

1684085

https://www.phoenixcontact.com/us/products/1684085

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



Master cable, application: Sensor/actuator box, connection method: M12 socket Plastic, number of positions: 19, slot assignment: Double, status display: No; master cable connection: M23 plug connection, PUR/PVC, cable length: 10 m, shielding: no, Alternative product in accordance with RoHS II without Exemption 6c (Pb < 0.1 %) item no.: 1260752

#### Commercial data

Item number	1684085
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	AB34
Product key	ABRDCB
Catalog page	Page 128 (PC-2009)
GTIN	4017918172039
Weight per piece (including packing)	1,941 g
Weight per piece (excluding packing)	1,941 g
Customs tariff number	85444290
Country of origin	DE



1684085

https://www.phoenixcontact.com/us/products/1684085

### Technical data

Notes on operation	The master cable is earmarked for use on the sensor/actuator boxes with an M23 plug-in connection.
Product properties	
Product type	Master cable, assembled
Application	Sensor/actuator box
Number of positions	19
Electrical properties	
Nominal voltage U <sub>N</sub>	48 V AC
	60 V DC
Connection data	
Connection method	Fixed connection
Signaling	
Status display present	No
Material specifications	
Material Housing	PUR
Material of contact, master cable side	CU alloy
Material of the contact carrier on the master cable side	PA
Material of contact surface, master cable side	gold-plated

