OMNIMATE Signal - series BL/SL 3.50
BL 3.50/20/90 SN OR BX

Weidmüller Interface GmbH & Co. KG
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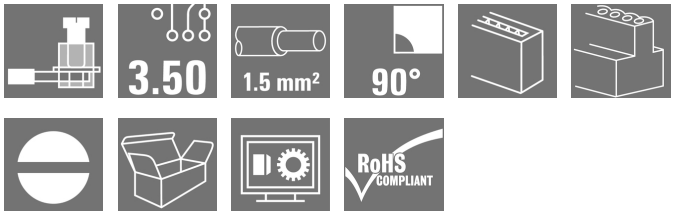
Product image



Similar to illustration

Female connectors with clamping yoke screw system for connecting conductors at 3.50 mm pitch. They provide space for labelling and can be coded.

General ordering data

Type	BL 3.50/20/90 SN OR BX
Order No.	1638730000
Version	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 20, 90°, Clamping yoke connection, Clamping range, max. : 1.5 mm², Box
GTIN (EAN)	4008190276270
Qty.	24 pc(s).
Product data	IEC: 320 V / 12 A / 0.2 - 1.5 mm² UL: 300 V / 8 A / AWG 28 - AWG 14
Packaging	Box

Creation date May 3, 2020 5:55:43 PM CEST

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Technical data

Dimensions and weights

Width	70 mm	Width (inches)	2.756 inch
Height	12 mm	Height (inches)	0.472 inch
Depth	22.45 mm	Depth (inches)	0.884 inch
Net weight	18.892 g		

System Parameters

Product family	OMNIMATE Signal - series BL/SL 3.50	Type of connection	Field connection
Wire connection method	Clamping yoke connection	Pitch in mm (P)	3.5 mm
Pitch in inches (P)	0.138 inch	Conductor outlet direction	90°
Number of poles	20	L1 in mm	66.5 mm
L1 in inches	2.618 inch	Number of rows	1
Pin series quantity	1	Rated cross-section	1.5 mm²
Touch-safe protection acc. to DIN VDE 57 106	Safe from finger touch	Touch-safe protection acc. to DIN VDE 0470	IP 20
Volume resistance	≤ 5mΩ	Can be coded	Yes
Stripping length	6 mm	Tightening torque, min.	0.2 Nm
Tightening torque, max.	0.25 Nm	Clamping screw	M 2
Screwdriver blade	0.4 x 2.5	Screwdriver blade standard	DIN 5264
Plugging cycles	25	Plugging force/pole, max.	7 N
Pulling force/pole, max.	5 N		

Material data

Insulating material	PBT	Colour	orange
Colour chart (similar)	RAL 2000	Insulating material group	IIIa
Comparative Tracking Index (CTI)	≥ 200	Insulation strength	≥ 10^8 Ω
UL 94 flammability rating	V-0	GWFI	960 °C
Contact material	Copper alloy	Contact surface	tinned
Layer structure of plug contact	4-8 µm Sn hot-dip tinned	Storage temperature, min.	-25 °C
Storage temperature, max.	50 °C	Max. relative humidity during storage	70 %
Operating temperature, min.	-50 °C	Operating temperature, max.	100 °C
Temperature range, installation, min.	-30 °C	Temperature range, installation, max.	100 °C

Conductors suitable for connection

Clamping range, min.	0.08 mm²
Clamping range, max.	1.5 mm²
Wire connection cross section AWG, min.	AWG 28
Wire connection cross section AWG, max.	AWG 14
Solid, min. H05(07) V-U	0.2 mm²
Solid, max. H05(07) V-U	1.5 mm²
Flexible, min. H05(07) V-K	0.2 mm²
Flexible, max. H05(07) V-K	1.5 mm²
w. plastic collar ferrule, DIN 46228 pt 4, min.	0.2 mm²
w. plastic collar ferrule, DIN 46228 pt 4, max.	1.5 mm²
w. wire end ferrule, DIN 46228 pt 1, min.	0.2 mm²
w. wire end ferrule, DIN 46228 pt 1, max.	1.5 mm²

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Plug gauge in accordance with EN 60999 a x b; ø	2.4 mm x 1.5 mm		
Clampable conductor	Cross-section for conductor connection	Type	fine-wired
		nominal	0.5 mm²
	wire end ferrule	Stripping length	nominal 8 mm
		Recommended wire-end ferrule	H0,5/12 OR
		Stripping length	nominal 6 mm
		Recommended wire-end ferrule	H0,5/6
	Cross-section for conductor connection	Type	fine-wired
		nominal	0.75 mm²
	wire end ferrule	Stripping length	nominal 8 mm
		Recommended wire-end ferrule	H0,75/12 W
		Stripping length	nominal 6 mm
		Recommended wire-end ferrule	H0,75/6
	Cross-section for conductor connection	Type	fine-wired
		nominal	1 mm²
	wire end ferrule	Stripping length	nominal 8 mm
		Recommended wire-end ferrule	H1,0/12 GE
		Stripping length	nominal 6 mm
		Recommended wire-end ferrule	H1,0/6
	Cross-section for conductor connection	Type	fine-wired
		nominal	0.25 mm²
	wire end ferrule	Stripping length	nominal 8 mm
		Recommended wire-end ferrule	H0,25/10 HBL
		Stripping length	nominal 5 mm
		Recommended wire-end ferrule	H0,25/5
	Cross-section for conductor connection	Type	fine-wired
		nominal	0.34 mm²
	wire end ferrule	Stripping length	nominal 8 mm
		Recommended wire-end ferrule	H0,34/10 TK
Reference text	The outside diameter of the plastic collar should not be larger than the pitch (P), Length of ferrules is to be chosen depending on the product and the rated voltage.		
Max. clamping range	1.5 mm²		

