

Fields of application

Charging station

Green Energy



Safety and Security

Industry

HVACR

Factory Test and Measurement

Process Automation and Utility Management

Building Technology

Control Devices

Lighting

Oil and Gas

Medical

Power Electronics

Home Automation & Domotics
compliant to EN 60335-1

Wireless Connection Devices



SAURO was founded in Padua, Italy in 1984. We design and manufacture both our high quality PCB terminal blocks and connectors and the machines and automated systems which manufacture them.

100% engineered and manufactured in ITALY

Connect with confidence, we take care of the rest



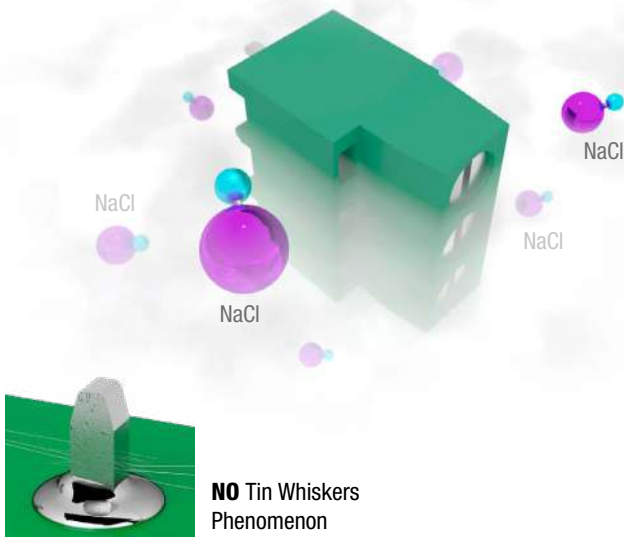
By the law

SAURO has always demonstrated the highest respect for human health and safety and for the environment by obtaining ISO 9001, 14001 and 45001 certification and with compliance to the REACH regulation and RoHS directive. Sauro embraces the fight against violence, human rights violations and environmental degradation, which is why we only source from suppliers who can guarantee that they are Conflict Mineral Free. Moreover, having obtained the most prestigious international agency approvals (UL, CSA, VDE, IMQ) confirms compliance with high quality standards.

Strategy



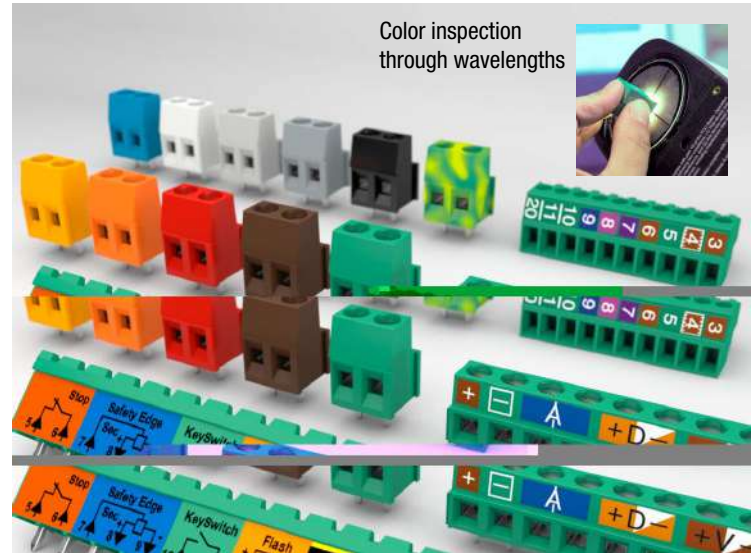
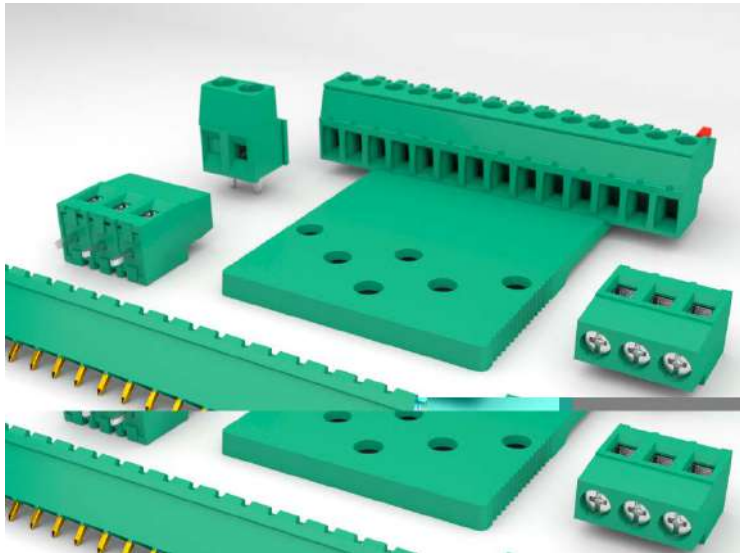
All production, from individual components to finished products is done at the headquarters in Padua, Italy. Machines, assembly lines and molds are all designed and built in-house. SAURO has always provided products that are fully tested on the production line allowing the customer a guarantee of zero functional defects.



