Feed-through header - HSCH 1,5-3U/18 9005 - 2202232

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PCB headers, nominal current: 8 A, rated voltage (III/2): 160 V, nominal cross section: 1.5 mm², number of positions: 18, pitch: 3.45 mm, color: black, contact surface: Tin, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 3.8 mm

Your advantages

- For front connection plugs with tool-free, time saving Push-in connection
- Suitable for reflow soldering processes
- All headers support variable coding

Key Commercial Data

Packing unit	50 pc
Minimum order quantity	50 pc
GTIN	4 055626 023700
GTIN	4055626023700

Technical data

Item properties

Brief article description	Feed-through header
Plug-in system	HSC 1,5
Type of contact	Male connector
Range of articles	HSCH 1,5/..-G
Pitch	3.45 mm
Number of positions	18
Mounting type	Wave soldering
Pin layout	Linear pinning
Number of levels	2
Number of connections	18
Number of potentials	18

Electrical parameters

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Technical data

Electrical parameters

Nominal current	8 A
Nom. voltage	160 V
Rated voltage	63 V
Rated voltage (III/2)	160 V
Rated voltage (II/2)	160 V
Rated surge voltage (III/3)	2.5 kV
Rated surge voltage (III/2)	2.5 kV
Rated surge voltage (II/2)	2.5 kV

Material data - contact

Note	WEEE/RoHS-compliant, free of whiskers according to IEC 60068-2-82/ JEDEC JESD 201
Contact material	Cu alloy
Surface characteristics	Tin-plated
Metal surface terminal point (top layer)	Tin (2 - 4 µm Sn)
Metal surface terminal point (middle layer)	Nickel (1.3 - 3 µm Ni)
Metal surface contact area (top layer)	Tin (2 - 4 µm Sn)
Metal surface contact area (middle layer)	Nickel (1.3 - 3 µm Ni),
Metal surface soldering area (top layer)	Tin (2 - 4 µm Sn)
Metal surface soldering area (middle layer)	Nickel (1.3 - 3 µm Ni)

Material data - housing

Housing color	black (9005)
Insulating material	PA
Insulating material group	I
CTI according to IEC 60112	600
Flammability rating according to UL 94	V0
Glow wire flammability index GWFI according to EN 60695-2-12	850
Glow wire ignition temperature GWIT according to EN 60695-2-13	775
Temperature for the ball pressure test according to EN 60695-10-2	125 °C

Dimensions for the product

Length [l]	16.05 mm
Width [w]	32.9 mm
Height [h]	17.45 mm
Pitch	3.45 mm
Height (without solder pin)	13.6 mm
Solder pin [P]	3.8 mm
Pin spacing	5.30 mm

Dimensions for PCB design

Hole diameter	1.3 mm
Pin spacing	5.30 mm

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Technical data

Packaging information

Type of packaging	Box packaging
Pieces per package	50
Denomination packing units	Pcs.
Outer packaging type	Carton

General product information

Type of note	Assembly instruction:
Note	Refer to the data sheet for the range in the download area.

Ambient conditions

Ambient temperature (storage/transport)	-40 °C ... 55 °C
Ambient temperature (assembly)	-5 °C ... 100 °C
Ambient temperature (operation)	-40 °C ... 105 °C (dependent on the derating curve)

Termination and connection method

Conductor connection test	The stripped-off ends of the largest conductor can be completely inserted in the opening of the terminal point without using excessive force.
Test result	Test passed
Test – repeated connection and release	IEC 60999-1:1999-11
	Test passed
Test for conductor damage and slackening	IEC 60999-1:1999-11
	Test passed

Pull-out test

Pull-out test	IEC 60999-1:1999-11
	Test passed
Conductor cross section / conductor type / tensile force	0.2 mm² / solid / > 10 N
	0.2 mm² / flexible / > 10 N
	1.5 mm² / solid / > 40 N
	1.5 mm² / flexible / > 40 N

Mechanical tests according to standard

Test specification	IEC 61984
Visual inspection	IEC 60512-1-1:2002-02
Dimension check	IEC 60512-1-2:2002-02
Resistance of inscriptions	IEC 60068-2-70:1995-12
Insertion and withdrawal force	IEC 60512-13-2:2006-02
No. of cycles	25
Insertion strength per pos. approx.	5 N
Withdraw strength per pos. approx.	4 N
Polarization and coding	IEC 60512-13-5:2006-02
Contact holder in insert	IEC 60512-15-1:2008-05
Test force per pos.	20 N

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Air clearances and creepage distances

Clearances and creepage distances	IEC 60664-1:2007-04
Specification	IEC 60664-1:2007-04
Minimum clearance - inhomogeneous field (III/3)	1.5 mm
Minimum clearance - inhomogeneous field (III/2)	1.5 mm
Minimum clearance - inhomogeneous field (II/2)	1.5 mm
Minimum creepage distance value (III/3)	1.6 mm
Minimum creepage distance value (III/2)	1.6 mm
Minimum creepage distance value (II/2)	1.6 mm

