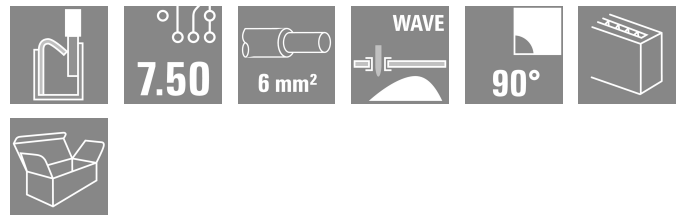
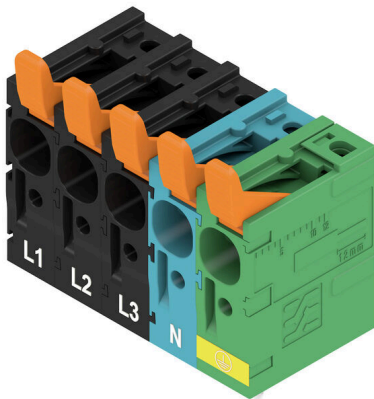


## LLF 7.50/05/90V 5.0SN BK BX SO

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

www.weidmueller.com



The sturdy, direct connection for extreme current and voltage requirements in all power electronics applications such as solar inverters, frequency converters, servo-controllers and power supplies.

### General ordering data

Version	Printed circuit board terminals, 7.50 mm, Number of poles: 5, 90°, Solder pin length (l): 5 mm, tinned, black, PUSH IN with actuator, Clamping range, max. : 6 mm <sup>2</sup> , Box
Order No.	<a href="#">2891930000</a>
Type	LLF 7.50/05/90V 5.0SN BK BX SO
GTIN (EAN)	4064675881506
Qty.	50 items
Product data	IEC: 1000 V / 41 A / 0.5 - 6 mm <sup>2</sup> UL: 600 V / 35 A / AWG 24 - AWG 8
Packaging	Box

## LLF 7.50/05/90V 5.0SN BK BX SO

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## Technical data

## Approvals

ROHS	Conform
------	---------

## Dimensions and weights

Depth	22.07 mm	Depth (inches)	0.8689 inch
Height	36.55 mm	Height (inches)	1.439 inch
Height of lowest version	31.55 mm	Width	38.5 mm
Width (inches)	1.5157 inch	Net weight	8.8 g

## Environmental Product Compliance

RoHS Compliance Status	Compliant without exemption
REACH SVHC	No SVHC above 0.1 wt%

## System parameters

Product family	OMNIMATE Power - series LL	Wire connection method	PUSH IN with actuator
Mounting onto the PCB	THT solder connection	Conductor outlet direction	90°
Pitch in mm (P)	7.50 mm	Pitch in inches (P)	0.295 "
Number of poles	5	Pin series quantity	1
Fitted by customer	No	Number of rows	1
Solder pin length (l)	5 mm	Solder pin dimensions	d = 1.5 mm
Solder eyelet hole diameter (D)	2 mm	Solder eyelet hole diameter tolerance (D)+	0,1 mm
Touch-safe protection acc. to DIN VDE 0470	IP 20	Touch-safe protection acc. to DIN VDE	Safe from finger touch 57 106
Protection degree	IP20		

## Material data

Insulating material	Wemid (PA)	Colour	black
Colour of operational elements	orange	Colour chart (similar)	RAL 9011
Insulating material group	I	Moisture Level (MSL)	
UL 94 flammability rating	V-0	Contact material	Cu-alloy
Contact surface	tinned	Layer structure of solder connection	4...10 µm Sn matt
Storage temperature, min.	-40 °C	Storage temperature, max.	70 °C
Operating temperature, min.	-40 °C	Operating temperature, max.	120 °C

## Conductors suitable for connection

Clamping range, min.	0.25 mm <sup>2</sup>		
Clamping range, max.	6 mm <sup>2</sup>		
Solid, min. H05(07) V-U	0.5 mm <sup>2</sup>		
Solid, max. H05(07) V-U	6 mm <sup>2</sup>		
Stranded, min. H07V-R	0.5 mm <sup>2</sup>		
Flexible, min. H05(07) V-K	0.5 mm <sup>2</sup>		
Flexible, max. H05(07) V-K	6 mm <sup>2</sup>		
w. plastic collar ferrule, DIN 46228 pt 4, 0.25 mm <sup>2</sup> min.			
w. plastic collar ferrule, DIN 46228 pt 4, 6 mm <sup>2</sup> max.			
w. wire end ferrule, DIN 46228 pt 1, min.	0.25 mm <sup>2</sup>		
w. wire end ferrule, DIN 46228 pt 1, max.	6 mm <sup>2</sup>		
Clampable conductor	Cross-section for conductor connection	Type	fine-wired

