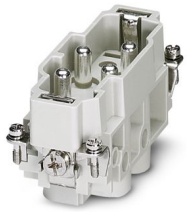
HC-K 4/0-ESTS - Contact insert

1679414

https://www.phoenixcontact.com/us/products/1679414

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Contact insert, number of positions: 4+PE, size: B16, power contacts: 4, control contacts: 0, Pin, Screw connection, 830 V, 80 A, 1.5 mm^2 ... 16 mm^2, application: Power

Your advantages

- Shock and vibration-resistant in accordance with DIN EN 61373

Commercial data

Item number	1679414
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	BF61
Product key	AF7ABA
GTIN	4017918168858
Weight per piece (including packing)	118.6 g
Weight per piece (excluding packing)	115.8 g
Customs tariff number	85366990
Country of origin	CN

Technical data

Notes

General	For HEAVYCON-ADVANCE housings of B16 type and HEAVYCON housings of B16 and B32 types
General	Connectors may be operated only when there is no load/voltage.

Mounting

Assembly note	To ensure correct use, installation in housing with IP54 protection or better is required
	Use wire end protection (screw connections do not have wire protection)

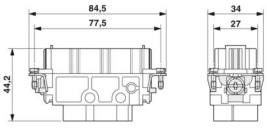
Product properties

Product type	Contact insert with a fixed no. of positions
Series	HC-K
Application	Power
Type	B16
	B32
Number of positions	4
Connection profile	4+PE
Contact numbering	1 - 4
No. of power contacts	4
No. of control contacts	0
Contact material type	turned
Screwdriver blade	0.8 x 4.5 mm (power contacts)

Insulation characteristics

Overvoltage category	III
Degree of pollution	3

Dimensions

Dimensional drawing	
Width	34 mm
Height	42 mm
Length	84.5 mm
Drill hole distance, horizontal	77.5 mm

Mechanical characteristics

Contact diameter	6 mm

Connection data

Connection technology

Connection technology	Screw connection (power contacts)

Conductor connection

Conductor cross-section	1.5 mm² ... 16 mm²
Connection cross section AWG	16 ... 6
Tightening torque	0.8 Nm ... 1.2 Nm (PE connection cross-section with cable lug expandable to 16 mm²)
	0.5 Nm ... 0.8 Nm (Mounting screws for mounting in the HEAVYCON housing)
	3 Nm (4.0 mm² ... 16 mm²)
	2 Nm (2.5 mm²)
	1.2 Nm (1.5 mm²)
Stripping length of the individual wire	14 mm

Electrical properties

Rated voltage (III/3)	830 V (power contacts)
Rated surge voltage	8 kV (power contacts)
Rated current	80 A (power contacts)

Mechanical properties

Mechanical data

Insertion/withdrawal cycles	≥ 500

Material specifications

Flammability rating according to UL 94	V0
Contact material	Cu alloy
Contact surface material	Ag
Contact carrier material	PC
Material of contact surface, power contact	Ag

Environmental and real-life conditions

Ambient conditions

Ambient temperature (operation)	-40 °C ... 125 °C
Specification	IEC 60512-9-1:2010-03
Requirements, visual check	There may be no malfunctions that could disturb the normal function.
No. of cycles	500

Vibration, broadband noise

Specification	IEC 61373:2010-05
Contact disturbance requirement	Duration of the disturbance: max. 1 µs
Requirements, visual check	No damage that can affect the intended use.

Lowest frequency	5 Hz
Highest frequency	150 Hz
Test directions	X-, Y- and Z-axis
Category	1
Class	B

Shock

Specification	IEC 61373:2010-05
Contact disturbance requirement	Duration of the disturbance: max. 1 µs
Requirements, visual check	No defects that impair normal functionality.
Acceleration	50 m/s²
Test directions	X-, Y- and Z-axis (pos. and neg.)
Number of shocks per direction	3
Shock duration	30 ms

Temperature rise

Specification	IEC 60512-5-1:2002-02
Requirements	The specified upper limiting temperature must not be exceeded.
Upper limiting temperature	125 °C

Climatic test group

Specification	IEC 61984:2008-10
	IEC 60512-11-10:2002-02
	IEC 60512-11-9:2002-02
	IEC 60512-11-7:2003-05
Requirements, visual check	No defects that impair normal functionality.
Cold stress	-40 °C/16 h
Thermal stress	125 °C/168 h
Corrosive stress	0,2 dm^3 SO_2 / 40 °C ±ـــر °C / 24 h / 2 cycles

Electrical tests

Specification	IEC 60512-2-2:2003-05
Requirements	Initial value: 5 mΩ, max.
Requirements, Contact resistance	The contact resistance must not increase by more than 50% of the reference value or ≤ 5 mΩ. The higher value applies.
Test current	1 A
Additional text	The values specified apply to all repetitions of the same test within the normative test sequence.
Specification	IEC 60512-4-1:2003-05
Requirements, dielectric strength	No disruptive charge or sparkover
Test voltage	690 V
Rated surge voltage	8 kV
Specification	IEC 60512-3-1:2002-02
Requirements, insulation resistance	R_I ≥ 400 MΩ
Test voltage	1000 V DC
Test duration	60 s

Mechanical tests

Specification	IEC 60512-1-1:2002-02
Requirements, visual check	No defects that impair normal functionality.
Additional text	The values specified apply to all repetitions of the same test within the normative test sequence.