Rated data acc. to IEC

tested acc. to standard	IEC 60664-1, IEC 61984	Rated current, min. number of poles (Tu=20°C)	12 A
Rated current, max. number of poles (Tu=20°C)	10 A	Rated current, min. number of poles (Tu=40°C)	10 A
Rated current, max. number of poles (Tu=40°C)	8 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	Short-time withstand current resistance	3 x 1s with 100 A

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Technical data

Rated data acc. to CSA

Institute (CSA)		Certificate No. (CSA)	154685-1318353
Rated voltage (Use group B / CSA)	300 V	Rated voltage (Use group D / CSA)	300 V
Rated current (Use group B / CSA)	10 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 (UR)		Certificate No. (UR)	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)	8 A	Rated current (Use group D / UL 1059)	8 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	65 mm
VPE width	80 mm	VPE height	100 mm

Classifications

ETIM 6.0	EC002638	ETIM 7.0	EC002638
eClass 9.0	27-44-03-09	eClass 9.1	27-44-03-09
eClass 10.0	27-44-03-09	UNSPSC	30-21-18-10

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Technical data

Notes

Notes	• Additional colours on request • Gold-plated contact surfaces on request • Rated current related to rated cross-section & min. No. of poles. • Max. outer diameter of the conductor: 2.9 mm • 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.
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

Downloads

Approval/Certificate/Document of Conformity	Declaration of the Manufacturer
Brochure/Catalogue	FL DRIVES EN MB DEVICE MANUF. EN FL DRIVES DE CAT 2 PORTFOLIOGUIDE EN FL BUILDING SAFETY EN FL APPL LED LIGHTING EN FL INDUSTR.CONTROLS EN FL MACHINE SAFETY EN FL HEATING ELECTR EN FL APPL_INVERTER EN FL_BASE_STATION_EN FL ELEVATOR EN FL POWER SUPPLY EN FL 72H SAMPLE SER EN PO OMNIMATE EN
Engineering Data	EPLAN, WSCAD
Engineering Data	STEP

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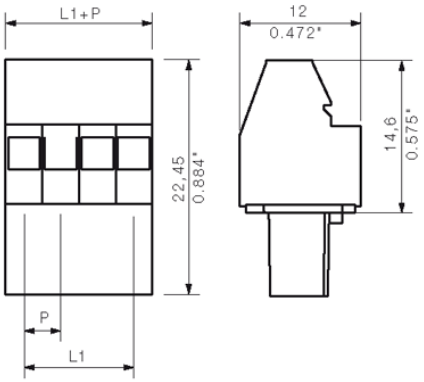
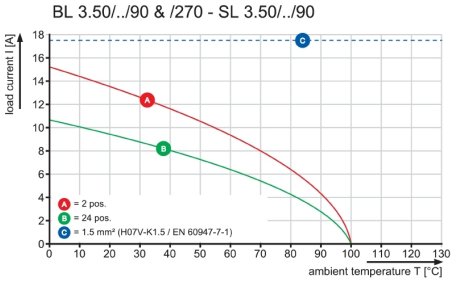
Drawings

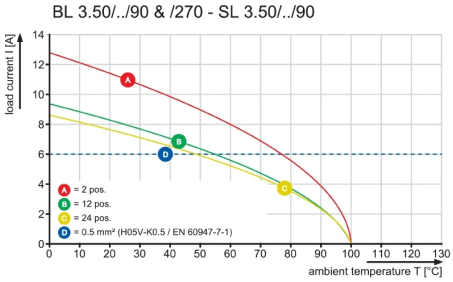
Dimensional drawing



Graph



Graph



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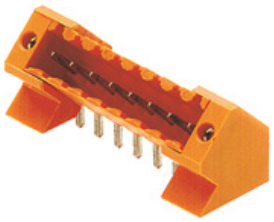
Mating connector (conditionally pluggable)

SL 3.50/135F



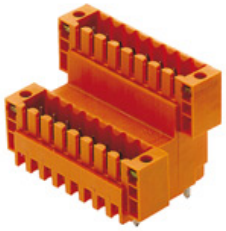
Pin headers for wave soldering in 3.50 mm pitch

- Plugging direction is parallel (90°), straight 180° or angled (135°) to the PCB
- Housing variant: screw flange (F)
- Packed in a cardboard box (BX)
- Pin header can be coded

General ordering data

Type	SL 3.50/20/135F 3.2SN O ...	Version	Product data	Packaging
Order No.	1643510000	PCB plug-in connector, male header, Flange, THT solder connection,	IEC: 320 V / 15 A	Box
GTIN (EAN)	4008190282271	3.50 mm, Number of poles: 20, 135°, Solder pin length (l): 3.2 mm,	UL: 300 V / 10 A	
Qty.	24 pc(s).	tinned, orange, Box		

SLD 3.50V/180F



Double-level, staggered pin header for wave soldering at 3.50 mm pitch. They are available in closed and flanged versions. The male connectors provide space for labelling and can be coded.

General ordering data

Type	SLD 3.50 V/40/180F 3.2 ...	Version	Product data	Packaging
Order No.	1641330000	PCB plug-in connector, male header, Flange, THT solder connection,	IEC: 200 V / 10.5 A	Box
GTIN (EAN)	4008190279738	3.50 mm, Number of poles: 40, 180°, Solder pin length (l): 3.2 mm,	UL: 300 V / 8 A	
Qty.	10 pc(s).	tinned, orange, Box		

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Mating connector (conditionally pluggable)

SL-SMT 3.5/90LF Box

High-temperature-resistant male header, 3.50 mm pitch.

