

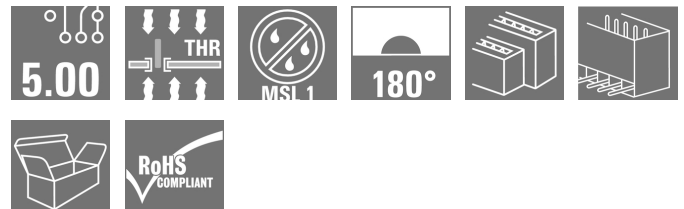
SLDV-THR 5.00/04/180G 1.5SN BK BX**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Product image

High-temperature resistant, double level, laterally offset, closed ended male header, with solder flange option. 1.5 mm solder pin suitable for reflow soldering. 3.2 mm solder pin suitable for reflow and wave soldering. The pin headers provide space for labelling and can be coded.

General ordering data

Version	PCB plug-in connector, male header, closed side, THT/THR solder connection, 5.00 mm, Number of poles: 4, 180°, Solder pin length (l): 1.5 mm, tinned, black, Box
Order No.	1894980000
Type	SLDV-THR 5.00/04/180G 1.5SN BK BX
GTIN (EAN)	4032248509690
Qty.	50 pc(s).
Product data	IEC: 400 V / 15 A UL: 300 V / 10 A
Packaging	Box

Creation date September 16, 2022 9:06:07 PM CEST

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Technical data

Dimensions and weights

Depth	23.43 mm	Depth (inches)	0.922 inch
Height	27.66 mm	Height (inches)	1.089 inch
Height of lowest version	26.16 mm	Width	13 mm
Width (inches)	0.512 inch	Net weight	4.66 g

System specifications

Product family	OMNIMATE Signal - series BL/SL 5.00	Type of connection	Board connection
Mounting onto the PCB	THT/THR solder connection	Pitch in mm (P)	5 mm
Pitch in inches (P)	0.197 inch	Outgoing elbow	180°
Number of poles	4	Number of solder pins per pole	1
Solder pin length (l)	1.5 mm	Solder pin length tolerance	+0.1 / -0.2 mm
Solder pin dimensions	d = 1.2 mm, Octagonal	Solder pin dimensions = d tolerance	0 / -0.03 mm
Solder eyelet hole diameter (D)	1.5 mm	Solder eyelet hole diameter tolerance (D)	+0.1 mm
L1 in mm	5 mm	L1 in inches	0.197 inch
Number of rows	2	Pin series quantity	2
Touch-safe protection acc. to DIN VDE 57 106	finger-safe plugged/ back-of-hand-safe unplugged	Touch-safe protection acc. to DIN VDE 0470	IP20 plugged/ IP10 unplugged
Protection degree	IP20	Volume resistance	≤5 mΩ
Can be coded	Yes	Plugging force/pole, max.	9 N
Pulling force/pole, max.	8 N		

Material data

Insulating material	LCP GF	Colour	black
Colour chart (similar)	RAL 9011	Insulating material group	IIla
Comparative Tracking Index (CTI)	≥ 175	Moisture Level (MSL)	1
UL 94 flammability rating	V-0	Contact material	CuSn
Contact surface	tinned	Layer structure of solder connection	1...3 µm Ni / 2...4 µm Sn matt
Layer structure of plug contact	1...3 µm Ni / 2...4 µm Sn matt	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		

Rated data acc. to IEC

tested acc. to standard	IEC 60664-1, IEC 61984	Rated current, min. number of poles (Tu=20°C)	15 A
Rated current, max. number of poles (Tu=20°C)	10.5 A	Rated current, min. number of poles (Tu=40°C)	13 A
Rated current, max. number of poles (Tu=40°C)	9 A	Rated voltage for surge voltage class / pollution degree II/2	400 V
Rated voltage for surge voltage class / pollution degree III/2	320 V	Rated voltage for surge voltage class / pollution degree III/3	250 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	4 kV
Rated impulse voltage for surge voltage class/ contamination degree III/3	4 kV	Short-time withstand current resistance	1 x 1s with 120 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 B / CSA) 10 A

Rated current (Use group D / CSA) 10 A

Reference to approval values

Specifications are maximum values, details - see approval certificate.

