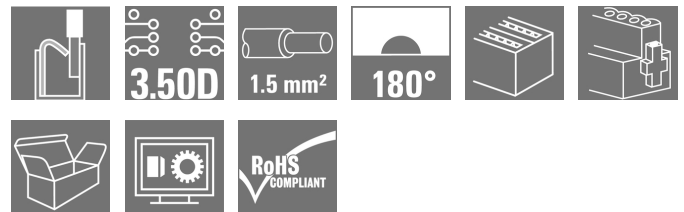


## B2CF 3.50/10/180F SN OR BX

**Weidmüller Interface GmbH & Co. KG**  
 Klingenbergstraße 26  
 D-32758 Detmold  
 Germany

www.weidmueller.com

### Product image



### 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

Version	PCB plug-in connector, female plug, 3.50 mm, Number of poles: 10, 180°, PUSH IN, Spring connection, Clamping range, max.: 1.5 mm², Box
Order No.	<a href="#">1277690000</a>
Type	B2CF 3.50/10/180F SN OR BX
GTIN (EAN)	4050118068429
Qty.	72 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 March 23, 2021 1:35:18 PM CET

**B2CF 3.50/10/180F SN OR BX****Weidmüller Interface GmbH & Co. KG**

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**Technical data****Dimensions and weights**

Depth	26.25 mm	Depth (inches)	1.033 inch
Height	15.2 mm	Height (inches)	0.598 inch
Net weight	7.086 g	Width	24.5 mm
Width (inches)	0.965 inch		

**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	10		
L1 in mm	14 mm		
L1 in inches	0.551 inch		
Number of rows	1		
Pin series quantity	2		
Rated cross-section	1.5 mm <sup>2</sup>		
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		
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		
Tightening torque	Torque type	Screw flange	
	Usage information	Tightening torque	min. 0.15 Nm max. 0.2 Nm

**Material data**

Insulating material	PA 66 GF 30	Colour	orange
Colour chart (similar)	RAL 2000	Insulating material group	II
Comparative Tracking Index (CTI)	≥ 600	Insulation strength	≥ 10 <sup>8</sup> Ω
UL 94 flammability rating	V-0	Contact material	Copper alloy
Contact surface	tinned	Layer structure of plug contact	2...5 µm Au 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 mm <sup>2</sup>
Clamping range, max.	1.5 mm <sup>2</sup>
Solid, min. H05(07) V-U	0.14 mm <sup>2</sup>
Solid, max. H05(07) V-U	1.5 mm <sup>2</sup>
Flexible, min. H05(07) V-K	0.14 mm <sup>2</sup>
Flexible, max. H05(07) V-K	1.5 mm <sup>2</sup>
w. plastic collar ferrule, DIN 46228 pt 4, min.	0.14 mm <sup>2</sup>

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**Technical data**

w. plastic collar ferrule, DIN 46228 pt 4, 1 mm<sup>2</sup>  
max.

w. wire end ferrule, DIN 46228 pt 1, 0.14 mm<sup>2</sup>  
min.

w. wire end ferrule, DIN 46228 pt 1, 1.5 mm<sup>2</sup>  
max.

Clampable conductor	Cross-section for conductor connection	Type	fine-wired
		nominal	0.5 mm <sup>2</sup>
wire end ferrule	wire end ferrule	Stripping length	nominal 12 mm
		Recommended wire-end ferrule	<a href="#">H0.5/16 OR</a>
		Stripping length	nominal 10 mm
		Recommended wire-end ferrule	<a href="#">H0.5/10</a>
Cross-section for conductor connection	wire end ferrule	Type	fine-wired
		nominal	0.75 mm <sup>2</sup>
		Stripping length	nominal 14 mm
		Recommended wire-end ferrule	<a href="#">H0.75/18 W</a>
Cross-section for conductor connection	wire end ferrule	Type	fine-wired
		nominal	1 mm <sup>2</sup>
		Stripping length	nominal 15 mm
		Recommended wire-end ferrule	<a href="#">H1.0/18D R</a>
Cross-section for conductor connection	wire end ferrule	Type	fine-wired
		nominal	1.5 mm <sup>2</sup>
		Stripping length	nominal 10 mm
		Recommended wire-end ferrule	<a href="#">H1.5/10</a>

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		Rated current, min. number of poles (Tu=20°C)	
	IEC 60664-1, IEC 61984		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 D / CSA)	300 V
Rated current (Use group C / CSA)	9.5 A
Wire cross-section, AWG, min.	AWG 26
Reference to approval values	Specifications are maximum values, details - see approval certificate.

