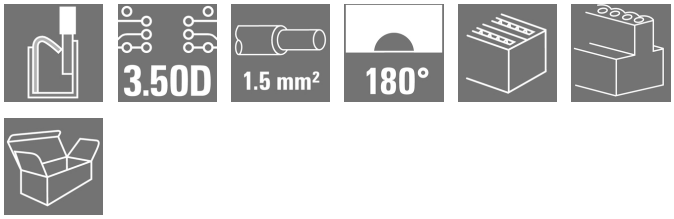
B2CF 3.50/44/180 SN BK BX

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: 44, 180°, PUSH IN with actuator, Clamping range, max. : 1.5 mm², Box
Order No.	2558490000
Type	B2CF 3.50/44/180 SN BK BX
GTIN (EAN)	4050118669701
Qty.	18 pc(s).
Product data	IEC: 320 V / 13.4 A / 0.14 - 1.5 mm² UL: 300 V / 9.5 A / AWG 30 - AWG 16
Packaging	Box

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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
Width	76.5 mm	Width (inches)	3.012 inch
Net weight	29.652 g		

System Parameters

Product family	OMNIMATE Signal - series B2C/S2C 3.50 - 2-row	Type of connection	Field connection
Wire connection method	PUSH IN with actuator	Pitch in mm (P)	3.5 mm
Pitch in inches (P)	0.138 "	Conductor outlet direction	180°
Number of poles	44	L1 in mm	73 mm
L1 in inches	2.898 "	Number of rows	1
Pin series quantity	2	Rated cross-section	15 mm²
Touch-safe protection acc. to DIN VDE 57 106	Safe from finger touch	Touch-safe protection acc. to DIN VDE 0470	IP20 plugged/ IP10 un-plugged
Protection degree	IP20, when fully mounted	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.	3.5 N	Pulling force/pole, max.	3.5 N

Material data

Insulating material	PA 66 GF 30	Colour	black
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	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
Wire connection cross section AWG, min.	AWG 30
Wire connection cross section AWG, max.	AWG 16
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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Clampable conductor	Cross-section for conductor connection	Type	fine-wired
		nominal	0.14 mm²
	wire end ferrule	Stripping length	nominal 10 mm
		Recommended wire-end ferrule	H0,14/12 GR SV
	Cross-section for conductor connection	Type	fine-wired
		nominal	0.25 mm²
	wire end ferrule	Stripping length	nominal 10 mm
		Recommended wire-end ferrule	H0,25/12 HBL SV
	Cross-section for conductor connection	Type	fine-wired
		nominal	0.34 mm²
	wire end ferrule	Stripping length	nominal 10 mm
		Recommended wire-end ferrule	H0,34/12 TK SV
	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 SV
		Stripping length	nominal 10 mm
		Recommended wire-end ferrule	H0,5/10
	Cross-section for conductor connection	nominal	0.75 mm²
	wire end ferrule	Stripping length	nominal 12 mm
		Recommended wire-end ferrule	H0,75/16 W SV
		Stripping length	nominal 10 mm
		Recommended wire-end ferrule	H0,75/10
	Cross-section for conductor connection	nominal	1
	wire end ferrule	Stripping length	nominal 12 mm
		Recommended wire-end ferrule	H1,0/16 GE SV
		Stripping length	nominal 10 mm
		Recommended wire-end ferrule	H1,0/10
	Cross-section for conductor connection	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.		

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

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 30	Wire cross-section, AWG, max.	AWG 16

Rated data acc. to UL 1059

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 30	Wire cross-section, AWG, max.	AWG 16

Packing

Packaging	Box	VPE length	338 mm
VPE width	130 mm	VPE height	33 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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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
ETIM 8.0	EC002638	ETIM 9.0	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
ECLASS 12.0	27-46-02-02	ECLASS 13.0	27-46-02-02

Environmental Product Compliance

REACH SVHC	/

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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	• Additional variants 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 • In accordance with IEC 61984, OMNIMATE-connectors are connectors without breaking capacity (COC). During designated use, connectors are not allowed to be engaged or disengaged when live or under load • Long term storage of the product with average temperature of 50 °C and maximum humidity 70%, 36 months

Downloads

Engineering Data	CAD data – STEP
Product Change Notification	20210721 Technical change Redesign B2CF 3.50 20210721 Technische Änderung Redesign zu B2CF 3.50 20220530 Change of packaging OMNIMATE® Signal B2CF 3.50 20220530 Verpackungsänderung OMNIMATE® Signal B2CF 3.50
Catalogues	Catalogues in PDF-format

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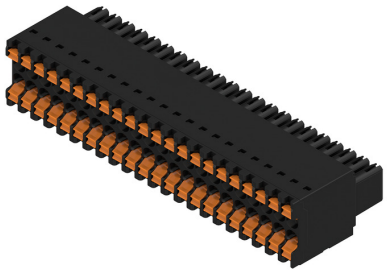
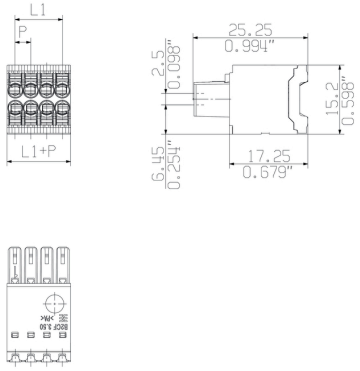
Drawings

