

# IPCV 35 HC/ 6-GF-15,00 - PCB header



1793590

<https://www.phoenixcontact.com/us/products/1793590>

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PCB headers, nominal cross section: 35 mm<sup>2</sup>, color: green, nominal current: 125 A, rated voltage (III/2): 1000 V, contact surface: Ag, contact connection type: Socket, number of potentials: 6, number of rows: 1, number of positions: 6, number of connections: 6, product range: IPCV 35 HC/...-GF, pitch: 15 mm, mounting: Wave soldering, pin layout: Linear pinning, solder pin [P]: 4.6 mm, number of solder pins per potential: 3, plug-in system: COMBICON PC 35, Pin connector pattern alignment: Standard, locking: Screw locking mechanism, mounting method: Threaded flange, type of packaging: packed in cardboard

## Your advantages

- Well-known mounting principle allows worldwide use
- Inverted header with socket contacts for touch-proof device outputs or PCB/PCB connections
- Double flange for space-optimized screw connection on the housing panel and with the connector
- Integrated double steel spring provides additional safety in the event of temperature and power fluctuations

## Commercial data

Item number	1793590
Packing unit	10 pc
Minimum order quantity	50 pc
Note	Made to order (non-returnable)
Sales key	AA05
Product key	AAESFA
GTIN	4046356621281
Weight per piece (including packing)	163.6 g
Weight per piece (excluding packing)	163.5 g
Customs tariff number	85366930
Country of origin	PL

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## Technical data

### Product properties

Product type	PCB headers
Product family	IPCV 35 HC/...-GF
Product line	COMBICON Connectors XL
Type	Headers
Number of positions	6
Pitch	15 mm
Number of connections	6
Number of rows	1
Number of potentials	6
Mounting type	Threaded flange
Pin layout	Linear pinning
Solder pins per potential	3

### Electrical properties

#### Properties

Nominal current $I_N$	125 A
Nominal voltage $U_N$	1000 V
Contact resistance	0.1 m $\Omega$
Rated voltage (III/3)	1000 V
Rated surge voltage (III/3)	8 kV
Rated voltage (III/2)	1000 V
Rated surge voltage (III/2)	8 kV
Rated voltage (II/2)	1000 V
Rated surge voltage (II/2)	8 kV

### Mounting

Mounting type	Wave soldering
Pin layout	Linear pinning

#### Flange

Tightening torque	0.8 Nm
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#### Attachment to feed-through panel

Tightening torque	1 Nm
Screw	1700368 DFK-PC 35 SS

#### Attachment on the PCB

Tightening torque	1 Nm
Screw	1700368 DFK-PC 35 SS

### Material specifications

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## Material data - contact

Note	WEEE/RoHS-compliant, free of whiskers according to IEC 60068-2-82/JEDEC JESD 201
Contact material	Cu alloy
Metal surface contact area (top layer)	Silver (4 µm - 8 µm Ag)
Metal surface soldering area (top layer)	Tin (3 µm - 5 µm Sn)
Metal surface soldering area (middle layer)	Nickel (1.3 µm - 3 µm Ni)

## Material data - housing

Color (Housing)	green (6021)
Insulating material	PBT
Insulating material group	IIIa
CTI according to IEC 60112	≥175 < 400
Flammability rating according to UL 94	V0

## Notes

Notes on operation	In accordance with IEC 61984, COMBICON connectors have no switching power (COC). During designated use, they must not be plugged in or disconnected when carrying voltage or under load.
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## Dimensions

Dimensional drawing	
Pitch	15 mm
Width [w]	114.4 mm
Height [h]	49.5 mm
Length [l]	28.5 mm
Installed height	44.9 mm
Solder pin length [P]	4.6 mm
Pin dimensions	2.4 x 2.5 mm

## PCB design

Hole diameter	3.6 mm
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## Mechanical tests

### Visual inspection

Specification	IEC 60512-1-1:2002-02
Result	Test passed

### Dimension check

Specification	IEC 60512-1-2:2002-02
Result	Test passed

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## Resistance of inscriptions

Specification	IEC 60068-2-70:1995-12
Result	Test passed

## Polarization and coding

Specification	IEC 60512-13-5:2006-02
Result	Test passed

## Contact holder in insert

Specification	IEC 60512-15-1:2008-05
Contact holder in insert Requirements >20 N	Test passed