Rated voltage (Use group C / CSA)	50 V
Rated current (Use group B / CSA)	9.5 A
Rated current (Use group D / CSA)	9.5 A
Wire cross-section, AWG, max.	AWG 16

**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 D / UL 1059)	300 V
Rated current (Use group C / UL 1059)	9.5 A
Wire cross-section, AWG, min.	AWG 26
Reference to approval values	Specifications are maximum values, details - see approval certificate.

Rated voltage (Use group C / UL 1059)	50 V
Rated current (Use group B / UL 1059)	9.5 A
Rated current (Use group D / UL 1059)	9.5 A
Wire cross-section, AWG, max.	AWG 16

**Packing**

Packaging	Box	VPE length	35 mm
VPE width	140 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 mm <sup>2</sup>
		Type of conductor and conductor cross-section	stranded 0.14 mm <sup>2</sup>
		Type of conductor and conductor cross-section	solid 1.5 mm <sup>2</sup>
		Type of conductor and conductor cross-section	stranded 1.5 mm <sup>2</sup>
		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	ECLASS 11.0	27-46-02-02

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**Technical data****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"> <li>• Additional colours on request</li> <li>• Gold-plated contact surfaces on request</li> <li>• Rated current related to rated cross-section &amp; min. No. of poles.</li> <li>• 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.</li> <li>• P on drawing = pitch</li> <li>• 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.</li> <li>• Max. outer diameter of the conductor 2.6 mm</li> </ul> <p>Wire-end ferrule w/plastic collar DIN 46228/4 or Weidmüller colour code</p> <ul style="list-style-type: none"> <li>• 1.00mm<sup>2</sup> [H1.0/18D] mtl. ferrule leng. 12mm, stripping leng. 15mm</li> <li>• 0.75mm<sup>2</sup> [H0.75/18D] mtl. ferrule leng. 12mm, stripping leng. 14mm</li> <li>• 0.50mm<sup>2</sup> [H0.5/16D] mtl. ferrule leng. 10mm, stripping leng. 12mm</li> <li>• 0.34mm<sup>2</sup> [H0.34/12] mtl. ferrule leng. 8mm, stripping leng. 10mm</li> <li>• 0.25mm<sup>2</sup> [H0.25/12] mtl. ferrule leng. 8mm, stripping leng. 10mm</li> <li>• 0.14mm<sup>2</sup> [H0.14/12] mtl. ferrule leng. 8mm, stripping leng. 10mm</li> </ul> <p>Wire-end ferrule w/o plastic collar acc. to DIN 46228/1</p> <ul style="list-style-type: none"> <li>• 1.50mm<sup>2</sup> [H1.5/10] mtl. ferrule leng. 10mm, stripping leng. 10mm</li> </ul> <ul style="list-style-type: none"> <li>• Long term storage of the product with average temperature of 50 °C and average humidity 70%, 36 months</li> </ul>

**Approvals**

Approvals



ROHS	Conform
UL File Number Search	E60693

**Downloads**

Approval/Certificate/Document of Conformity	<a href="#">Declaration of the Manufacturer</a>
Engineering Data	<a href="#">STEP</a>
Engineering Data	<a href="#">EPLAN, WSCAD</a>
User Documentation	<a href="#">Operating instruction</a>

