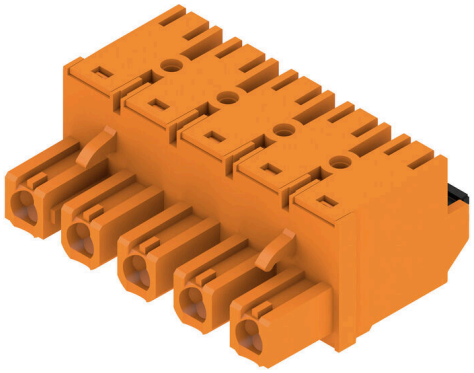
Data sheet

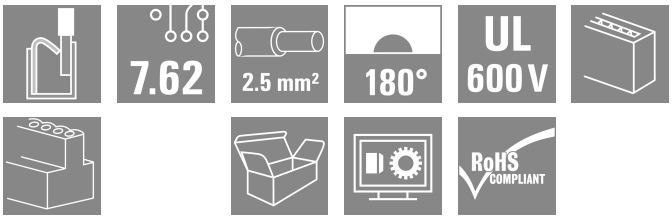
BLF 7.62HP/05/180 SN OR BX

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

www.weidmueller.com

Product image





180° female header with PUSH-IN connection technology for field wiring in 2.5 mm² with a 7.62 pitch.
Meets the requirements as per UL1059 600 V class C and IEC 61800-5-1
Variants: without flange, external flange, release latch.

General ordering data

Version	PCB plug-in connector, female plug, 7.62 mm, Number of poles: 5, 180°, PUSH IN with actuator, Clamping range, max. : 2.5 mm², Box
Order No.	1043820000
Type	BLF 7.62HP/05/180 SN OR BX
GTIN (EAN)	4032248774760
Qty.	48 items
Product data	IEC: 1000 V / 29 A / 0.5 - 2.5 mm² UL: 600 V / 20 A / AWG 20 - AWG 12
Packaging	Box

BLF 7.62HP/05/180 SN OR BX

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Technical data

Approvals

Approvals	
ROHS	Conform
UL File Number Search	UL Website
Certificate No. (cURus)	E60693

Dimensions and weights

Depth	28.1 mm	Depth (inches)	1.1063 inch
Height	15.1 mm	Height (inches)	0.5945 inch
Width	37.38 mm	Width (inches)	1.4717 inch
Net weight	12.5 g		

Environmental Product Compliance

RoHS Compliance Status	Compliant without exemption	
REACH SVHC	No SVHC above 0.1 wt%	
Product Carbon Footprint	Cradle to gate	0,833 kg CO2 eq.

System Parameters

Product family	OMNIMATE Power - series BL/SL 7.62HP	Type of connection	Field connection
Wire connection method	PUSH IN with actuator	Pitch in mm (P)	7.62 mm
Pitch in inches (P)	0.300 "	Conductor outlet direction	180°
Number of poles	5	L1 in mm	30.48 mm
L1 in inches	1.200 "	Number of rows	1
Pin series quantity	1	Rated cross-section	2.5 mm²
Touch-safe protection acc. to DIN VDE 57 106	Safe from finger touch	Touch-safe protection acc. to DIN VDE 0470	IP 20
Protection degree	IP20	Can be coded	Yes
Stripping length	10 mm	Screwdriver blade	0.6 x 3.5
Plugging cycles	25	Plugging force/pole, max.	8.5 N
Pulling force/pole, max.	6 N		

Material data

Insulating material	PBT	Colour	orange
Colour of operational elements	black	Colour chart (similar)	RAL 2000
Insulating material group	IIIa	Comparative Tracking Index (CTI)	≥ 200
Insulation resistance	≥ 108 Ω	Moisture Level (MSL)	
UL 94 flammability rating	V-0	Contact material	Cu-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.	-25 °C	Temperature range, installation, max.	100 °C

Conductors suitable for connection

Clamping range, min.	0.08 mm²
Clamping range, max.	2.5 mm²
Wire connection cross section AWG, min.	AWG 20

