

https://www.phoenixcontact.com/us/products/1419897



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Contact insert, number of positions: 3+PE, size: D7, number of connections per position: 1, Socket, Crimp connection, 400 V, 40 A, 1.5 mm<sup>2</sup> ... 6 mm<sup>2</sup>, application: Power

### Your advantages

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

### Commercial data

Item number	1419897	
Packing unit	1 pc	
Minimum order quantity	1 pc	
Sales key	BF61	
Product key	BF7ABJ	
Catalog page	Page 511 (C-2-2019)	
GTIN	4055626256160	
Weight per piece (including packing)	10.4 g	
Weight per piece (excluding packing)	10.2 g	
Customs tariff number	85389099	
Country of origin	CN	



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### Technical data

#### Notes

General	For HC-D7 housing, crimp contacts CK 4,0. Crimp contacts not included in scope of supply.
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

### Product properties

Product type	Contact insert with a fixed no. of positions
Series	HC-HS
Application	Power
Туре	D7
Number of positions	3
Connection profile	3+PE
Contact numbering	1 - 2
Number of connections per position	1
Contact material type	turned

#### Data management status

Degree of pollution

Article revision 04	
Insulation characteristics	
Overvoltage category	III

3

#### **Dimensions**

Dimensional drawing	
	- 021 - 35.5 · VO
Width	21 mm
Height	34.8 mm
Length	21 mm
Mechanical characteristics	
Contact diameter	4 mm

