

BLZF 3.50/20/180 SN OR BX PRT

Weidmüller Interface GmbH & Co. KG

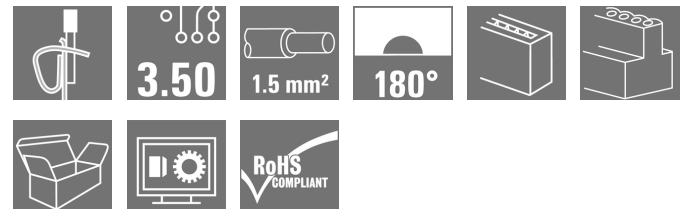
Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Product image



Similar to illustration

Female connectors with tension clamp system for connecting cables in 3.50 pitch. They provide space for labelling and can be coded.

General ordering data

Version	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 20, 180°, Tension-clamp connection, Clamping range, max.: 1.5 mm², Box
Order No.	1861450000
Type	BLZF 3.50/20/180 SN OR BX PRT
GTIN (EAN)	4032248421183
Qty.	20 pc(s).
Product data	IEC: 320 V / 14.5 A / 0.2 - 1.5 mm² UL: 300 V / 10 A / AWG 26 - AWG 14
Packaging	Box

Creation date April 15, 2021 5:52:18 PM CEST

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Technical data
Dimensions and weights

Depth	22 mm	Depth (inches)	0.866 inch
Height	13 mm	Height (inches)	0.512 inch
Net weight	20.45 g	Width	70 mm
Width (inches)	2.756 inch		

System Parameters

Product family	OMNIMATE Signal - series BL/SL 3.50	Type of connection	Field connection
Wire connection method	Tension-clamp connection	Pitch in mm (P)	3.5 mm
Pitch in inches (P)	0.138 inch	Conductor outlet direction	180°
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 mm ²
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	≤5 mΩ	Can be coded	Yes
Stripping length	10 mm	Screwdriver blade	0.4 x 2.5
Screwdriver blade standard	DIN 5264-A	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	Contact material	Copper alloy
Contact surface	tinned	Layer structure of plug contact	4...8 μm Sn hot-dip tinned
Storage temperature, min.	-40 °C	Storage temperature, max.	70 °C
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.	0.13 mm ²
Clamping range, max.	1.5 mm ²
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 ²
Solid, max. H05(07) V-U	1.5 mm ²
Flexible, min. H05(07) V-K	0.2 mm ²
Flexible, max. H05(07) V-K	1.5 mm ²
w. plastic collar ferrule, DIN 46228 pt 4, 0.2 mm ² min.	
w. plastic collar ferrule, DIN 46228 pt 4, 1 mm ² max.	
w. wire end ferrule, DIN 46228 pt 1, min.	0.2 mm ²
w. wire end ferrule, DIN 46228 pt 1, max.	1.5 mm ²
Outer diameter of insulation, max.	2.9 mm
Plug gauge in accordance with EN 60999 a x b; ø	2.4 mm x 1.5 mm

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Clampable conductor	Cross-section for conductor connection	Type	fine-wired	
		nominal	0.5 mm ²	
	wire end ferrule	Stripping length	nominal	12 mm
		Recommended wire-end ferrule	H0.5/16 OR	
		Stripping length	nominal	10 mm
		Recommended wire-end ferrule	H0.5/10	
	Cross-section for conductor connection	Type	fine-wired	
		nominal	0.75 mm ²	
	wire end ferrule	Stripping length	nominal	12 mm
		Recommended wire-end ferrule	H0.75/16 W	
		Stripping length	nominal	10 mm
		Recommended wire-end ferrule	H0.75/10	
Cross-section for conductor connection	Type	fine-wired		
	nominal	1 mm ²		
wire end ferrule	Stripping length	nominal	12 mm	
	Recommended wire-end ferrule	H1.0/16D R		
	Stripping length	nominal	10 mm	
	Recommended wire-end ferrule	H1.0/10		
Cross-section for conductor connection	Type	fine-wired		
	nominal	1.5 mm ²		
wire end ferrule	Stripping length	nominal	10 mm	
	Recommended wire-end ferrule	H1.5/10		

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.