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**Technical data**

	nominal	0.5 mm <sup>2</sup>
wire end ferrule	Stripping length	nominal 14 mm
	Recommended wire-end ferrule	<a href="#">H0.5/18 OR</a>
Cross-section for conductor connection	Type	fine-wired
	nominal	1 mm <sup>2</sup>
wire end ferrule	Stripping length	nominal 15 mm
	Recommended wire-end ferrule	<a href="#">H1.0/18 GE</a>
Cross-section for conductor connection	Type	fine-wired
	nominal	1.5 mm <sup>2</sup>
wire end ferrule	Stripping length	nominal 15 mm
	Recommended wire-end ferrule	<a href="#">H1.5/18D SW</a>
	Stripping length	nominal 12 mm
	Recommended wire-end ferrule	<a href="#">H1.5/12</a>
Cross-section for conductor connection	Type	fine-wired
	nominal	0.75 mm <sup>2</sup>
wire end ferrule	Stripping length	nominal 14 mm
	Recommended wire-end ferrule	<a href="#">H0.75/18 W</a>
Cross-section for conductor connection	Type	fine-wired
	nominal	2.5 mm <sup>2</sup>
wire end ferrule	Stripping length	nominal 14 mm
	Recommended wire-end ferrule	<a href="#">H2.5/19D BL</a>
	Stripping length	nominal 12 mm
	Recommended wire-end ferrule	<a href="#">H2.5/12</a>
Cross-section for conductor connection	Type	fine-wired
	nominal	4 mm <sup>2</sup>
wire end ferrule	Stripping length	nominal 12 mm
	Recommended wire-end ferrule	<a href="#">H4.0/12</a>
	Stripping length	nominal 14 mm
	Recommended wire-end ferrule	<a href="#">H4.0/20D GR</a>
Cross-section for conductor connection	Type	fine-wired
	nominal	6 mm <sup>2</sup>
wire end ferrule	Stripping length	nominal 14 mm
	Recommended wire-end ferrule	<a href="#">H6.0/20 SW</a>
	Stripping length	nominal 12 mm
	Recommended wire-end ferrule	<a href="#">H6.0/12</a>

Reference text Length of ferrules is to be chosen depending on the product and the rated voltage.. The outside diameter of the plastic collar should not be larger than the pitch (P)

**Rated data acc. to IEC**

tested acc. to standard	In accordance with IEC 60947-7-1	Rated current, min. number of poles (Tu=20°C)	41 A
Rated current, max. number of poles (Tu=20°C)	35 A	Rated current, min. number of poles (Tu=40°C)	41 A
Rated current, max. number of poles (Tu=40°C)	30 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	1000 V

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### Technical data

Rated impulse voltage for surge voltage class/ pollution degree II/2 8 kV

Rated impulse voltage for surge voltage class/ contamination degree III/3 8 kV

Rated impulse voltage for surge voltage class/ pollution degree III/2 8 kV

#### Rated data acc. to CSA

Rated voltage (Use group B / CSA) 600 V

Rated voltage (Use group D / CSA) 600 V

Rated current (Use group C / CSA) 35 A

Wire cross-section, AWG, min. AWG 24

Rated voltage (Use group C / CSA) 600 V

Rated current (Use group B / CSA) 35 A

Rated current (Use group D / CSA) 5 A

Wire cross-section, AWG, max. AWG 8

#### Rated data acc. to UL 1059

Rated voltage (Use group B / UL 1059) 600 V

Rated voltage (Use group D / UL 1059) 600 V

Rated current (Use group C / UL 1059) 35 A

Wire cross-section, AWG, min. AWG 24

Rated voltage (Use group C / UL 1059) 600 V

Rated current (Use group B / UL 1059) 35 A

Rated current (Use group D / UL 1059) 5 A

Wire cross-section, AWG, max. AWG 8

#### Packing

Packaging Box VPE length 349.00 mm

VPE width 139.00 mm VPE height 30.00 mm

#### Type tests

Test: Durability of markings	Standard	IEC 60947-7-4 section 7.1.4 / 08.13		
	Test	mark of origin, type identification, type of material, pitch, durability, stripping length		
	Evaluation	available		
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 0.5 mm <sup>2</sup>	
		Type of conductor and conductor cross-section	stranded 0.5 mm <sup>2</sup>	
		Type of conductor and conductor cross-section	solid 6 mm <sup>2</sup>	
		Type of conductor and conductor cross-section	stranded 6 mm <sup>2</sup>	
		Type of conductor and conductor cross-section	AWG 24/19	
		Type of conductor and conductor cross-section	AWG 24/1	
		Type of conductor and conductor cross-section	AWG 10/1	
		Type of conductor and conductor cross-section	AWG 10/19	
		Type of conductor and conductor cross-section	H07V-K10	
Evaluation	passed			