#### Connection data

#### Connection technology

•	
Connection technology	Crimp connection



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Conductor cross section  1.5 mm² 6 mm²  Connection cross section AWG  16 10  1.5 hm 0.8 Nm (Mounting screws for mounting in the HEAVYCON housing)  Stripping length of the individual wire  9 mm (2.5 mm² 6.0 mm²)  11 mm (for 10 mm²)  sectrical properties  Rated voltage (III/3)  Rated surge voltage  6 kV  Rated current  40 A  schanical properties  Mechanical properties  sterical properties  Actional properties  A		
Connection in acc. with standard  Conductor connection  Conductor cross section  Connection cross section AWG  Tightening torque  Contection from the individual wire  Ectrical properties  Rated voltage (III/3)  Rated surge voltage Rated current  Contact anterial  Restrion/withdrawal cycles  Selectrial specifications  Flammability rating according to UL 94  Contact material  Contact carrier material  PC  Standards/regulations  Ambient temperature (operation)  And "C 125 "C (including heating up of contacts)  and and and regulations  Constructional and testing regulations  DIN VDE 0110-002.79  DIN VDE 0110-002.79  DIN VDE 0110-1004.97  IEC 60664-1, DIN IEC 60512  IEC 60664-1, DIN IEC 60512		Crimp connection (PE contact)
Conductor connection  Conductor cross section 1.5 mm² 6 mm²  Connection cross section AWG 16 10  Tightening forque 0.5 km 0.8 km (Mounting screws for mounting in the HEAVYCON housing)  Stripping length of the individual wire 9 mm (2,5 mm² 6,0 mm²) 11 mm (for 10 mm²)  sectrical properties  Rated voltage (III/3) 400 V Rated surge voltage 6 kV Rated surge voltage 6 kV  Rated surge voltage 500 V Rehanical properties  Mechanical properties  Mechanical properties  Mechanical properties  Mechanical properties  Mechanical properties  Mechanical data 500 V Rated surge voltage 700 V Rated 800 V Rated 900 V Rate	Number of connections per position	1
1.5 mm² 6 mm²	Connection in acc. with standard	IEC / EN
Connection cross section AWG	Conductor connection	
Tightening torque  0.5 Nm 0.8 Nm (Mounting screws for mounting in the HEAVYCON housing)  9 mm (2,5 mm² 6,0 mm²)  11 mm (for 10 mm²)  11 mm (for 10 mm²)  12 mm (2,0 mm²)  13 mm² 6,0 mm²)  14 mm (for 10 mm²)  15 mm² 6,0 mm²)  16 mm²  16 mm²  17 mm (for 10 mm²)  18 mated voltage (III/3)  18 rated surge voltage 18 kV  18 rated current 19 contact arrivant voltage  19 mm (2,5 mm² 6,0 mm²)  10 mm²  10 mm²  11 mm (for 10 mm²)  12 mm²  13 kV  140 V  140 V  15 mm²  16 mm²  17 mm²  18 mm²	Conductor cross section	1.5 mm² 6 mm²
HEAVYCON housing)   Stripping length of the individual wire   9 mm (2,5 mm² 6,0 mm²)   11 mm (for 10 mm²)   11 mm (for 10 mm²)   12 mm² 6,0 mm²)   13 mm² 6,0 mm²)   14 mm² 6,0 mm²)   15 mm² 6,0 mm²)   16 kV 8 mm² 6,0 kV 8 mm² 8	Connection cross section AWG	16 10
### 11 mm (for 10 mm²)  ### 200 V  ### Rated voltage (III/3)  ### Rated surge voltage  ### Rated surge voltage  ### Au A  ### Au Au A  ### A	Tightening torque	
Rated voltage (III/3) 400 V Rated surge voltage 6 kV Rated current 40 A  schanical properties  Mechanical properties  Mechanical data Insertion/withdrawal cycles ≥ 500  aterial specifications  Flammability rating according to UL 94 V0 Contact material Copper alloy Contact surface material Ag Contact carrier material PC: Fire protection in rail vehicles - requirement sets R22, R23, and R24 acc. to DIN EN 45545-2 (Risk level HL 1 - HL 3)  avironmental and real-life conditions  Ambient conditions  Ambient temperature (operation) -40 °C 125 °C (including heating up of contacts)  and ards and regulations  Constructional and testing regulations  DIN VDE 0627/86 DIN VDE 0110-1/04.97 IEC 60664-1, DIN IEC 60512  IEC 60664-1, DIN IEC 60512	Stripping length of the individual wire	9 mm (2,5 mm² 6,0 mm²)
Rated voltage (III/3)         400 V           Rated surge voltage         6 kV           Rated current         40 A           achanical properties           Mechanical data         Insertion/withdrawal cycles           aterial specifications         ≥ 500           Flammability rating according to UL 94         V0           Contact surface material         Copper alloy           Contact surface material         PC           Standards/regulations         PC: Fire protection in rail vehicles - requirement sets R22, R23, and R24 acc. to DIN EN 45545-2 (Risk level HL1 - HL3)           vironmental and real-life conditions         Ambient conditions           Ambient temperature (operation)         -40 °C 125 °C (including heating up of contacts)           andards and regulations         DIN VDE 0627/86           DIN VDE 0110-1/04.97         IEC 6064-1, DIN IEC 60512           Tests         DIN VDE 0627/86           DIN VDE 0110-1/04.97         IEC 6064-1, DIN IEC 60512		11 mm (for 10 mm²)
Rated surge voltage 6 kV Rated current 40 A  achanical properties  Mechanical data  Insertion/withdrawal cycles ≥ 500  aterial specifications  Flammability rating according to UL 94 V0 Contact material Copper alloy Contact surface material Ag Contact carrier material PC Standards/regulations PC: Fire protection in rail vehicles - requirement sets R22, R23, and R24 acc. to DIN EN 45545-2 (Risk level HL1 - HL3)  wironmental and real-life conditions  Ambient conditions  Ambient temperature (operation) 40 °C 125 °C (including heating up of contacts)  and ards and regulations  Constructional and testing regulations  DIN VDE 0627/86 DIN VDE 06110-104.97 IEC 606352  Tests  DIN VDE 0627/86 DIN VDE 0627/86 DIN VDE 06110-104.97 IEC 60664-1, DIN IEC 60512	ectrical properties	
Rated current  ### Add A  ### Ad	Rated voltage (III/3)	400 V
Ambient conditions  Constructional and testing regulations  Constructional and testing regulations  DIN VDE 0627/86 DIN VDE 06110/02.79 DIN VDE 0627/86 DIN VDE 06110/02.79 DIN VDE 060512	Rated surge voltage	6 kV
