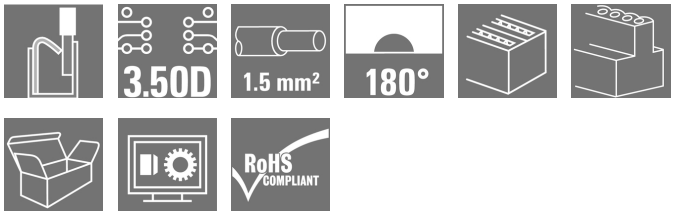
OMNIMATE Signal - series B2C/S2C 3.50 - 2-row
B2CF 3.50/20/180 SN BK BX

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 26
D-32758 Detmold
Germany
Fon: +49 5231 14-0
Fax: +49 5231 14-292083
www.weidmueller.com

Product image



Similar to illustration



Two-row female plug with PUSH IN spring connection

- Simply insert the prepared wire - and you're done
- Intuitive to use because
- the wire-entry area and handling area are clearly separated
- Integrated push-buttons for opening the terminal point
- High component density because of low heights
- Optional: locking and releasing require no tools when using Weidmüller's
  release latch (LR) or release lever (LH)

General ordering data

Type	B2CF 3.50/20/180 SN BK BX
Order No.	1277550000
Version	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 20, 180°, PUSH IN, Spring connection, Clamping range, max. : 1.5 mm², Box
GTIN (EAN)	4050118067415
Qty.	48 pc(s).
Product data	IEC: 320 V / 13.4 A / 0.14 - 1.5 mm² UL: 300 V / 9.5 A / AWG 26 - AWG 16
Packaging	Box

Creation date August 16, 2020 12:13:01 PM CEST

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Technical data

Dimensions and weights

Width	35	Width (inches)	1.378 inch
Height	15.2 mm	Height (inches)	0.598 inch
Depth	26.25 mm	Depth (inches)	1.033 inch
Net weight	13.16 g		

System Parameters

Product family	OMNIMATE Signal - series B2C/S2C 3.50 - 2-row	Type of connection	Field connection
Wire connection method	PUSH IN, Spring 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	31.5 mm
L1 in inches	1.24 inch	Number of rows	1
Pin series quantity	2	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
Can be coded	Yes	Stripping length	10 mm
Actuating force actuating element, max.	40 N	Screwdriver blade	0.4 x 2.5
Screwdriver blade standard	DIN 5264	Plugging cycles	25
Plugging force/pole, max.	5 N	Pulling force/pole, max.	5 N

Material data

Insulating material	PA 66 GF 30	Colour	black
Colour of operational elements	orange	Material of operational elements	PA 66/6
Colour chart (similar)	RAL 9011	Insulating material group	II
Comparative Tracking Index (CTI)	≥ 600	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	2...5 µm Sn hot-dip tinned	Storage temperature, min.	-40 °C
Storage temperature, max.	70 °C	Operating temperature, min.	-50 °C
Operating temperature, max.	120 °C	Temperature range, installation, min.	-40 °C
Temperature range, installation, max.	120 °C		

Conductors suitable for connection

Clamping range, min.	0.14 mm²
Clamping range, max.	1.5 mm²
Solid, min. H05(07) V-U	0.14 mm²
Solid, max. H05(07) V-U	1.5 mm²
Flexible, min. H05(07) V-K	0.14 mm²
Flexible, max. H05(07) V-K	1.5 mm²
w. plastic collar ferrule, DIN 46228 pt 4, min.	0.14 mm²
w. plastic collar ferrule, DIN 46228 pt 4, max.	1 mm²
w. wire end ferrule, DIN 46228 pt 1, min.	0.14 mm²
w. wire end ferrule, DIN 46228 pt 1, max.	1.5 mm²

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Technical data

Clampable conductor	Cross-section for conductor connection	Type	fine-wired	
		nominal	0.5 mm²	
	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 mm²	
	wire end ferrule	Stripping length	nominal	14 mm
		Recommended wire-end ferrule	H0,75/18 W	
		Stripping length	nominal	10 mm
		Recommended wire-end ferrule	H0,75/10	
	Cross-section for conductor connection	Type	fine-wired	
		nominal	1 mm²	
	wire end ferrule	Stripping length	nominal	15 mm
		Recommended wire-end ferrule	H1,0/18D R	
		Stripping length	nominal	10 mm
		Recommended wire-end ferrule	H1,0/10	
	Cross-section for conductor connection	Type	fine-wired	
		nominal	1.5 mm²	
	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.			
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)	13.4 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)	9 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 80 A