#### Connector

#### Connection 1

Head design Sc	ocket
Head cable outlet an	ngled
Head thread type M2	23

#### Connection 2

Head design	free cable end
-------------	----------------

### Cable/line

Cable length	10 m

### PUR/PVC black [PUR]



1684085

https://www.phoenixcontact.com/us/products/1684085

UL AWM Style         20549 (80°C/300 V)           Number of positions         19           Shielded         no           Cable type         PUR/PVC black [PUR]           Conductor structure signal line         28 v. 0.5 mm           AWG signal line         20           Conductor cross section         16x 0.5 mm² (Signal line)           3x 1 mm² (power line)	Dimensional drawing	
Number of positions         19           Shielded         no           Cable type         PUR/PVC black [PUR]           Conductor structure signal line         28x 0.15 mm           AWG signal line         20           Conductor cross section         16x 0.5 mm² (Signal line)           3x 1 mm² (power line)         3x 1 mm² (power line)           Wire diameter incl. insulation         1.5 mm ± 0.1 mm (power line)           External cable diameter         10.50 mm ± 0.2 mm           Outer sheath, material         PUR           External sheath, color         black RAL 9005           Conductor material         Bare Cu litz wires           Material wire insulation         PVC           Single wire, color         brown, blue, green/yellow, white, green, yellow, gray, pink, red, black, violet, gray/pink, red/blue, white/graen, brown/green, white/yellow, yellow/brown, white/gray, gray/brown           Inner sheath thickness         ≥ 0.15 mm           Thickness, outer sheath         ≥ 0.76 mm           Overall twist         Wires twisted in layers           Nominal voltage, cable         300 V           Test voltage         2000 V           Minimum bending radius, fixed installation         7.5 x D           Minimum bending radius, fixed installation         10 x D <td< td=""><td>Cable weight</td><td>183.7 kg/km</td></td<>	Cable weight	183.7 kg/km
Shielded         no           Cable type         PUR/PVC black [PUR]           Conductor structure signal line         28x 0.15 mm           AWG signal line         20           Conductor cross section         16x 0.5 mm² (Signal line)           3x 1 mm² (power line)         3x 1 mm² (power line)           Wire diameter incl. insulation         1.5 mm ± 0.1 mm (power line)           External cable diameter         10.50 mm ± 0.2 mm           Outer sheath, material         PUR           External sheath, color         black RAL 9005           Conductor material         Bare Cu litz wires           Material wire insulation         PVC           Single wire, color         brown, blue, green/yellow, white, green, yellow, gray, pink, red, black, violet, gray/pink, red/blue, white/green, brown/green, white/yellow, yellow/brown, white/gray, gray/brown           Inner sheath thickness         ≥ 0.15 mm           Thickness, outer sheath         ≥ 0.76 mm           Overall twist         Wires twisted in layers           Nominal voltage, cable         300 V           Test voltage         2000 V           Minimum bending radius, flexible installation         7.5 x D           Minimum bending radius, flexible installation         79 mm           Smallest bending radius, movable installation         105 mm<	UL AWM Style	20549 (80°C/300 V)
Cable type         PUR/PVC black [PUR]           Conductor structure signal line         28x 0.15 mm           AWG signal line         20           Conductor cross section         16x 0.5 mm² (Signal line)           3x 1 mm² (power line)         3x 1 mm² (power line)           Wire diameter incl. insulation         2.1 mm ±0.1 mm (power line)           External cable diameter         10.50 mm ±0.2 mm           Outer sheath, material         PUR           External sheath, color         black RAL 9005           Conductor material         Bare Cu litz wires           Material wire insulation         PVC           Single wire, color         brown, blue, green/yellow, white, green, yellow, gray, pink, red/blue, white/green, brown/green, white/yellow, yellow/brown, white/gray, gray/brown           Inner sheath thickness         ≥ 0.15 mm           Overall twist         Wires twisted in layers           Nominal voltage, cable         300 V           Test voltage         2000 V           Minimum bending radius, fixed installation         7.5 x D           Minimum bending radius, fixed installation         7.5 x D           Minimum bending radius, fixed installation         10 x D           Smallest bending radius, movable installation         105 mm           Max. bending radius, movable installation	Number of positions	19
Conductor structure signal line         28x 0.15 mm           AWG signal line         20           Conductor cross section         16x 0.5 mm² (Signal line)           3x 1 mm² (power line)         mm ±0.1 mm (Signal line)           Wire diameter incl. insulation         1.5 mm ±0.1 mm (Signal line)           External cable diameter         10.50 mm ±0.2 mm           Outer sheath, material         PUR           External sheath, color         black RAL 9005           Conductor material         Bare Cu litz wires           Material wire insulation         PVC           Single wire, color         brown, blue, green/yellow, white, green, yellow, gray, pink, red, black, violet, gray/pink, red/blue, white/gray, gray/brown           Inner sheath thickness         ≥ 0.15 mm           Thickness, outer sheath         ≥ 0.76 mm           Overall twist         Wires twisted in layers           Nominal voltage, cable         300 V           Test voltage         2000 V           Minimum bending radius, fixed installation         7.5 x D           Minimum bending radius, fixed installation         10 x D           Smallest bending radius, movable installation         105 mm           Max. bending cycles         1500000           Flame resistance         according to DIN EN 50265	Shielded	no
