OMNIMATE Signal - series BL/SL 5.08
SL 5.08HC/06/90G 3.2SN BK BX

Weidmüller ⋺Ξ
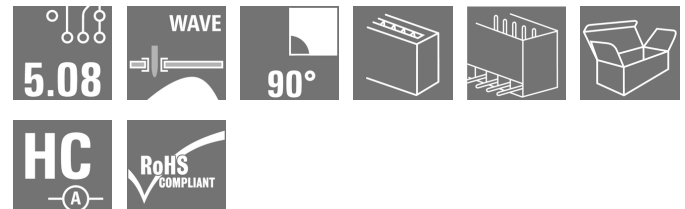
Similar to illustration

Pin headers made from glass-fibre-reinforced plastic with 90° wire outlet; optimised for wave soldering. The flange variant (F) can be screwed onto the respective counter piece or the circuit board. There is no need for an extra screw to connect the circuit board when the solder flange (LF) version is used. This also protects the solder points from mechanical strain. All pin headers can be manually coded or ordered pre-coded. HC = High Current.

General ordering data

Type	SL 5.08HC/06/90G 3.2SN BK BX
Order No.	1155370000
Version	PCB plug-in connector, male header, closed side, THT solder connection, 5.08 mm, Number of poles: 6, 90°, Solder pin length (l): 3.2 mm, tinned, black, Box
GTIN (EAN)	4050118050547
Qty.	50 pc(s).
Product data	IEC: 400 V / 24 A UL: 300 V / 18.5 A
Packaging	Box

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Technical data

Dimensions and weights

Width	33.68 mm	Width (inches)	1.326 inch
Height	11.7 mm	Height (inches)	0.461 inch
Height of lowest version	8.5 mm	Depth	12 mm
Depth (inches)	0.472 inch	Net weight	2.8 g

System specifications

Product family	OMNIMATE Signal - series BL/SL 5.08	Type of connection	Board connection
Mounting onto the PCB	THT solder connection	Pitch in mm (P)	5.08 mm
Pitch in inches (P)	0.2 inch	Outgoing elbow	90°
Number of poles	6	Number of solder pins per pole	1
Solder pin length (I)	3.2 mm	Solder pin length tolerance	+0.1 / -0.3 mm
Tolerance of solder pin position	± 0.1 mm	Solder pin dimensions	d = 1.2 mm, Octagonal
Solder pin dimensions = d tolerance	0 / -0,03 mm	Solder eyelet hole diameter (D)	1.3 mm
Solder eyelet hole diameter tolerance (D)+ 0,1 mm		L1 in mm	25.4 mm
L1 in inches	1 inch	Number of rows	1
Pin series quantity	1	Volume resistance	≤ 5mΩ
Can be coded	Yes	Plugging cycles	25
Plugging force/pole, max.	10 N	Pulling force/pole, max.	7.5 N

Material data

Insulating material	PA GF	Colour	black
Colour chart (similar)	RAL 9011	Insulating material group	II
Comparative Tracking Index (CTI)	≥ 550	Insulation strength	$\geq 10^8\ \Omega$
UL 94 flammability rating	V-0	GWFI	960 °C
Contact material	CuMg	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.	-25 °C	Storage temperature, max.	50 °C
Max. relative humidity during storage	70 %	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)	24 A
Rated current, max. number of poles (Tu=20°C)	19 A	Rated current, min. number of poles (Tu=40°C)	21 A
Rated current, max. number of poles (Tu=40°C)	16.5 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		

Rated data acc. to CSA

Rated voltage (Use group B / CSA)	300 V	Rated voltage (Use group D / CSA)	300 V
Rated current (Use group B / CSA)	18.5 A	Rated current (Use group D / CSA)	10 A

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Technical data

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 D / UL 1059)	300 V
Rated current (Use group B / UL 1059)	18.5 A	Rated current (Use group D / UL 1059)	10 A
Reference to approval values	Specifications are maximum values, details - see approval certificate.		

Packing

Packaging	Box	VPE length	40 mm
VPE width	68 mm	VPE height	165 mm

Classifications

ETIM 6.0	EC002637	ETIM 7.0	EC002637
eClass 9.0	27-44-04-02	eClass 9.1	27-44-04-02
eClass 10.0	27-44-04-02		

Notes

Notes	• Additional colours on request
	• Gold-plated contact surfaces on request
	• Rated current related to rated cross-section & min. No. of poles.
	• 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.
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.