- **Plugging direction parallel (90°), straight 180° or angled (135°) to PCB**
- **Housing variants: closed side (G), screw flange (F), solder flange (LF) or snap-on solder flange (RF)**
- **Optimised for the SMT process**
- **Pin length 3.2 mm universal for all soldering methods**
- **Pin length 1.5 mm optimised for reflow soldering methods**
- **Packed either in a box (BX) or tape-on-reel (RL)**
- **Male header can be coded**

General ordering data

Type	SL-SMT 3.50/20/90LF 1.5 ...	Version	Product data	Packaging
Order No.	1805120000	PCB plug-in connector, male header, Solder flange, THT/THR solder	IEC: 320 V / 15 A	Box
GTIN (EAN)	4032248269020	connection, 3.50 mm, Number of poles: 20, 90°, Solder pin length (l):	UL: 300 V / 10 A	
Qty.	24 pc(s).	1.5 mm, tinned, black, Box		

Type	SL-SMT 3.50/20/90LF 3.2 ...	Version	Product data	Packaging
Order No.	1842030000	PCB plug-in connector, male header, Solder flange, THT/THR solder	IEC: 320 V / 15 A	Box
GTIN (EAN)	4032248353385	connection, 3.50 mm, Number of poles: 20, 90°, Solder pin length (l):	UL: 300 V / 10 A	
Qty.	24 pc(s).	3.2 mm, tinned, black, Box		

SL-SMT 3.5/180F Box

High-temperature-resistant male header, 3.50 mm pitch.

- **Plugging direction parallel (90°), straight 180° or angled (135°) to PCB**
- **Housing variants: closed side (G), screw flange (F), solder flange (LF) or snap-on solder flange (RF)**
- **Optimised for the SMT process**
- **Pin length 3.2 mm universal for all soldering methods**
- **Pin length 1.5 mm optimised for reflow soldering methods**
- **Packed either in a box (BX) or tape-on-reel (RL)**
- **Male header can be coded**

General ordering data

Type	SL-SMT 3.50/20/180F 3.2 ...	Version	Product data	Packaging
Order No.	1842950000	PCB plug-in connector, male header, Flange, THT/THR solder	IEC: 320 V / 15 A	Box
GTIN (EAN)	4032248354412	connection, 3.50 mm, Number of poles: 20, 180°, Solder pin length	UL: 300 V / 10 A	
Qty.	24 pc(s).	(l): 3.2 mm, tinned, black, Box		

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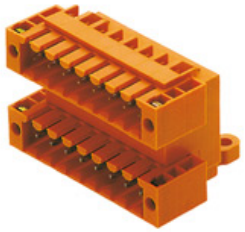
Mating connector (conditionally pluggable)

Type	SL-SMT 3.50/20/180F 1.5 ...	Version	Product data	Packaging
Order No.	1761142001	PCB plug-in connector, male header, Flange, THT/THR solder connection, 3.50 mm, Number of poles: 20, 180°, Solder pin length (l): 1.5 mm, tinned, black, Box	IEC: 320 V / 15 A UL: 300 V / 10 A	Box
GTIN (EAN)	4032248131716			
Qty.	20 pc(s).			

SLD 3.50/90F



Two-tier pin header for wave soldering in 3.50 mm pitch. The connector is available in open, closed and flange versions. The male connectors provide space for labelling and can be coded. Packed in a cardboard box.

General ordering data

Type	SLD 3.50/40/90F 3.2SN O ...	Version	Product data	Packaging
Order No.	1633990000	PCB plug-in connector, male header, Flange, THT solder connection, 3.50 mm, Number of poles: 40, 90°, Solder pin length (l): 3.2 mm, tinned, orange, Box	IEC: 200 V / 10.5 A UL: 300 V / 8 A	Box
GTIN (EAN)	4008190258443			
Qty.	10 pc(s).			

SLD 3.50V/90F

Double-level, staggered pin header for wave soldering at 3.50 mm pitch. They are available in closed and flanged versions. The male connectors provide space for labelling and can be coded.

General ordering data

Type	SLD 3.50 V/40/90F 3.2 S ...	Version	Product data	Packaging
Order No.	1642460000	PCB plug-in connector, male header, Flange, THT solder connection, 3.50 mm, Number of poles: 40, 90°, Solder pin length (l): 3.2 mm, tinned, orange, Box	IEC: 200 V / 10.5 A UL: 300 V / 8 A	Box
GTIN (EAN)	4008190280987			
Qty.	10 pc(s).			

OMNIMATE Signal - series BL/SL 3.50
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Mating connector (conditionally pluggable)

SL-SMT 3.5/180G Box

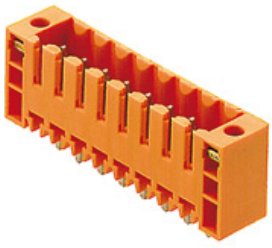
High-temperature-resistant male header, 3.50 mm pitch.

- **Plugging direction parallel (90°), straight 180° or angled (135°) to PCB**
- **Housing variants: closed side (G), screw flange (F), solder flange (LF) or snap-on solder flange (RF)**
- **Optimised for the SMT process**
- **Pin length 3.2 mm universal for all soldering methods**
- **Pin length 1.5 mm optimised for reflow soldering methods**
- **Packed either in a box (BX) or tape-on-reel (RL)**
- **Male header can be coded**

General ordering data

Type	SL-SMT 3.50/20/180G 3.2 ...	Version	Product data	Packaging
Order No.	1842490000	PCB plug-in connector, male header, closed side, THT/THR solder	IEC: 320 V / 15 A	Box
GTIN (EAN)	4032248353842	connection, 3.50 mm, Number of poles: 20, 180°, Solder pin length	UL: 300 V / 10 A	
Qty.	20 pc(s).	(l): 3.2 mm, tinned, black, Box		
Type	SL-SMT 3.50/20/180G 1.5 ...	Version	Product data	Packaging
Order No.	1753162001	PCB plug-in connector, male header, closed side, THT/THR solder	IEC: 320 V / 15 A	Box
GTIN (EAN)	4032248131068	connection, 3.50 mm, Number of poles: 20, 180°, Solder pin length	UL: 300 V / 10 A	
Qty.	20 pc(s).	(l): 1.5 mm, tinned, black, Box		