AWG signal line 20 Conductor cross section 16x 0.5 mm² (Signal line) 3x 1 mm² (power line)  Wire diameter incl. insulation 1.5 mm ±0.1 mm (Signal line) 2.1 mm ±0.1 mm (Signal line) 2.1 mm ±0.1 mm (Dower line)  External cable diameter 10.50 mm ±0.2 mm  Outer sheath, material PUR  External sheath, color black RAL 9005  Conductor material Bare Cu litz wires  Material wire insulation PVC  Single wire, color brown, blue, green/yellow, white, green, yellow, gray, pink, red, black, violet, gray/pink, red/blue, white/green, brown/green, white/yellow, yellow/brown, white/gray, gray/brown  Inner sheath thickness ≥ 0.15 mm  Thickness, outer sheath ≥ 0.76 mm  Overall twist Wires twisted in layers  Nominal voltage, cable 300 V  Test voltage 2000 V  Minimum bending radius, fixed installation 10 x D  Smallest bending radius, fixed installation 79 mm  Max. bending voltes installation 105 mm  Max. bending voltes (according to DIN EN 50265  Resistance to oil according to VDE 0472 Part 803  Other resistance Selicone-free	Cable type	PUR/PVC black [PUR]
Conductor cross section         16x 0.5 mm² (Signal line)           3x 1 mm² (power line)           Wire diameter incl. insulation         1.5 mm ±0.1 mm (Signal line)           2.1 mm ±0.1 mm (power line)           External cable diameter         10.50 mm ±0.2 mm           Outer sheath, material         PUR           External sheath, color         black RAL 9005           Conductor material         Bare Cu litz wires           Material wire insulation         PVC           Single wire, color         brown, blue, green/yellow, white, green, yellow, gray, pink, red, black, violet, gray/pink, red/blue, white/gray, gray/brown           Inner sheath thickness         ≥ 0.15 mm           Thickness, outer sheath         ≥ 0.76 mm           Overall twist         Wires twisted in layers           Nominal voltage, cable         300 V           Test voltage         2000 V           Minimum bending radius, fixed installation         7.5 x D           Minimum bending radius, fixed installation         79 mm           Smallest bending radius, movable installation         105 mm           Max. bending cycles         1500000           Flame resistance         according to DIN EN 50265           Resistance to oil         according to VDE 0472 Part 803           Other resistance         Highl	Conductor structure signal line	28x 0.15 mm
3x 1 mm² (power line)   1.5 mm ±0.1 mm (Signal line)   2.1 mm ±0.1 mm (power line)   2.1 mm ±0.1 mm (power line)   External cable diameter	AWG signal line	20
Wire diameter incl. insulation         1.5 mm ±0.1 mm (Signal line)           External cable diameter         10.50 mm ±0.2 mm           Outer sheath, material         PUR           External sheath, color         black RAL 9005           Conductor material         Bare Cu litz wires           Material wire insulation         PVC           Single wire, color         brown, blue, green/yellow, white, green, yellow, gray, pink, red, black, violet, gray/pink, red/blue, white/green, brown/green, white/yellow, yellow/brown, white/gray, gray/brown           Inner sheath thickness         ≥ 0.15 mm           Thickness, outer sheath         ≥ 0.76 mm           Overall twist         Wires twisted in layers           Nominal voltage, cable         300 V           Test voltage         2000 V           Minimum bending radius, fixed installation         7.5 x D           Minimum bending radius, fixed installation         79 mm           Smallest bending radius, movable installation         10 x D           Smallest bending radius, movable installation         105 mm           Max. bending cycles         1500000           Flame resistance         according to VDE 0472 Part 803           Other resistance         Highly resistant to acids, alkaline solutions and solvents           Special properties         Silicone-free <td>Conductor cross section</td> <td>16x 0.5 mm² (Signal line)</td>	Conductor cross section	16x 0.5 mm² (Signal line)
External cable diameter  2.1 mm ±0.1 mm (power line)  External cable diameter  0uter sheath, material  External sheath, color  black RAL 9005  Conductor material  Bare Cu litz wires  Material wire insulation  PVC  Single wire, color  brown, blue, green/yellow, white, green, yellow, gray, pink, red, black, violet, gray/pink, red/blue, white/green, brown/green, white/glow, yellow/brown, white/gray, gray/brown  Inner sheath thickness  2.0.15 mm  Inner sheath thickness  2.0.76 mm  Overall twist  Wires twisted in layers  Nominal voltage, cable  300 V  Test voltage  2000 V  Minimum bending radius, fixed installation  7.5 x D  Minimum bending radius, fixed installation  7.5 mm  Smallest bending radius, fixed installation  7.9 mm  Smallest bending radius, movable installation  105 mm  Max. bending cycles  Flame resistance  according to DIN EN 50265  Resistance to oil  Other resistance  Highly resistant to acids, alkaline solutions and solvents  Special properties  Silicone-free		3x 1 mm² (power line)