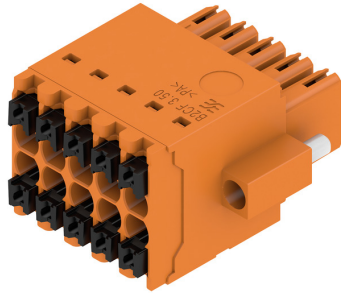
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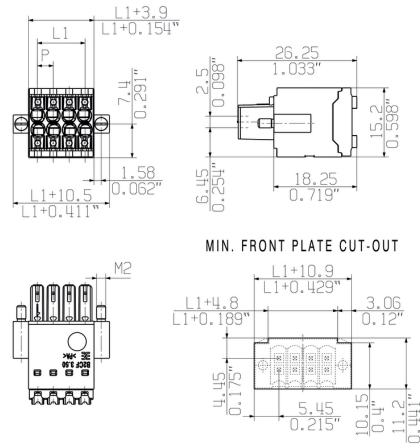
www.weidmueller.com

**Drawings**

**Product image**

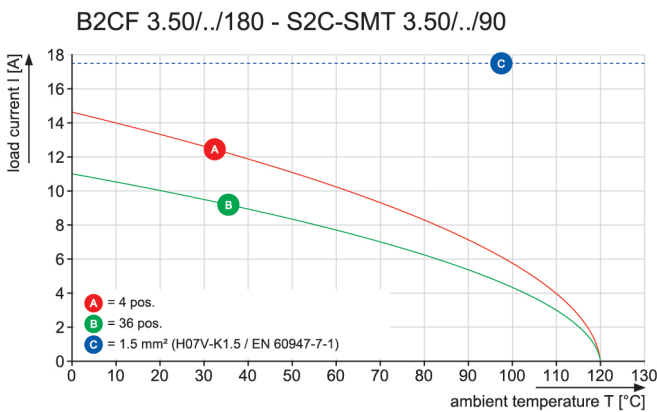


**Similar to illustration**

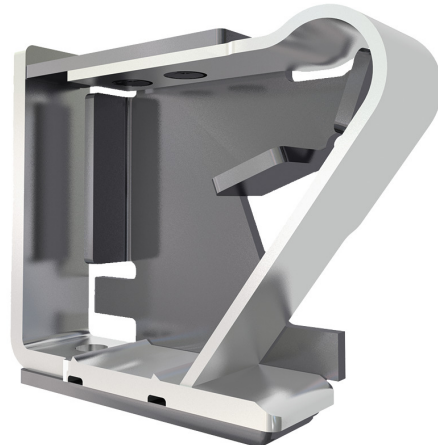


Similar to illustration

**Graph**

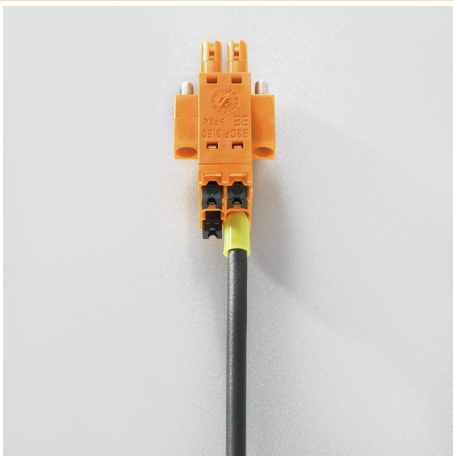


**Product benefits**



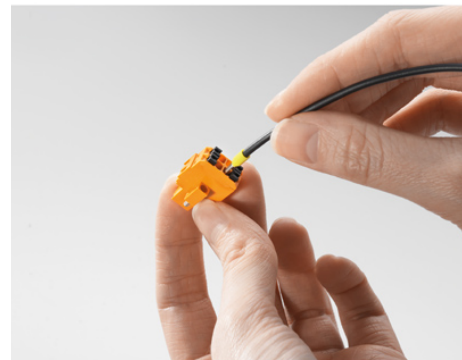
Solid PUSH IN contact  
 Safe and durable

**Product benefits**



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

**Product benefits**



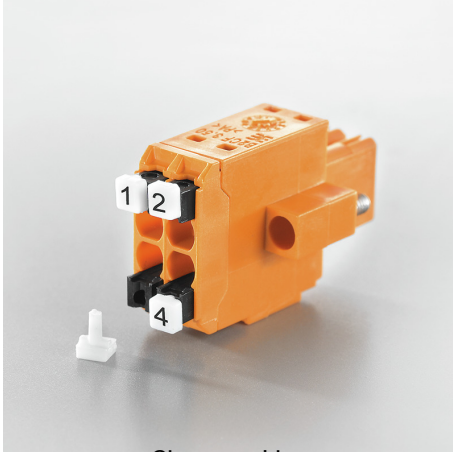
Fast PUSH IN connection  
 Tool-free and touch-safe