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Technical data

Wire connection cross section AWG, max.	AWG 12			
Solid, min. H05(07) V-U	0.5 mm²			
Solid, max. H05(07) V-U	1.5 mm²			
Flexible, min. H05(07) V-K	0.5 mm²			
Flexible, max. H05(07) V-K	2.5 mm²			
w. plastic collar ferrule, DIN 46228 pt 4, min.	0.5 mm²			
w. plastic collar ferrule, DIN 46228 pt 4, max.	2.5 mm²			
w. wire end ferrule, DIN 46228 pt 1, min.	0.5 mm²			
w. wire end ferrule, DIN 46228 pt 1, max.	2.5 mm²			
Plug gauge in accordance with EN 60999 a x b; ø	2.8 mm x 2.0 mm			
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	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 mm²	
	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 mm²	
	wire end ferrule	Stripping length	nominal	10 mm
		Recommended wire-end ferrule	H1,5/10	
		Stripping length	nominal	12 mm
		Recommended wire-end ferrule	H1,5/16 R	
	Cross-section for conductor connection	Type	fine-wired	
		nominal	2.5 mm²	
	wire end ferrule	Stripping length	nominal	10 mm
		Recommended wire-end ferrule	H2,5/10	
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.			

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Technical data

Rated data acc. to IEC

tested acc. to standard	IEC 60664-1, IEC 61984	Rated current, min. number of poles (Tu=20°C)	29 A
Rated current, max. number of poles (Tu=20°C)	24 A	Rated current, min. number of poles (Tu=40°C)	23.8 A
Rated current, max. number of poles (Tu=40°C)	23 A	Rated voltage for surge voltage class / pollution degree II/2	1000 V
Rated voltage for surge voltage class / pollution degree III/2	1000 V	Rated voltage for surge voltage class / pollution degree III/3	630 V
Rated impulse voltage for surge voltage class/ pollution degree II/2	6 kV	Rated impulse voltage for surge voltage class/ pollution degree III/2	8 kV
Rated impulse voltage for surge voltage class/ contamination degree III/3	6 kV	Short-time withstand current resistance	3 x 1s with 180 A
Creepage distance, min.	11.4 mm	Clearance, min.	11.4 mm

Rated data acc. to CSA

Institute (CSA)	CSA	Certificate No. (CSA)	200039-1121690
Rated voltage (Use group B / CSA)	600 V	Rated voltage (Use group C / CSA)	600 V
Rated voltage (Use group D / CSA)	600 V	Rated current (Use group B / CSA)	20 A
Rated current (Use group C / CSA)	20 A	Rated current (Use group D / CSA)	5 A
Wire cross-section, AWG, min.	AWG 20	Wire cross-section, AWG, max.	AWG 12
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

Rated data acc. to UL 1059

Institute (cURus)	CURUS	Certificate No. (cURus)	E60693
Rated voltage (Use group B / UL 1059)	600 V	Rated voltage (Use group C / UL 1059)	600 V
Rated voltage (Use group D / UL 1059)	600 V	Rated current (Use group B / UL 1059)	20 A
Rated current (Use group C / UL 1059)	20 A	Rated current (Use group D / UL 1059)	5 A
Wire cross-section, AWG, min.	AWG 20	Wire cross-section, AWG, max.	AWG 12
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

Packing

Packaging	Box	VPE length	352.00 mm
VPE width	136.00 mm	VPE height	38.00 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, pitch, type of material, date clock
	Evaluation	available
	Test	durability
	Evaluation	passed
Test: Misengagement (Non-interchangeability)	Standard	DIN EN 61984 section 6.3 and 6.9.1 / 09.02, DIN EN 60512-13-5 / 11.08
	Test	180° turned with coding elements
	Evaluation	passed
	Test	180° turned without coding elements
	Evaluation	passed
Test: Clampable cross section	Standard	DIN EN 60999-1 section 7 and 9.1 / 12.00, DIN EN 60947-1 section 8.2.4.5.1 / 04.08