External cable diameter  Outer sheath, material  PUR  External sheath, color  Conductor material  Bare Cu litz wires  Material wire insulation  PVC  Single wire, color  Single wire, color  Single wire, color  Single wire sheath thickness  2 0.15 mm  Thickness, outer sheath  Overall twist  Wires twisted in layers  Nominal voltage, cable  Test voltage  2000 V  Minimum bending radius, fixed installation  Minimum bending radius, fixed installation  To mm  Smallest bending radius, movable installation  Max. bending cycles  Resistance  Resistance  Highly resistant to acids, alkaline solutions and solvents  Special properties  PUR  PUR  PUR  PUR  PUR  PUR  PUR  PU	Wire diameter incl. insulation	1.5 mm ±0.1 mm (Signal line)
Outer sheath, material       PUR         External sheath, color       black RAL 9005         Conductor material       Bare Cu litz wires         Material wire insulation       PVC         Single wire, color       brown, blue, green/yellow, white, green, yellow, gray, pink, red, black, violet, gray/pink, red/blue, white/graen, brown/green, white/yellow, yellow/brown, white/gray, gray/brown         Inner sheath thickness       ≥ 0.15 mm         Thickness, outer sheath       ≥ 0.76 mm         Overall twist       Wires twisted in layers         Nominal voltage, cable       300 V         Test voltage       2000 V         Minimum bending radius, fixed installation       7.5 x D         Minimum bending radius, flexible installation       10 x D         Smallest bending radius, fixed installation       79 mm         Smallest bending radius, movable installation       105 mm         Max. bending cycles       1500000         Flame resistance       according to DIN EN 50265         Resistance to oil       according to VDE 0472 Part 803         Other resistance       Highly resistant to acids, alkaline solutions and solvents         Special properties       Silicone-free		2.1 mm ±0.1 mm (power line)
External sheath, color  Conductor material  Material wire insulation  PVC  Single wire, color  brown, blue, green/yellow, white, green, yellow, gray, pink, red, black, violet, gray/pink, red/blue, white/gray, gray/brown  Inner sheath thickness  ≥ 0.15 mm  Thickness, outer sheath  ≥ 0.76 mm  Overall twist  Wires twisted in layers  Nominal voltage, cable  300 V  Test voltage  2000 V  Minimum bending radius, fixed installation  7.5 x D  Minimum bending radius, fixed installation  79 mm  Smallest bending radius, fixed installation  10 x D  Smallest bending radius, movable installation  105 mm  Max. bending cycles  Flame resistance  according to DIN EN 50265  Resistance to oil  Other resistance  Highly resistant to acids, alkaline solutions and solvents  Special properties	External cable diameter	10.50 mm ±0.2 mm
Conductor material       Bare Cu litz wires         Material wire insulation       PVC         Single wire, color       brown, blue, green/yellow, white, green, yellow, gray, pink, red, black, violet, gray/pink, red/blue, white/green, brown/green, white/yellow, yellow/brown, white/gray, gray/brown         Inner sheath thickness       ≥ 0.15 mm         Thickness, outer sheath       ≥ 0.76 mm         Overall twist       Wires twisted in layers         Nominal voltage, cable       300 V         Test voltage       2000 V         Minimum bending radius, fixed installation       7.5 x D         Minimum bending radius, flexible installation       10 x D         Smallest bending radius, fixed installation       79 mm         Smallest bending radius, movable installation       105 mm         Max. bending cycles       1500000         Flame resistance       according to DIN EN 50265         Resistance to oil       according to VDE 0472 Part 803         Other resistance       Highly resistant to acids, alkaline solutions and solvents         Special properties       Silicone-free	Outer sheath, material	PUR
Material wire insulation       PVC         Single wire, color       brown, blue, green/yellow, white, green, yellow, gray, pink, red, black, violet, gray/pink, red/blue, white/green, brown/green, white/yellow, yellow/brown, white/gray, gray/brown         Inner sheath thickness       ≥ 0.15 mm         Thickness, outer sheath       ≥ 0.76 mm         Overall twist       Wires twisted in layers         Nominal voltage, cable       300 V         Test voltage       2000 V         Minimum bending radius, fixed installation       7.5 x D         Minimum bending radius, flexible installation       10 x D         Smallest bending radius, movable installation       79 mm         Smallest bending radius, movable installation       105 mm         Max. bending cycles       1500000         Flame resistance       according to DIN EN 50265         Resistance to oil       according to VDE 0472 Part 803         Other resistance       Highly resistant to acids, alkaline solutions and solvents         Special properties       Silicone-free	External sheath, color	black RAL 9005
Single wire, color       brown, blue, green/yellow, white, green, yellow, gray, pink, red, black, violet, gray/pink, red/blue, white/green, brown/green, white/yellow, yellow/brown, white/gray, gray/brown         Inner sheath thickness       ≥ 0.15 mm         Thickness, outer sheath       ≥ 0.76 mm         Overall twist       Wires twisted in layers         Nominal voltage, cable       300 V         Test voltage       2000 V         Minimum bending radius, fixed installation       7.5 x D         Minimum bending radius, flexible installation       10 x D         Smallest bending radius, fixed installation       79 mm         Smallest bending radius, movable installation       105 mm         Max. bending cycles       1500000         Flame resistance       according to DIN EN 50265         Resistance to oil       according to VDE 0472 Part 803         Other resistance       Highly resistant to acids, alkaline solutions and solvents         Special properties       Silicone-free	Conductor material	Bare Cu litz wires