Rated data acc. to IEC

tested acc. to standard	IEC 60664-1, IEC 61984	Rated current, min. number of poles (Tu=20°C)	14.5 A
Rated current, max. number of poles (Tu=20°C)	10 A	Rated current, min. number of poles (Tu=40°C)	12 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

Rated data acc. to CSA

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 26	Wire cross-section, AWG, max.	AWG 14

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Technical data

Rated data acc. to UL 1059

Institute (UR)



Certificate No. (UR)

E60693

Rated voltage (Use group B / UL 1059)	300 V
Rated current (Use group B / UL 1059)	10 A
Wire cross-section, AWG, min.	AWG 26
Reference to approval values	Specifications are maximum values, details - see approval certificate.

Rated voltage (Use group D / UL 1059)	300 V
Rated current (Use group D / UL 1059)	10 A
Wire cross-section, AWG, max.	AWG 14

Packing

Packaging	Box	VPE length	88 mm
VPE width	82 mm	VPE height	78 mm

Type tests

Test: Durability of markings	Standard	DIN EN 61984 section 7.3.2 / 09.02 taking pattern from DIN EN 60068-2-70 / 07.96	
	Test	mark of origin, type identification, rated voltage, rated cross-section, pitch, type of material, approval marking SEV, approval marking CSA	
	Evaluation	available	
	Test	approval marking UL	
	Evaluation	on packaging label	
	Test	durability	
Test: Clampable cross section	Evaluation	passed	
	Standard	DIN EN 60999-1 section 7 and 9.1 / 12.00, DIN EN 60947-1 section 8.2.4.5.1 / 12.99	
	Conductor type	Type of conductor and conductor cross-section	solid 0.2 mm ²
		Type of conductor and conductor cross-section	stranded 0.5 mm ²
		Type of conductor and conductor cross-section	solid 1.5 mm ²
		Type of conductor and conductor cross-section	stranded 1.5 mm ²
		Type of conductor and conductor cross-section	AWG 28/1
		Type of conductor and conductor cross-section	AWG 28/19
		Type of conductor and conductor cross-section	AWG 16/1
		Type of conductor and conductor cross-section	AWG 16/19
Evaluation	passed		

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Technical data

Test for damage to and accidental loosening of conductors

Standard	DIN EN 60999-1 section 9.4 / 12.00	
Requirement	0.2 kg	
Conductor type	Type of conductor and conductor cross-section	solid 0.2 mm ²
	Type of conductor and conductor cross-section	AWG 28/1
	Type of conductor and conductor cross-section	AWG 28/19
Evaluation	passed	
Requirement	0.3 kg	
Conductor type	Type of conductor and conductor cross-section	stranded 0.5 mm ²
	Evaluation	passed
Requirement	0.4 kg	
Conductor type	Type of conductor and conductor cross-section	solid 1.5 mm ²
	Type of conductor and conductor cross-section	stranded 1.5 mm ²
	Type of conductor and conductor cross-section	AWG 16/1
	Type of conductor and conductor cross-section	AWG 16/19
Evaluation	passed	

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Technical data

Pull-out test	Standard	DIN EN 60999-1 section 9.5 / 12.00		
	Requirement	≥5 N		
	Conductor type	Type of conductor and conductor cross-section	AWG 28/1	
		Type of conductor and conductor cross-section	AWG 28/19	
	Evaluation	passed		
	Requirement	≥10 N		
	Conductor type	Type of conductor and conductor cross-section	H05V-U0.2	
		Evaluation	passed	
	Requirement	≥20 N		
	Conductor type	Type of conductor and conductor cross-section	H05V-U0.5	
		Evaluation	passed	
	Requirement	≥40 N		
	Conductor type	Type of conductor and conductor cross-section	H05V-U1.5	
		Type of conductor and conductor cross-section	H05V-K1.5	
		Type of conductor and conductor cross-section	AWG 16/1	
Type of conductor and conductor cross-section		AWG 16/19		
Evaluation	passed			

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	ECLASS 11.0	27-46-02-02

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

Approvals

Approvals



ROHS	Conform
UL File Number Search	E60693

Data sheet**BLZF 3.50/20/180 SN OR BX PRT**

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Technical data**Downloads**

Approval/Certificate/Document of Conformity	Declaration of the Manufacturer
Engineering Data	WSCAD
Brochure/Catalogue	Catalogues in PDF-format