Dimensional examination

Specification	IEC 60512-1-2:2002-02
Requirements	All individual parts have been approved for the current revision status.

Durability of marking

Specification	IEC 60068-2-70:1995-12
Requirements	Inscriptions must be legible after the test.

Polarization and coding

Specification	IEC 61984:2008-10
Requirements	No damage that can impair normal functionality. Connectors must only be able to be plugged in when they are in the correct position and combination. The design must prevent mismatching. Polarization prevents incorrect electrical contact.
Test force	80 N

Contact retention in insert

Specification	IEC 60512-15-1:2008-05
Requirements	No axial offset should occur that can affect functions.

Mechanical strength impact

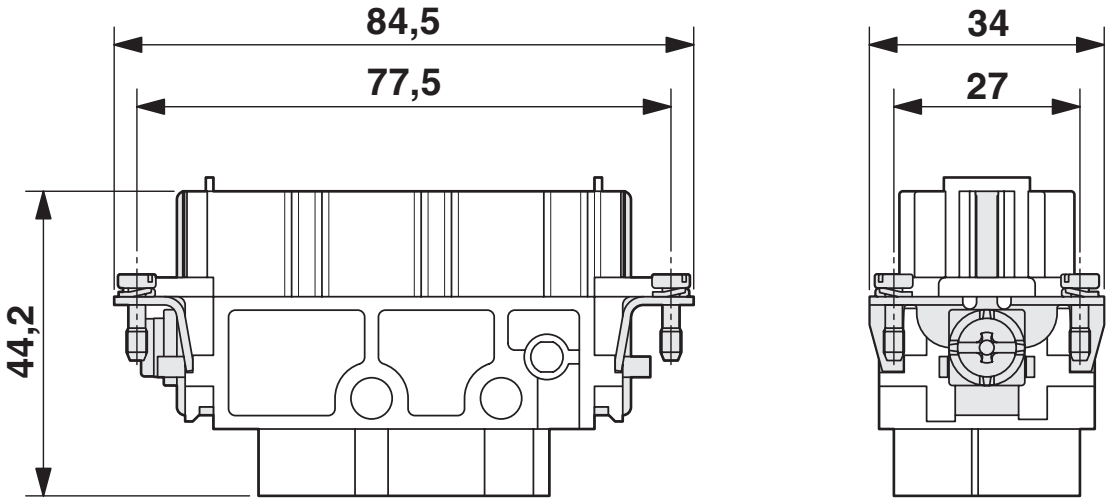
Specification	IEC 60512-7-2:2011-11
Requirements, visual check	Loose parts or damage that would impair functionality are not permitted.

Protection against electric shock

Specification	IEC 61984:2008-10
Requirements	Unencapsulated connectors: It must not be possible to touch live parts. Encapsulated connectors: The required air clearances and creepage distances must be maintained between the live parts and the test finger.
Test force	20 N