black, violet, gray/pink, red/blue, white/green, brown/green, white/yellow, yellow/brown, white/gray, gray/brown  Inner sheath thickness  ≥ 0.15 mm  ≥ 0.76 mm  Overall twist  Wires twisted in layers  Nominal voltage, cable  300 ∨  Test voltage  2000 ∨  Minimum bending radius, fixed installation  7.5 x D  Minimum bending radius, flexible installation  10 x D  Smallest bending radius, fixed installation  79 mm  Smallest bending radius, movable installation  105 mm  Max. bending cycles  Flame resistance  according to DIN EN 50265  Resistance to oil  Other resistance  Highly resistant to acids, alkaline solutions and solvents  Special properties  Silicone-free	Material wire insulation	PVC
Thickness, outer sheath  Overall twist  Wires twisted in layers  Nominal voltage, cable  300 V  Test voltage  2000 V  Minimum bending radius, fixed installation  7.5 x D  Minimum bending radius, flexible installation  10 x D  Smallest bending radius, fixed installation  79 mm  Smallest bending radius, movable installation  105 mm  Max. bending cycles  1500000  Flame resistance  according to DIN EN 50265  Resistance to oil  according to VDE 0472 Part 803  Other resistance  Highly resistant to acids, alkaline solutions and solvents  Special properties  Silicone-free	Single wire, color	black, violet, gray/pink, red/blue, white/green, brown/green,
Overall twist  Nominal voltage, cable  300 V  Test voltage  2000 V  Minimum bending radius, fixed installation  7.5 x D  Minimum bending radius, flexible installation  10 x D  Smallest bending radius, fixed installation  79 mm  Smallest bending radius, movable installation  105 mm  Max. bending cycles  1500000  Flame resistance  according to DIN EN 50265  Resistance to oil  Other resistance  Highly resistant to acids, alkaline solutions and solvents  Special properties  Silicone-free	Inner sheath thickness	≥ 0.15 mm
Nominal voltage, cable  Test voltage  2000 V  Minimum bending radius, fixed installation  7.5 x D  Minimum bending radius, flexible installation  10 x D  Smallest bending radius, fixed installation  79 mm  Smallest bending radius, movable installation  105 mm  Max. bending cycles  1500000  Flame resistance  according to DIN EN 50265  Resistance to oil  according to VDE 0472 Part 803  Other resistance  Highly resistant to acids, alkaline solutions and solvents  Special properties  Silicone-free	Thickness, outer sheath	≥ 0.76 mm
Test voltage 2000 V  Minimum bending radius, fixed installation 7.5 x D  Minimum bending radius, flexible installation 10 x D  Smallest bending radius, fixed installation 79 mm  Smallest bending radius, movable installation 105 mm  Max. bending cycles 1500000  Flame resistance according to DIN EN 50265  Resistance to oil according to VDE 0472 Part 803  Other resistance Highly resistant to acids, alkaline solutions and solvents  Special properties Silicone-free	Overall twist	Wires twisted in layers
Minimum bending radius, fixed installation 7.5 x D  Minimum bending radius, flexible installation 10 x D  Smallest bending radius, fixed installation 79 mm  Smallest bending radius, movable installation 105 mm  Max. bending cycles 1500000  Flame resistance according to DIN EN 50265  Resistance to oil according to VDE 0472 Part 803  Other resistance Highly resistant to acids, alkaline solutions and solvents  Special properties Silicone-free	Nominal voltage, cable	300 V
Minimum bending radius, flexible installation  5 mallest bending radius, fixed installation  7 mm  105 mm  105 mm  Max. bending cycles  1500000  Flame resistance  according to DIN EN 50265  Resistance to oil  Other resistance  Highly resistant to acids, alkaline solutions and solvents  Special properties  Silicone-free	Test voltage	2000 V
Smallest bending radius, fixed installation 79 mm  Smallest bending radius, movable installation 105 mm  Max. bending cycles 1500000  Flame resistance according to DIN EN 50265  Resistance to oil according to VDE 0472 Part 803  Other resistance Highly resistant to acids, alkaline solutions and solvents  Special properties Silicone-free	Minimum bending radius, fixed installation	7.5 x D
Smallest bending radius, movable installation  105 mm  Max. bending cycles  1500000  Flame resistance  according to DIN EN 50265  according to VDE 0472 Part 803  Other resistance  Highly resistant to acids, alkaline solutions and solvents  Special properties  Silicone-free	Minimum bending radius, flexible installation	10 x D
Max. bending cycles  1500000  Flame resistance  according to DIN EN 50265  Resistance to oil  other resistance  Highly resistant to acids, alkaline solutions and solvents  Special properties  Silicone-free	Smallest bending radius, fixed installation	79 mm
Flame resistance according to DIN EN 50265  Resistance to oil according to VDE 0472 Part 803  Other resistance Highly resistant to acids, alkaline solutions and solvents  Special properties Silicone-free	Smallest bending radius, movable installation	105 mm
Resistance to oil according to VDE 0472 Part 803  Other resistance Highly resistant to acids, alkaline solutions and solvents  Special properties Silicone-free	Max. bending cycles	1500000
Other resistance Highly resistant to acids, alkaline solutions and solvents  Special properties Silicone-free	Flame resistance	according to DIN EN 50265
Special properties Silicone-free	Resistance to oil	according to VDE 0472 Part 803
	Other resistance	Highly resistant to acids, alkaline solutions and solvents
Ambient temperature (operation) -40 °C 90 °C (cable, fixed installation)	Special properties	Silicone-free
	Ambient temperature (operation)	-40 °C 90 °C (cable, fixed installation)



