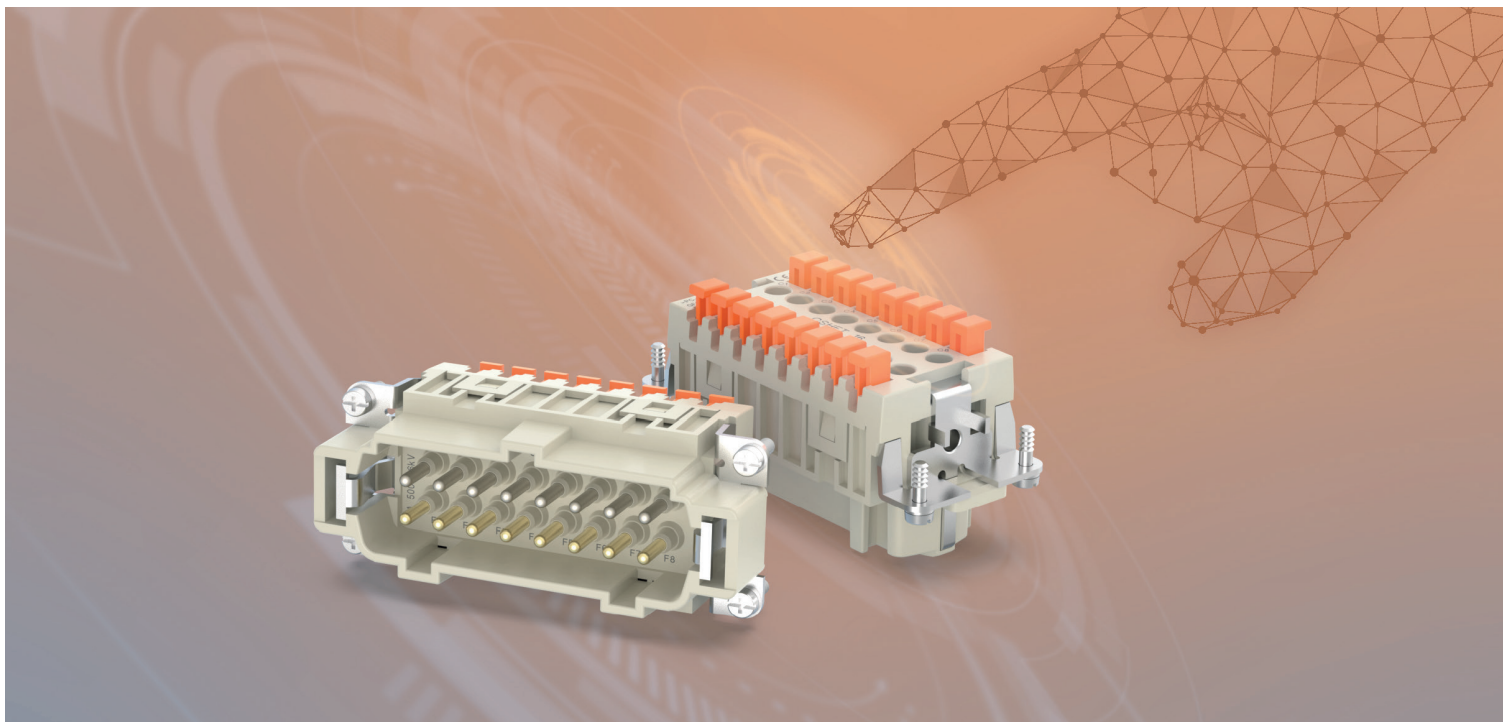


CSHT-SQUICH® series for Type J (Fe/CuNi) thermocouples



This new **CSHT** variant of series **SQUICH® CSH** inserts employs one row of contacts made by *iron* (Fe, gold plated to provide corrosion resistance), the other facing row of contacts made by *constantan* alloy (CuNi), for quick, easy, releasable/reusable wiring of the popular **type J** thermocouples according to IEC 60584-1.

NOTE – Type J thermocouples cover a temperature measurement range - 210 °C to + 760 °C. This type's susceptibility to high-temperature degradation limits its life, but it is often used in injection moulding because of its compatibility with vacuum and inert atmospheres. Compared to type K thermocouples, it has a smaller temperature range and a shorter lifespan at higher temperatures, but in terms of cost and reliability they are equivalent.

