



#### General ordering data

|                  |  |
|------------------|--|
| Order No.        | 1638740000   |
| Part designation | BL 3.5/21/90 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: 21, 90°, Box |
| EAN              | 4008190276287  |
| Qty.             | 20 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                              | 21                       |
| 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                                  | 70 mm                    |
| L1 in inch                                | 2.756 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   |
|------------|-------------------|---|
| 1638550000 | BL 3.5/2/90 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 |
| 1638780000 | BL 3.5/2/90 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 |
| 1638560000 | BL 3.5/3/90 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 |
| 1638790000 | BL 3.5/3/90 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 |
| 1638570000 | BL 3.5/4/90 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 |
| 1638800000 | BL 3.5/4/90 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 |
| 1638580000 | BL 3.5/5/90 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 |
| 1638810000 | BL 3.5/5/90 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 |
| 1638590000 | BL 3.5/6/90 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 |
| 1638820000 | BL 3.5/6/90 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 |
| 1638600000 | BL 3.5/7/90 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 |

|            |                    |  |
|------------|--------------------|--|
| 1638830000 | BL 3.5/7/90 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  |
| 1638610000 | BL 3.5/8/90 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  |
| 1638840000 | BL 3.5/8/90 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  |
| 1638620000 | BL 3.5/9/90 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  |
| 1638850000 | BL 3.5/9/90 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  |
| 1638630000 | BL 3.5/10/90 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 |
| 1638860000 | BL 3.5/10/90 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 |
| 1638640000 | BL 3.5/11/90 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 |
| 1638870000 | BL 3.5/11/90 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 |
| 1638650000 | BL 3.5/12/90 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: 12, 90°, Box |
| 1638880000 | BL 3.5/12/90 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 |
| 1638660000 | BL 3.5/13/90 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 |
| 1638890000 | BL 3.5/13/90 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 |
| 1638670000 | BL 3.5/14/90 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 |
| 1638900000 | BL 3.5/14/90 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 |
| 1638680000 | BL 3.5/15/90 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 |
| 1638910000 | BL 3.5/15/90 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 |

|            |                    |  |
|------------|--------------------|--|
| 1638690000 | BL 3.5/16/90 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 |
| 1638920000 | BL 3.5/16/90 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 |
| 1638700000 | BL 3.5/17/90 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 |
| 1638930000 | BL 3.5/17/90 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 |
| 1638710000 | BL 3.5/18/90 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 |
| 1638940000 | BL 3.5/18/90 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 |
| 1638720000 | BL 3.5/19/90 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 |
| 1638950000 | BL 3.5/19/90 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 |
| 1638730000 | BL 3.5/20/90 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 |
| 1638960000 | BL 3.5/20/90 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 |
| 1638970000 | BL 3.5/21/90 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 |
| 1638750000 | BL 3.5/22/90 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 |
| 1638980000 | BL 3.5/22/90 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 |
| 1638760000 | BL 3.5/23/90 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 |
| 1638990000 | BL 3.5/23/90 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 |
| 1638770000 | BL 3.5/24/90 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 |
| 1639000000 | BL 3.5/24/90 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 |