Mechanical data  Insertion/withdrawal cycles  aterial specifications  Flammability rating according to UL 94  Contact material  Copper alloy  Contact surface material  Ag  Contact carrier material  PC  Standards/regulations  PC: Fire protection in rail vehicles - requirement sets R22, R23, and R24 acc. to DIN EN 45545-2 (Risk level HL1 - HL3)  Ambient conditions  Ambient temperature (operation)  Adv "C 125 "C (including heating up of contacts)  andards and regulations  Constructional and testing regulations  DIN VDE 0627/86  DIN VDE 0110-1/04.97  IEC 60664-1, DIN IEC 60512  Tests  DIN VDE 0217/86  DIN VDE 0217/86  DIN VDE 0110-1/04.97  IEC 60664-1, DIN IEC 60512  IEC 60352  DIN VDE 0110-1/04.97  IEC 60664-1, DIN IEC 60512	Rated current	40 A
Flammability rating according to UL 94  Contact material  Copper alloy  Contact surface material  Ag  Contact carrier material  PC  Standards/regulations  PC: Fire protection in rail vehicles - requirement sets R22, R23 and R24 acc. to DIN EN 45545-2 (Risk level HL1 - HL3)  Ambient conditions  Ambient conditions  Ambient temperature (operation)  Ambient temperature (operation)  Constructional and testing regulations  DIN VDE 0627/86  DIN VDE 0110/02.79  DIN VDE 0110-1/04.97  IEC 60664-1, DIN IEC 60512  Tests  DIN VDE 0110/02.79  DIN VDE 0110/02.79  DIN VDE 0110/02.79  DIN VDE 0627/86  DIN VDE 0627/86  DIN VDE 0664-1, DIN IEC 60512  IEC 60664-1, DIN IEC 60512	echanical properties  Mechanical data	
Flammability rating according to UL 94  Contact material  Contact surface material  Contact carrier material  PC  Standards/regulations  Ambient conditions  Ambient temperature (operation)  Constructional and testing regulations  DIN VDE 0627/86  DIN VDE 0110-1/04.97  IEC 60664-1, DIN IEC 60512  IEC 60664-1, DIN IEC 60512  IEC 60664-1, DIN IEC 60512	Insertion/withdrawal cycles	≥ 500
Contact material Contact surface material Contact surface material PC Standards/regulations PC: Fire protection in rail vehicles - requirement sets R22, R23, and R24 acc. to DIN EN 45545-2 (Risk level HL1 - HL3)  Ambient conditions Ambient conditions Ambient temperature (operation)  Constructional and testing regulations  DIN VDE 0627/86 DIN VDE 0110/02.79 DIN VDE 0110-1/04.97 IEC 60664-1, DIN IEC 60512 IEC 60352  Tests DIN VDE 0110/02.79 DIN VDE 0627/86 DIN VDE 0110/02.79 DIN VDE 0110-1/04.97 IEC 60664-1, DIN IEC 60512	aterial specifications	
Contact surface material Contact carrier material PC Standards/regulations PC: Fire protection in rail vehicles - requirement sets R22, R23, and R24 acc. to DIN EN 45545-2 (Risk level HL1 - HL3)  Ambient conditions Ambient conditions Ambient temperature (operation)  Constructional and testing regulations  DIN VDE 0627/86 DIN VDE 0110-1/04.97 IEC 60664-1, DIN IEC 60512  Tests DIN VDE 0110-1/04.97 IEC 60664-1, DIN IEC 60512 IEC 60664-1, DIN IEC 60512	Flammability rating according to UL 94	V0
Contact carrier material	Contact material	Copper alloy
Standards/regulations  PC: Fire protection in rail vehicles - requirement sets R22, R23, and R24 acc. to DIN EN 45545-2 (Risk level HL1 - HL3)  Arbient conditions  Ambient temperature (operation)  andards and regulations  Constructional and testing regulations  DIN VDE 0627/86  DIN VDE 0110/02.79  DIN VDE 0110-1/04.97  IEC 60664-1, DIN IEC 60512  IEC 60352  Tests  DIN VDE 0110/02.79  DIN VDE 0110-1/04.97  IEC 60664-1, DIN IEC 60512	Contact surface material	Ag
and R24 acc. to DIN EN 45545-2 (Risk level HL1 - HL3)  Ambient conditions  Ambient conditions  Ambient temperature (operation)  andards and regulations  Constructional and testing regulations  DIN VDE 0627/86  DIN VDE 0110/02.79  DIN VDE 0110-1/04.97  IEC 60664-1, DIN IEC 60512  IEC 60352  Tests  DIN VDE 0110-1/04.97	Contact carrier material	PC
Ambient conditions  Ambient temperature (operation)  -40 °C 125 °C (including heating up of contacts)  andards and regulations  Constructional and testing regulations  DIN VDE 0627/86  DIN VDE 0110/02.79  DIN VDE 0110-1/04.97  IEC 60664-1, DIN IEC 60512  IEC 60352  Tests  DIN VDE 0110/02.79  DIN VDE 0110/02.79  DIN VDE 0110/02.79  DIN VDE 0110-1/04.97  IEC 60664-1, DIN IEC 60512	Standards/regulations	PC: Fire protection in rail vehicles - requirement sets R22, R23, and R24 acc. to DIN EN 45545-2 (Risk level HL1 - HL3)
Ambient temperature (operation)  -40 °C 125 °C (including heating up of contacts)  andards and regulations  Constructional and testing regulations  DIN VDE 0627/86  DIN VDE 0110/02.79  DIN VDE 0110-1/04.97  IEC 60664-1, DIN IEC 60512  IEC 60352  Tests  DIN VDE 0627/86  DIN VDE 0627/86  DIN VDE 0627/86  DIN VDE 0110/02.79  DIN VDE 0110-1/04.97  IEC 60664-1, DIN IEC 60512	nvironmental and real-life conditions	
Andards and regulations  Constructional and testing regulations  DIN VDE 0627/86  DIN VDE 0110/02.79  DIN VDE 0110-1/04.97  IEC 60664-1, DIN IEC 60512  IEC 60352  Tests  DIN VDE 0110/02.79  DIN VDE 0110/02.79  DIN VDE 0110/02.79  DIN VDE 0110-1/04.97  IEC 60664-1, DIN IEC 60512	Ambient conditions	
Constructional and testing regulations  DIN VDE 0627/86  DIN VDE 0110/02.79  DIN VDE 0110-1/04.97  IEC 60664-1, DIN IEC 60512  IEC 60352  Tests  DIN VDE 0110/02.79  DIN VDE 0110/02.79  DIN VDE 0110-1/04.97  IEC 60664-1, DIN IEC 60512	Ambient temperature (operation)	-40 °C 125 °C (including heating up of contacts)
DIN VDE 0110/02.79  DIN VDE 0110-1/04.97  IEC 60664-1, DIN IEC 60512  IEC 60352  Tests  DIN VDE 0627/86  DIN VDE 0110/02.79  DIN VDE 0110/02.79  DIN VDE 0110-1/04.97  IEC 60664-1, DIN IEC 60512	andards and regulations	
DIN VDE 0110/02.79  DIN VDE 0110-1/04.97  IEC 60664-1, DIN IEC 60512  IEC 60352  Tests  DIN VDE 0627/86  DIN VDE 0110/02.79  DIN VDE 0110/02.79  DIN VDE 0110-1/04.97  IEC 60664-1, DIN IEC 60512	Constructional and testing regulations	DIN VDE 0627/86
DIN VDE 0110-1/04.97  IEC 60664-1, DIN IEC 60512  IEC 60352  Tests  DIN VDE 0627/86  DIN VDE 0110/02.79  DIN VDE 0110-1/04.97  IEC 60664-1, DIN IEC 60512	- •	
Tests  DIN VDE 0627/86  DIN VDE 0110/02.79  DIN VDE 0110-1/04.97  IEC 60664-1, DIN IEC 60512		
Tests  DIN VDE 0627/86  DIN VDE 0110/02.79  DIN VDE 0110-1/04.97  IEC 60664-1, DIN IEC 60512		IEC 60664-1, DIN IEC 60512
Tests  DIN VDE 0627/86  DIN VDE 0110/02.79  DIN VDE 0110-1/04.97  IEC 60664-1, DIN IEC 60512		
DIN VDE 0110/02.79  DIN VDE 0110-1/04.97  IEC 60664-1, DIN IEC 60512	Tests	
DIN VDE 0110-1/04.97 IEC 60664-1, DIN IEC 60512		
		IEC 60664-1, DIN IEC 60512
		IEC 60352



