# BLZ 7.62HP/12/180F SN BK BX

Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26
D-32758 Detmold
Germany

www.weidmueller.com

Product image
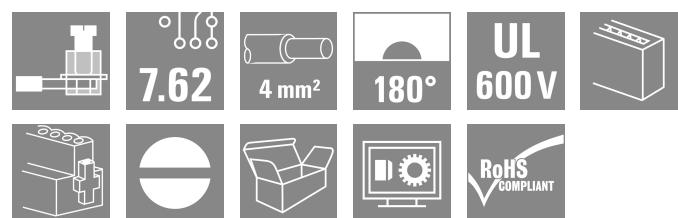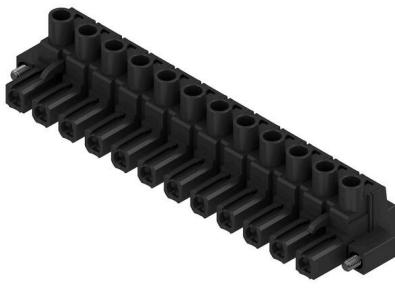
Power on board - 100% safety, 100% integration, 100% cost-effectiveness:

The compact, efficient solution for UL-600V applications in the lower performance range up to 12kVA.

• 29 A at 630 V (IEC)

• 20 A at 600 V (UL)

• Single compartment mating profile

• Clamping range: 0.08 - 4 mm² / AWG 28 - 12

Assistance with device approval:

• meets the requirements for 600 V in accordance with UL508/UL840

• meets the more stringent touch-safety requirements of IEC68100-5-1

The slimming cure for multiple-stage device series: reduced size and cut costs in the high-volume lower performance range without compromising device approval!

General ordering data

Version	PCB plug-in connector, female plug, 7.62 mm, Number of poles: 12, 180°, Clamping yoke connection, Clamping range, max. : 4 mm², Box
Order No.	1095780000
Type	BLZ 7.62HP/12/180F SN BK BX
GTIN (EAN)	4032248868674
Qty.	15 items
Product data	IEC: 630 V / 29 A / 0.2 - 4 mm² UL: 600 V / 20 A / AWG 28 - AWG 12
Packaging	Box

Weidmüller

BLZ 7.62HP/12/180F SN BK BX

Technical data

Approvals

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

Dimensions and weights

Depth	23.3 mm	Depth (inches)	0.9173 inch
Height	18.3 mm	Height (inches)	0.7205 inch
Width	100.52 mm	Width (inches)	3.9575 inch
Net weight	24.97 g		

Environmental Product Compliance

RoHS Compliance Status	Compliant without exemption	
REACH SVHC	No SVHC above 0.1 wt%	
Product Carbon Footprint	Cradle to gate	0.488 kg CO2eq.

System Parameters

Product family	OMNIMATE Power - series BL/SL 7.62HP	Type of connection	Field connection
Wire connection method	Clamping yoke connection	Pitch in mm (P)	7.62 mm
Pitch in inches (P)	0.300 "	Conductor outlet direction	180°
Number of poles	12	L1 in mm	83.82 mm
L1 in inches	3.300 "	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	Volume resistance	5.00 mΩ
Can be coded	Yes	Stripping length	7 mm
Tightening torque for screw flange, min.	0.15 Nm	Tightening torque for screw flange, max.	0.25 Nm
Tightening torque, min.	0.4 Nm	Tightening torque, max.	0.5 Nm
Clamping screw	M 2.5	Screwdriver blade	0.6 x 3.5
Screwdriver blade standard	DIN 5264	Plugging cycles	25
Plugging force/pole, max.	9.5 N	Pulling force/pole, max.	8.5 N

Material data

Insulating material	PBT	Colour	black
Colour chart (similar)	RAL 9011	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.	4 mm²	

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Technical data

Wire connection cross section AWG, min.	AWG 28			
Wire connection cross section AWG, max.	AWG 12			
Solid, min. H05(07) V-U	0.2 mm²			
Solid, max. H05(07) V-U	4 mm²			
Flexible, min. H05(07) V-K	0.2 mm²			
Flexible, max. H05(07) V-K	4 mm²			
w. plastic collar ferrule, DIN 46228 pt 4, min.	0.2 mm²			
w. plastic collar ferrule, DIN 46228 pt 4, max.	2.5 mm²			
w. wire end ferrule, DIN 46228 pt 1, min.	0.2 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 2.4 mm			
Clampable conductor	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	
	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	
	Cross-section for conductor connection	Type	fine-wired	
		nominal	0.5 mm²	
	wire end ferrule	Stripping length	nominal	6 mm
		Recommended wire-end ferrule	H0,5/6	
	Cross-section for conductor connection	Type	fine-wired	
		nominal	0.75 mm²	
	wire end ferrule	Stripping length	nominal	6 mm
		Recommended wire-end ferrule	H0,75/6	
	Cross-section for conductor connection	Type	fine-wired	
		nominal	1 mm²	
	wire end ferrule	Stripping length	nominal	6 mm
		Recommended wire-end ferrule	H1,0/6	
	Cross-section for conductor connection	Type	fine-wired	
		nominal	1.5 mm²	
	wire end ferrule	Stripping length	nominal	7 mm
		Recommended wire-end ferrule	H1,5/7	
	Cross-section for conductor connection	Type	fine-wired	
		nominal	2.5 mm²	
	wire end ferrule	Stripping length	nominal	7 mm
		Recommended wire-end ferrule	H2,5/7	
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)	26.5 A	Rated current, min. number of poles (Tu=40°C)	25 A
Rated current, max. number of poles (Tu=40°C)	23 A	Rated voltage for surge voltage class / pollution degree II/2	630 V
Rated voltage for surge voltage class / pollution degree III/2	500 V	Rated voltage for surge voltage class / pollution degree III/3	400 V
Rated impulse voltage for surge voltage class/ pollution degree II/2	4 kV	Rated impulse voltage for surge voltage class/ pollution degree III/2	6 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.	11.3 mm	Clearance, min.	9.8 mm