Approvals

Approvals	
ROHS	Conform

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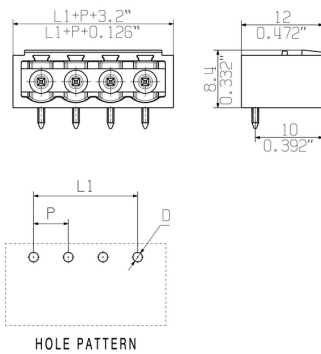
Technical data

Downloads

Approval/Certificate/Document of Conformity	Declaration of the Manufacturer
Brochure/Catalogue	FL DRIVES EN
	MB DEVICE MANUF. EN
	FL DRIVES DE
	CAT 2 PORTFOLIOGUIDE EN
	FL BUILDING SAFETY EN
	FL APPL LED LIGHTING EN
	FL INDUSTR.CONTROLS EN
	FL MACHINE SAFETY EN
	FL HEATING ELECTR EN
	FL APPL_INVERTER EN
	FL_BASE_STATION_EN
	FL ELEVATOR EN
	FL POWER SUPPLY EN
	FL 72H SAMPLE SER EN
	PO OMNIMATE EN
Engineering Data	STEP
Product Change Notification	EN - Change of packaging
	DE - Change of packaging

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Drawings

Dimensional drawing
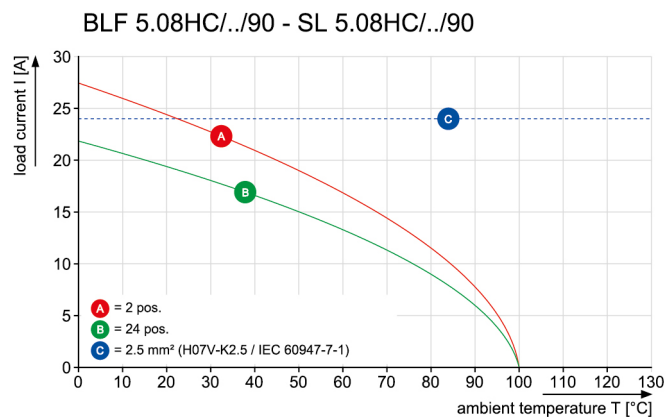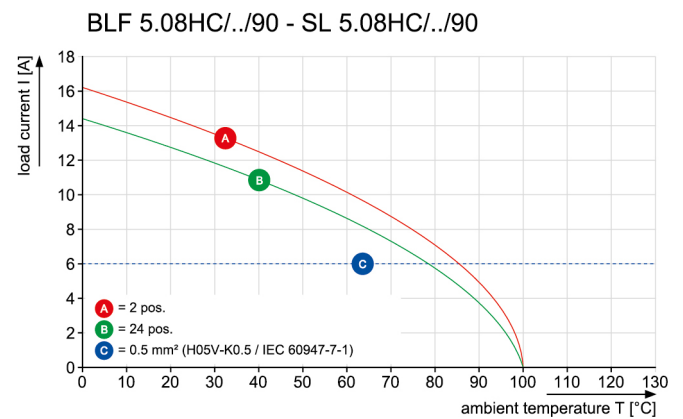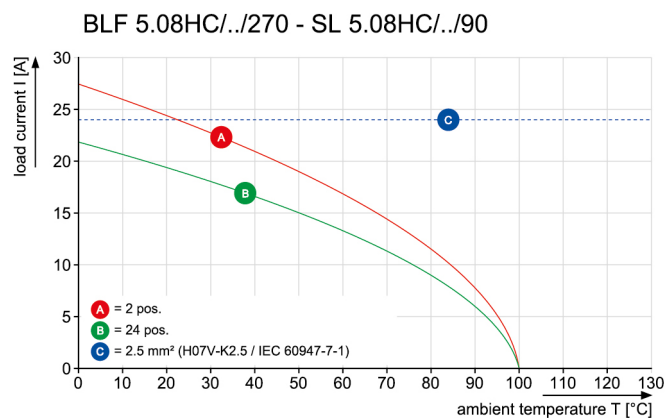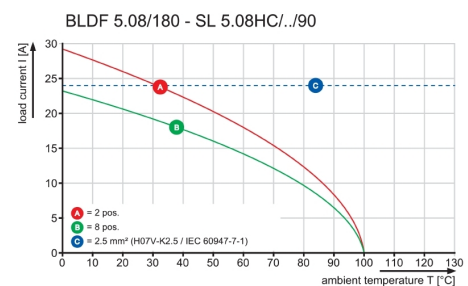
L1+P+3.2"
L1+P+0.126"