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**Technical data**

Test for damage to and accidental loosening of conductors	Standard	IEC 60999-1 section 9.4 / 11.99, IEC 60999-1 section 9.5 / 11.99		
	Requirement	0.3 kg		
	Conductor type	Type of conductor and conductor cross-section	H05V-K0.5	
		Type of conductor and conductor cross-section	H05V-U0.5	
	Evaluation	passed		
	Requirement	0,4 kg		
	Conductor type	Type of conductor and conductor cross-section	H07V-K1	
		Type of conductor and conductor cross-section	H07V-U1	
	Evaluation	passed		
	Requirement	0.7 kg		
	Conductor type	Type of conductor and conductor cross-section	H07V-K2.5	
		Type of conductor and conductor cross-section	H07V-U2.5	
	Evaluation	passed		
	Requirement	0.9 kg		
	Conductor type	Type of conductor and conductor cross-section	H07V-K4	
Type of conductor and conductor cross-section		H07V-U4.0		
Evaluation	passed			
Requirement	1.4 kg			
Conductor type	Type of conductor and conductor cross-section	H07V-K6		
	Type of conductor and conductor cross-section	H07V-U6		
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-K0.5	
		Type of conductor and conductor cross-section	H05V-U0.5	
	Evaluation	passed		
	Requirement	≥50 N		
	Conductor type	Type of conductor and conductor cross-section	H07V-K2.5	
		Type of conductor and conductor cross-section	H07V-U2.5	
	Evaluation	passed		
	Requirement	≥60 N		
Conductor type	Type of conductor and conductor cross-section	H07V-K4		

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**Technical data**

	Type of conductor and conductor cross-section	H07V-U4.0
Evaluation	passed	
Requirement	≥80 N	
Conductor type	Type of conductor and conductor cross-section	H07V-K6
	Type of conductor and conductor cross-section	H07V-U6
Evaluation	passed	
Requirement	≥35 N	
Conductor type	Type of conductor and conductor cross-section	H07V-K1
	Type of conductor and conductor cross-section	H07V-U1
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	<ul style="list-style-type: none"> <li>• Additional variants on request</li> <li>• Rated current related to rated cross-section &amp; min. No. of poles.</li> <li>• Wire end ferrule without plastic collar to DIN 46228/1</li> <li>• Wire end ferrule with plastic collar to DIN 46228/4</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>• The test point can only be used as potential-pickup point.</li> <li>• The single-position PCB terminal block can be used for voltages up to 1500 V (DC) and 1000 V (AC). The relevant device standard and the appropriate required clearances and creepage distances should be observed in the application</li> <li>• Long term storage of the product with average temperature of 50 °C and maximum humidity 70%, 36 months</li> </ul>

**Classifications**

ETIM 8.0	EC002643	ETIM 9.0	EC002643
ETIM 10.0	EC002643	ECLASS 14.0	27-46-01-01
ECLASS 15.0	27-46-01-01		

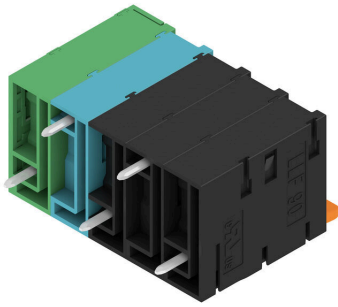
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Drawings

Product image



Dimensional drawing



Derating curve



Derating curve



Product benefits



Power up to UL 600 V offset solder pins

Product benefits



Tool-free wiring Top contact security

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**Accessories**

**Slotted screwdriver**



VDE insulated slot-head screwdriver, SDI DIN 7437, ISO 2380/2, drive output acc. to DIN 5264, ISO 2380/1. SoftFinish grip

**General ordering data**

Type	SDIS 0.5X3.0X100	Version	
Order No.	<a href="#">9008380000</a>	Screwdriver, Screwdriver	
GTIN (EAN)	4032248056347		
Qty.	1 ST		

Type	SDS 0.5X3.0X80	Version	
Order No.	<a href="#">9008320000</a>	Screwdriver, Screwdriver	
GTIN (EAN)	4032248056262		
Qty.	1 ST		

**Additional accessories**



No task is too small when creating the perfect solution. Connections form just one part of the overall process. Small details are often the key to the perfect solution in applications where potentials are tested, grouped or even isolated.

A system is not a system without small but essential details:

- Test plugs ensure reliable pick-up from diagnostic sockets

In tandem with the manufacturing process and application.

**General ordering data**

Type	PS 2.0 MC	Version	
Order No.	<a href="#">0310000000</a>	PCB plug-in connector, Accessories, Test plug, red, Number of poles:	
GTIN (EAN)	4008190000059		1
Qty.	20 ST		

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## Accessories

### Tools



- Stripping tools with automatic self-adjustment
- For flexible and solid conductors
- Ideally suitable for mechanical and plant engineering, railway and rail traffic, wind energy, robot technology, explosion protection as well as marine, offshore and ship building sectors
- Stripping length adjustable via end stop
- Automatic opening of clamping jaws after stripping
- No fanning-out of individual conductors
- Adjustable to diverse insulation thicknesses
- Double-insulated cables in two process steps without special adjustment
- No play in self-adjusting cutting unit
- Long service life
- Optimised ergonomic design

### General ordering data

Type	STRIPAX	Version	
Order No.	<a href="#">9005000000</a>	Tools, Stripping and cutting tool	
GTIN (EAN)	4008190072506		
Qty.	1 ST		