Rated data acc. to CSA

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 28	Wire cross-section, AWG, max.	AWG 12

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 28	Wire cross-section, AWG, max.	AWG 12
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

Packing

Packaging	Box	VPE length	347.00 mm
VPE width	135.00 mm	VPE height	31.00 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
	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 / 12.02
	Conductor type	Type of conductor and conductor cross-section solid 0.5 mm²

Creation date 22.12.2025 03:44:20 MEZ

BLZ 7.62HP/12/180F SN BK BX

Technical data

		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 12/1
		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	0.2 kg	
	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	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
	Evaluation	passed	
	Requirement	0.7 kg	
	Conductor type	Type of conductor and conductor cross-section	AWG 14/1
		Type of conductor and conductor cross-section	AWG 14/19
	Evaluation	passed	
	Requirement	0.9 kg	
	Conductor type	Type of conductor and conductor cross-section	H07V-U4.0
		Type of conductor and conductor cross-section	H07V-K4.0
	Evaluation	passed	
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

BLZ 7.62HP/12/180F SN BK BX

Technical data

Evaluation	passed	
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
Evaluation	passed	
Requirement	≥50 N	
Conductor type	Type of conductor and conductor cross-section	AWG 14/1
	Type of conductor and conductor cross-section	AWG 14/19
	Type of conductor and conductor cross-section	H07V-K4.0
Evaluation	passed	
Requirement	≥60 N	
Conductor type	Type of conductor and conductor cross-section	H07V-U4.0
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. • 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		

BLZ 7.62HP/12/180F SN BK BX

Drawings

Product image
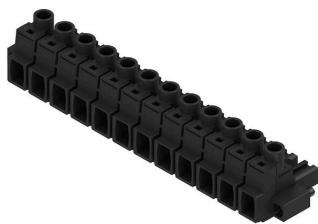
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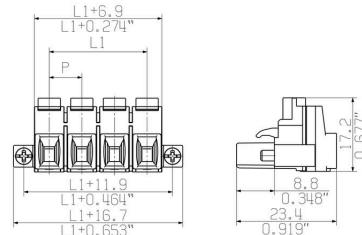
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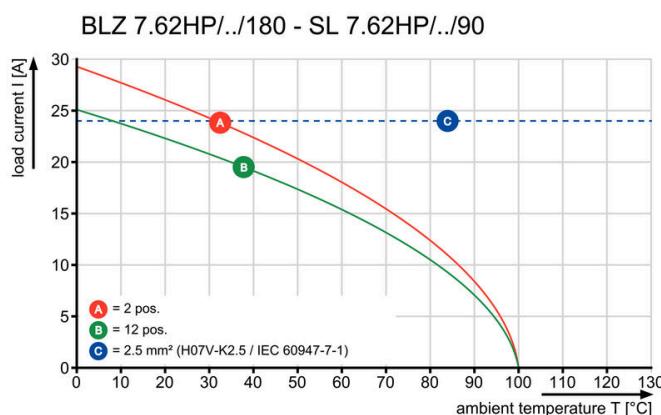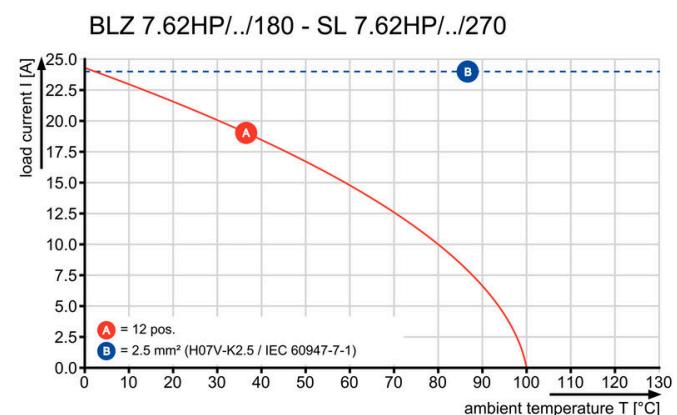
BLZ 7.62HP/../180 - SL 7.62HP/../90

A = 2 pos.
B = 12 pos.
C = 2.5 mm² (H07V-K2.5 / IEC 60947-7-1)