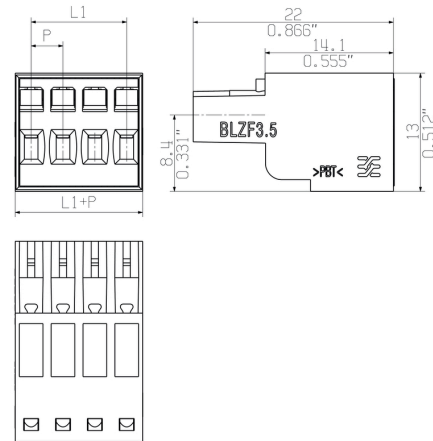
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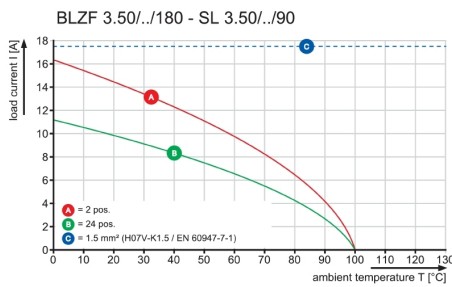
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Drawings

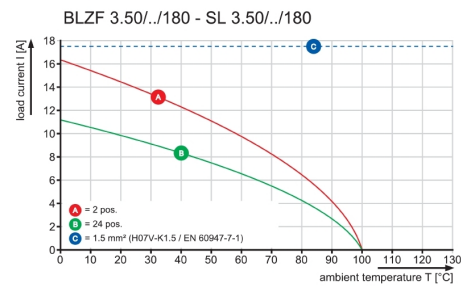
Dimensional drawing