1684085

https://www.phoenixcontact.com/us/products/1684085

### Environmental and real-life conditions

#### Ambient conditions

Degree of protection	IP65
	IP67
Ambient temperature (operation)	-40 °C 125 °C (Plug / socket)

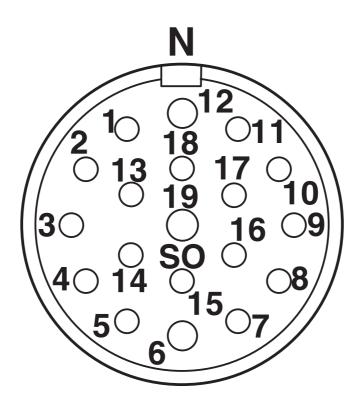


1684085

https://www.phoenixcontact.com/us/products/1684085

### Drawings

Schematic diagram



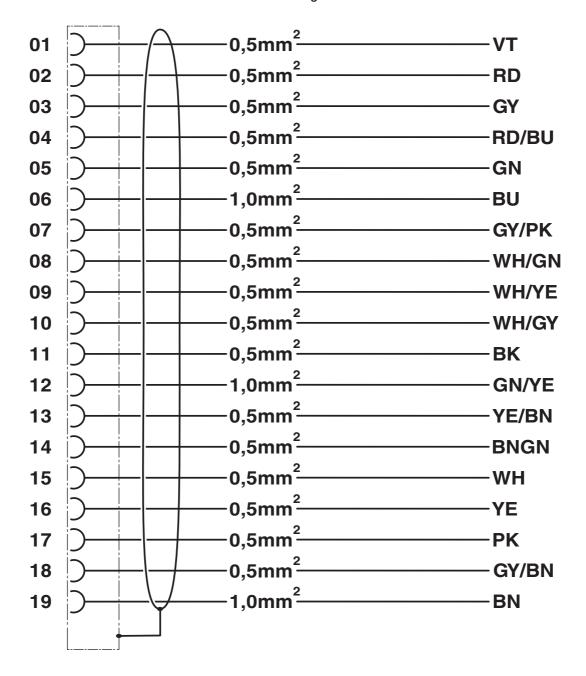
Pin assignment M23 socket, 19-pos., female side view



1684085

https://www.phoenixcontact.com/us/products/1684085

#### Circuit diagram





1684085

https://www.phoenixcontact.com/us/products/1684085

### **Approvals**

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1684085



EAC

Approval ID: 19060508



1684085

https://www.phoenixcontact.com/us/products/1684085

### Classifications

#### **ECLASS**

UNSPSC 21.0

ECLASS-11.0	27060311
ECLASS-12.0	27060311
ECLASS-13.0	27060311
ETIM	
ETIM 9.0	EC001855
UNSPSC	

26121600



1684085

https://www.phoenixcontact.com/us/products/1684085

### 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	96b18188-d212-4c3e-83f8-57e340a987b2

Phoenix Contact 2024 © - all rights reserved https://www.phoenixcontact.com

Phoenix Contact USA 586 Fulling Mill Road Middletown, PA 17057, United States (+717) 944-1300 info@phoenixcon.com