SL 3.50/180F



Pin headers for wave soldering in 3.50 mm pitch

- Plugging direction is parallel (90°), straight 180° or angled (135°) to the PCB
- Housing variant: screw flange (F)
- Packed in a cardboard box (BX)
- Pin header can be coded

General ordering data

Type	SL 3.50/20/180F 4.5 SN ...	Version	Product data	Packaging
Order No.	1618940000	PCB plug-in connector, male header, Flange, THT solder connection,	IEC: 320 V / 17 A	Box
GTIN (EAN)	4008190130398	3.50 mm, Number of poles: 20, 180°, Solder pin length (l): 4.5 mm,	UL: 300 V / 10 A	
Qty.	20 pc(s).	tinned, black, Box		
Type	SL 3.50/20/180F 3.2SN G ...	Version	Product data	Packaging
Order No.	1622440000	PCB plug-in connector, male header, Flange, THT solder connection,	IEC: 320 V / 17 A	Box
GTIN (EAN)	4008190193102	3.50 mm, Number of poles: 20, 180°, Solder pin length (l): 3.2 mm,	UL: 300 V / 10 A	
Qty.	20 pc(s).	tinned, Pebble grey, Box		

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Mating connector (conditionally pluggable)

Type	SL 3.50/20/180F 4.5SN O ...	Version	Product data	Packaging
Order No.	1618860000	PCB plug-in connector, male header, Flange, THT solder connection,	IEC: 320 V / 17 A	Box
GTIN (EAN)	4008190128715	3.50 mm, Number of poles: 20, 180°, Solder pin length (l): 4.5 mm,	UL: 300 V / 10 A	
Qty.	20 pc(s).	tinned, orange, Box		
Type	SL 3.50/20/180F 3.2SN O ...	Version	Product data	Packaging
Order No.	1622210000	PCB plug-in connector, male header, Flange, THT solder connection,	IEC: 320 V / 17 A	Box
GTIN (EAN)	4008190188931	3.50 mm, Number of poles: 20, 180°, Solder pin length (l): 3.2 mm,	UL: 300 V / 10 A	
Qty.	20 pc(s).	tinned, orange, Box		
Type	SL 3.50/20/180F 3.2SN D ...	Version	Product data	Packaging
Order No.	1622660000	PCB plug-in connector, male header, Flange, THT solder connection,	IEC: 320 V / 17 A	Box
GTIN (EAN)	4008190193324	3.50 mm, Number of poles: 20, 180°, Solder pin length (l): 3.2 mm,	UL: 300 V / 10 A	
Qty.	20 pc(s).	tinned, Signal green, Box		

SL-SMT 3.5/90F Box

High-temperature-resistant male header, 3.50 mm pitch.

- **Plugging direction parallel (90°), straight 180° or angled (135°) to PCB**
- **Housing variants: closed side (G), screw flange (F), solder flange (LF) or snap-on solder flange (RF)**
- **Optimised for the SMT process**
- **Pin length 3.2 mm universal for all soldering methods**
- **Pin length 1.5 mm optimised for reflow soldering methods**
- **Packed either in a box (BX) or tape-on-reel (RL)**
- **Male header can be coded**

General ordering data

Type	SL-SMT 3.50/20/90F 3.2S ...	Version	Product data	Packaging
Order No.	1842260000	PCB plug-in connector, male header, Flange, THT/THR solder	IEC: 320 V / 15 A	Box
GTIN (EAN)	4032248353613	connection, 3.50 mm, Number of poles: 20, 90°, Solder pin length (l):	UL: 300 V / 10 A	
Qty.	24 pc(s).	3.2 mm, tinned, black, Box		

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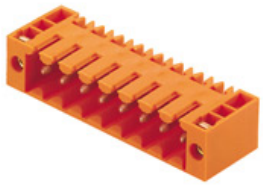
Mating connector (conditionally pluggable)

SL 3.50/90F



Pin headers for wave soldering in 3.50 mm pitch

- Plugging direction is parallel (90°), straight 180° or angled (135°) to the PCB
- Housing variant: screw flange (F)
- Packed in a cardboard box (BX)
- Pin header can be coded

General ordering data

Type	SL 3.50/20/90F 4.5SN OR ...	Version	Product data	Packaging
Order No.	1618230000	PCB plug-in connector, male header, Flange, THT solder connection,	IEC: / 17 A	Box
GTIN (EAN)	4008190118273	3.50 mm, Number of poles: 20, 90°, Solder pin length (l): 4.5 mm,	UL: 300 V / 10 A	
Qty.	20 pc(s).	tinned, orange, Box		
Type	SL 3.50/20/90F 3.2SN OR ...	Version	Product data	Packaging
Order No.	1619800000	PCB plug-in connector, male header, Flange, THT solder connection,	IEC: / 17 A	Box
GTIN (EAN)	4008190147549	3.50 mm, Number of poles: 20, 90°, Solder pin length (l): 3.2 mm,	UL: 300 V / 10 A	
Qty.	20 pc(s).	tinned, orange, Box		
Type	SL 3.50/20/90F 4.5 SN B ...	Version	Product data	Packaging
Order No.	1618310000	PCB plug-in connector, male header, Flange, THT solder connection,	IEC: / 17 A	Box
GTIN (EAN)	4008190120153	3.50 mm, Number of poles: 20, 90°, Solder pin length (l): 4.5 mm,	UL: 300 V / 10 A	
Qty.	20 pc(s).	tinned, black, Box		
Type	SL 3.50/20/90F 3.2SN DK ...	Version	Product data	Packaging
Order No.	1620240000	PCB plug-in connector, male header, Flange, THT solder connection,	IEC: / 17 A	Box
GTIN (EAN)	4008190153878	3.50 mm, Number of poles: 20, 90°, Solder pin length (l): 3.2 mm,	UL: 300 V / 10 A	
Qty.	20 pc(s).	tinned, Signal green, Box		
Type	SL 3.50/20/90F 3.2SN GY ...	Version	Product data	Packaging
Order No.	1620030000	PCB plug-in connector, male header, Flange, THT solder connection,	IEC: / 17 A	Box
GTIN (EAN)	4008190150907	3.50 mm, Number of poles: 20, 90°, Solder pin length (l): 3.2 mm,	UL: 300 V / 10 A	
Qty.	20 pc(s).	tinned, Pebble grey, Box		

