

SR-SMD 4.50/05/90LF 1.5AU BK BX
Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

The integrated rail bus for the modular electronics housing system

When supplying, connecting or distributing within modular applications, the rail bus can replace the tedious individual wiring process with a flexible and uninterrupted system-wide solution.

The system bus is securely integrated within the 35-mm standard mounting rail. The SMD-bus contact block can be reflow-soldered so that it can be completely automatically processed during the component assembly. The resistant, gold-plated contact surfaces ensure a permanent and reliable contact for all housing widths.

- **Unlimited scalability** The integrated connection solution covers all system widths: from the 6-mm slice to the 67-mm large-area housing.
- **Easy to service during installation** It's easy to replace a module, even in existing modules groups – without any influence on the neighbouring modules.
- **Universal integration** The uninterrupted system bus is securely integrated within the 35-mm standard mounting rail.
- **Maximum availability** Five fully-galvanized and partially gold-plated twin-arched contacts are used to establish a permanent contact to the rail bus. THR solder flanges ensure that the connection to the circuit board is stable.

General ordering data

Version	PCB plug-in connector, Bus-contact block for CH20M12-67, Solder flange, THT/THR solder connection, Number of poles: 5, 180°, Solder pin length (l): 1.5 mm, Gold-plated, black
Order No.	1155890000
Type	SR-SMD 4.50/05/90LF 1.5AU BK BX
GTIN (EAN)	4032248942527
Qty.	78 pc(s).
Product data	UL: 300 V / 5 A
Packaging	Box

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Technical data

Dimensions and weights

Depth	16.3 mm	Depth (inches)	0.642 inch
Height	24 mm	Height (inches)	0.945 inch
Width	7.4 mm	Width (inches)	0.291 inch
Length	0 mm	Net weight	2.782 g

Material data

Insulating material	LCP	Colour	black
Colour chart (similar)	RAL 9011	Insulating material group	IIIa
Comparative Tracking Index (CTI)	$175 \leq \text{CTI} < 400$	Insulation strength	$\geq 10^8 \Omega$
Moisture Level (MSL)	1	Contact surface	Gold-plated
Storage temperature, min.	-40 °C	Storage temperature, max.	70 °C
Operating temperature, min.	-50 °C	Operating temperature, max.	100 °C
Temperature range, installation, min.	-30 °C	Temperature range, installation, max.	100 °C

Rated data acc. to IEC

tested acc. to standard	IEC 60664-1, IEC 61984	Rated voltage for surge voltage class / pollution degree III/3	63 V
Rated impulse voltage for surge voltage class/ pollution degree II/3	1.5 kV	Clearance, min.	2.3 mm
Creepage distance, min.	3.2 mm		

Rated data acc. to UL 1059

Institute (cURus)		Certificate No. (cURus)	E60693
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)	50 V	Rated current (Use group B / UL 1059)	5 A
Rated current (Use group C / UL 1059)	5 A	Rated current (Use group D / UL 1059)	5 A
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

Material data

Comparative Tracking Index (CTI)	$175 \leq \text{CTI} < 400$	Insulating material	LCP
Insulating material group	IIIa	Material	Plastic
Surface finish	gold		

General data

Colour	black	Colour chart (similar)	RAL 9011
Protection degree	IP20 in installed state		

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Classifications

ETIM 6.0	EC001031	ETIM 7.0	EC001031
ETIM 8.0	EC001031	ETIM 9.0	EC001031
ETIM 10.0	EC001031	ECLASS 9.0	27-18-27-90
ECLASS 9.1	27-18-27-90	ECLASS 10.0	27-18-27-92
ECLASS 11.0	27-18-27-92	ECLASS 12.0	27-18-27-92
ECLASS 13.0	27-18-27-92	ECLASS 14.0	27-18-27-92
ECLASS 15.0	27-18-27-92		

Environmental Product Compliance

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

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.
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Approvals

Approvals



Approvals MAMID	https://mdcop.weidmueller.com/mediadelivery/rendition/900_319230/-T1z1mm-S800/
ROHS	Conform
UL File Number Search	UL Website
Certificate No. (cURus)	E60693

Downloads

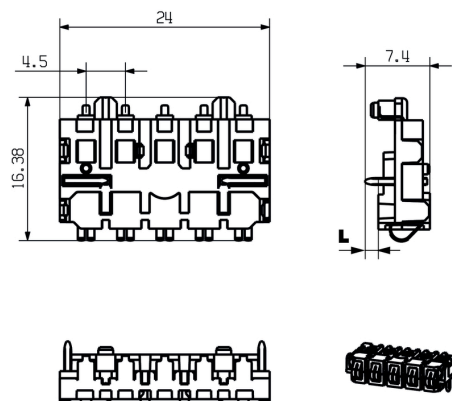
Engineering Data	CAD data – STEP
Catalogues	Catalogues in PDF-format
Brochures	FL ANALO.SIGN.CONV. EN MB DEVICE MANUF. EN FL MACHINE SAFETY EN FL 72H SAMPLE SER EN PO OMNIMATE EN PO OMNIMATE EN