12
0.472"

8.4
0.332"

10
0.392"

L1

P

D

HOLE PATTERN

Graph

BLF 5.08HC/../90 - SL 5.08HC/../90

load current I [A]

ambient temperature T [°C]

A = 2 pos.
B = 24 pos.
C = 2.5 mm² (H07V-K2.5 / IEC 60947-7-1)

Graph

BLF 5.08HC/../90 - SL 5.08HC/../90

load current I [A]

ambient temperature T [°C]

A = 2 pos.
B = 24 pos.
C = 0.5 mm² (H05V-K0.5 / IEC 60947-7-1)

Graph

BLF 5.08HC/../270 - SL 5.08HC/../90

load current I [A]

ambient temperature T [°C]

A = 2 pos.
B = 24 pos.
C = 2.5 mm² (H07V-K2.5 / IEC 60947-7-1)

Graph

BLDF 5.08/180 - SL 5.08HC/../90

load current I [A]

ambient temperature T [°C]

A = 2 pos.
B = 8 pos.
C = 2.5 mm² (H07V-K2.5 / IEC 60947-7-1)

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OMNIMATE Signal - series BL/SL 5.08
SL 5.08HC/06/90G 3.2SN BK BX

Mating connector (fully pluggable)

BLDT 5.08B

Female plugs with two clamping-yoke screw connections per pole for wire connections with 90° and 270° outlet directions. The female plugs provide space for labelling and can be coded.

General ordering data

Type	BLDT 5.08/06/-B SN BK BX	Version		Product data	Packaging
Order No.	1673820000	PCB plug-in connector, female plug, 5.08 mm, Number of poles: 6,		IEC: 400 V / 14 A / 0.2 - 2.5 mm²	Box
GTIN (EAN)	4008190435554	180°, Clamping yoke connection, Clamping range, max. : 3.31 mm²,		UL: 300 V / 10 A / AWG 26 - AWG 12	
Qty.	45 pc(s).	Box			
Type	BLDT 5.08/06/-B SN OR BX	Version		Product data	Packaging
Order No.	1651780000	PCB plug-in connector, female plug, 5.08 mm, Number of poles: 6,		IEC: 400 V / 14 A / 0.2 - 2.5 mm²	Box
GTIN (EAN)	4008190400460	180°, Clamping yoke connection, Clamping range, max. : 3.31 mm²,		UL: 300 V / 10 A / AWG 26 - AWG 12	
Qty.	45 pc(s).	Box			

BLC 5.08BR
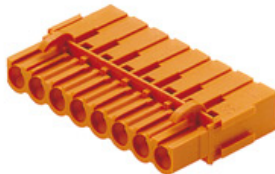
Female plugs with crimp wire connection system.The female plugs provide space for labelling and can be coded.

General ordering data

Type	BLC 5.08/06/180BR OR BX	Version		Product data	Packaging
Order No.	1649410000	PCB plug-in connector, female plug, 5.08 mm, Number of poles: 6,		IEC: 400 V / 21 A	Box
GTIN (EAN)	4008190294526	180°, Crimp connection, Clamping range, max. : 2.5 mm², Box		UL: 300 V / 10 A / AWG 26 - AWG 14	
Qty.	50 pc(s).				
Type	BLC 5.08/06/180BR BK BX	Version		Product data	Packaging
Order No.	1712150000	PCB plug-in connector, female plug, 5.08 mm, Number of poles: 6,		IEC: 400 V / 21 A	Box
GTIN (EAN)	4008190935160	180°, Crimp connection, Clamping range, max. : 2.5 mm², Box		UL: 300 V / 10 A / AWG 26 - AWG 14	
Qty.	50 pc(s).				

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OMNIMATE Signal - series BL/SL 5.08
SL 5.08HC/06/90G 3.2SN BK BX

Mating connector (fully pluggable)

BLL 5.08/180B

Female header for PCB mounting. The solder pin length is optimised for wave flow soldering.