Choice of materials

The high quality of SAURO products is guaranteed by the attentive choice of materials and the continuous research and development with raw material suppliers of innovative and better performing materials. The Insulating material is phosphorus, dioxins, halogen and antimony trioxide free and it is V0 class self-extinguishing according to UL94 certification. It is also GWIT (Glow Wire Ignition Temperature) classified at 775°C and therefore suitable for use in domestic appliances subject to European Standard EN 60335-1. All products are suitable for use in harsh environments and operating conditions since metallic components are made exclusively in special copper alloys. In addition, products with spring clamping technology can be used in environments where ammonia is present (NH₃) thanks to the use of stainless steel. Characteristically the properties of SAURO products remain unchanged in time maintaining the maximum safety and reliability.

Smart and customer-specific solutions



Design-in

Due to the flexibility of our molding tools and SAURO's philosophy of being oriented towards customer needs, the insulating housings and metallic components can be designed and manufactured according to the customer required specification.

Examples include: non-fundamental geometric changes, closed product base, closed wire entry, addition of cable clip, customized pin length, special plating, various screw head types and more.

Colors & Marking

The standard color of traditional products (manual or wave soldering) is green, and for STH products (for high temperature reflow soldering) is black. Different colors are available upon request. SAURO offers pad printing using a bi-component ink, obtaining characters with the highest possible readability that are also indelible and scratch resistant.



Accessories

Various accessories are offered separately or already mounted to the SAURO product. Examples include coding clips and splines, bridges for short circuits and occluders. Thanks to modular molds of the insulating housing, the coding clips and splines can be replaced by integrated coding of the insulating body, and pole closures can be done by molding instead of loosely inserted occluders.



Packaging solutions

All products can be supplied according to customer requirements or to the assembly process on the PCB. Packaging in kits, for example, allows for simplified product handling, shipping, storage and assembly, as well as reduced risk of error. Moreover, depending on the PCB assembly requirement, products can be supplied in aligned tray and tube packaging (ideal for semi-automated assembly) or in tape on reel and cell tray (ideal for automated assembly).

From standard product to STH: our evolution and its

Materials

PCB assembly

Soldering process

STANDARD



Traditional polyamide PA6.6



Manual assembly process



Wave and manual soldering

STH



30% glass fibre reinforced and MSL1 (Moisture Sensitivity Level 1) rated polyamide: no moisture absorption



Automated assembly process using gripper or vacuum system




Reflow soldering


+


Benefits

Products withstand the high temperatures of reflow ovens and do not require any moisture barrier bag or drying process before going in to the oven.


+

Benefits

For high volume usage the automated assembly process is the most reliable, convenient and efficient choice.