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Technical data

Rated data acc. to CSA

Institute (CSA)		Certificate No. (CSA)	200039-1121690
Rated voltage (Use group B / CSA)	300 V	Rated voltage (Use group C / CSA)	50 V
Rated voltage (Use group D / CSA)	300 V	Rated current (Use group B / CSA)	9.5 A
Rated current (Use group C / CSA)	9.5 A	Rated current (Use group D / CSA)	9.5 A
Wire cross-section, AWG, min.	AWG 26	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 C / UL 1059)	50 V
Rated voltage (Use group D / UL 1059)	300 V	Rated current (Use group B / UL 1059)	9.5 A
Rated current (Use group C / UL 1059)	9.5 A	Rated current (Use group D / UL 1059)	9.5 A
Wire cross-section, AWG, min.	AWG 26	Wire cross-section, AWG, max.	AWG 16
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

Packing

Packaging	Box	VPE length	35 mm
VPE width	125 mm	VPE height	350 mm

Type tests

Test: Durability of markings	Standard	IEC 61984 section 6.2 and 7.3.2 / 10.11 taking pattern from IEC 60068-2-70 / 12.95
	Test	mark of origin, type identification, pitch, type of material, date clock, approval marking UL, approval marking cULus
	Evaluation	available
	Test	durability
	Evaluation	passed
Test: Misengagement (Non-interchangeability)	Standard	IEC 61984 section 6.3 and 6.9.1 / 10.11, IEC 60512-13-5 / 02.06
	Test	180° turned without coding elements
	Evaluation	passed
	Test	180° turned with coding elements
	Evaluation	passed
	Test	visual examination
	Evaluation	passed

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Technical data

Test: Clampable cross section	Standard	IEC 60999-1 section 7 and 9.1 / 11.99, IEC 60947-1 section 8.2.4.5.1 / 03.11	
	Conductor type	Type of conductor and conductor cross-section	solid 0.14 mm²
		Type of conductor and conductor cross-section	stranded 0.14 mm²
		Type of conductor and conductor cross-section	solid 1.5 mm²
		Type of conductor and conductor cross-section	stranded 1.5 mm²
		Type of conductor and conductor cross-section	AWG 26/1
		Type of conductor and conductor cross-section	AWG 26/19
		Type of conductor and conductor cross-section	AWG 16/1
		Type of conductor and conductor cross-section	AWG 16/19
	Evaluation	passed	
Test for damage to and accidental loosening of conductors	Standard	IEC 60999-1 section 9.4 / 11.99	
	Requirement	0.2 kg	
	Conductor type	Type of conductor and conductor cross-section	AWG 26/1
		Type of conductor and conductor cross-section	AWG 26/19
	Evaluation	passed	
	Requirement	0.3 kg	
	Conductor type	Type of conductor and conductor cross-section	H05V-U0.75
		Type of conductor and conductor cross-section	H05V-K0.75
	Evaluation	passed	
	Requirement	0.4 kg	
	Conductor type	Type of conductor and conductor cross-section	H07V-U1.5
		Type of conductor and conductor cross-section	H07V-K1.5
		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	IEC 60999-1 section 9.5 / 11.99	
	Requirement	≥10 N	
	Conductor type	Type of conductor and conductor cross-section	AWG 26/1
		Type of conductor and conductor cross-section	AWG 26/19
	Evaluation	passed	
	Requirement	≥20 N	
	Conductor type	Type of conductor and conductor cross-section	H05V-U0.75
		Type of conductor and conductor cross-section	H05V-K0.75
	Evaluation	passed	
	Requirement	≥40 N	
	Conductor type	Type of conductor and conductor cross-section	H07V-U1.5
		Type of conductor and conductor cross-section	H07V-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		