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Technical data

	Conductor type	Type of conductor and conductor cross-section	solid 0.5 mm²
		Type of conductor and conductor cross-section	stranded 0.5 mm²
		Type of conductor and conductor cross-section	solid 2.5 mm²
		Type of conductor and conductor cross-section	stranded 2.5 mm²
		Type of conductor and conductor cross-section	AWG 20/1
		Type of conductor and conductor cross-section	AWG 20/19
		Type of conductor and conductor cross-section	AWG 14/1
		Type of conductor and conductor cross-section	AWG 12/19
	Evaluation	passed	
Test for damage to and accidental loosening of conductors	Standard	DIN EN 60999-1 section 9.4 / 12.00	
	Requirement	0.3 kg	
	Conductor type	Type of conductor and conductor cross-section	H05V-U0.5
		Type of conductor and conductor cross-section	H05V-K0.5
		Type of conductor and conductor cross-section	AWG 20/1
		Type of conductor and conductor cross-section	AWG 20/19
	Evaluation	passed	
	Requirement	0.7 kg	
	Conductor type	Type of conductor and conductor cross-section	H07V-U2.5
		Type of conductor and conductor cross-section	H07V-K2.5
		Type of conductor and conductor cross-section	AWG 14/1
	Evaluation	passed	
	Requirement	0.9 kg	
	Conductor type	Type of conductor and conductor cross-section	AWG 12/19
	Evaluation	passed	
Pull-out test	Standard	DIN EN 60999-1 section 9.5 / 12.00	
	Requirement	≥20 N	
	Conductor type	Type of conductor and conductor cross-section	H05V-U0.5
		Type of conductor and conductor cross-section	H05V-K0.5

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Technical data

		Type of conductor and conductor cross-section	AWG 20/1
		Type of conductor and conductor cross-section	AWG 20/19
	Evaluation	passed	
	Requirement	≥50 N	
	Conductor type	Type of conductor and conductor cross-section	H07V-U2.5
		Type of conductor and conductor cross-section	H07V-K2.5
		Type of conductor and conductor cross-section	AWG 14/1
	Evaluation	passed	
	Requirement	≥60 N	
	Conductor type	Type of conductor and conductor cross-section	AWG 12/19
	Evaluation	passed	

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. • 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. • Crimping shape "A" for wire end ferrules with PZ 6/5 crimping tool recommended. • 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

Classifications

ETIM 8.0	EC002638	ETIM 9.0	EC002638
ETIM 10.0	EC002638	ECLASS 14.0	27-46-02-02
ECLASS 15.0	27-46-02-02		

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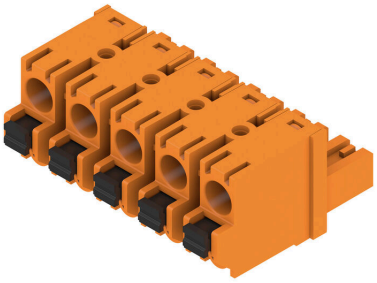
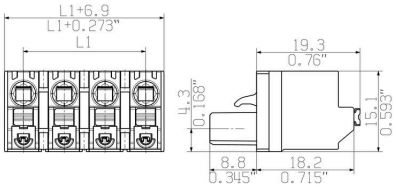
Drawings

Product image



Dimensional drawing



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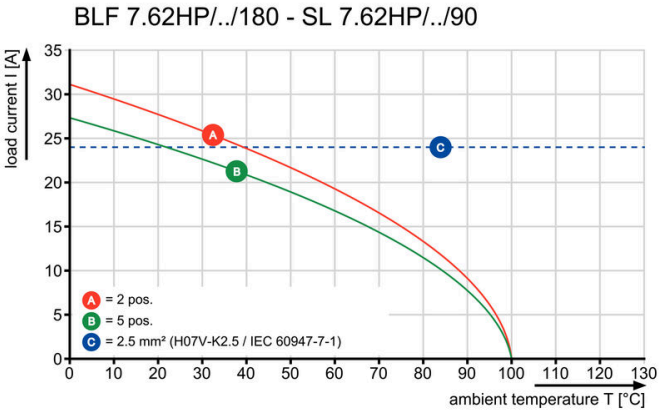