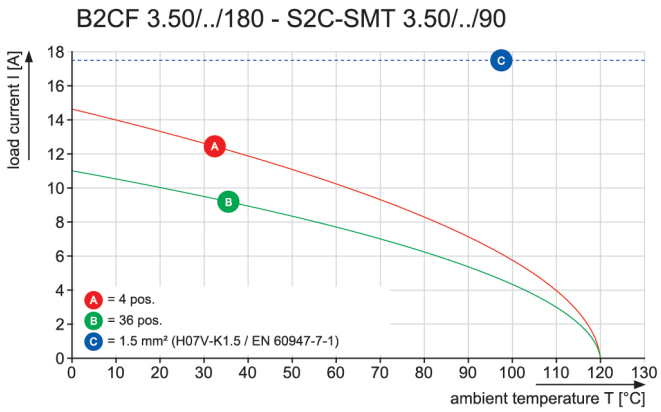
Product image



Dimensional drawing



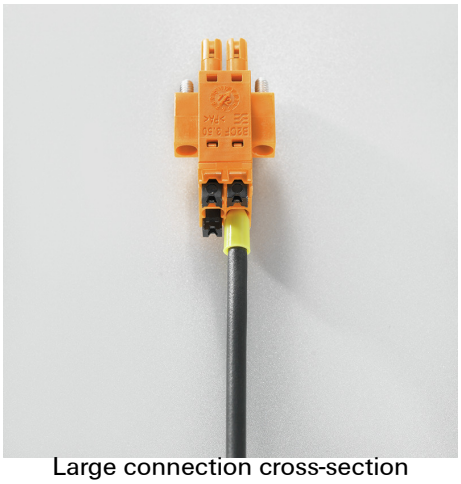
Graph



Product benefits

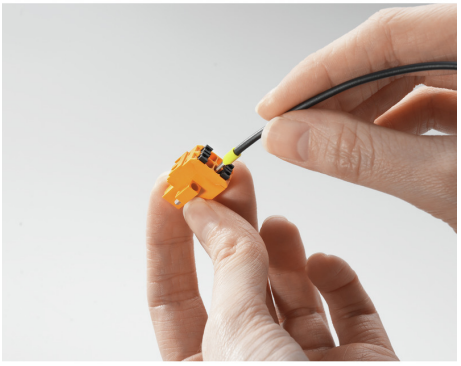
Solid PUSH IN contact
Safe and durable

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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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	B2L/S2L 3.50 KO BK BX	Version	Product data	Packaging
Order No.	1849740000	PCB plug-in connector, Accessories, Coding element, black, Number		Box
GTIN (EAN)	4032248378203	of poles: 1		
Qty.	100 pc(s).			

Type	B2L/S2L 3.50 KO OR BX	Version	Product data	Packaging
Order No.	1849730000	PCB plug-in connector, Accessories, Coding element, orange, Number		Box
GTIN (EAN)	4032248378197	of poles: 1		
Qty.	100 pc(s).			

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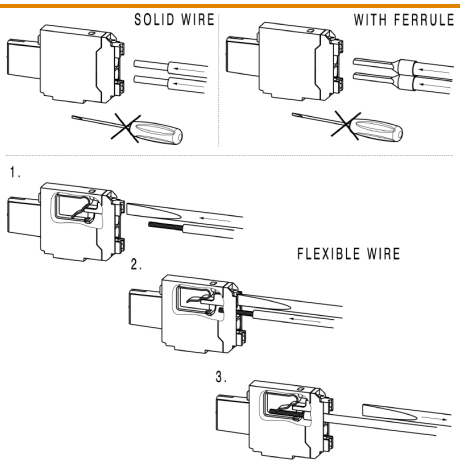
Drawings

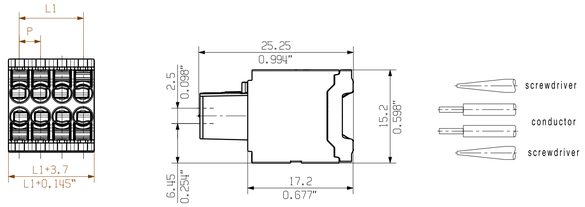
Example of use



The English version is binding

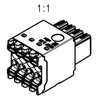
ALLGEMEINGUELTIGE KUNDENZEICHNUNG, AKTUELLER STAND NUR AUF ANFRAGE
GENERAL CUSTOMER DRAWING, TOPICAL VERSION ONLY IF REQUIRED