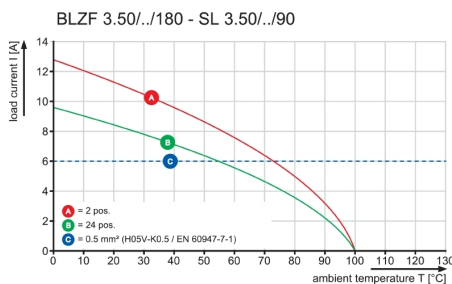
Graph



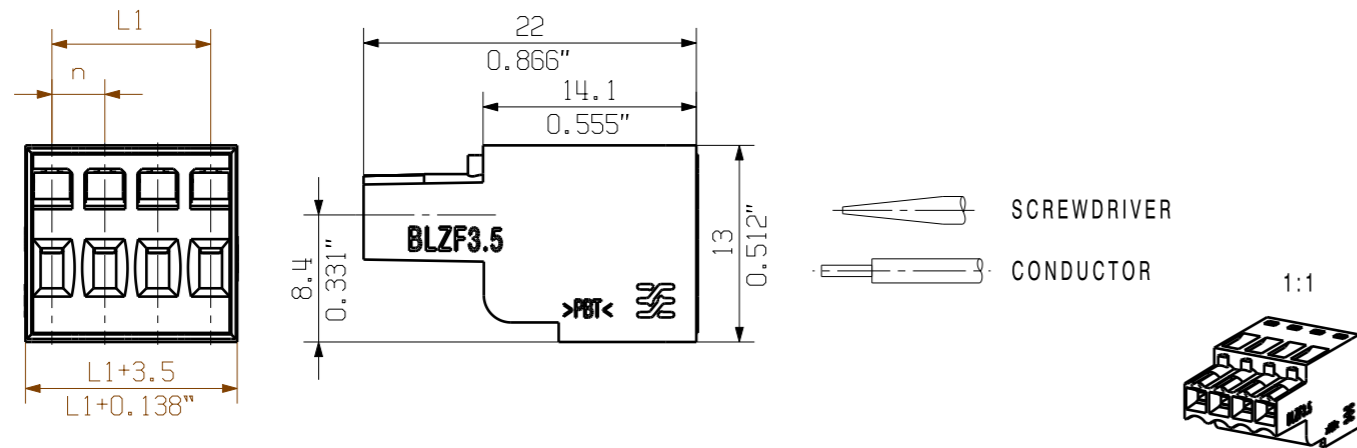
Graph



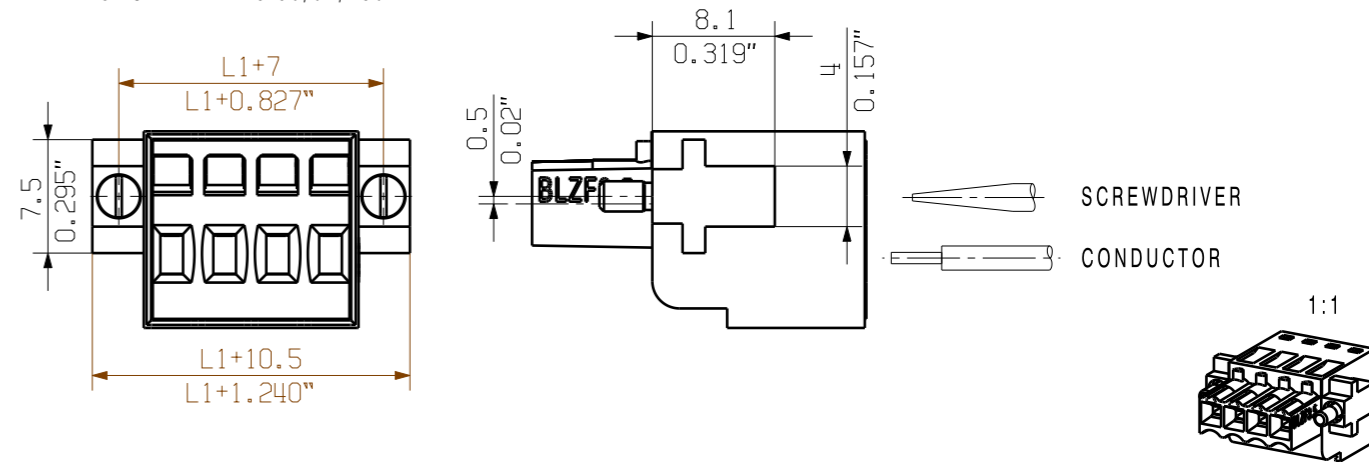
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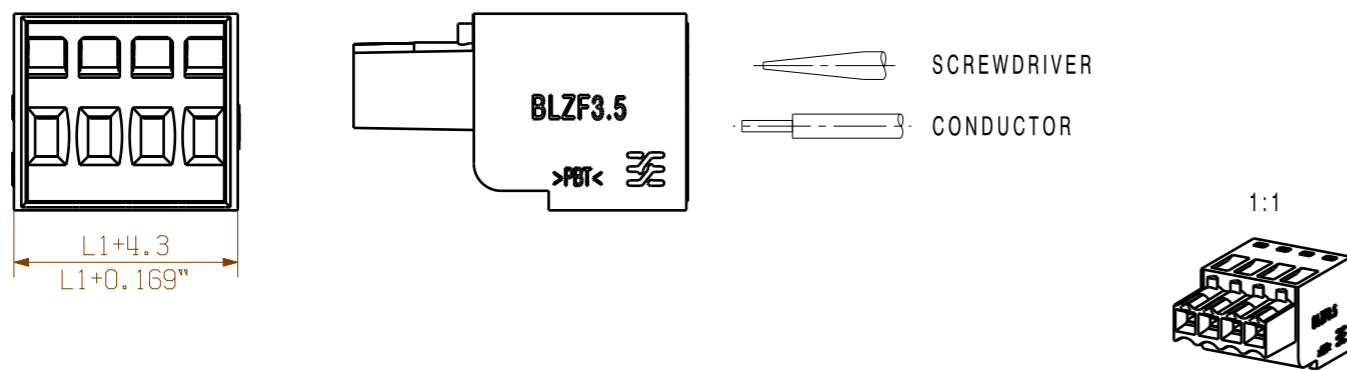
SHOWN: BLZF 3.50/04/180