OMNIMATE Signal - series BL/SL 3.50
BL 3.50/20/90 SN OR BX

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Mating connector (conditionally pluggable)

SL-SMT 3.5/180LF Box

High-temperature-resistant male header, 3.50 mm pitch.

- **Plugging direction parallel (90°), straight 180° or angled (135°) to PCB**
- **Housing variants: closed side (G), screw flange (F), solder flange (LF) or snap-on solder flange (RF)**
- **Optimised for the SMT process**
- **Pin length 3.2 mm universal for all soldering methods**
- **Pin length 1.5 mm optimised for reflow soldering methods**
- **Packed either in a box (BX) or tape-on-reel (RL)**
- **Male header can be coded**

General ordering data

Type	SL-SMT 3.50/20/180LF 3. ...	Version	Product data	Packaging
Order No.	1842720000	PCB plug-in connector, male header, Solder flange, THT/THR solder	IEC: 320 V / 15 A	Box
GTIN (EAN)	4032248354085	connection, 3.50 mm, Number of poles: 20, 180°, Solder pin length	UL: 300 V / 10 A	
Qty.	24 pc(s).	(l): 3.2 mm, tinned, black, Box		
Type	SL-SMT 3.50/20/180LF 1. ...	Version	Product data	Packaging
Order No.	1804890000	PCB plug-in connector, male header, Solder flange, THT/THR solder	IEC: 320 V / 15 A	Box
GTIN (EAN)	4032248268658	connection, 3.50 mm, Number of poles: 20, 180°, Solder pin length	UL: 300 V / 10 A	
Qty.	20 pc(s).	(l): 1.5 mm, tinned, black, Box		

OMNIMATE Signal - series BL/SL 3.50
BL 3.50/20/90 SN OR BX

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Mating connector (fully pluggable)

SL-SMT 3.5/90G Tray

High-temperature-resistant male header, 3.50 mm pitch.

- **Plugging direction parallel (90°), straight 180° or angled (135°) to PCB**
- **Housing variants: closed side (G), screw flange (F), solder flange (LF) or snap-on solder flange (RF)**
- **Optimised for the SMT process**
- **Pin length 3.2 mm universal for all soldering methods**
- **Pin length 1.5 mm optimised for reflow soldering methods**
- **Packed either in a box (BX) or tape-on-reel (RL)**
- **Male header can be coded**

General ordering data

Type	SL-SMT 3.50/20/90G 1.5S ...	Version	Product data	Packaging
Order No.	1761723001	PCB plug-in connector, male header, closed side, THT/THR solder	IEC: 320 V / 15 A	Tray
GTIN (EAN)	4032248133994	connection, 3.50 mm, Number of poles: 20, 90°, Solder pin length (l):	UL: 300 V / 10 A	
Qty.	18 pc(s).	1.5 mm, tinned, black, Tray		

SL-THR 3.5/135F

High-temperature-resistant male header, 3.50 mm pitch.

- **Plugging direction parallel (90°), straight 180° or angled (135°) to PCB**
- **Housing variants: closed side (G), screw flange (F), solder flange (LF) or snap-on solder flange (RF)**
- **Optimised for the SMT process**
- **Pin length 3.2 mm universal for all soldering methods**
- **Pin length 1.5 mm optimised for reflow soldering methods**
- **Packed either in a box (BX) or tape-on-reel (RL)**
- **Male header can be coded**

General ordering data

Type	SL-SMT 3.50/20/135F 3.2 ...	Version	Product data	Packaging
Order No.	1003700000	PCB plug-in connector, male header, Flange, THT/THR solder	IEC: 320 V / 15 A	Box
GTIN (EAN)	4032248700325	connection, 3.50 mm, Number of poles: 20, 135°, Solder pin length	UL: 300 V / 10 A	
Qty.	24 pc(s).	(l): 3.2 mm, tinned, black, Box		

OMNIMATE Signal - series BL/SL 3.50
BL 3.50/20/90 SN OR BX

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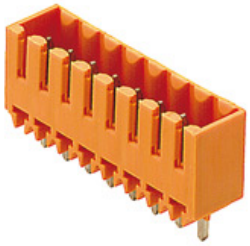
Mating connector (fully pluggable)

SL 3.50/180G



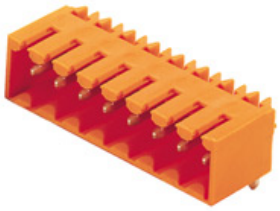
Pin headers for wave soldering in 3.50 mm pitch

- Plugging direction is parallel (90°), straight 180° or angled (135°) to the PCB
- Housing variant: screw flange (F)
- Packed in a cardboard box (BX)
- Pin header can be coded