Graph

BLZ 7.62HP/../180 - SL 7.62HP/../270

A = 12 pos.
B = 2.5 mm² (H07V-K2.5 / IEC 60947-7-1)

BLZ 7.62HP/12/180F SN BK BX

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		

BLZ 7.62HP/12/180F SN BK BX

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		

BLZ 7.62HP/12/180F SN BK BX

Counterpart

SL 7.62HP/180F

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, with screw flanges

General ordering data

Type	SL 7.62HP/12/180F 3.2 S...	Version
Order No.	1140970000	PCB plug-in connector, male header, Flange, THT solder connection,
GTIN (EAN)	4032248923540	7.62 mm, Number of poles: 12, 180°, Solder pin length (l): 3.2 mm,
Qty.	18 ST	tinned, black, Box
Type	SL 7.62HP/12/180F 3.2 S...	Version
Order No.	1141080000	PCB plug-in connector, male header, Flange, THT solder connection,
GTIN (EAN)	4032248923489	7.62 mm, Number of poles: 12, 180°, Solder pin length (l): 3.2 mm,
Qty.	18 ST	tinned, orange, Box

SL 7.62HP/180LF

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- 20 A at 600 V (UL)
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Assisting in device approval:

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The slimming diet for multiple-stage device series:

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Male header, 180° outlet direction, with solder flanges

BLZ 7.62HP/12/180F SN BK BX

Counterpart

General ordering data

Type	SL 7.62HP/12/180LF 3.2 ...	Version
Order No.	1141190000	PCB plug-in connector, male header, Solder flange, THT solder
GTIN (EAN)	4032248924073	connection, 7.62 mm, Number of poles: 12, 180°, Solder pin length
Qty.	18 ST	(l): 3.2 mm, tinned, black, Box
Type	SL 7.62HP/12/180LF 3.2 ...	Version
Order No.	1141300000	PCB plug-in connector, male header, Solder flange, THT solder
GTIN (EAN)	4032248923878	connection, 7.62 mm, Number of poles: 12, 180°, Solder pin length
Qty.	18 ST	(l): 3.2 mm, tinned, orange, Box

SL 7.62HP/270LF
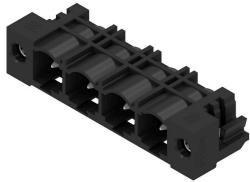
Power on board - 100% safety, 100% integration, 100% cost-effectiveness:
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• 29 A at 400 V (IEC)
• 20 A at 300 V (UL)
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• Clamping range: 0.08 - 4 mm² / AWG 28 - 12
Assisting in device approval:
• Meets the requirements for 600 V according to UL 508 / UL840.
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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 with solder flanges

General ordering data

| Type	SL 7.62HP/12/270LF 3.2S...	Version
Order No.	1472470000	PCB plug-in connector, male header, Solder flange, THT solder
GTIN (EAN)	4050118317619	connection, 7.62 mm, Number of poles: 12, 270°, Solder pin length
Qty.	50 ST	(l): 3.2 mm, tinned, black, Box
Type	SL 7.62HP/12/270LF 3.2S...	Version
Order No.	1472710000	PCB plug-in connector, male header, Solder flange, THT solder
GTIN (EAN)	4050118317831	connection, 7.62 mm, Number of poles: 12, 270°, Solder pin length
Qty.	50 ST	(l): 3.2 mm, tinned, orange, Box

BLZ 7.62HP/12/180F SN BK BX

Counterpart

SL 7.62HP/90F

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• 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 with screw flanges

General ordering data

Type	SL 7.62HP/12/90F 3.2 SN...	Version
Order No.	1124320000	PCB plug-in connector, male header, Flange, THT solder connection,
GTIN (EAN)	4032248906376	7.62 mm, Number of poles: 12, 90°, Solder pin length (l): 3.2 mm,
Qty.	18 ST	tinned, black, Box
Type	SL 7.62HP/12/90F 3.2 SN...	Version
Order No.	1124400000	PCB plug-in connector, male header, Flange, THT solder connection,
GTIN (EAN)	4032248906529	7.62 mm, Number of poles: 12, 90°, Solder pin length (l): 3.2 mm,
Qty.	18 ST	tinned, orange, Box

SL 7.62HP/90LF

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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 with solder flanges

General ordering data

Type	SL 7.62HP/12/90LF 3.2 S...	Version
Order No.	1096020000	PCB plug-in connector, male header, Solder flange, THT solder
GTIN (EAN)	4032248960187	connection, 7.62 mm, Number of poles: 12, 90°, Solder pin length (l):
Qty.	18 ST	3.2 mm, tinned, black, Box

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BLZ 7.62HP/12/180F SN BK BX

Counterpart

Type	SL 7.62HP/12/90LF 3.2 S...	Version
Order No.	1096130000	PCB plug-in connector, male header, Solder flange, THT solder
GTIN (EAN)	4032248959877	connection, 7.62 mm, Number of poles: 12, 90°, Solder pin length (l):
Qty.	18 ST	3.2 mm, tinned, orange, Box