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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. • Crimp shape A for wire-end ferrules with crimping tools PZ 1,5 (order no. 9005990000) or PZ 6/5 (order no. 9011460000) for larger wire cross-sections recommended. • 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. • Max. outer diameter of the conductor 2.6 mm Wire-end ferrule w/plastic collar DIN 46228/4 or Weidmüller colour code • 1.00mm² [H1.0/18D] mtl. ferrule leng. 12mm, stripping leng. 15mm • 0.75mm² [H0.75/18D] mtl. ferrule leng. 12mm, stripping leng. 14mm • 0.50mm² [H0.5/16D] mtl. ferrule leng. 10mm, stripping leng. 12mm • 0.34mm² [H0.34/12] mtl. ferrule leng. 8mm, stripping leng. 10mm • 0.25mm² [H0.25/12] mtl. ferrule leng. 8mm, stripping leng. 10mm • 0.14mm² [H0.14/12] mtl. ferrule leng. 8mm, stripping leng. 10mm Wire-end ferrule w/o plastic collar acc. to DIN 46228/1 • 1.50mm² [H1.5/10] mtl. ferrule leng. 10mm, stripping leng. 10mm • Long term storage of the product with average temperature of 50 °C and average humidity 70%, 36 months
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

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Technical data

Downloads

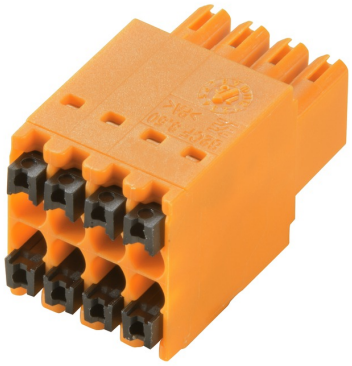
Approval/Certificate/Document of Conformity	Declaration of the Manufacturer
Brochure/Catalogue	FL DRIVES EN MB DEVICE MANUF. EN FL DRIVES DE CAT 2 PORTFOLIOGUIDE EN FL BUILDING SAFETY EN FL APPL LED LIGHTING EN FL INDUSTR.CONTROLS EN FL MACHINE SAFETY EN FL HEATING ELECTR EN FL APPL_INVERTER EN FL_BASE_STATION_EN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

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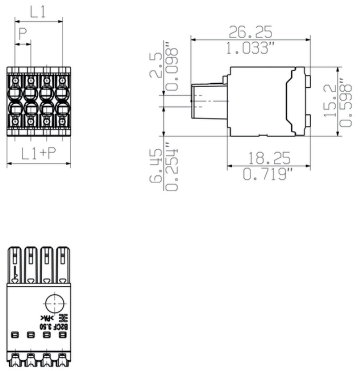
Drawings