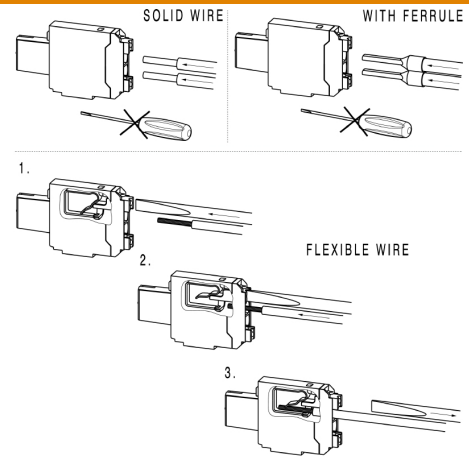
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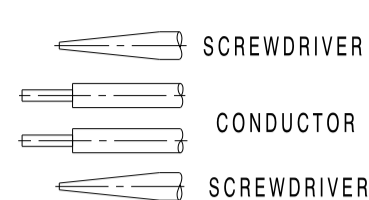
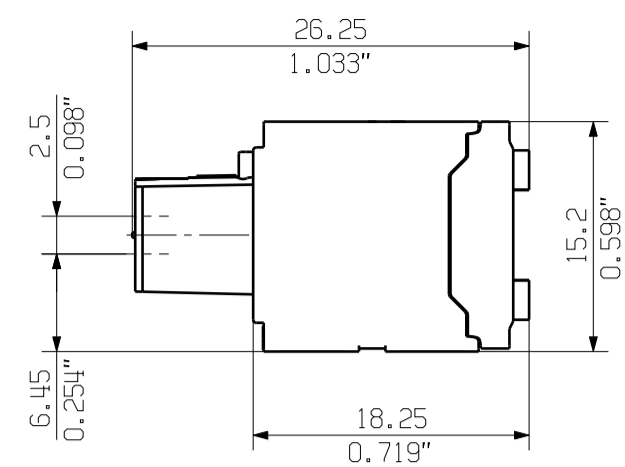
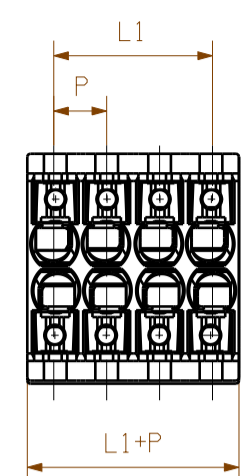
**Product benefits**

Clear marking  
Unique designation

**Example of use**

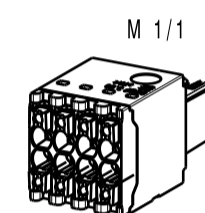
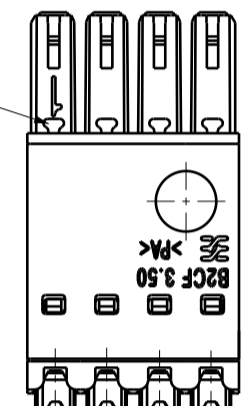
ALLGEMEINGÜLTIGE KUNDENZEICHUNG, AKTUELLER STAND NUR AUF ANFRAGE  
GENERAL CUSTOMER DRAWING, TOPICAL VERSION ONLY IF REQUIRED