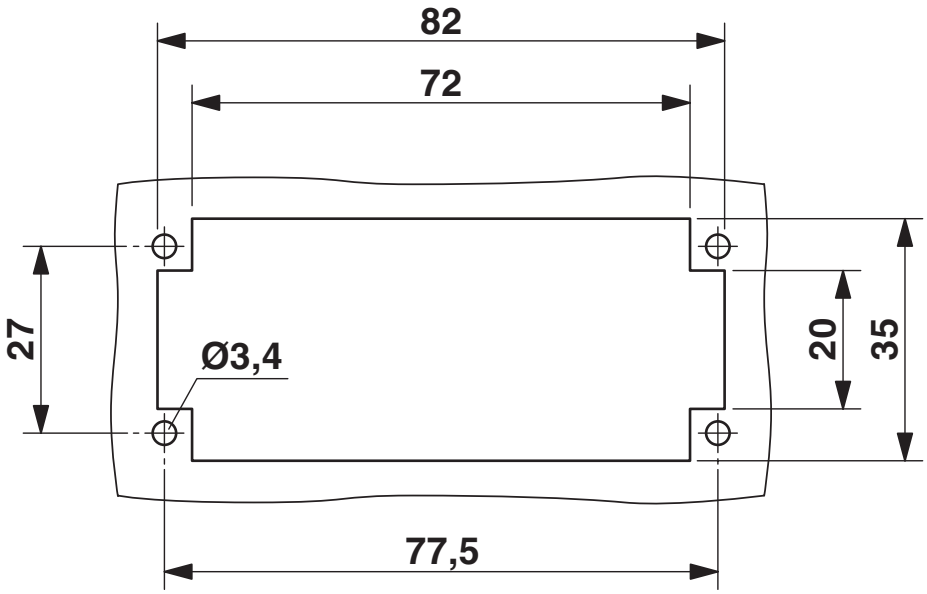
Drawings

Dimensional drawing



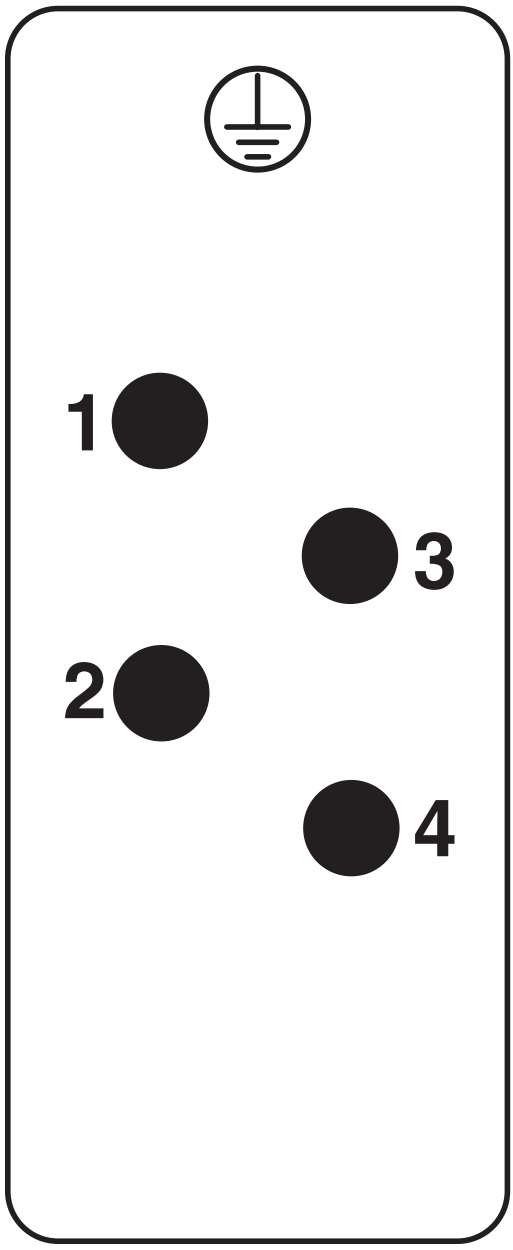
Male insert

Dimensional drawing



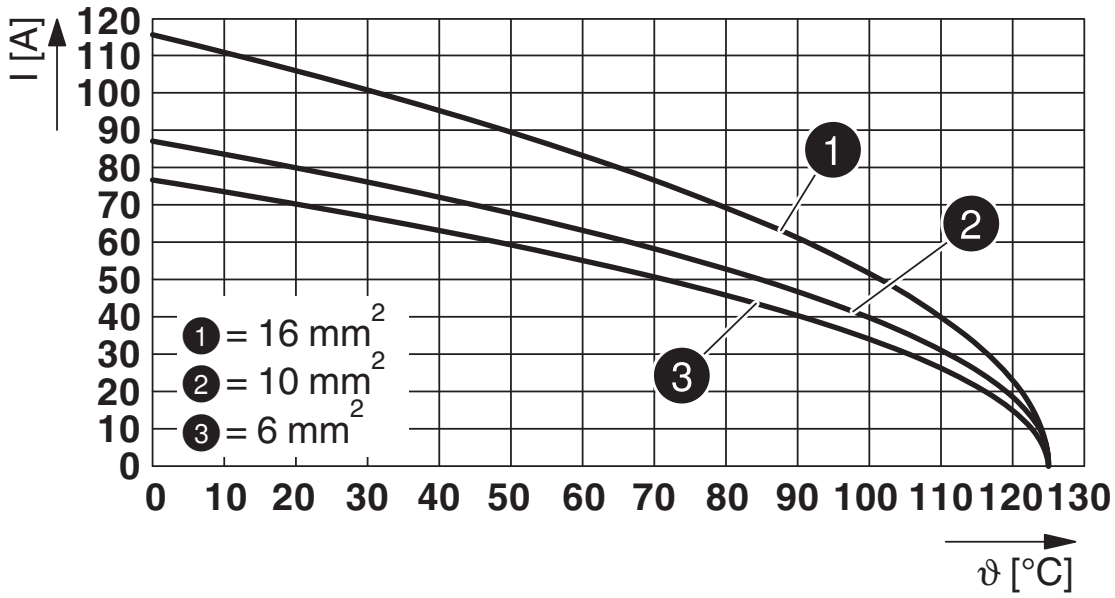
Mounting cutout when used without housing

Schematic diagram



Connector pin assignment, connection side

Diagram



Derating diagram

Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1679414

UL Recognized
Approval ID: E118976

	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
keine				
	600 V	80 A	- 6	-

Classifications

ECLASS

ECLASS-13.0	27440205
ECLASS-15.0	27440205

ETIM

ETIM 10.0	EC000438

UNSPSC

UNSPSC 21.0	39121500

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	6(c)

China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
SCIP	ef036728-252d-401f-bf52-90336a2a46b2

EF3.1 Climate Change

CO2e kg	9.669 kg CO2e

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