Product image

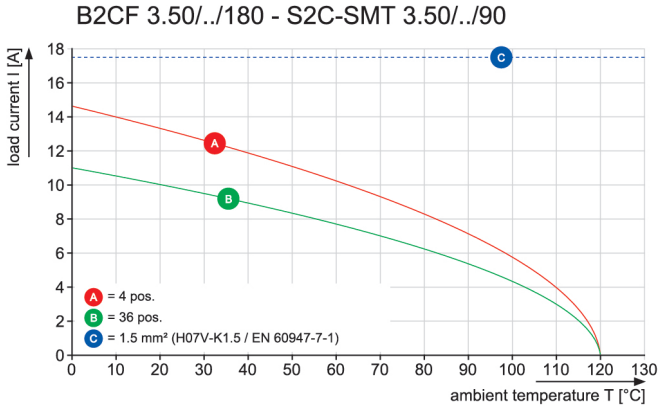


similar to illustration

Dimensional drawing



Graph

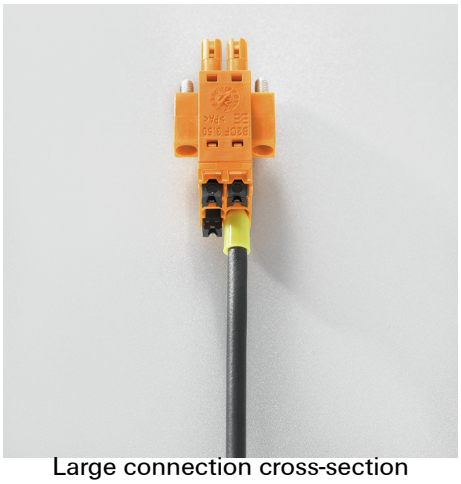


Product benefits



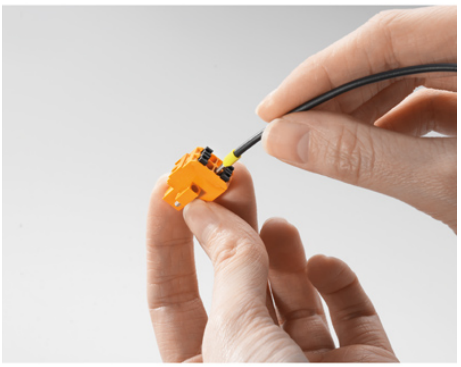
Solid PUSH IN contact
Safe and durable

Product benefits



Large connection cross-section
Up to 1.5 mm possible with ease

Product benefits



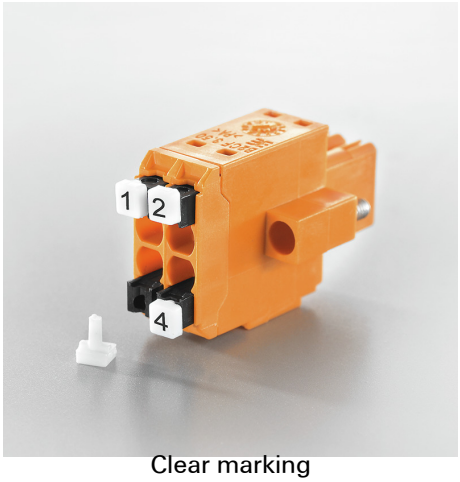
Fast PUSH IN connection
Tool-free and touch-safe

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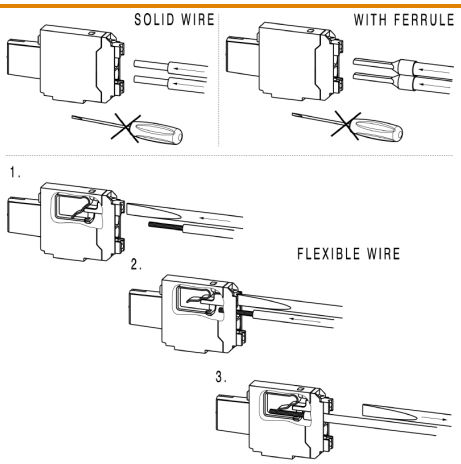
Drawings

Product benefits



Clear marking
Unique designation

Example of use

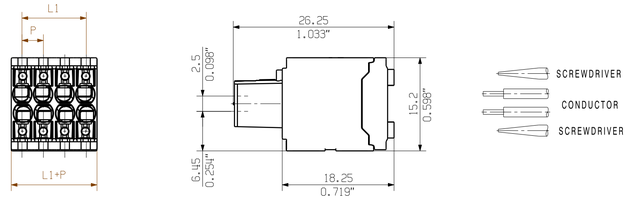


Dimensions without tolerances are no check dimensions

The English version is binding

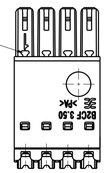
ALLGEMEINGUELTIGE KUNDENZEICHNUNG, AKTUELLER STAND NUR AUF ANFRAGE
GENERAL CUSTOMER DRAWING, TOPICAL VERSION ONLY IF REQUIRED

SHOWN: B2CF 3.50/08/180



n	POLZAHL / POLES	RASTHAKEN / SNAP-FITS
22		
20	X X	X X
18	X X	X X
16	X X	X X
14	X X	X X
12	X X	X X
10	X X	X X
8	X X X X	
6	X X X	
4	X X	

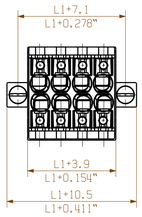
ACHTUNG: AB 22-POLIG OHNE RASTHAKEN
ATTENTION: HOUSING WITH 22-36 POLES WITHOUT SNAP-FITS