+

Benefits

STH products can be soldered in the reflow oven together with all other SMD products eliminating the additional wave soldering process and all the intermediate storages.

advantages!

Packaging

Furthermore

Future



Bulk

What we need?

- Intermediate storage
- Manual assembly
- Wave or manual soldering process

STH



Through hole reflow technology



Tape on reel

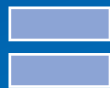
We do not need!

- PAD
- Intermediate storage
- Manual assembly
- Moisture barrier bag or drying process
- Wave soldering process

SMT



Surface Mount Technology



Benefits

Tape on reel packaging is the best method of product placement for automated assembly on the PCB.

Factory's work space
and time reduced by

70%

Respect to STANDARD

Benefits

SAURO SMD products have been designed to offer small and smart solutions when the dominant requirement is compactness and miniaturization.

Factory's work space
and time reduced by

75%

Respect to STANDARD



Series		MBBH	MBBD SMD	MTBH	MTBD SMD	MSBH	MSBD SMD	MSGH	MSMH	MSMH N.	MSFH
Height		7.3 mm .287 in	7.5 mm .295 in	8.5 mm .335 in	8.5 mm .335 in	10 mm .394 in	10.15 mm .400 in	13.5 mm .531 in	15.2 mm .598 in	17.05 mm .671 in	15.5 mm .610 in
Mounting type & Version	Side stackable	90°	0°	0°,55°	0°	0°,55°,90°	0°	0°,90°	0°	0°	0°
	Modular			0°,55°		0°,55°,90°		0°,90°	0°,35°		
	Polarized										
	Flanges										
Pitch mm/in.	2.54	.100									
	3.5	.138									
	3.81	.150	3.81 (x)	3.81 (x)	3.81 (x)	3.81 (x)					
	5	.197					5 (x)	5 (x)	5 (x)	5 (x)	
	5.08	.200					5.08 (x)		5.08 (x)		
	6.35	.250									
	7	.276			7 (•)	7 (•)					
	7.5	.295							7.5 (•)	7.5 (•)	
	7.62	.300	7.62 (•)	7.62 (•)	7.62 (•)	7.62 (•)			7.62 (•)		7.62 (•)
	9.52	.375									
	10	.394									
	10.16	.400									
12.7	.500										
15	.591										
Rated voltage		300 V (x) 600 V (•)	300 V (x) 600 V (•)	300 V (x) 750 V (•)	300 V (x) 750 V (•)	300 V (x) 750 V (•)	300 V (x) 750 V (•)	300 V (x) 750 V (•)	300 V (x) 750 V (•)	300 V (x)	750 V (•)
Wire section mm ²		0.05÷0.75	0.05÷0.75	0.05÷1.5	0.05÷1.5	0.05÷1.5	0.05÷1.5	0.05÷2.5	0.05÷2.5	0.05÷2.5	0.05÷2.5
Wire section AWG		28÷18	28÷18	28÷16	28÷16	30÷16	30÷16	30÷14	30÷12	30÷12	30÷12
Rated current		9 A	9 A	12 A	12 A	17.5 A	17.5 A	24 A	24 A	24 A	24 A