SHOWN: B2CF 3.50/08/180

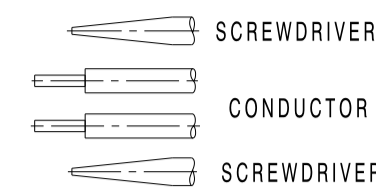
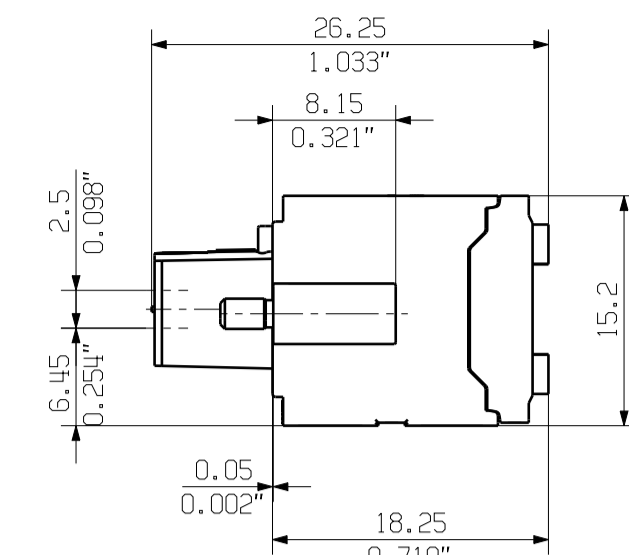
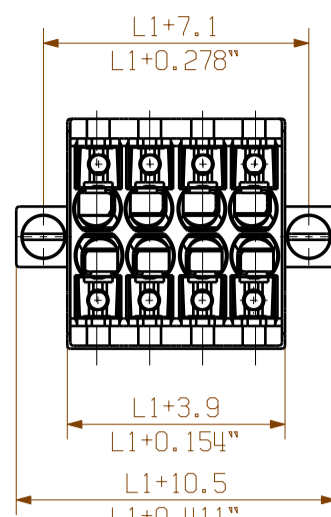


22																								
20	X	X									X	X									X	X		
18	X	X																						
16	X	X														X	X							
14	X	X													X	X	X							
12	X	X												X	X									
10	X	X												X	X									
8	X	X	X	X																				
6	X	X	X																					
4	X	X																						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

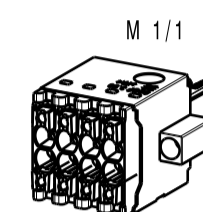
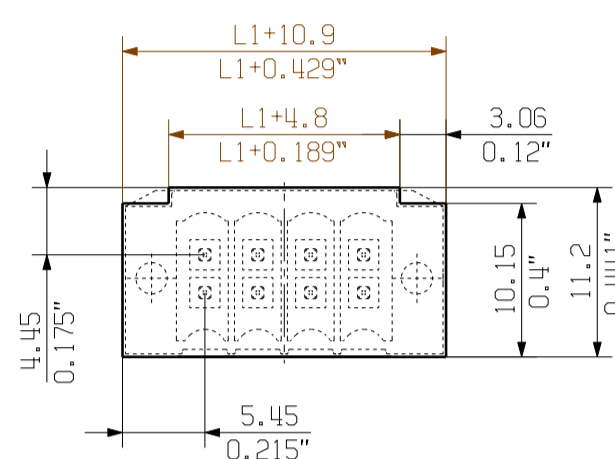
ACHTUNG: AB 22-POLIG OHNE RASTHAKEN  
ATTENTION: HOUSING WITH 22-36 POLES WITHOUT SNAP-FITS