Packing

Packaging	Box	VPE length	145 mm
VPE width	114 mm	VPE height	66 mm

Classifications

ETIM 6.0	EC002637	ETIM 7.0	EC002637
ETIM 8.0	EC002637	ECLASS 9.0	27-44-04-02
ECLASS 9.1	27-44-04-02	ECLASS 10.0	27-44-04-02
ECLASS 11.0	27-46-02-01	ECLASS 12.0	27-46-02-01

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	- Rated current related to rated cross-section & min. No. of poles. - Spacing between rows: see hole layout - 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. - Long term storage of the product with average temperature of 50 °C and average humidity 70%, 36 months

Approvals

Approvals



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

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Technical data

Downloads

Approval/Certificate/Document of Conformity	Declaration of the Manufacturer
Catalogues	Catalogues in PDF-format
Brochures	FL DRIVES EN MB DEVICE MANUF. EN FL DRIVES DE FL BUILDING SAFETY EN FL APPL LED LIGHTING EN FLIndustr.CONTROLS EN FL MACHINE SAFETY EN FL HEATING ELECTRON EN FL APPL INVERTER EN FL BASE STATION EN FL ELEVATOR EN FL POWER SUPPLY EN FL 72H SAMPLE SER EN PO OMNIMATE EN PO OMNIMATE EN
White paper surface mount technology	Download Whitepaper

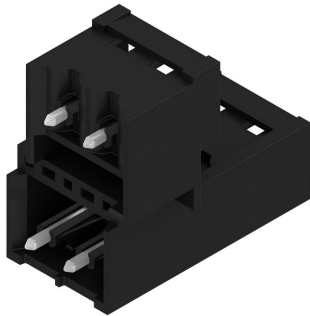
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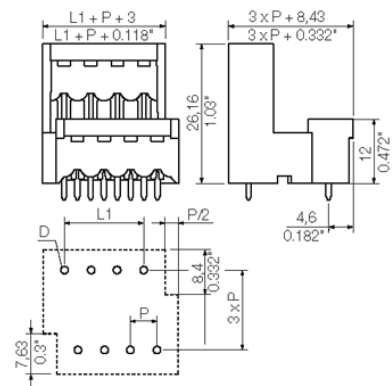
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Drawings

Product image



Dimensional drawing



Product benefits



Safe power transmission
Proven properties

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Drawings

Product benefits



Compliant with existing standards

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DIE DEUTSCHE VERSION IST VERBINDLICH
THE GERMAN VERSION IS BINDING

Technical Data

Rev.

Material data

Insulation material type	
Insulation material colours	
Insulation material flammability class	UL94
Insulation resistance	MOhm
Contact base material	
Contact plating (mating end)	
Contact plating (solder end)	

LCP GF
black
V-0
10 ⁵
CuSn
tin plated
tin plated

System characteristic values

together with counterpart

Pitch P	mm/inch
Number of rows	
Dielectric strength (r.m.s withstand voltage)	kV
Mechanical operating cycles	acc. to IEC 512
Plug in force (max.)	N/pole
Pull out force (max.)	N/pole
Through resistance (typical)	mOhm
Operating temperature range	°C
Degree of protection acc. to VDE 0106 (plugged/unplugged)	
Degree of protection acc. to DIN EN 60529 (plugged/unplugged)	
Solder pin length L	mm/inch
PCB hole diameter D (wave soldering)	mm/inch
PCB hole diameter D (reflow soldering)	mm/inch
Resistance to soldering heat acc. to DIN IEC 60512-6	°C/sec
Resistance to soldering heat acc. to EN 61760-1	°C/sec
Solderability classification acc. to EN 61760-1	
Solder connection type	
Solder pin diameter d (max.)	mm/inch

BLZ 5.00
5.00/0.197
2
4
25
n.a.
n.a.
<5
-55...+100
back of hands
IP10
3.2/0.126 ; 1.5/0.059
1.4/0.055
1.5/0.059
260/5
290/30
class A
through hole solder
1.2/0.047