General ordering data

Type	SL 3.50/20/180G 4.5SN B ...	Version	Product data	Packaging
Order No.	1618640000	PCB plug-in connector, male header, closed side, THT solder	IEC: 320 V / 17 A	Box
GTIN (EAN)	4008190125448	connection, 3.50 mm, Number of poles: 20, 180°, Solder pin length	UL: 300 V / 10 A	
Qty.	20 pc(s).	(l): 4.5 mm, tinned, black, Box		
Type	SL 3.50/20/180G 3.2SN O ...	Version	Product data	Packaging
Order No.	1621820000	PCB plug-in connector, male header, closed side, THT solder	IEC: 320 V / 17 A	Box
GTIN (EAN)	4008190181116	connection, 3.50 mm, Number of poles: 20, 180°, Solder pin length	UL: 300 V / 10 A	
Qty.	20 pc(s).	(l): 3.2 mm, tinned, orange, Box		

SL 3.50/90G



Pin headers for wave soldering in 3.50 mm pitch

- Plugging direction is parallel (90°), straight 180° or angled (135°) to the PCB
- Housing variant: screw flange (F)
- Packed in a cardboard box (BX)
- Pin header can be coded

General ordering data

Type	SL 3.50/20/90G 3.2SN DK ...	Version	Product data	Packaging
Order No.	1619720000	PCB plug-in connector, male header, closed side, THT solder	IEC: / 17 A	Box
GTIN (EAN)	4008190145750	connection, 3.50 mm, Number of poles: 20, 90°, Solder pin length (l):	UL: 300 V / 10 A	
Qty.	20 pc(s).	3.2 mm, tinned, Signal green, Box		
Type	SL 3.50/20/90G 3.2SN OR ...	Version	Product data	Packaging
Order No.	1619410000	PCB plug-in connector, male header, closed side, THT solder	IEC: / 17 A	Box
GTIN (EAN)	4008190139605	connection, 3.50 mm, Number of poles: 20, 90°, Solder pin length (l):	UL: 300 V / 10 A	
Qty.	20 pc(s).	3.2 mm, tinned, orange, Box		
Type	SL 3.50/20/90G 4.5SN BK ...	Version	Product data	Packaging
Order No.	1618010000	PCB plug-in connector, male header, closed side, THT solder	IEC: / 17 A	Box
GTIN (EAN)	4008190115517	connection, 3.50 mm, Number of poles: 20, 90°, Solder pin length (l):	UL: 300 V / 10 A	
Qty.	20 pc(s).	4.5 mm, tinned, black, Box		
Type	SL 3.50/20/90G 4.5SN OR ...	Version	Product data	Packaging
Order No.	1617930000	PCB plug-in connector, male header, closed side, THT solder	IEC: / 17 A	Box
GTIN (EAN)	4008190114497	connection, 3.50 mm, Number of poles: 20, 90°, Solder pin length (l):	UL: 300 V / 10 A	
Qty.	20 pc(s).	4.5 mm, tinned, orange, Box		

OMNIMATE Signal - series BL/SL 3.50
BL 3.50/20/90 SN OR BX

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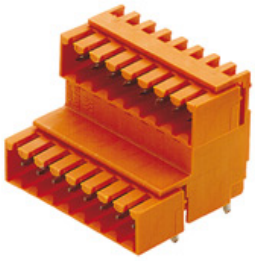
Mating connector (fully pluggable)

Type	SL 3.50/20/90G 3.2SN GY ...	Version	Product data	Packaging
Order No.	1619640000	PCB plug-in connector, male header, closed side, THT solder	IEC: / 17 A	Box
GTIN (EAN)	4008190144197	connection, 3.50 mm, Number of poles: 20, 90°, Solder pin length (l):	UL: 300 V / 10 A	
Qty.	20 pc(s).	3.2 mm, tinned, Pebble grey, Box		

SLD 3.50V/90G

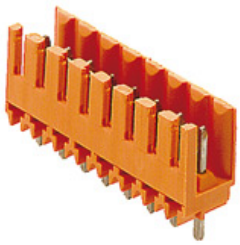


Double-level, staggered pin header for wave soldering at 3.50 mm pitch. They are available in closed and flanged versions. The male connectors provide space for labelling and can be coded.

General ordering data

Type	SLD 3.50V/40/90G 3.2SN ...	Version	Product data	Packaging
Order No.	1642330000	PCB plug-in connector, male header, closed side, THT solder	IEC: 200 V / 10.5 A	Box
GTIN (EAN)	4008190280857	connection, 3.50 mm, Number of poles: 40, 90°, Solder pin length (l):	UL: 300 V / 8 A	
Qty.	10 pc(s).	3.2 mm, tinned, orange, Box		

SL 3.50/180



Pin headers for wave soldering in 3.50 mm pitch

- Plugging direction is parallel (90°), straight 180° or angled (135°) to the PCB
- Housing variant: screw flange (F)
- Packed in a cardboard box (BX)
- Pin header can be coded

General ordering data

Type	SL 3.50/20/180 3.2SN OR ...	Version	Product data	Packaging
Order No.	1621430000	PCB plug-in connector, male header, open side, THT solder	IEC: 320 V / 17 A	Box
GTIN (EAN)	4008190172510	connection, 3.50 mm, Number of poles: 20, 180°, Solder pin length	UL: 300 V / 10 A	
Qty.	20 pc(s).	(l): 3.2 mm, tinned, orange, Box		

OMNIMATE Signal - series BL/SL 3.50
BL 3.50/20/90 SN OR BX

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Mating connector (fully pluggable)

SL-SMT 3.5/180G Tray

High-temperature-resistant male header, 3.50 mm pitch.

- **Plugging direction parallel (90°), straight 180° or angled (135°) to PCB**
- **Housing variants: closed side (G), screw flange (F), solder flange (LF) or snap-on solder flange (RF)**
- **Optimised for the SMT process**
- **Pin length 3.2 mm universal for all soldering methods**
- **Pin length 1.5 mm optimised for reflow soldering methods**
- **Packed either in a box (BX) or tape-on-reel (RL)**
- **Male header can be coded**

General ordering data

Type	SL-SMT 3.50/20/180G 1.5 ...	Version	Product data	Packaging
Order No.	1753163001	PCB plug-in connector, male header, closed side, THT/THR solder	IEC: 320 V / 15 A	Tray
GTIN (EAN)	4032248133031	connection, 3.50 mm, Number of poles: 20, 180°, Solder pin length	UL: 300 V / 10 A	
Qty.	18 pc(s).	(l): 1.5 mm, tinned, black, Tray		

SL-SMT 3.5/90G Box

High-temperature-resistant male header, 3.50 mm pitch.