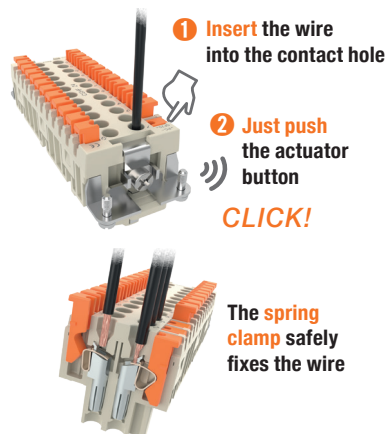
While these special-use connector inserts bear the same rated insulation voltage (500 V 6 kV) and the same current rating (16 A) of the standard versions of series CSH for power transmission, the employed special contacts made with *Fe* (iron) and *CuNi* (constantan) respectively cannot provide the same contact resistance, thus the current carrying capacity of silver-plated brass contacts.

NOTE – Resistivity of iron (*Fe*) varies from 1,1× to 1,7× that of brass, depending the title of copper in the brass alloy, while resistivity of constantan (*CuNi*) is from 5,4× to 8,2× that of brass.

Indeed, in thermocouple applications there is neither need for such voltage nor for such current-carrying capacity. The thermocouple current is in the milliamperere range, the voltage is in the millivolt range, with the purpose to avoid *offset* voltages due to contact among dissimilar metals.

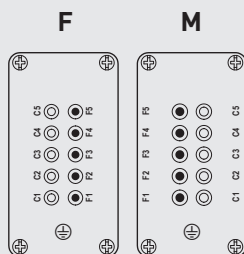
TECHNOLOGY AT A GLANCE

 **SQUICH®**

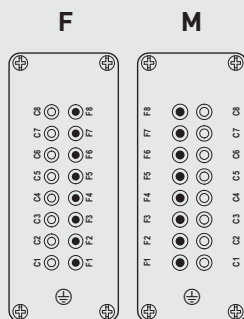


FOCUS

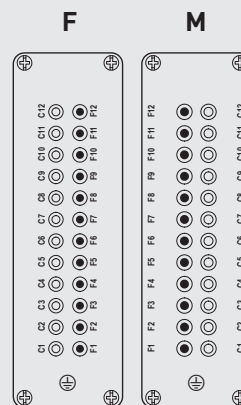
Fe / CuNi contacts layout



➤ **CSHFT /MT 10**
for up to 5 Type J thermocouples



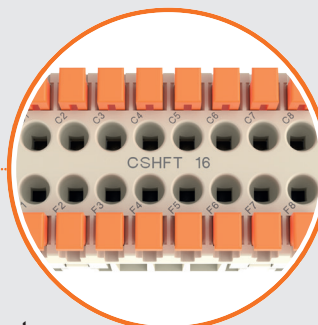
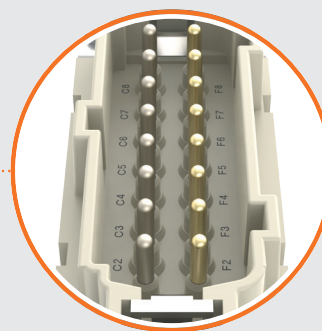
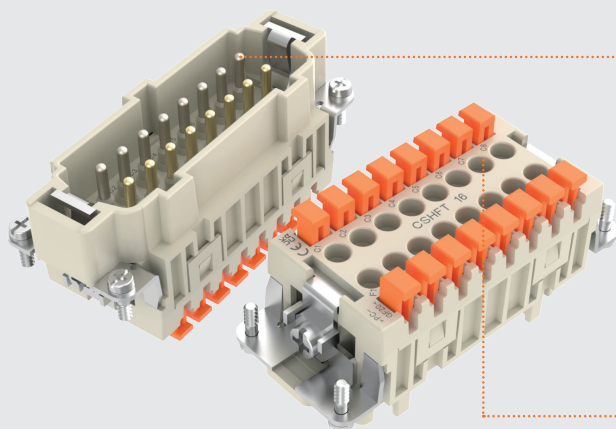
➤ **CSHFT /MT 16**
for up to 8 Type J thermocouples



➤ **CSHFT /MT 24**
for up to 12 Type J thermocouples

contacts side - front view

- CuNi contact
- Fe contact (gold plated)
- M = male insert
- F = female insert



- Variants with mixed combination of standard brass contacts (for power circuits) and type J thermocouple contacts are possible upon request for reasonable production quantities. Please contact our commercial offices.