Application notes

Coding possibility	yes/no
Joinable without loss of pitch	yes/no
Manual assembly of modules	yes/no
Max. number of poles	n

yes
n.a.
n.a.
48

IEC 664-1 / VDE0110 (4.97) rated data

Rated cross section acc. to EN 60999	mm ²
Rated current @ 20°C ambient (together with BLZ 5.08)	A
Rated current @ 40°C ambient (together with BLZ 5.08)	A
Overvoltage category / Pollution degree	
Rated voltage	V
Rated impulse voltage	kV

n.a.
18.6
16.1
III/3 III/2 II/2
250 320 400
4.0 4.0 4.0

UL 1059 rated data



File No.: E60693

Rated voltage	V
Rated current	A
AWG wire range (field wiring / factory wiring)	

B	C	D
300		300
10		10
n.a.		

CSA C22.2 rated data



File No.: 12400 (old)
ReportNo.: 1308147 (new)

Rated voltage	V
Rated current	A
AWG wire range (field wiring / factory wiring)	

B	C	D
300		300
10		10
n.a.		

Packaging

carton

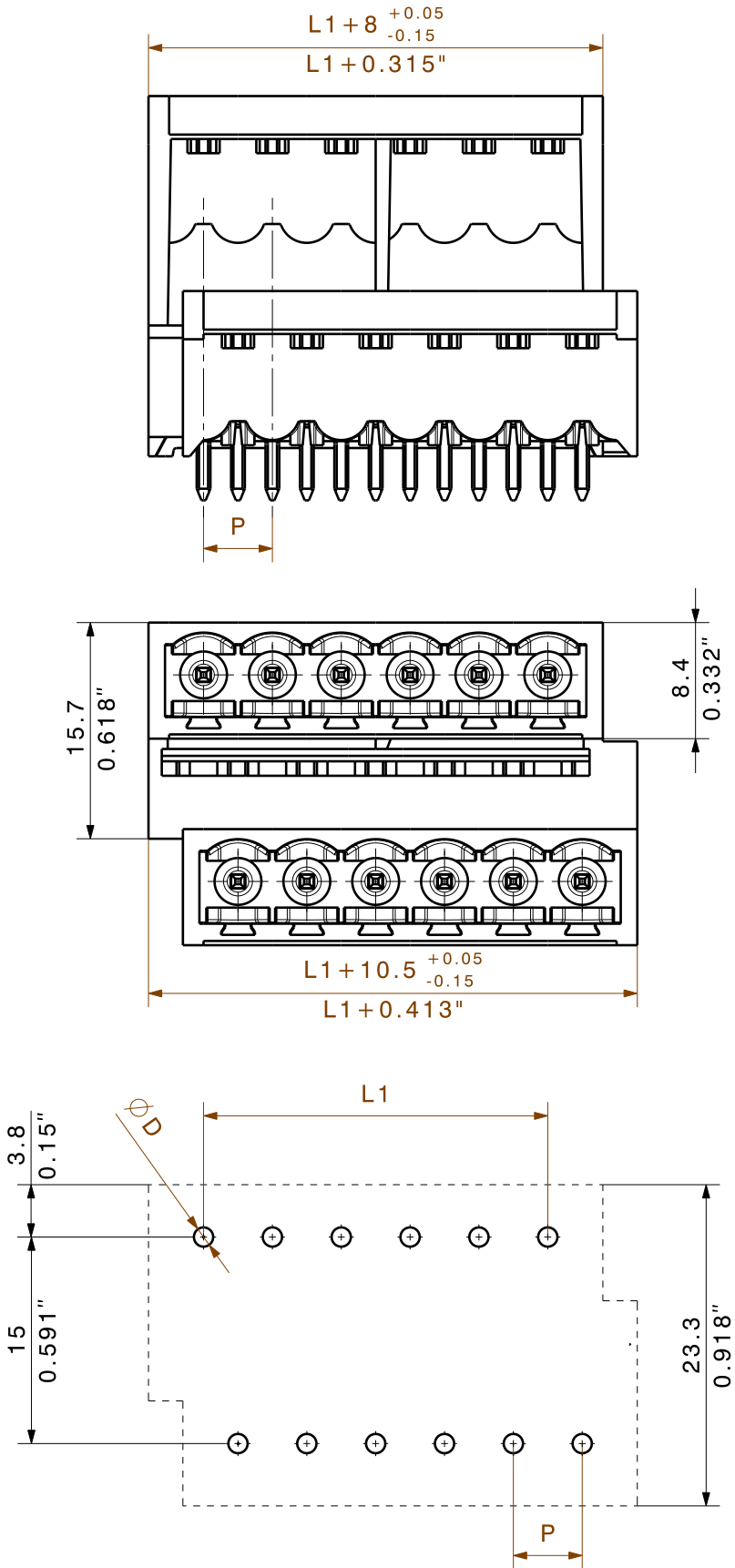
Downloads

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- 1) Sum of ambient temperature and temperature rise
- 2) Recommendation for manual assembly
- 3) Recommendation for automatic assembly
- 4) Recommendation for wave soldering
- 5) Recommendation for reflow soldering
- 6) Referred to rated cross section and minimum pole number
- 7) Fingersafe above PC-board, if plugged with BLZ
- 8) IP20 above PC-board, if plugged with BLZ

n.a. = not applicable

Subject to technical changes



Layout Finished Holes

Paste-Free Area

48	115,00	4,53
46	110,00	4,33
44	105,00	4,13
42	100,00	3,94
40	95,00	3,74
38	90,00	3,54
36	85,00	3,35
34	80,00	3,15
32	75,00	2,95
30	70,00	2,76
28	65,00	2,56
26	60,00	2,36
24	55,00	2,17
22	50,00	1,97
20	45,00	1,77
18	40,00	1,57
16	35,00	1,38
14	30,00	1,18
12	25,00	0,98
10	20,00	0,79
8	15,00	0,59
6	10,00	0,39
4	5,00	0,20
n	L1 [mm]	L1 [inch]

RoHS ☒	37601/5 07.09.07 HERTEL_S 01		CAT.NO.: .	
MODIFICATION		Weidmüller		C 36146 05
DRAWN 04.08.2004 HERTEL_S		DRAWING NO. SHEET 3 OF 6		ISSUE NO. SHEETS
RESPONSIBLE HERTEL_S		SLDV-THR 5.00/./180G		
CHECKED 13.09.2007 HERTEL_S		SMT Doppelstock-Stiftleiste		
APPROVED GUENTHER_W		SMT double level pin header		