MSSH	MSQH	MSPH	MMTH	MCBH	MCB D SMD	MCCH	MCMH	MCQH	MCQH D.
15.2 mm .598 in	19 mm .748 in	21.5 mm .846 in	15 mm .590 in	8 mm .315 in	8 mm .315 in	12 mm .472 in	14.45 mm .569 in	17.9 mm .705 in	17.3 mm .681 in
0°	0°	0°, 35°, 90°	90°	45°	45°	45°	0°	0°, 90°	90°
0°	0°						0°		
			3.5 (x) 3.81 (x)	3.5 (x)	3.5 (x)	3.81 (x)			
5 (x)	5 (x) 5.08 (x)			5 (x)	5 (x)	5.08 (x)	5.08 (x)	5 (x)	5 (x)
		6.35 (x)							
			7 (●)	7 (●)	7 (●)				
7.5 (●) 7.62 (●)	7.5 (●) 7.62 (●)	7.62 (x) 9.52 (●)	7.62 (●)			7.62 (●)			
10 (●)				10 (□)	10 (□)			10 (●)	10 (●)
						10.16 (●)			
300 V (x) 750 V (●)	300 V (x) 750 V (●)	450 V (x) 750 V (●)	300 V (x) 750 V (●)	300 V (x) 630 V (●) 1000 V (□)	300 V (x) 630 V (●) 1000 V (□)	300 V (x) 630 V (●) 1000 V (□)	300 V (x)	300 V (x) 750 V (●)	300 V (x) 750 V (●)
0.05÷2.5	0.05÷4	0.05÷6	0.2÷1.5	0.2÷1.5	0.2÷1.5	0.2÷1.5	0.2÷2.5	0.2÷2.5	0.2÷2.5
30÷12	30÷12	30÷10	30÷16	24÷16	24÷16	30÷16	30÷12	30÷12	30÷12
24 A	32 A	41 A	10 A	17.5 A	17.5 A	13.5 A	16 A	16 A	16 A

Clamp technology

TRADITIONAL
for wave soldering



Series		PSB	PSM	PSQ
Height		19 mm (C) .748 in	25.2 mm (C) .992 in	31.5 mm (C) 1.240 in
Mounting type & Version	Side stackable			
	Modular	A,B,C,D,E	A,B,C,D,E	A,B,C,D,E,F
	Polarized			
	Flanges			
Pitch mm/in.	2.54			
	3.5			
	3.81			
	5	5 (x)	5 (x)	5 (x)
	5.08	5.08 (x)	5.08 (x)	5.08 (x)
	6.35			
	7			
	7.5			
	7.62			
	9.52			
	10	10 (●)	10 (●)	10 (●)
10.16	10.16 (●)	10.16 (●)	10.16 (●)	
12.7				
15				
Rated voltage		300 V (x) 750 V (●)	300 V (x) 750 V (●)	300 V (x) 750 V (●)
Wire section mm ²		0.05÷1.5	0.05÷2.5	0.05÷4
Wire section AWG		30÷16	30÷12	30÷12
Rated current		17.5 A	24 A	32 A