- **Plugging direction parallel (90°), straight 180° or angled (135°) to PCB**
- **Housing variants: closed side (G), screw flange (F), solder flange (LF) or snap-on solder flange (RF)**
- **Optimised for the SMT process**
- **Pin length 3.2 mm universal for all soldering methods**
- **Pin length 1.5 mm optimised for reflow soldering methods**
- **Packed either in a box (BX) or tape-on-reel (RL)**
- **Male header can be coded**

General ordering data

Type	SL-SMT 3.50/20/90G 1.5S ...	Version	Product data	Packaging
Order No.	1761722001	PCB plug-in connector, male header, closed side, THT/THR solder	IEC: 320 V / 15 A	Box
GTIN (EAN)	4032248132317	connection, 3.50 mm, Number of poles: 20, 90°, Solder pin length (l):	UL: 300 V / 10 A	
Qty.	20 pc(s).	1.5 mm, tinned, black, Box		

OMNIMATE Signal - series BL/SL 3.50
BL 3.50/20/90 SN OR BX

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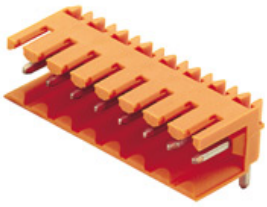
Mating connector (fully pluggable)

Type	SL-SMT 3.50/20/90G 3.2S ...	Version	Product data	Packaging
Order No.	1841810000	PCB plug-in connector, male header, closed side, THT/THR solder	IEC: 320 V / 15 A	Box
GTIN (EAN)	4032248353163	connection, 3.50 mm, Number of poles: 20, 90°, Solder pin length (l):	UL: 300 V / 10 A	
Qty.	20 pc(s).	3.2 mm, tinned, black, Box		

SL 3.50/90



Pin headers for wave soldering in 3.50 mm pitch

- Plugging direction is parallel (90°), straight 180° or angled (135°) to the PCB
- Housing variant: screw flange (F)
- Packed in a cardboard box (BX)
- Pin header can be coded

General ordering data

Type	SL 3.50/20/90 4.5SN BK ...	Version	Product data	Packaging
Order No.	1617850000	PCB plug-in connector, male header, open side, THT solder	IEC: 320 V / 17 A	Box
GTIN (EAN)	4008190113384	connection, 3.50 mm, Number of poles: 20, 90°, Solder pin length (l):	UL: 300 V / 10 A	
Qty.	20 pc(s).	4.5 mm, tinned, black, Box		
Type	SL 3.50/20/90 3.2SN OR ...	Version	Product data	Packaging
Order No.	1619020000	PCB plug-in connector, male header, open side, THT solder	IEC: 320 V / 17 A	Box
GTIN (EAN)	4008190132262	connection, 3.50 mm, Number of poles: 20, 90°, Solder pin length (l):	UL: 300 V / 10 A	
Qty.	20 pc(s).	3.2 mm, tinned, orange, Box		
Type	SL 3.50/20/90 3.2SN GY ...	Version	Product data	Packaging
Order No.	1619250000	PCB plug-in connector, male header, open side, THT solder	IEC: 320 V / 17 A	Box
GTIN (EAN)	4008190136987	connection, 3.50 mm, Number of poles: 20, 90°, Solder pin length (l):	UL: 300 V / 10 A	
Qty.	20 pc(s).	3.2 mm, tinned, Pebble grey, Box		
Type	SL 3.50/20/90 3.2SN DKG ...	Version	Product data	Packaging
Order No.	1619330000	PCB plug-in connector, male header, open side, THT solder	IEC: 320 V / 17 A	Box
GTIN (EAN)	4008190137991	connection, 3.50 mm, Number of poles: 20, 90°, Solder pin length (l):	UL: 300 V / 10 A	
Qty.	20 pc(s).	3.2 mm, tinned, Signal green, Box		
Type	SL 3.50/20/90 4.5SN OR ...	Version	Product data	Packaging
Order No.	1617770000	PCB plug-in connector, male header, open side, THT solder	IEC: 320 V / 17 A	Box
GTIN (EAN)	4008190111021	connection, 3.50 mm, Number of poles: 20, 90°, Solder pin length (l):	UL: 300 V / 10 A	
Qty.	20 pc(s).	4.5 mm, tinned, orange, Box		

OMNIMATE Signal - series BL/SL 3.50
BL 3.50/20/90 SN OR BX

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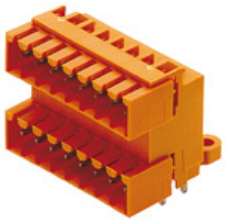
Mating connector (fully pluggable)

SLD 3.50/90G

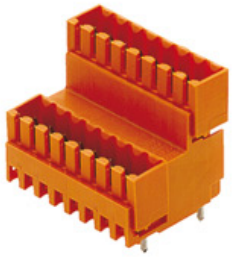


Two-tier pin header for wave soldering in 3.50 mm pitch. The connector is available in open, closed and flange versions. The male connectors provide space for labelling and can be coded. Packed in a cardboard box.