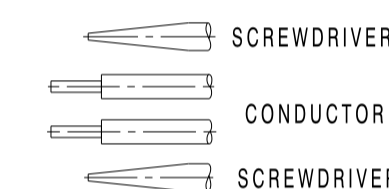
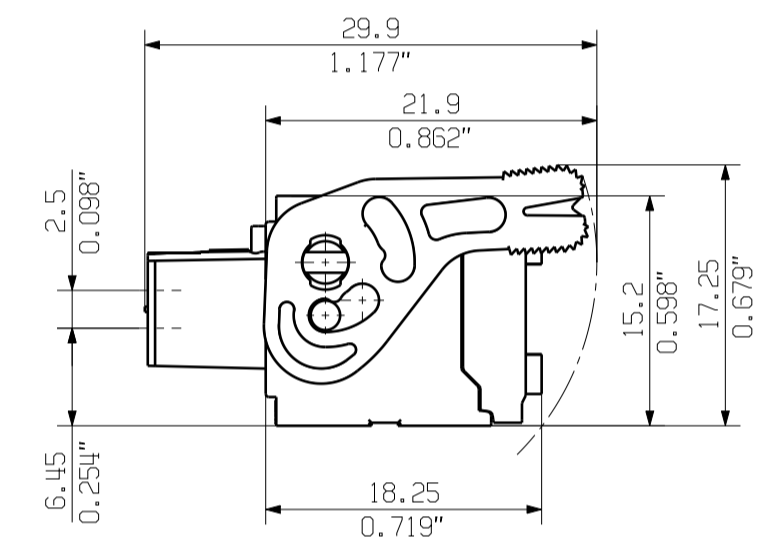
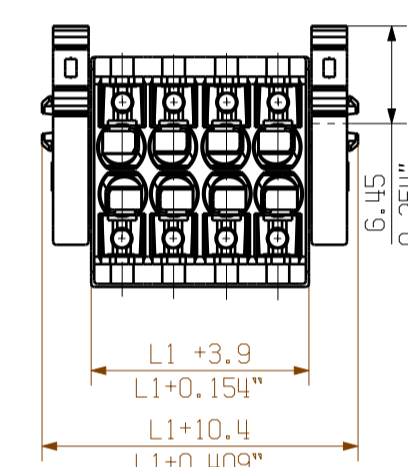
SHOWN: B2CF 3.50/08/180F



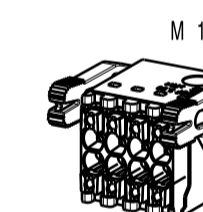
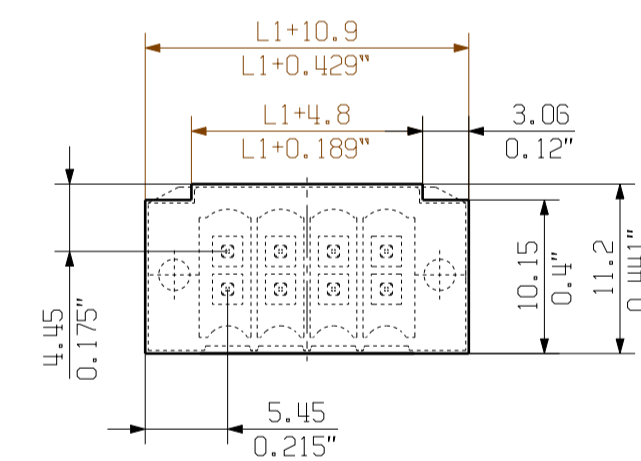
MIN. FRONT PLATE CUT-OUT