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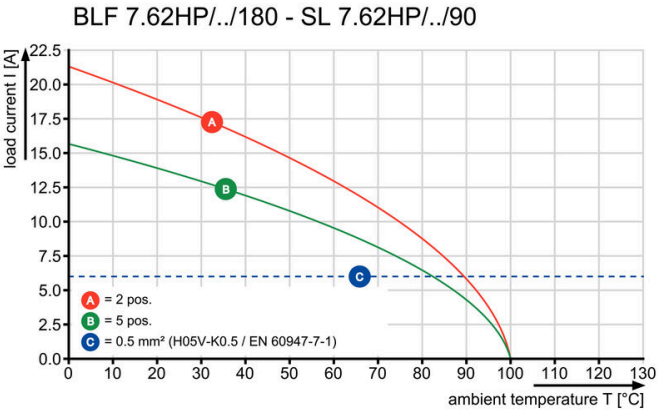

Product benefits

Vibration-proof connection

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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	BLZ/SL KO OR BX	Version
Order No.	1573010000	PCB plug-in connector, Accessories, Coding element, orange, Number
GTIN (EAN)	4008190048396	of poles: 1
Qty.	100 ST	
Type	BLZ/SL KO BK BX	Version
Order No.	1545710000	PCB plug-in connector, Accessories, Coding element, black, Number
GTIN (EAN)	4008190087142	of poles: 1
Qty.	50 ST	

Slotted screwdriver

Slotted screwdriver with rounded blade SD DIN 5265, ISO 2380/2, output to DIN 5264, ISO 2380/1.
ChromTop tip, SoftFinish grip

General ordering data

Type	SDS 0.6X3.5X100	Version
Order No.	9008330000	Screwdriver, Screwdriver
GTIN (EAN)	4032248056286	
Qty.	1 ST	
Type	SDIS 0.6X3.5X100	Version
Order No.	9008390000	Screwdriver, Screwdriver
GTIN (EAN)	4032248056354	
Qty.	1 ST	

BLF 7.62HP/05/180 SN OR BX

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Accessories

Crimping tools

Crimping tools for wire end ferrules, with and without plastic collars
- Ratchet guarantees precise crimping
- Release option in the event of incorrect operation

General ordering data

Type	PZ 6/5	Version
Order No.	9011460000	Pressing tool, Crimping tool for wire-end ferrules, 0.25mm², 6mm²,
GTIN (EAN)	4008190165352	Trapezoidal indentation crimp
Qty.	1 ST	

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Counterpart

SL 7.62HP/180G

Power on board - 100% safety, 100% integration, 100% cost-effectiveness:
The compact, efficient solution for UL-600V applications in the lower performance range.
High-performance male header for applications up to 12 kVA:
- 29 A at 400 V (IEC)
- 20 A at 600 V (UL)
- Single compartment mating profile

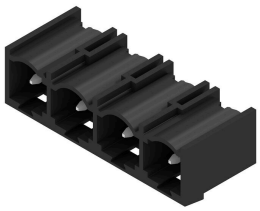
Assisting in device approval:
- Meets the requirements for 600 V according to UL 508 / UL840.
- Meets the increased requirements on touch safety as per IEC68100-5-1 when combined with female header BLZ 7.62 HP

The slimming diet for multiple-stage device series:
Reduce the size and cut costs in the high-volume lower performance range without compromising device approval!
Male header, 180° outlet direction, without flange

General ordering data

Type	SL 7.62HP/05/180G 3.2SN...	Version
Order No.	1048980000	PCB plug-in connector, male header, closed side, THT solder
GTIN (EAN)	4032248786954	connection, 7.62 mm, Number of poles: 5, 180°, Solder pin length (l):
Qty.	50 ST	3.2 mm, tinned, black, Box
Type	SL 7.62HP/05/180G 3.2SN...	Version
Order No.	1048900000	PCB plug-in connector, male header, closed side, THT solder
GTIN (EAN)	4032248786879	connection, 7.62 mm, Number of poles: 5, 180°, Solder pin length (l):
Qty.	50 ST	3.2 mm, tinned, orange, Box

SL 7.62HP/270G



Power on board - 100% safety, 100% integration, 100% cost-effectiveness:
The compact, efficient solution for UL-600V applications in the lower performance range up to 12 kVA
- 29 A at 400 V (IEC)
- 20 A at 300 V (UL)
- Single compartment mating profile
- Clamping range: 0.08 - 4 mm² / AWG 28 - 12

Assisting in device approval:
- Meets the requirements for 600 V according to UL 508 / UL840.
- Meets the increased requirements on touch safety as per IEC68100-5-1