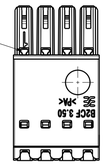
B2CF 3.50/08/180



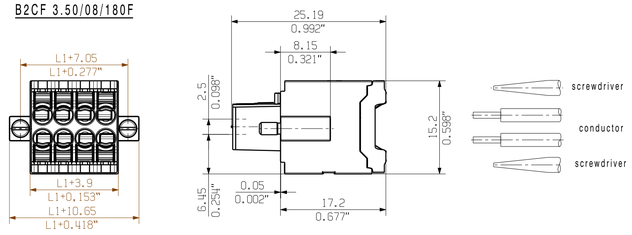
n POLES	POLZAHL	RASTHAKEN / SNAP-FITS
22		
20	X X	X X
18	X X	X X
16	X X	X X
14	X X	X X
12	X X	X X
10	X X	X X
8	X X	X X
6	X X	X
4	X X	

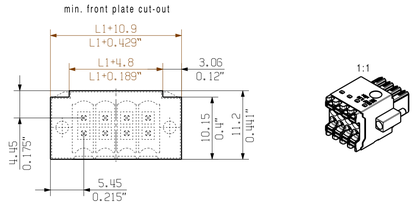
ACHTUNG: AB 22-polig ohne Rasthaken
ATTENTION: housing with 22-36 poles without snap-fits



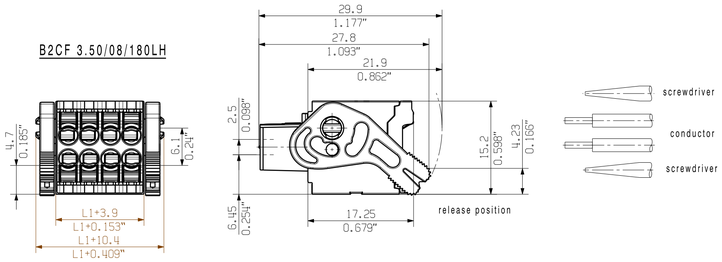


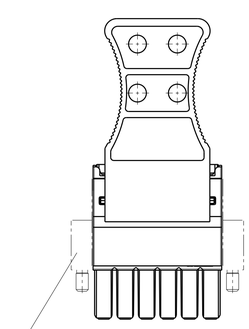
B2CF 3.50/08/180F



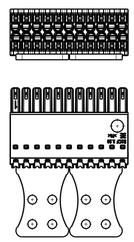


B2CF 3.50/08/180LH

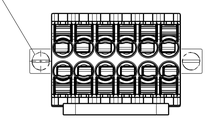


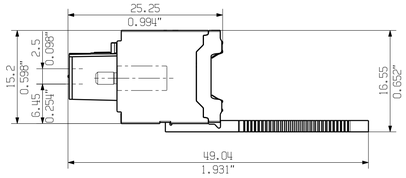


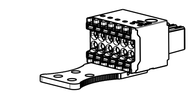
Schematische Darstellung/
schematic representation
AB 22-polig mit 2 Zugentlastungen
22-36 pole version with 2 strain reliefs

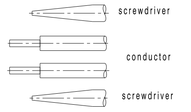


auch andere Flansche mit Zugentlastung möglich/
other flange types with strain relief possible (F/LH/LR)

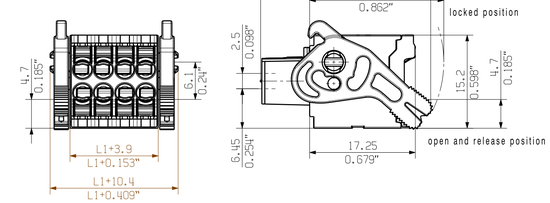


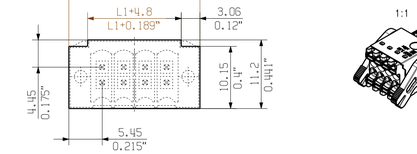


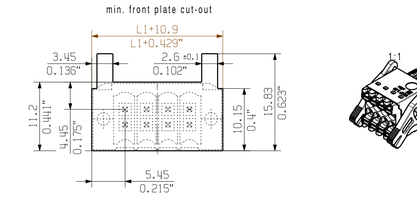




B2CF 3.50/08/180LR







P = 3.50 Raster/ 0.138" pitch

n = Polzahl / no of poles

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	L1 [mm]	L1 [inch]
46	76.8	3.033
44	73.3	2.895
42	69.8	2.757
40	66.3	2.619
38	62.8	2.481
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
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
8	10.5	0.413
6	7.00	0.276
4	3.50	0.138

RoHS COMPLIANT

General Tolerances: WN700144-W.. WN 212010 X ISO 2768-mK Tolerances ISO 8015
Changes: EC00009088
Mat. No. (SAP) 1277290000
Drawings Assembly

Drawn	Hellis, Maria	
Responsible	Aporius, Stefan	
Approved	Lang, Thomas	16.03.2023

Weidmüller
Drawing no. 73450 Index 6
Scale: 2:1 Sheet 3 / 7

B2CF 3.50/../180
FEMALE PLUG
BUCHSENSTECKER

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