Pulirma
available versions



PSB (A) - Medium tower
Height 19 mm/.748 in

PSB (B) - High tower
Height 28 mm/1.102 in

PSB (C) - 1st & 2nd levels
Height 19 mm/.748 in

PSB (D) - 2nd & 3rd levels
Height 28 mm/1.102 in

PSB (E) - 3 levels
Height 28 mm/1.102 in



PSM (A) - Medium tower
Height 25.2 mm/992 in

PSM (B) - High tower
Height 35.6 mm/1.402 in

PSM (C) - 1st & 2nd levels
Height 25.2 mm/992 in

PSM (D) - 2nd & 3rd levels
Height 35.6 mm/1.402 in

PSM (E) - 3 levels
Height 35.6 mm/1.402 in



PSQ (A) - Medium tower
Height 31.5 mm/1.240 in

PSQ (B) - High tower
Height 45 mm/1.772 in

PSQ (C) - 1st & 2nd levels
Height 31.5 mm/1.240 in

PSQ (D) - 2nd & 3rd levels
Height 45 mm/1.772 in

PSQ (E) - 3 levels
Height 45 mm/1.772 in

PSQ (F) - 4 levels
Height 58.8 mm/2.315 in



MSL1 Not moisture sensitive



Traditional for wave soldering



STH for reflow soldering



Solderable up to 275 °C



Pick and place system



For resined PCBs



Series		CSMH	CSMD SMD	CLMH	CTMH	CTMH DOUBLE	CIMH	CIMH N.	CPMH
Height		9 mm .355 in	9.5 mm .374 in	9 mm .355 in	9.2 mm .362 in	18.6 mm .732 in	12 mm .472 in	16.49 mm .649 in	22.08 mm .869 in
Mounting type & Version	Side stackable	0°,90°	0°	0°			0°,45°,90°,270°	0°	0°,90°
	Modular				0°,45°,90°,270°		0°,45°,90°		0°,90°
	Polarized				0°,45°,90°,270°	90°	0°,45°,90°,270°		0°,90°
	Flanges				0°,45°,90°,270°		0°,45°,90°,270°		
Pitch mm/in.	2.54	.100							
	3.5	.138							
	3.81	.150			3.5 (x)	3.5 (x)			
	5	.197	5 (x)	5 (x)	5 (x)		5 (x)	5 (●)	5 (x)
	5.08	.200			5.08 (x)		5.08 (x)		5.08 (x)
	6.35	.250							
	7	.276			7 (●)	7 (●)			
	7.5	.295					7.5 (●)		
	7.62	.300				7.62 (●)	7.62 (●)		
	9.52	.375							
	10	.394	10 (●)	10 (●)			10 (□)		10 (●)
10.16	.400				10.16 (□)	10.16 (□)		10.16 (●)	
12.7	.500								
15	.591								
Rated voltage		300 V (x) 1000 V (●)	300 V (x) 1000 V (●)	150 V (x) 300 V (●)	300 V (x) 600 V (●) 1000 V (□)	300 V (x) 600 V (●)	300 V (x) 600 V (●) 1000 V (□)	300 V (●)	300 V (x) 1000 V (●)
Wire section mm ²									
Wire section AWG									
Rated current		12 A	12 A	10 A	11 A	11 A	16 A	15 A	16 A

Connectors

TRADITIONAL
for wave soldering

Female connectors



Series		CGF	CXF	CSF	CLF	CHF	CHF D.
Height		18.9 mm .744 in	7.95 mm .313 in	11.5 mm .453 in	11.1 mm .437 in	12.5 mm .492 in	16 mm .630 in
Mounting type & Version	Side stackable		90°, 270°	0°, 90°, 270°	0°, 90°, 270°	45°	45°
	Modular	0°, 90°		0°, 90°, 270°	0°, 90°, 270°		
	Polarized						
	Flanges			90°, 270°			
Pitch mm/in.	2.54	.100					
	3.5	.138			3.5 (●)	3.5 (x)	3.5 (x)
	3.81	.150					
	5	.197	5 (x)	5 (●)	5 (x)		
	5.08	.200	5.08 (x)				
	6.35	.250					
	7	.276				7 (●)	7 (●)
	7.5	.295	7.5 (●)				
	7.62	.300	7.62 (●)				
	9.52	.375					
	10	.394	10 (□)		10 (●)		
	10.16	.400	10.16 (□)				
12.7	.500						
15	.591						
Rated voltage		300 V (x) 600 V (●) 1000 V (□)	300 V (●)	300 V (x) 1000 V (●)	300 V (●)	150 V (x) 300 V (●)	150 V (x) 300 V (●)
Wire section mm ²			0.2÷1.5	0.05÷2.5	0.5÷1.5	0.5÷1.5	0.5÷1.5
Wire section AWG			28÷16	30÷14	30÷16	24÷16	24÷16
Rated current		16 A	10 A	12 A	10 A	4 A	8 A



STH & SMD
for reflow soldering



Female connectors



Series		CGFH
Height		18.9 mm .744 in
Mounting type & Version	Side stackable	
	Modular	0°, 90°
	Polarized	
	Flanges	
Pitch mm/in.	2.54	.100
	3.5	.138
	3.81	.150
	5	.197
	5.08	.200
	6.35	.250
	7	.276
	7.5	.295
	7.62	.300
	9.52	.375
	10	.394
	10.16	.400
12.7	.500	
15	.591	
Rated voltage		300 V (x) 600 V (●) 1000 V (□)
Wire section mm ²		
Wire section AWG		
Rated current		16 A