General ordering data

Type	BLL 5.08/06/180B 3.2SN ...	Version	Product data	Packaging
Order No.	1682770000	PCB plug-in connector, female header, Dovetails for fixing blocks, THT	IEC: 400 V / 23 A	Box
GTIN (EAN)	4008190474539	solder connection, 5.08 mm, Number of poles: 6, 180°, Solder pin	UL: 300 V / 15 A	
Qty.	54 pc(s).	length (l): 3.2 mm, tinned, orange, Box		

BLZP 5.08HC/225B SN

Clamping-yoke connection with right-angled (90° or 270°) or angled (225°) outlet direction. The female connectors provide space for labelling and can be coded. Fastened by means of a flange or release latch. The also provide an integrated plus/minus screw, protection against faulty insertion of the wire, and they are delivered with open clamping yokes. HC = High Current.

General ordering data

Type	BLZP 5.08HC/06/225B SN ...	Version	Product data	Packaging
Order No.	1945790000	PCB plug-in connector, female plug, 5.08 mm, Number of poles: 6,	IEC: 400 V / 17.5 A / 0.2 - 4 mm²	Box
GTIN (EAN)	4032248621262	225°, Clamping yoke connection, Clamping range, max. : 4 mm², Box	UL: 300 V / 15 A / AWG 26 - AWG 12	
Qty.	54 pc(s).			
Type	BLZP 5.08HC/06/225B SN ...	Version	Product data	Packaging
Order No.	1946020000	PCB plug-in connector, female plug, 5.08 mm, Number of poles: 6,	IEC: 400 V / 17.5 A / 0.2 - 4 mm²	Box
GTIN (EAN)	4032248621552	225°, Clamping yoke connection, Clamping range, max. : 4 mm², Box	UL: 300 V / 15 A / AWG 26 - AWG 12	
Qty.	54 pc(s).			

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Accessories

Blocks for PCB mounting

Minor component, major effect:
Clip-on attachment elements increase the mechanical resilience of the whole plug connection by
• securing the male connectors to the circuit board
• providing a vibration-proof connection between the sockets and the male connectors

Clip-on or pre-assembled - always the right solution:
• Hard-wearing, precise fitting dovetail joint
• Hard-wearing metal threaded inserts
• Suitable for all outlet directions

Maximum stability, minimum effort:
• Extremely resilient for frequent fastening operations
• Complete set for easy selection

The result: soldering points, contacts and overall module are more resilient against mechanical stress such as vibrations and tensile loads.

General ordering data

Type	SLA BB11R OR	Version		Product data	Packaging
Order No.	1604120000	PCB plug-in connector, Accessories, Mounting block, orange, Number of poles: 1			Box
GTIN (EAN)	4008190182977				
Qty.	20 pc(s).				
Type	SLA BB11R SW	Version		Product data	Packaging
Order No.	1692340000	PCB plug-in connector, Accessories, Mounting block, black, Number of poles: 1			Box
GTIN (EAN)	4008190864965				
Qty.	20 pc(s).				

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OMNIMATE Signal - series BL/SL 5.08
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Accessories

LED Light guides

Effective: the link between LED and front panel.
Floodlight indicators allow users to monitor the switching states without requiring a special design: optical plastic directs the light from standard LEDs around a bend into the connectors or through the front plate.
The fibre-optic elements are simply clipped behind the relevant 90° bend male connectors (90° outlet direction). Versions with different incoming light beam heights achieve maximum light efficiency for LEDs with different designs or heights.
The advantages compared to conventional solutions:
• No additional LED circuit board required behind the front panel
• No "long-legged" LEDs with separate mounting required
• Bent fibre-optic cable line for maximum light efficiency
• Uncomplicated front plate bore holes due to circular shape of outgoing light beam
• Easy to maintain correct clearance and creepage distance
• Can be partitioned for smaller pole numbers

The result: simplified manufacturing process, reduced costs and simplified design

General ordering data

Type	SL FLA 3.8/1	Version		Product data	Packaging
Order No.	1580110000	PCB plug-in connector, Accessories, Flood-light display, Transparent,			Box
GTIN (EAN)	4008190050740	Number of poles: 1			
Qty.	100 pc(s).				