Current carrying capacity / derating curves

Caption	Type: HSCP-SP 1,5-1U/ 6 7035 with HSCH 1,5-2U/12 9005
Specification	IEC 61984:2008-10
Reduction factor	0.8
Note	Representation based on IEC 60512-5-2:2002-02
	For number of positions, see diagram

Mechanical tests (A)

Test specification	IEC 61984
Insertion strength per pos. approx.	5 N
Withdraw strength per pos. approx.	4 N
Polarization when inserted requirement >20 N	Test passed
Contact holder in insert requirements >20 N	Test passed

Durability tests (B)

Specification	IEC 60512-9-1:2010-03
Contact resistance R_1	2.1 mΩ
Insertion/withdrawal cycles	25
Contact resistance R_2	2.2 mΩ
Impulse withstand voltage at sea level	2.95 kV
Power-frequency withstand voltage	1.39 kV
Insulation resistance, neighboring positions	> 0,4 TΩ

Thermal tests (C)

Specification	IEC 60512-5-1:2002-02
Number of positions	6
Conductor cross section	1.5 mm²

Climatic tests (D)

Specification	ISO 6988:1985-02
Cold stress	-40 °C/2 h
Thermal stress	100 °C/168 h
Corrosive stress	0.2 dm^3 SO_2 on 300 dm^3/40 °C/1 cycle
Impulse withstand voltage at sea level	2.95 kV

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Technical data

Climatic tests (D)

Power-frequency withstand voltage	1.39 kV

Environmental and durability tests (E)

Specification	IEC 61984:2008-10
Result, degree of protection, IP code	Finger safety with IP20 test finger

Standards and Regulations

Flammability rating according to UL 94	V0
Safety note	WARNING: The connectors may not be plugged in or disconnected under load. Ignoring the warning or improper use may damage persons and/or property.
	• WARNING: Commission properly functioning products only. The products must be regularly inspected for damage. Decommission defective products immediately. Replace damaged products. Repairs are not possible.
	• WARNING: Only electrically qualified personnel may install and operate the product. They must observe the following safety notes. The qualified personnel must be familiar with the basics of electrical engineering. They must be able to recognize and prevent danger. The relevant symbol on the packaging indicates that only personnel familiar with electrical engineering are allowed to install and operate the product.
	• The item is intended to be an unencapsulated plug for installation in a housing.
	• Operate the connector only when it is fully plugged in.