General ordering data

Type	SLD 3.50/40/90G 3.2SN O ...	Version	Product data	Packaging
Order No.	1633760000	PCB plug-in connector, male header, closed side, THT solder	IEC: 200 V / 10.5 A	Box
GTIN (EAN)	4008190258214	connection, 3.50 mm, Number of poles: 40, 90°, Solder pin length (l):	UL: 300 V / 8 A	
Qty.	10 pc(s).	3.2 mm, tinned, orange, Box		
Type	SLD 3.50/40/90G 3.2SN D ...	Version	Product data	Packaging
Order No.	1675030000	PCB plug-in connector, male header, closed side, THT solder	IEC: 200 V / 10.5 A	Box
GTIN (EAN)	4008190445720	connection, 3.50 mm, Number of poles: 40, 90°, Solder pin length (l):	UL: 300 V / 8 A	
Qty.	10 pc(s).	3.2 mm, tinned, Signal green, Box		
Type	SLD 3.50/40/90G 4.5SN B ...	Version	Product data	Packaging
Order No.	1634450000	PCB plug-in connector, male header, closed side, THT solder	IEC: 200 V / 10.5 A	Box
GTIN (EAN)	4008190258900	connection, 3.50 mm, Number of poles: 40, 90°, Solder pin length (l):	UL: 300 V / 8 A	
Qty.	10 pc(s).	4.5 mm, tinned, black, Box		

SLD 3.50V/180G



Double-level, staggered pin header for wave soldering at 3.50 mm pitch. They are available in closed and flanged versions. The male connectors provide space for labelling and can be coded.

General ordering data

Type	SLD 3.50V/40/180G 3.2SN ...	Version	Product data	Packaging
Order No.	1641200000	PCB plug-in connector, male header, closed side, THT solder	IEC: 200 V / 10.5 A	Box
GTIN (EAN)	4008190279608	connection, 3.50 mm, Number of poles: 40, 180°, Solder pin length	UL: 300 V / 8 A	
Qty.	10 pc(s).	(l): 3.2 mm, tinned, orange, Box		

OMNIMATE Signal - series BL/SL 3.50
BL 3.50/20/90 SN OR BX

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Accessories

Coding elements

Only connects what is supposed to be connected: the right connection at the right place.
Coding elements and locking devices clearly assign connecting elements during the manufacturing process and operation
The coding elements and locking devices are inserted prior to assembly or during the cable assembly phase.
The Weidmüller alternative: configure online using the variant configurator to precode prior to delivery.
Incorrect assembly on the circuit board and incorrect plugging of connecting elements is no longer possible.
The advantage: no troubleshooting during manufacture and no operational errors by the user.

General ordering data

Type	BL SL 3.5 KO SW	Version	Product data	Packaging
Order No.	1610100000	PCB plug-in connector, Accessories, Coding element, black, Number		Box
GTIN (EAN)	4008190187637	of poles: 1		
Qty.	100 pc(s).			

Type	BL SL 3.5 KO OR	Version	Product data	Packaging
Order No.	1693430000	PCB plug-in connector, Accessories, Coding element, orange, Number		Box
GTIN (EAN)	4008190867447	of poles: 1		
Qty.	100 pc(s).			

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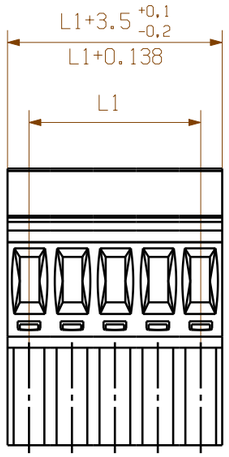
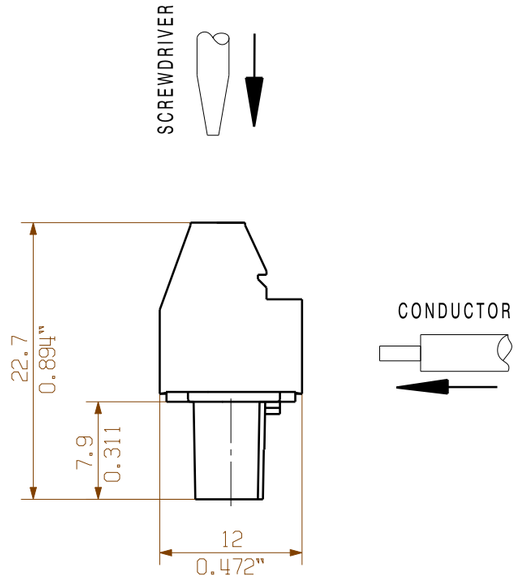
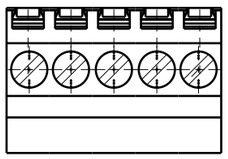
THE GERMAN VERSION IS BINDING







n	L1[mm]	L1 [Inch]
24	80,50	3,169
23	77,00	3,031
22	73,50	2,894
21	70,00	2,756
20	66,50	2,618
19	63,00	2,480
18	59,50	2,343
17	56,00	2,205
16	52,50	2,067
15	49,00	1,929
14	45,50	1,791
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

SHOWN : BL 3.50/05/90

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

Weidmüller connectors are tested to the DIN VDE 0627 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 occuring of electrical, mechanical, thermic and corrosive stress will be satisfied.

RoHS COMPLIANT

METRIC TOLERANCES:
X. = ±0.3
X.X = ±0.1
X.XX = ±0.05

60340/0
15.09.11 HELIS_MA 01
MODIFICATION

CAT.NO.: .

Weidmüller

C 21346 15
DRAWING NO. ISSUE NO.
SHEET 01 OF 03 SHEETS

	DATE	NAME
DRAWN	24.07.2003	KOWOLLIK_R
RESPONSIBLE		LANG_T
CHECKED	15.09.2011	RIEPENHAUSEN_H
APPROVED		HECKERT_M

SCALE: 5/1
SUPERSEDES: .

BL 3.50/../90...
BUCHSENSTECKER
FEMALE PLUG

PRODUCT FILE: BL 3.50 7369

WEITERGABE SOWIE VERVIELFAELTIGUNG 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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