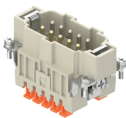
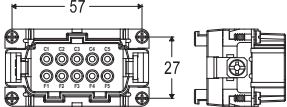

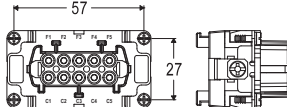
CSHT 10
16 A 500 V

size **57.27**
10 poles + ⊕

Tool-less connection – SQUICH®

EN 61984 rating	16 A 500 V 6 kV 3
Rated voltage (UL / CSA)	600 V
Insulation resistance	≥ 10 GΩ
Contact resistance	≤ 3 mΩ
Ambient temperature limit	-40 °C ... +125 °C
Mechanical life (cycles)	≥ 500

CE UK (pending: EAC)
(pending: CQC, DNV and BV)
(pending: cURus)

Item	Description	Part No.	Dimension
	Male inserts with male contacts Spring clamp connections, with actuator button Poles with built-in iron contacts (gold plated) are marked with "F" letter, poles with built-in constantan contacts are marked with "C" letter.	CSHMT 10	
	Female inserts with female contacts Spring clamp connections, with actuator button Poles with built-in iron contacts (gold plated) are marked with "F" letter, poles with built-in constantan contacts are marked with "C" letter.	CSHFT 10	

Materials	
Insert	polycarbonate (PC)
UL 94 flame rating	V-0
Colour	pebble grey, RAL 7032
Contacts	
- poles F1-F5	built-in turned, iron ● (Fe, gold plated)
- poles C1-C5	built-in turned, constantan ● (CuNi)

Wiring information	
Wires cross sectional area	
- unprepared	0,14 mm² - 2,5 mm² (AWG 26-14)
- prepared	0,14 mm² - 2,5 mm² (AWG 26-14)
Stripping length	9...11 mm

Enclosures size 57.27	Pages
Heavy-Duty Applications	
Metallic with C-TYPE lever	E.54-61
Metallic with IL-BRID lever	E.92-95,105
Metallic with JEI®-P lever	E.113-114,119
Metallic with V-TYPE IP67 lever	E.125,130-131
Thermoplastic T-TYPE	E.228-229,234-235
Aggressive Environments	
Metallic IP68 high protection	E.144-145
Metallic W-TYPE	E.156-157,163
Metallic E-Xtreme®	E.176-177,184-185,195
Thermoplastic T-TYPE/W	E.228-229,234-235
Specialized Applications	
EMC (Electromagnetic Shielding)	E.210-211,217
Hygienic series for food and beverage	E.245,248
Standard applications with Central lever	E.256-257
BIG Enclosures for multiple cable entries	E.269,274-275
COB system for switch cabinet	E.286-289
Light and Sound applications with JEI®-P lever	E.298-299

CSHT 16

16 A 500 V

size **77.27****16 poles +** 


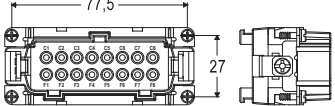

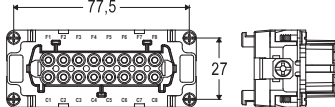
Tool-less connection – SQUICH®

EN 61984 rating	16 A 500 V 6 kV 3
Rated voltage (UL / CSA)	600 V
Insulation resistance	≥ 10 GΩ
Contact resistance	≤ 3 mΩ
Ambient temperature limit	-40 °C ... +125 °C
Mechanical life (cycles)	≥ 500

CE UK (pending: EAC)

(pending: CQC, DNV and BV)

(pending: cURus)

Item	Description	Part No.	Dimension
	Male inserts with male contacts Spring clamp connections, with actuator button Poles with built-in iron contacts (gold plated) are marked with "F" letter, poles with built-in constantan contacts are marked with "C" letter.	CSHMT 16	
	Female inserts with female contacts Spring clamp connections, with actuator button Poles with built-in iron contacts (gold plated) are marked with "F" letter, poles with built-in constantan contacts are marked with "C" letter.	CSHFT 16	

CSHT

B

Materials

Insert	polycarbonate (PC)
UL 94 flame rating	V-0
Colour	pebble grey, RAL 7032
Contacts	
- poles F1-F8	built-in turned, iron ● (Fe, gold plated)
- poles C1-C8	built-in turned, constantan ● (CuNi)