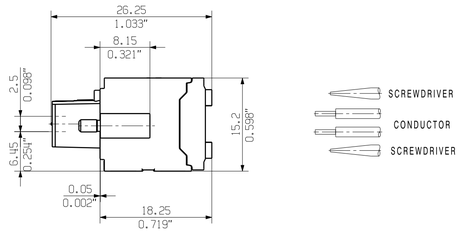


M 1/1

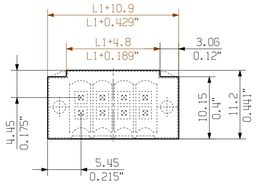


SHOWN: B2CF 3.50/08/180F





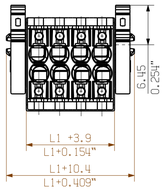
MIN. FRONT PLATE CUT-OUT

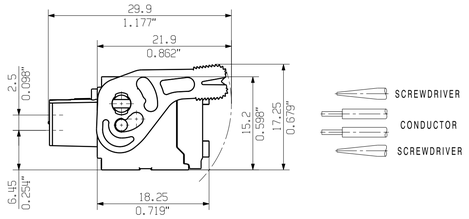


M 1/1



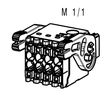
SHOWN: B2CF 3.50/08/180LH



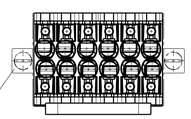


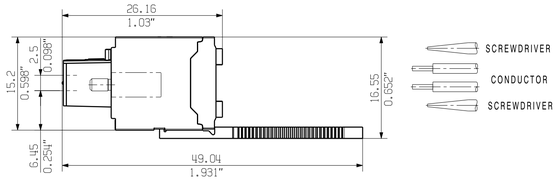
MIN. FRONT PLATE CUT-OUT

M 1/1

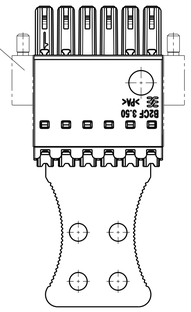


SHOWN: B2CF 3.50/12/180ZE

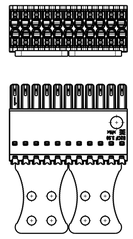




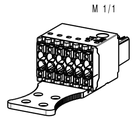
AUCH ANDERE FLANSCHE MIT ZUGENTLASTUNG MOEGLICH (F/LH/LR)
ALSO OTHER FLANGE TYPES WITH STRAIN RELIEF AVAILABLE



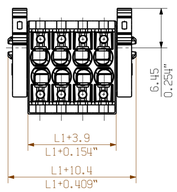
SCHEMATISCHE DARSTELLUNG
SCHEMATIC REPRESENTATION
AB 22-POLIG MIT ZWEI ZUGENTLASTUNGEN
22-36 POLE VERSIONS WITH TWO STRAIN RELIEFS

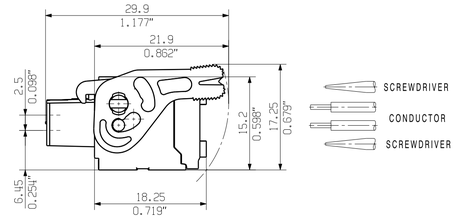


M 1/1

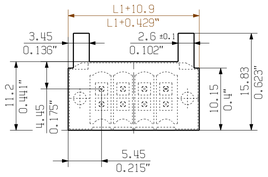


SHOWN: B2CF 3.50/08/180LR

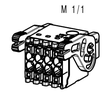




MIN. FRONT PLATE CUT-OUT



M 1/1



P = 3.50 RASTER
0.138" PITCH

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 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 connectors are used to the intended purpose, all requirements with respect to the occuring of electrical, mechanical, thermic and corrosive stress will be satisfied.

n POLZAHL / POLES	L1 [mm]	L1 [inch]	TOLERANZ TOLERANCE L1[mm]
46	76.8	80.5	
44	73.3	77.0	
42	69.8	73.5	+0.3 -0.35
40	66.3	70.0	
38	62.8	66.5	
36	59.5	2.343	
34	56.0	2.205	
32	52.5	2.067	
30	49.0	1.929	
28	45.5	1.791	
26	42.0	1.654	+0.3 -0.5
24	38.5	1.516	
22	35.0	1.378	
20	31.5	1.240	
18	28.0	1.102	
16	24.5	0.965	
14	21.0	0.827	
12	17.5	0.689	
10	14.0	0.551	+0.2 -0.5
8	10.5	0.413	
6	7.00	0.276	
4	3.50	0.138	

GENERAL TOLERANCE: DIN ISO 2768-m

RoHS COMPLIANT

88607/0 28.03.18 HELIS_MA 01

Modification

Weidmüller

Cat.no.: 1 53600 (21)
Drawing no. / Issue no.
Sheet 02 of 05 sheets

	Date	Name
Drawn	26.10.2011	REGLIN_A
Responsible		AMANN_A
Checked	03.04.2018	HERTEL_S
Approved		LANG_T

Scale: 2/1
Supersedes: ..

B2CF 3.50/.../180...
BUCHSENSTECKER
FEMALE PLUG

Product file: B2CF 3.50 7400

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