Environmental Product Compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

Drawings

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Schematic diagram

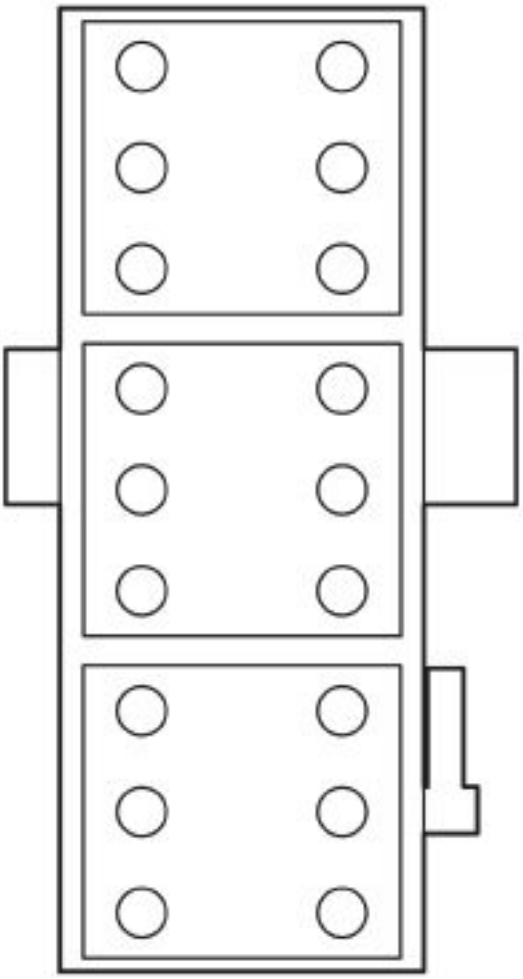

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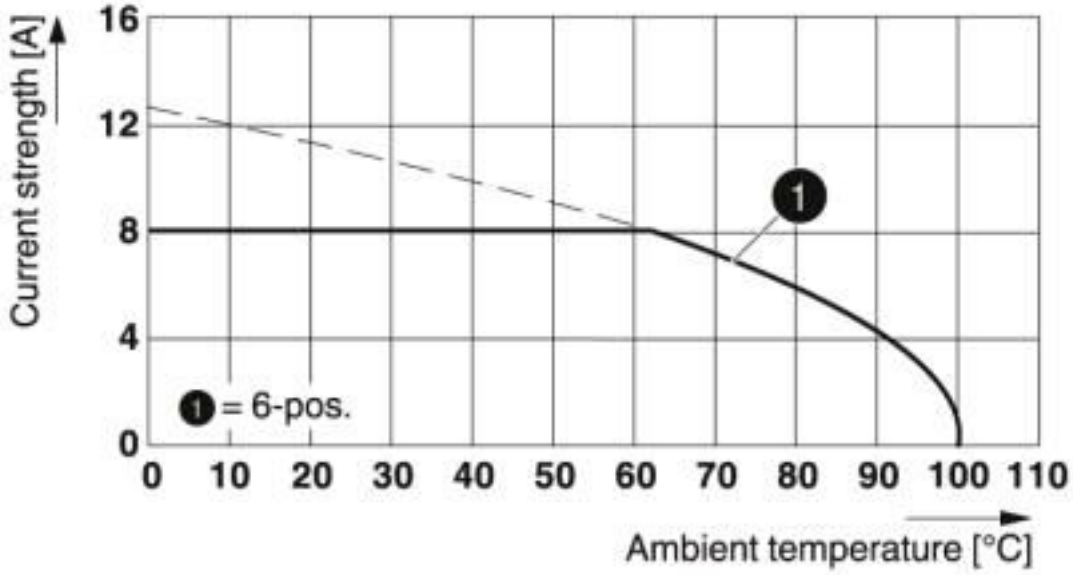
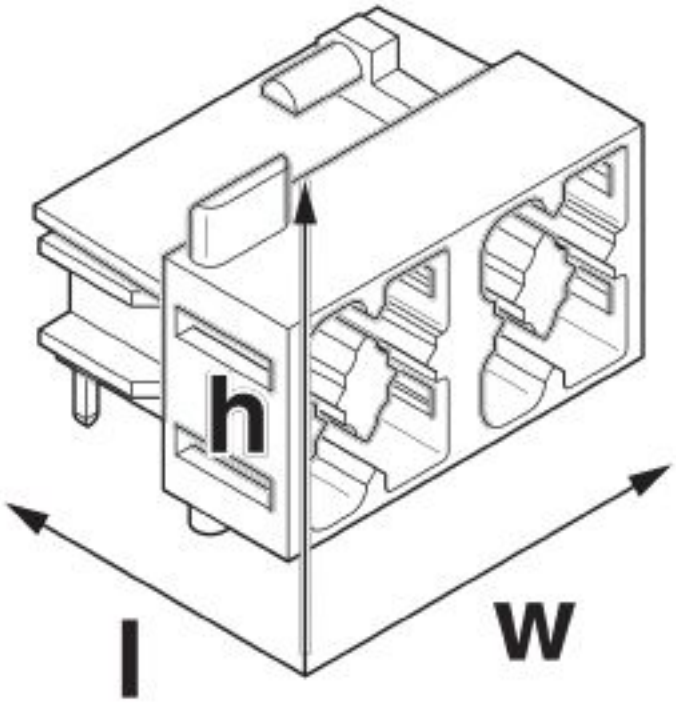
Diagram



Type: HSCP-SP 1,5-1U/ 6 7035 with HSCH 1,5-2U/12 9005

Dimensional drawing



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Classifications

eCl@ss

eCl@ss 10.0.1	27440402
eCl@ss 4.0	27260700
eCl@ss 4.1	27260700
eCl@ss 5.0	27260700
eCl@ss 5.1	27260700
eCl@ss 6.0	27260700
eCl@ss 7.0	27440402
eCl@ss 8.0	27440402
eCl@ss 9.0	27440402

ETIM

ETIM 4.0	EC001031
ETIM 5.0	EC002637
ETIM 6.0	EC002637
ETIM 7.0	EC002637

UNSPSC

UNSPSC 13.2	39121409
UNSPSC 18.0	39121409
UNSPSC 19.0	39121409
UNSPSC 20.0	39121409
UNSPSC 21.0	39121409

Approvals

Approvals

Approvals

IECEE CB Scheme / VDE Zeichengenehmigung / cULus Recognized / EAC

Ex Approvals

Approval details

IECEE CB Scheme	CB scheme	http://www.iecee.org/	DE1-58502

Nominal voltage UN	320 V
Nominal current IN	8 A

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Approvals

VDE Zeichengenehmigung		http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx	40045969

Nominal voltage UN	320 V
Nominal current IN	8 A

cULus Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	E60425-20150613

	B
Nominal voltage UN	150 V
Nominal current IN	8 A

EAC		B.01687

Accessories

Accessories

Coding element

Coding profile - CP-DMC 1,5 NAT - 1790647

Coding profile, for insertion between the coding ribs of the connector and the header following the reflow soldering process, insulating material, color: natural

Necessary add-on products

Printed-circuit board connector - HSCP-SP 1,5-1U6-7035 - 2202234

PCB connector, nominal current: 8 A, rated voltage (III/2): 160 V, nominal cross section: 1.5 mm², number of positions: 6, pitch: 3.45 mm, connection method: Push-in spring connection, color: light gray, contact surface: Tin, Color of the spring lever: orange

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