## Insertion and withdrawal forces

Specification	IEC 60512-13-2:2006-02
Result	Test passed
No. of cycles	50
Insertion strength per pos. approx.	14 N
Withdraw strength per pos. approx.	7 N

## Electrical tests

### Thermal test | Test group C

Specification	IEC 60512-5-1:2002-02
Tested number of positions	6

### Insulation resistance

Specification	IEC 60512-3-1:2002-02
Insulation resistance, neighboring positions	> 5 MΩ

### Air clearances and creepage distances |

Specification	IEC 60664-1:2007-04
Insulating material group	IIIa
Comparative tracking index (IEC 60112)	CTI ≥175 to <400
Rated insulation voltage (III/3)	1000 V
Rated surge voltage (III/3)	8 kV
minimum clearance value - non-homogenous field (III/3)	8 mm
minimum creepage distance (III/3)	16 mm
Rated insulation voltage (III/2)	1000 V
Rated surge voltage (III/2)	8 kV
minimum clearance value - non-homogenous field (III/2)	8 mm
minimum creepage distance (III/2)	10 mm
Rated insulation voltage (II/2)	1000 V
Rated surge voltage (II/2)	8 kV
minimum clearance value - non-homogenous field (II/2)	8 mm
minimum creepage distance (II/2)	10 mm

## Environmental and real-life conditions

### Durability test

Specification	IEC 60512-9-1:2010-03
Impulse withstand voltage at sea level	9.8 kV
Contact resistance R <sub>1</sub>	0.1 mΩ
Contact resistance R <sub>2</sub>	0.1 mΩ
Insertion/withdrawal cycles	50
Insulation resistance, neighboring positions	> 5 MΩ

### Climatic test

Specification	ISO 6988:1985-02
Corrosive stress	0.2 dm <sup>3</sup> SO <sub>2</sub> on 300 dm <sup>3</sup> /40 °C/1 cycle
Thermal stress	100 °C/168 h
Power-frequency withstand voltage	4.26 kV

### Vibration test

Specification	IEC 60068-2-6:2007-12
Frequency	10 - 150 - 10 Hz
Sweep speed	1 octave/min
Amplitude	0.35 mm (10 Hz ... 60.1 Hz)
Acceleration	5g (60.1 Hz ... 150 Hz)
Test duration per axis	2.5 h
Test directions	X-, Y- and Z-axis

### Shocks

Specification	IEC 60068-2-27:2008-02
Pulse shape	Semi-sinusoidal
Acceleration	30g
Shock duration	18 ms
Test directions	X-, Y- and Z-axis (pos. and neg.)

### Railway application: Shocks

Acceleration	30g
Shock duration	18 ms
Test directions	X-, Y- and Z-axis (pos. and neg.)

### Ambient conditions

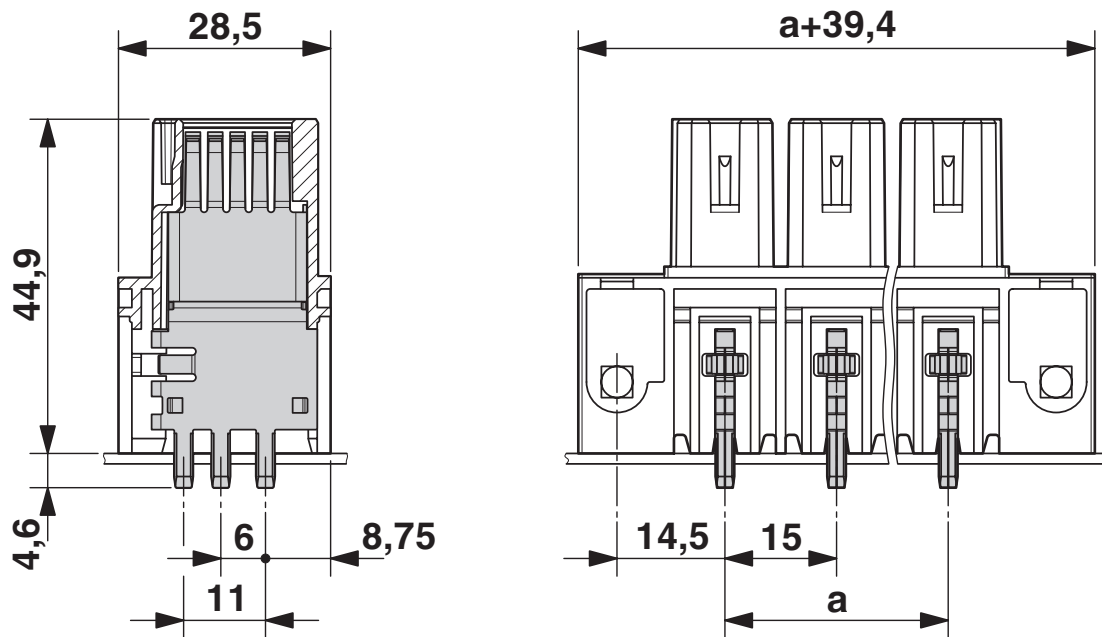
Ambient temperature (storage/transport)	-40 °C ... 70 °C
Relative humidity (storage/transport)	30 % ... 70 %
Ambient temperature (assembly)	-5 °C ... 100 °C
Ambient temperature (operation)	-40 °C ... 100 °C (dependent on the derating curve)

