FAST MOVING TECHNOLOGY

STÄUBLI

High-performance connector for docking applications

DuraDock power

EN

STÄUBLI ELECTRICAL CONNECTORS

Connections for Life

Stäubli, as the international technology leader, offers innovative mechatronics solutions in its four divisions: Electrical Connectors, Fluid Connectors, Robotics, and Textile. At Stäubli Electrical Connectors, we develop advanced connection solutions based on the reliable MULTILAM contact technology.

We create connections for life – and our customers are at the center of these connections. We are convinced that solid and stable partnerships directly contribute to our mutual success.

We take on the needs of our partners and deal with the most extraordinary challenges. As a result, we always create, sell and support reliable and long-lasting products for markets with the highest productivity and safety requirements in close cooperation with our customers.

Together for reliable and safe connections

We know that you entrust us with the functionality of your applications and we work hard to ensure this every single day. Thanks to our high level of expertise, our extensive experience and the multiple successful co-operation with our partners, numerous new developments have originated at Stäubli Electrical Connectors and subsequently have become worldwide standards. This includes our MC4 connector portfolio for which we are today the global market leader in photovoltaic. As the Stäubli original, the MC4 represents the result of our constant quest for innovation, quality and safety.

Further examples are the CombiTac modular connector system or the Quick Charging Connector (QCC) for automatic charging systems.

We ensure connections for life together with our long-standing customers in a wide range of industries from renewable energies, power transmission and distribution and E-mobility to industrial automation applications, railway and welding automation, test and measurement and medical devices.

Thus, developing reliable, efficient and safe solutions based on our proven MULTILAM contact technology, which guarantees a high service lifetime in addition to highly efficient power transmission.

Applications and benefits

Automated industrial applications with high mating cycles require constant and safe power transmission, especially for high currents and voltages. Stäubli delivers suitable high-performance connectors for advanced automation technology.

DuraDock power single-pole connectors were developed for the safe transmission of the highest energies and currents. They were designed for test applications with up to 100,000 mating cycles, where the highest service life, reliability, and safety are critical.

Areas of application

The connectors are suitable for a variety of industrial applications, e.g., in E-mobility, railways, and mechanical engineering.

Your benefits:

- Unparalleled advanced contact reliability thanks to MULTILAM contact technology
- Robust, reliable and user-friendly – up to 100,000 mating cycles
- High current-carrying capacity with minimal contact resistance for a long life span
- Numerous possible combinations with the other connectors of the DuraDock multi series (four sizes with up to 72 poles) for almost all applications.

Test systems:

- Automatic docking in test benches and production processes
- Test bench technology in E-mobility and battery production
- Test benches for wind turbines

Manufacturing:

- Test systems for in-line testing with high currents

Plant engineering:

- Interface in manufacturing modules of modular production lines
- Docking station to supply moving machines, for example, mobile melting furnaces

Contents

General information

Changes/reservations

All data, illustrations, and drawings in the catalog have been carefully checked. They are in accordance with our experience to date, but no responsibility can be accepted for errors. We also reserve the right to make modifications for design and safety reasons. When designing equipment incorporating our components, it is therefore advisable not to rely solely on the data in the catalog but to consult us to make sure this information is up to date. We shall be pleased to advise you.

Copyright

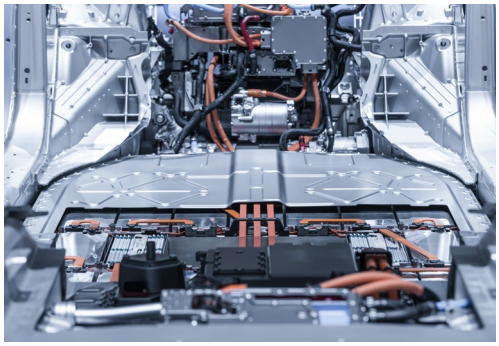
RoHS ready

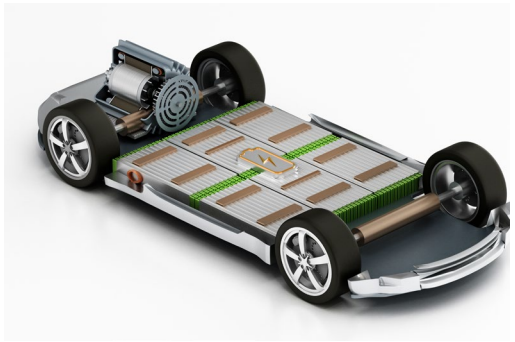
RoHS European Directive 2011/65/EU incl. all related amendments (e.g. Delegated Directive (EU) 2015/863)
For further information please follow the link below
www.staubli.com/de/en/electrical-connectors/downloads/certificates/material-compliance.html