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#### Testing

Standards/regulations	PC: Fire protection in rail vehicles - requirement sets R22, R23,
	and R24 acc. to DIN EN 45545-2 (Risk level HL1 - HL3)

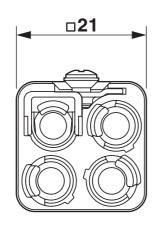


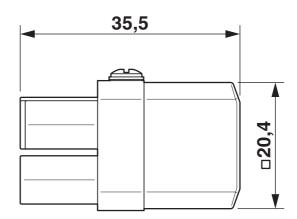
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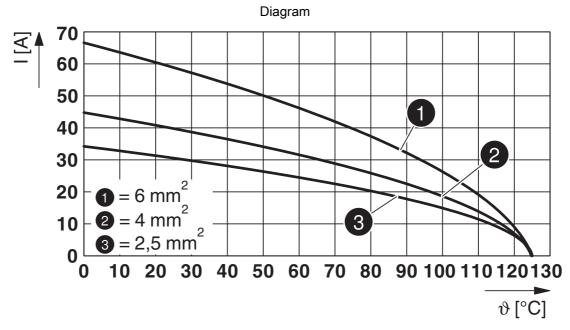
## Drawings

### Dimensional drawing





#### Female insert



Derating diagram



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### **Approvals**

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1419897

<i>9</i> 7	<b>UL Recognized</b> Approval ID: E118976				
		Nominal voltage U <sub>N</sub>	Nominal current I <sub>N</sub>	Cross section AWG	Cross section mm <sup>2</sup>
		600 V	50 A	- 8	-

EHI EAC	C roval ID: RU C-DE.BL08.B.00511

<b>7.1</b>	<b>UL Recognized</b> Approval ID: E468743				
		Nominal voltage U <sub>N</sub>	Nominal current I <sub>N</sub>	Cross section AWG	Cross section mm <sup>2</sup>
		600 V	45 A	-	-



1419897

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## Classifications

UNSPSC 21.0

#### **ECLASS**

ECLASS-11.0	27440205
ECLASS-12.0	27440205
ECLASS-13.0	27440205
ETIM	
ETIM 9.0	EC000438
UNSPSC	

39121500



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## Environmental product compliance

#### EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions
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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