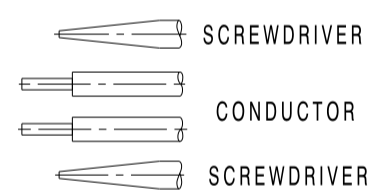
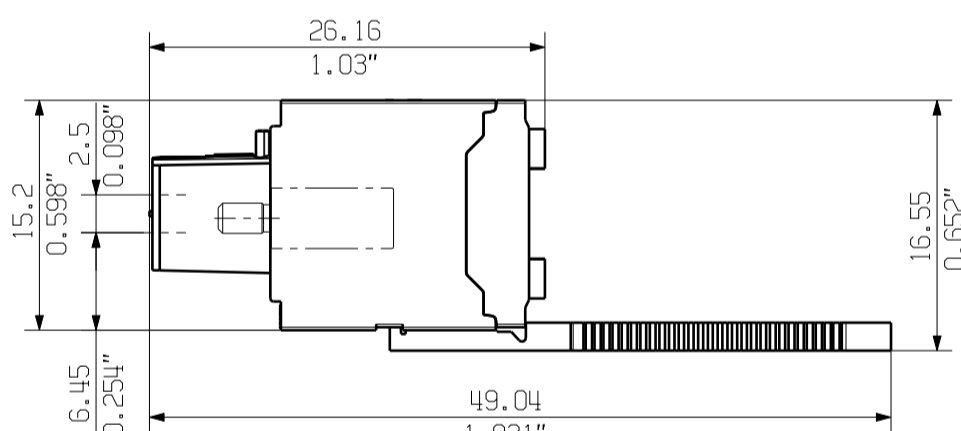
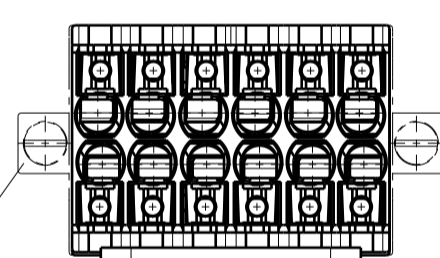
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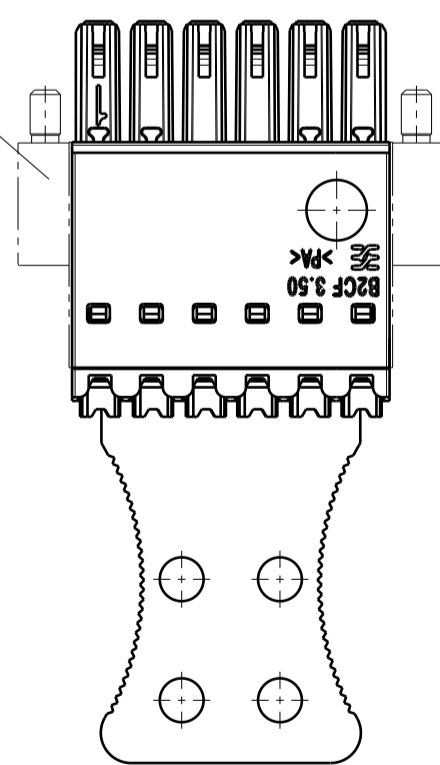
MIN. FRONT PLATE CUT-OUT



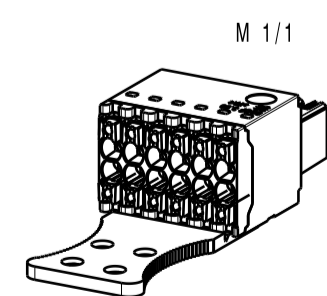
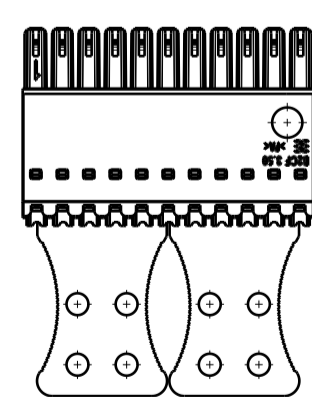
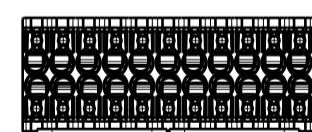
SHOWN: B2CF 3.50/12/180ZE



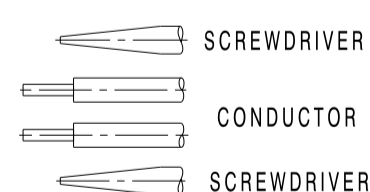
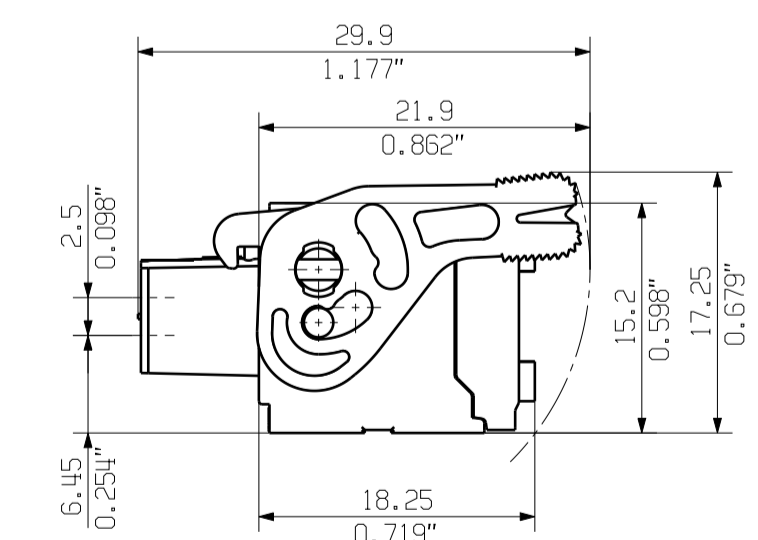
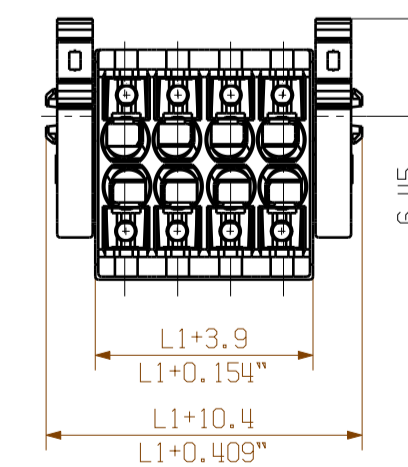
AUCH ANDERE FLANSCH MIT ZUGENTLASTUNG MÖGLICH  
ALSO OTHER FLANGE TYPES WITH STRAIN RELIEF AVAILABLE (F/LH/LR)