SHOWN: BLZF 3.50/04/180F



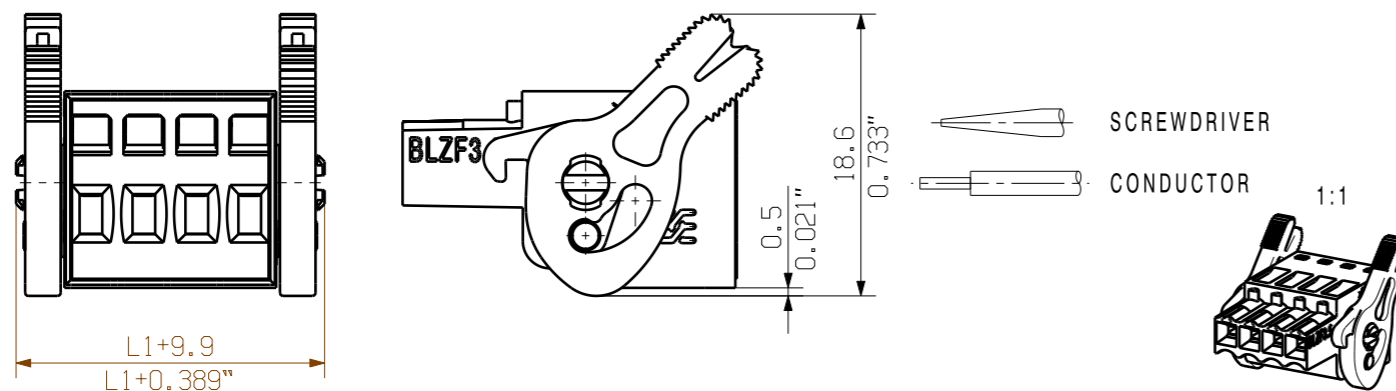
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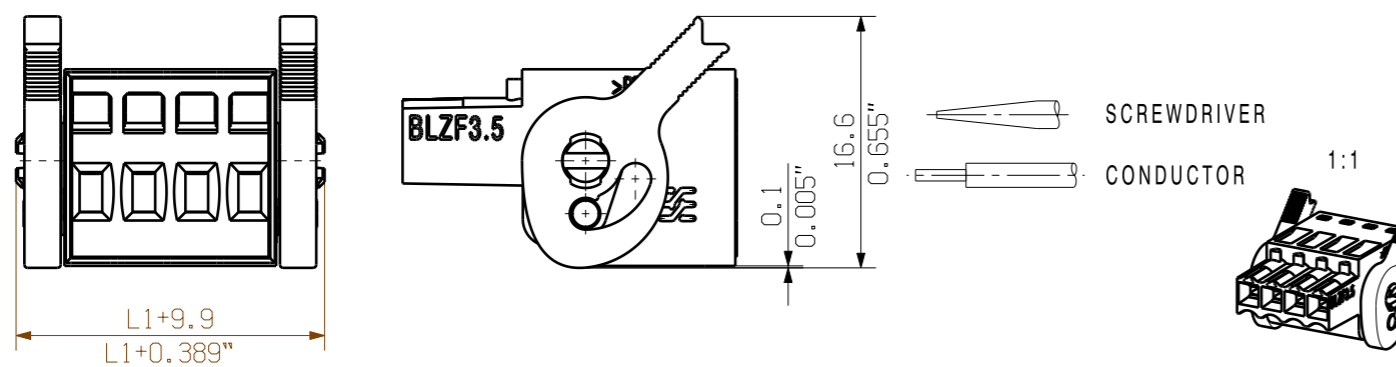
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SHOWN: BLZF 3.50/04/180LR



SHOWN: BLZF 3.50/04/180LH



ALLGEMEINGUELTIGE KUNDENZEICHNUNG, AKTUELLER STAND NUR AUF ANFRAGE
GENERAL CUSTOMER DRAWING, TOPICAL VERSION ONLY IF REQUIRED

For the mounting of PCBs, it should be noted that the rated data given in the catalogue relates only to the connection elements. The necessary creepage and clearance paths must be observed in connection with the respective applicant in accordance with 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 connectors are used to the intended purpose, all requirements with respect to the occurring of electrical, mechanical, thermic and corrosive stress will be satisfied.

POLZAHL POLES	L1 (mm)	L1 (inch)
24	80.5	3.169
23	77.0	3.032
22	73.5	2.894
21	70.0	2.756
20	66.5	2.618
19	63.0	2.480
18	59.5	2.343
17	56.0	2.205
16	52.5	2.067
15	49.0	1.929
14	45.5	1.791
13	42.0	1.654
12	38.5	1.516
11	35.0	1.378
10	31.5	1.240
9	28.0	1.102
8	24.5	0.965
7	21.0	0.827
6	17.5	0.689
5	14.0	0.551
4	10.5	0.413
3	7.0	0.276
2	3.5	0.138

	DIN ISO 2768-m	Cat.no.: .	
	93783/5 24.11.17 HELIS_MA 02		
Modification		3 23142	
		Drawing no. 3 23142 Issue no. 20 Sheet 01 of 01 sheets	
Scale: 2/1	Drawn: 10.12.2007 HELIS_MA Responsible: AMANN_A Checked: 08.01.2018 HELIS_MA Approved: LANG_T	BLZF 3.50/././180.. BUCHSENSTECKER FEMALE PLUG	
Supersedes: .	Product file: BLZF 3.50	7357	