SCALE: 2:1		PRODUCT FILE: SLDV-THR 5.08		
SUPERSEDES: .		None		
SUPERSEDED BY: .				

Recommended wave soldering profiles

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Single Wave:



Double Wave:



Wave soldering profiles

Wired connection elements should be processed in accordance with the DIN EN 61760-1 standard. We have included two recommendations for practical wave soldering profiles, with which Weidmüller PCB terminals and connectors are qualified.

When choosing a suitable profile for your application, the following factors also need to be considered:

- PCB thickness
- Proportion of Cu in the layers
- Single/double-sided assembly
- Product range
- Heating and cooling rates

The single and double wave profiles each indicate the recommended operating range, including the maximum soldering temperature of 260°C. In practice, the maximum soldering temperature is quite often well below the above maximum profile.

We reserve the right to make technical changes.

Recommended reflow soldering profile

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Reflow soldering profile

The perfect soldering profile for SMT Surface Mount Technology is one the most exiting question in SMT production. But there are more than one correct answer: The diagram of temperature-on-time is related to processing features of solder paste and to maximum load of components.

We have to consider the following parameters:

- Time for pre heating
- Maximum temperature
- Time above melting point
- Time for cooling
- Maximum heating rate
- Maximum cooling rate

We recommend a typical solder profile with associated process limits. With preheating components and board are prepared smoothly for the solder phase. Heating rate is typically $\leq +3\text{K/s}$. In parallel the solder paste is 'activated'. The time above melting point of 217°C the paste gets liquid and components and boards begin to connect. The maximum temperature of 245°C to 254°C should stay between 10 and 40 seconds. In the cooling phase at $\geq -6\text{K/s}$ solder is cured. Board and components cool down while avoiding cold cracks.