Wiring information

Wires cross sectional area	
- unprepared	0,14 mm ² - 2,5 mm ² (AWG 26-14)
- prepared	0,14 mm ² - 2,5 mm ² (AWG 26-14)
Stripping length	9...11 mm

Enclosures size 77.27

Pages

Heavy-Duty Applications

Metallic with C-TYPE lever	E.62-69
Metallic with IL-BRID lever	E.96-99,106
Metallic with JEI®-P lever	E.115-116,119
Metallic with V-TYPE IP67 lever	E.126-179,186-187,196
Thermoplastic T-TYPE	E.230-231,234-235

Aggressive Environments

Metallic IP68 high protection	E.146-147
Metallic W-TYPE	E.158-159,164
Metallic E-Xtreme®	E.178-179,186-187,196
Thermoplastic T-TYPE/W	E.230-231,234-235

Specialized Applications

EMC (Electromagnetic Shielding)	E.212-213,218
Hygienic series for food and beverage	E.246,248
Standard applications with Central lever	E.258-259
BIG Enclosures for multiple cable entries	E.270,276-277
COB system for switch cabinet	E.286-289
Light and Sound applications with JEI®-P lever	E.300-301



CSHT 24

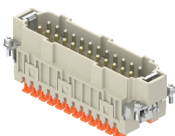
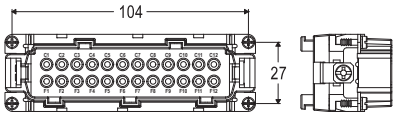
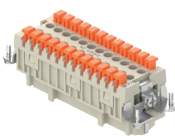
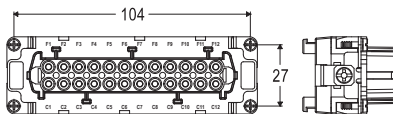
16 A 500 Vsize **104.27****24 poles + ⊕****Tool-less connection – SQUICH®**

EN 61984 rating	16 A 500 V 6 kV 3
Rated voltage (UL / CSA)	600 V
Insulation resistance	≥ 10 GΩ
Contact resistance	≤ 3 mΩ
Ambient temperature limit	-40 °C ... +125 °C
Mechanical life (cycles)	≥ 500

CE UK (pending: EAC)

(pending: CQC, DNV and BV)

(pending: cURus)

Item	Description	Part No.	Dimension
	Male inserts with male contacts Spring clamp connections, with actuator button Poles with built-in iron contacts (gold plated) are marked with "F" letter, poles with built-in constantan contacts are marked with "C" letter.	CSHMT 24	
	Female inserts with female contacts Spring clamp connections, with actuator button Poles with built-in iron contacts (gold plated) are marked with "F" letter, poles with built-in constantan contacts are marked with "C" letter.	CSHFT 24	

Materials

Insert	polycarbonate (PC)
UL 94 flame rating	V-0
Colour	pebble grey, RAL 7032
Contacts	
- poles F1-F12	built-in turned, iron ● (Fe, gold plated)
- poles C1-C12	built-in turned, constantan ● (CuNi)

Wiring information

Wires cross sectional area	
- unprepared	0,14 mm ² - 2,5 mm ² (AWG 26-14)
- prepared	0,14 mm ² - 2,5 mm ² (AWG 26-14)
Stripping length	9...11 mm

Enclosures size 104.27**Pages****Heavy-Duty Applications**

Metallic with C-TYPE lever	E.70-77
Metallic with IL-BRID lever	E.100-103,107
Metallic with JEI®-P lever	E.117-119
Metallic with V-TYPE IP67 lever	E.127,134-135
Thermoplastic T-TYPE	E.232-235

Aggressive Environments

Metallic IP68 high protection	E.148-149
Metallic W-TYPE	E.160-161,165
Metallic E-Xtreme®	E.180-181,188-189,197
Thermoplastic T-TYPE/W	E.232-235

Specialized Applications

EMC (Electromagnetic Shielding)	E.214-215,219
Hygienic series for food and beverage	E.247-248
Standard applications with Central lever	E.260-261
BIG Enclosures for multiple cable entries	E.271,278-279
COB system for switch cabinet	E.286-289
Light and Sound applications with JEI®-P lever	E.302-303