## Packaging specifications

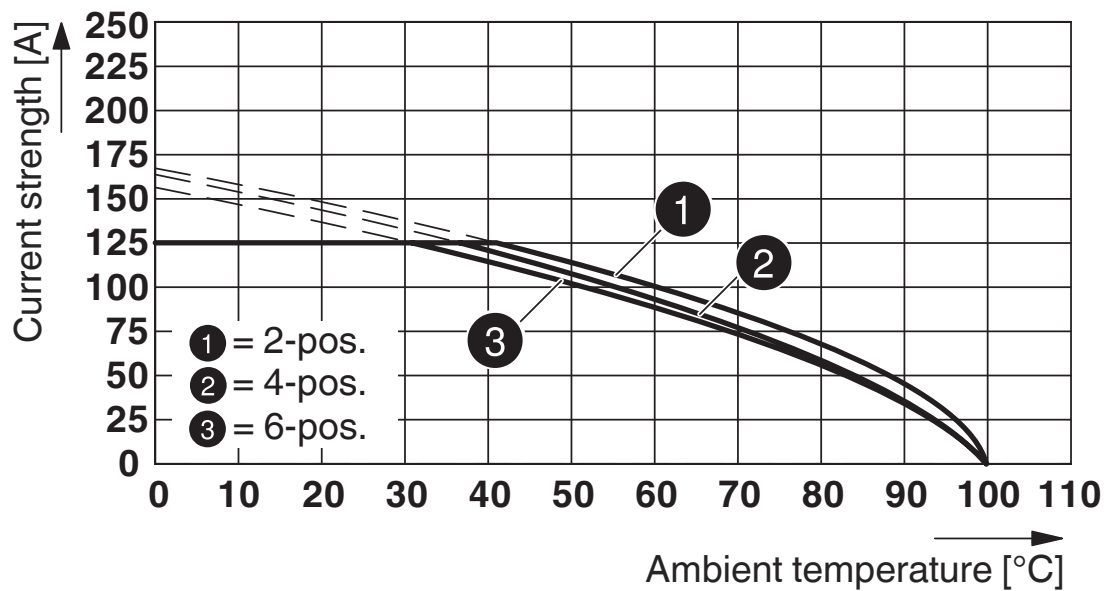
Type of packaging	packed in cardboard
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## Drawings

Dimensional drawing



Diagram



Type: IPC 35 HC/...-STF-15,00 with IPCV 35 HC/...-GF-15,00

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## Approvals

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 <b>UL Recognized</b> Approval ID: E60425-20101007				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
B	600 V	115 A	-	-
C	600 V	115 A	-	-

 <b>VDE Zeichengenehmigung</b> Approval ID: 40039053				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
keine	1000 V	125 A	-	-

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## Classifications

### ECLASS

ECLASS-13.0	27460201
ECLASS-15.0	27460201

### ETIM

ETIM 10.0	EC002637
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### UNSPSC

UNSPSC 21.0	39121400
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## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions
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### China RoHS

Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits

### EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%
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