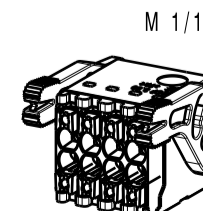
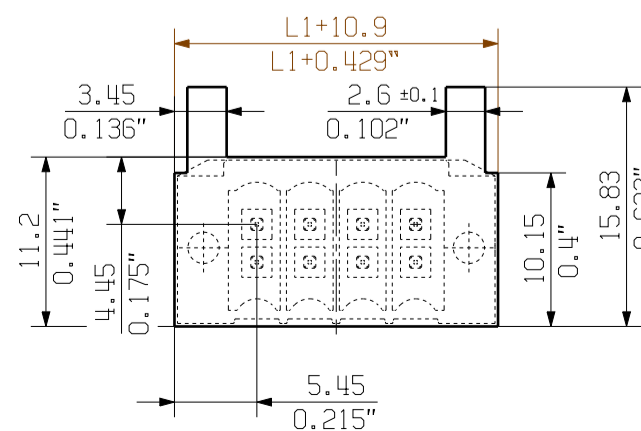
SCHEMatische DARSTELLUNG  
SCHEMATIC REPRESENTATION  
AB 22-POLIG MIT ZWEL ZUGENTLASTUNGEN  
22-36 POLE VERSIONS WITH TWO STRAIN RELIEFS



SHOWN: B2CF 3.50/08/180LR



MIN. FRONT PLATE CUT-OUT



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 occurring of electrical, mechanical, thermal and corrosive stress will be satisfied.

46	76.8	80.5			
44	73.3	77.0			
42	69.8	73.5			+0.3
40	66.3	70.0			-0.35
38	62.8	66.5			
36	59.3	63.0			
34	55.8	59.5			
32	52.3	56.0			
30	48.8	52.5			
28	45.3	49.0			+0.3
26	41.8	45.5			-0.5
24	38.3	42.0			
22	34.8	38.5			
20	31.3	35.0			
18	27.8	31.5			
16	24.3	28.0			
14	20.8	24.5			
12	17.3	21.0			
10	13.8	17.5			+0.2
8	10.3	14.0			-0.5
6	6.8	10.5			
4	3.3	7.0			
n	POLZAHL POLES	L1 [mm]	L1 [inch]	TOLERANZ TOLERANCE L1 [mm]	

GENERAL TOLERANCE:  
DIN ISO 2768-m

98607/0  
28.03.18 HELIS\_MA 01

Modification  
Date Name

Drawn 28.10.2011 REGUL\_A

Responsible AMANN\_A

Checked 03.04.2018 HERTEL\_S

Approved LANG\_T

1 53600 (21)  
Drawing no. Issue no.

Sheet 02 of 05 sheets



**Weidmüller**

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

Scale: 2/1  
Supersedes: .

Product file: B2CF 3.50  
7400