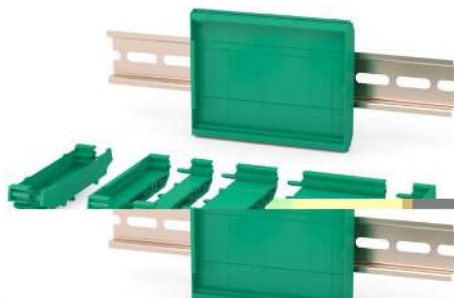
PCB Supports



STC 072 Extruded supports



STC 107 Extruded supports



SMC 072 Modular supports



SMC 107 Modular supports



SRC 175 DIN Rail Boxes



SRC 225 DIN Rail Boxes



SRC 350 DIN Rail Boxes



SRC 450 DIN Rail Boxes



CTF	CKF	CBF	CIF	CVF	CCF	CCF D.	CUF
11.1 mm .437 in	19.2 mm .756 in	20.85 mm .821 in	15.5 mm .610 in	25 mm .984 in	25.4 mm 1 in	25.2 mm .992 in	15.5 mm .610 in
0°	90° 90°	0°	0° 0°	90° 90°	0°	0°	0°
0°	90°	0°	0°	90°	0°	0°	0°
3.5 (x) 3.81 (x) 5 (•) 5.08 (•)	3.5 (•) 3.81 (•)	3.5 (x) 3.81 (x)	5 (x) 5.08 (x)	5 (x) 5.08 (x)	5 (x) 5.08 (x)	5 (x)	5 (x)
7 (□)	7 (□)	7 (•)	7.5 (•) 7.62 (•)	7.5 (•) 7.62 (•)			
7.62 (□)	7.62 (□)	7.62 (•)					
10 (□) 10.16 (□)			10 (□) 10.16 (□)	10 (□) 10.16 (□)	10 (•) 10.16 (•)	10 (•)	10 (•)
300 V (x) 600 V (•) 1000 V (□)	300 V (•) 1000 V (□)	150 V (x) 300 V (•)	300 V (x) 600 V (•) 1000 V (□)	300 V (x) 600 V (•) 1000 V (□)	300 V (x) 1000 V (•)	300 V (x) 1000 V (•)	300 V (x) 750 V (•)
0.05÷1.5	0.05÷1.5	0.14÷1.5	0.05÷2.5	0.05÷2.5	0.2÷2.5	0.2÷2.5	0.05÷1.5
30÷14	30÷14	30÷14	30÷12	30÷12	30÷12	30÷12	30÷12
11 A	11 A	11 A	16 A	16 A	12 A	12 A	10 A

Angle definition

Compatibility of connectors

	CXF	CSF	CLF	CHF	CHF D.	CTF	CKF	CBF	CIF	CVF	CCF	CCF D.	CGF
Clamp terminal blocks 													
Angle between the PCB and the wiring direction	CSM ✓	CSM ✓											
	CSMH ✓	CSMH ✓											
	CSMD ✓	CSMD ✓											
	CLMH_S		✓		✓								
Spring terminal blocks 	CLMH_0			✓									
Angle between the PCB and the wiring direction	CTM					✓	✓	✓					
	CTMH					✓	✓	✓					
	CTM D.					✓	✓	✓					
Female connectors 	CTMH D.					✓	✓	✓					
Angle between the plugging direction and the wiring direction	CIM								✓		✓	✓	
	CIMH								✓	✓	✓	✓	
	CPM H.								✓	✓	✓	✓	
	CPM								✓	✓	✓		
Male connectors 	CPMH								✓	✓	✓		
Angle between the normal to the PCB and the plugging direction	CRM								✓	✓	✓		
	CIMH N.								✓	✓	✓	✓	
	CGM												✓



ELECTRONIC CONNECTORS
— *by the law* —