clamping range, max.: 1.5 mm <sup>2</sup> , Pitch: 3.50 mm, No. of poles: 19, 90°, Box |
| 1639410000 | BL 3.5/19/90F SN SW | PCB plug-in connector, Female connectors, Clamping yoke connection, Clamping range, max.: 1.5 mm <sup>2</sup> , Pitch: 3.50 mm, No. of poles: 19, 90°, Box |
| 1639190000 | BL 3.5/20/90F SN OR | PCB plug-in connector, Female connectors, Clamping yoke connection, Clamping range, max.: 1.5 mm <sup>2</sup> , Pitch: 3.50 mm, No. of poles: 20, 90°, Box |
| 1639420000 | BL 3.5/20/90F SN SW | PCB plug-in connector, Female connectors, Clamping yoke connection, Clamping range, max.: 1.5 mm <sup>2</sup> , Pitch: 3.50 mm, No. of poles: 20, 90°, Box |
| 1639200000 | BL 3.5/21/90F SN OR | PCB plug-in connector, Female connectors, Clamping yoke connection, Clamping range, max.: 1.5 mm <sup>2</sup> , Pitch: 3.50 mm, No. of poles: 21, 90°, Box |
| 1639430000 | BL 3.5/21/90F SN SW | PCB plug-in connector, Female connectors, Clamping yoke connection, Clamping range, max.: 1.5 mm <sup>2</sup> , Pitch: 3.50 mm, No. of poles: 21, 90°, Box |
| 1639210000 | BL 3.5/22/90F SN OR | PCB plug-in connector, Female connectors, Clamping yoke connection, Clamping range, max.: 1.5 mm <sup>2</sup> , Pitch: 3.50 mm, No. of poles: 22, 90°, Box |
| 1639440000 | BL 3.5/22/90F SN SW | PCB plug-in connector, Female connectors, Clamping yoke connection, Clamping range, max.: 1.5 mm <sup>2</sup> , Pitch: 3.50 mm, No. of poles: 22, 90°, Box |
| 1639220000 | BL 3.5/23/90F SN OR | PCB plug-in connector, Female connectors, Clamping yoke connection, Clamping range, max.: 1.5 mm <sup>2</sup> , Pitch: 3.50 mm, No. of poles: 23, 90°, Box |
| 1639450000 | BL 3.5/23/90F SN SW | PCB plug-in connector, Female connectors, Clamping yoke connection, Clamping range, max.: 1.5 mm <sup>2</sup> , Pitch: 3.50 mm, No. of poles: 23, 90°, Box |
| 1639230000 | BL 3.5/24/90F SN OR | PCB plug-in connector, Female connectors, Clamping yoke connection, Clamping range, max.: 1.5 mm <sup>2</sup> , Pitch: 3.50 mm, No. of poles: 24, 90°, Box |
| 1639460000 | BL 3.5/24/90F SN SW | PCB plug-in connector, Female connectors, Clamping yoke connection, Clamping range, max.: 1.5 mm <sup>2</sup> , Pitch: 3.50 mm, No. of poles: 24, 90°, Box |