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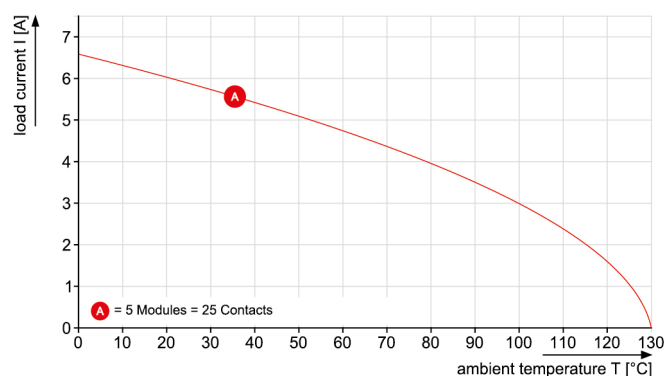
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Drawings



CH20M22-Bus



Recommended reflow soldering profile

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Klingenbergstraße 16

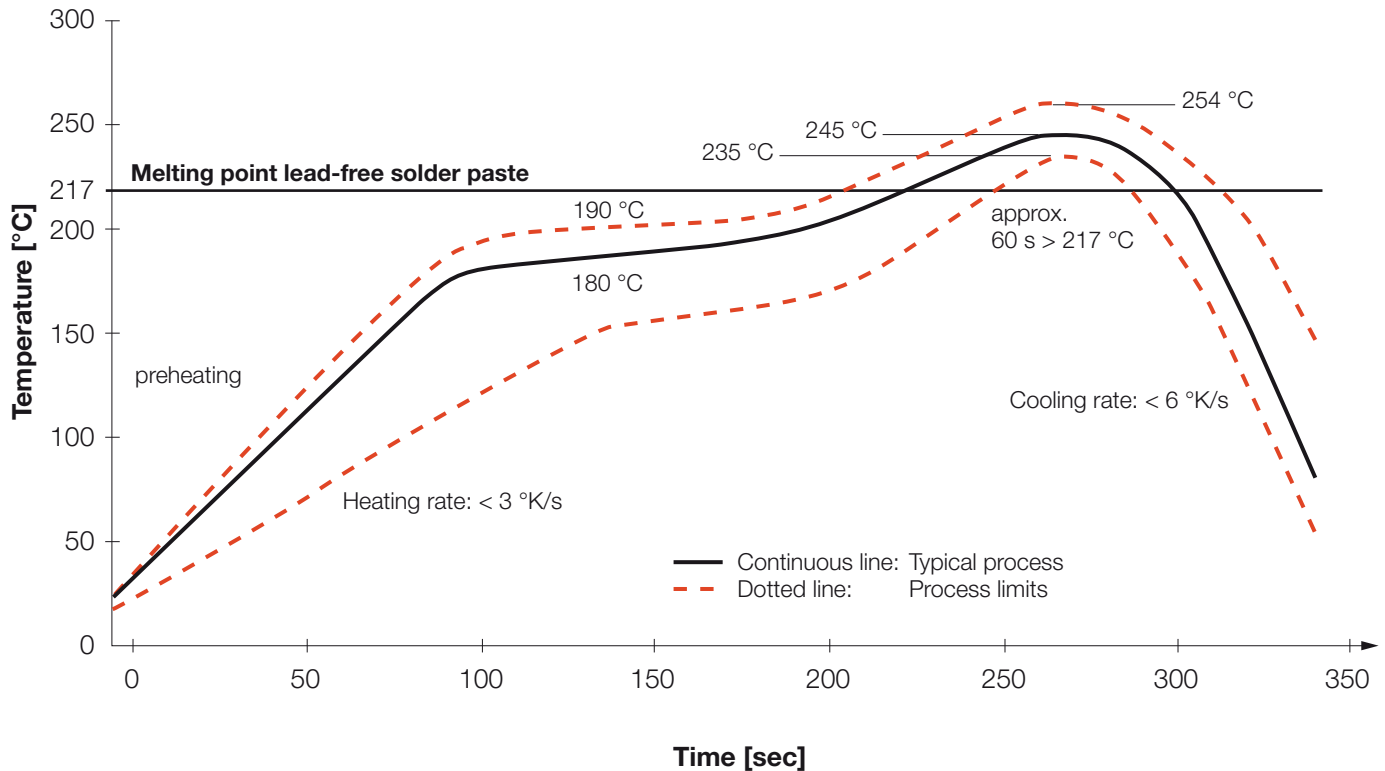
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Reflow soldering profile

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.