The slimming diet for multiple-stage device series:
Reduce the size and cut costs in the high-volume lower performance range without compromising device approval!
Male header, 270° outlet angle

BLF 7.62HP/05/180 SN OR BX

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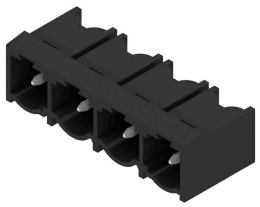
Counterpart

General ordering data

Type	SL 7.62HP/05/270G 3.2SN...	Version
Order No.	1472270000	PCB plug-in connector, male header, closed side, THT solder
GTIN (EAN)	4050118317435	connection, 7.62 mm, Number of poles: 5, 270°, Solder pin length (l):
Qty.	50 ST	3.2 mm, tinned, black, Box
Type	SL 7.62HP/05/270G 3.2SN...	Version
Order No.	1472520000	PCB plug-in connector, male header, closed side, THT solder
GTIN (EAN)	4050118317657	connection, 7.62 mm, Number of poles: 5, 270°, Solder pin length (l):
Qty.	50 ST	3.2 mm, tinned, orange, Box

SL 7.62HP/90G



Power on board - 100% safety, 100% integration, 100% cost-effectiveness:
The compact, efficient solution for UL-600V applications in the lower performance range up to 12 kVA
- 29 A at 400 V (IEC)
- 20 A at 300 V (UL)
- Single compartment mating profile
- Clamping range: 0.08 - 4 mm² / AWG 28 - 12

Assisting in device approval:
- Meets the requirements for 600 V according to UL 508 / UL840.
- Meets the increased requirements on touch safety as per IEC68100-5-1

The slimming diet for multiple-stage device series:
Reduce the size and cut costs in the high-volume lower performance range without compromising device approval!
Male header, 90° outlet angle

General ordering data

Type	SL 7.62HP/05/90G 3.2SN ...	Version
Order No.	1026790000	PCB plug-in connector, male header, closed side, THT solder
GTIN (EAN)	4032248752195	connection, 7.62 mm, Number of poles: 5, 90°, Solder pin length (l):
Qty.	50 ST	3.2 mm, tinned, black, Box
Type	SL 7.62HP/05/90G 3.2SN ...	Version
Order No.	1980400000	PCB plug-in connector, male header, closed side, THT solder
GTIN (EAN)	4032248675456	connection, 7.62 mm, Number of poles: 5, 90°, Solder pin length (l):
Qty.	50 ST	3.2 mm, tinned, orange, Box

SL-SMT 7.62HP/180G SN Box

BLF 7.62HP/05/180 SN OR BX

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Counterpart

General ordering data

Type	SL-SMT 7.62HP/05/180G 2...	Version
Order No.	3114290000	PCB plug-in connector, male header, closed side, THT solder
GTIN (EAN)	4099987204095	connection, 7.62 mm, Number of poles: 5, 180°, Solder pin length (l):
Qty.	ST	2.1 mm, tinned, black, Box

SL-SMT 7.62HP/180G SN Tape

General ordering data

Type	SL-SMT 7.62HP/05/180G 2...	Version
Order No.	3114340000	PCB plug-in connector, male header, closed side, THT solder
GTIN (EAN)	4099987204149	connection, 7.62 mm, Number of poles: 5, 180°, Solder pin length (l):
Qty.	ST	2.1 mm, tinned, black, Reel

SL-SMT 7.62HP/90G SN Box

General ordering data

Type	SL-SMT 7.62HP/05/90G 2....	Version
Order No.	3114140000	PCB plug-in connector, male header, closed side, THT solder
GTIN (EAN)	4099987203944	connection, 7.62 mm, Number of poles: 5, 90°, Solder pin length (l):
Qty.	ST	2.1 mm, tinned, black, Box

BLF 7.62HP/05/180 SN OR BX

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Counterpart

SL-SMT 7.62HP/90G Tape

General ordering data

Type	SL-SMT 7.62HP/05/90G 2....	Version
Order No.	3114120000	PCB plug-in connector, male header, closed side, THT solder
GTIN (EAN)	4099987203920	connection, 7.62 mm, Number of poles: 5, 90°, Solder pin length (l):
Qty.	ST	2.1 mm, tinned, black, Reel