Type	SL FLA 2,3/1	Version		Product data	Packaging
Order No.	1636670000	PCB plug-in connector, Accessories, Flood-light display, Transparent,			Box
GTIN (EAN)	4008190409975	Number of poles: 1			
Qty.	100 pc(s).				

Type	SL FLA 2,3/24	Version		Product data	Packaging
Order No.	1636680000	PCB plug-in connector, Accessories, Flood-light display, Transparent,			Box
GTIN (EAN)	4008190409968	Number of poles: 1			
Qty.	10 pc(s).				

Type	SL FLA 3.8/24	Version		Product data
Order No.	1595860000	PCB plug-in connector, Accessories, Flood-light display, Transparent,		
GTIN (EAN)	4008190140892	Number of poles: 1		
Qty.	10 pc(s).			

Type	SL FLA 9.0/24	Version		Product data
Order No.	1595870000	PCB plug-in connector, Accessories, Flood-light display, Transparent,		
GTIN (EAN)	4008190079796	Number of poles: 1		
Qty.	10 pc(s).			

Type	SL FLA 9.0/1	Version		Product data	Packaging
Order No.	1580120000	PCB plug-in connector, Accessories, Flood-light display, Transparent,			Box
GTIN (EAN)	4008190031909	Number of poles: 1			
Qty.	100 pc(s).				

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Accessories

Type	SL FLA 1.5/1	Version		Product data		Packaging
Order No.	1580100000	PCB plug-in connector, Accessories, Flood-light display, Transparent,				Box
GTIN (EAN)	4008190152475	Number of poles: 1				
Qty.	100 pc(s).					
Type	SL FLA 1.5/24	Version		Product data		
Order No.	1595850000	PCB plug-in connector, Accessories, Flood-light display, Transparent,				
GTIN (EAN)	4008190092573	Number of poles: 1				
Qty.	10 pc(s).					

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

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Accessories

Additional accessories

No task is too small when creating the perfect solution. br />
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 useful details:

- Test plugs - ensure reliable pick-up from diagnostic sockets
- Cross-connectors - ensure a stable electrical distribution contact directly at the connection
- Compartment partition elements - divide a large number of male connectors into several separate socket connector channels
- Locks and clips - optional vibration-resistant clip-on connection or mounting for male and female connectors

In tandem with the manufacturing process and application - more accessories = smaller workload
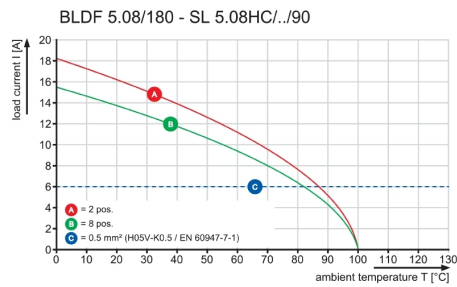
General ordering data

Type	SL AT SW	Version		Product data	Packaging
Order No.	1770240000	PCB plug-in connector, Accessories, Spacer, black, Number of poles: 1			Box
GTIN (EAN)	4032248117710				
Qty.	100 pc(s).				
Type	SL AT OR	Version		Product data	Packaging
Order No.	1598300000	PCB plug-in connector, Accessories, Spacer, orange, Number of poles:			Box
GTIN (EAN)	4008190189266	1			
Qty.	100 pc(s).				

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OMNIMATE Signal - series BL/SL 5.08
SL 5.08HC/06/90G 3.2SN BK BX

Drawings

Graph

BLDF 5.08/180 - SL 5.08HC/../90

Graph: load current I [A] (y-axis, 0 to 20) vs. ambient temperature T [°C] (x-axis, 0 to 130)
- A = 2 pos.
- B = 8 pos.
- C = 0.5 mm² (H05V-K0.5 / EN 60947-7-1)

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Recommended wave solderding profiles

Single Wave:

Contact time appr. 3 sec.
260 °C
255 °C
250 °C
appr. 150 °C
Preheating
Cooling rate < 6 °K/s
Heating rate < 3 °K/s

Temperature [°C] / time [s]

— Typical process
- - - Prozess limits
···· Temperature on board

Double Wave:

255 °C   260 °C
Total contact time max. 10 sec.   250 °C
appr. 150°C
Preheating
Cooling rate < 6 °K/s
Heating rate < 3 °K/s

Temperature [°C] / time [s]

— Typical process
- - - Process limits
···· Temperature on board

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.