Symbols

Accessories or special tools exist for this product

Assembly instructions MA000 are available for this product





OVERVIEW

Model overview

DuraDock power is a connector series with two contact diameters of 16 mm and 28 mm. DuraDock power offers up to 100,000 mating cycles and enables many connectable cable cross sections. Three versions are available:

- uninsulated without housing
- insulated in plastic housing
- shielded/insulated in metal housing

When unmated, the connectors are IP2X touch proof. With the uninsulated version, ensure that the contact protection on the cable outlet side is designed in accordance with our assembly instructions. For this version, the user must ensure there is protection against electric shock. The versions with housing have degree of protection IP54 (insulated) or IP55 to IP57 (shielded/insulated).

DuraDock power can be inserted in docking plates of 10 mm (0.39 in.) or 14 mm (0.55 in.) thickness, and at a plate spacing of 13 mm (0.51 in.) or 37 mm (1.45 in.). It is possible to combine different plate thicknesses, e.g. the plug side with 10 mm and the socket side with 14 mm thickness.

Nominal contact Ø	Rated current at 20 °C ambient temperature	Maximum conductor cross-section		Version	Cable outlet	Page
16 mm (0.63 in.)	235 A – 340 A	35 mm² – 95 mm²	2 AWG – 3/0 AWG	uninsulated	straight	12
					angled 90°	14
16 mm (0.63 in.)	235 A – 325 A	35 mm² – 95 mm²	2 AWG – 3/0 AWG	insulated	straight	16
					angled 90°	18
16 mm (0.63 in.)	220 A – 325 A	35 mm² – 95 mm²	2 AWG – 3/0 AWG	shielded/insulated	straight	20
						20
28 mm (1.10 in.)	475 A – 630 A	120 mm² – 240 mm²	250 MCM – 450 MCM	uninsulated	straight	12
					angled 90°	14
28 mm (1.10 in.)	475 A – 630 A	120 mm² – 240 mm²	250 MCM – 450 MCM	insulated	straight	16
					angled 90°	18
28 mm (1.10 in.)	475 A – 630 A	120 mm² – 240 mm²	250 MCM – 450 MCM	shielded/insulated	straight	20

Type code

Type code example:

DPR28P-ISD-CB185M50

DPR28P-ISD-CB185M50	DuraDock power
DPR**28**P-ISD-CB185M50	Contact diameter (mm)
DPR28**P**-ISD-CB185M50	**P**: Pin; **S**: Socket
DPR28P-**ISD**-CB185M50	Version, **UIS:** uninsulated; **ISD:** insulated; **SDD:** shielded/insulated
DPR28P-ISD-**CB**185M50	**CB**: Crimp connection; **CLG**: Cable lug
DPR28P-ISD-CB**185**M50	Conductor cross-section: **120** mm²; **150** mm²; **185** mm²; **240** mm²
DPR28P-ISD-CB185**M50**	Cable gland thread size: **M50**

Uninsulated version

- Pre-assembled contact for direct installation in a docking plate or a device
- Cable outlet straight or angled 90°
- Degree of protection IP2X in unmated condition when installed according to our assembly instructions

Insulated version

- Pre-assembled contact in plastic housing
- Cable outlet straight or angled 90°, the respective unused cable outlet is closed with the supplied blind plug
- Degree of protection IP54, IP2X

Shielded/insulated version

- Pre-assembled contact in metal housing
- Cable outlet straight
- Degree of protection IP55 to IP57, IP2X

PE version, uninsulated and insulated

- First mate, last break
- Pre-assembled contact
- Cable outlet straight or angled 90°
- Degree of protection IP2X and IP54 (insulated version only)

Features

Safety and use

- PE version for protection in the event of a fault
- IP2X touch protection on the pin and socket side
- Complete solution for fast mounting
- Plate installation without special tools

Variety and flexibility

- Conductor cross sections from 35 mm² to 240 mm² (from 2 AWG to ~450 MCM)
- Cable outlet straight or angled 90°
- Uninsulated, insulated, or shielded/insulated versions
- Suitable for plate thicknesses of 10 mm and 14 mm (0.39 and 0.55 in.)
- Suitable for plate spacing of 13 mm and 37 mm (0.51 and 1.45 in.)

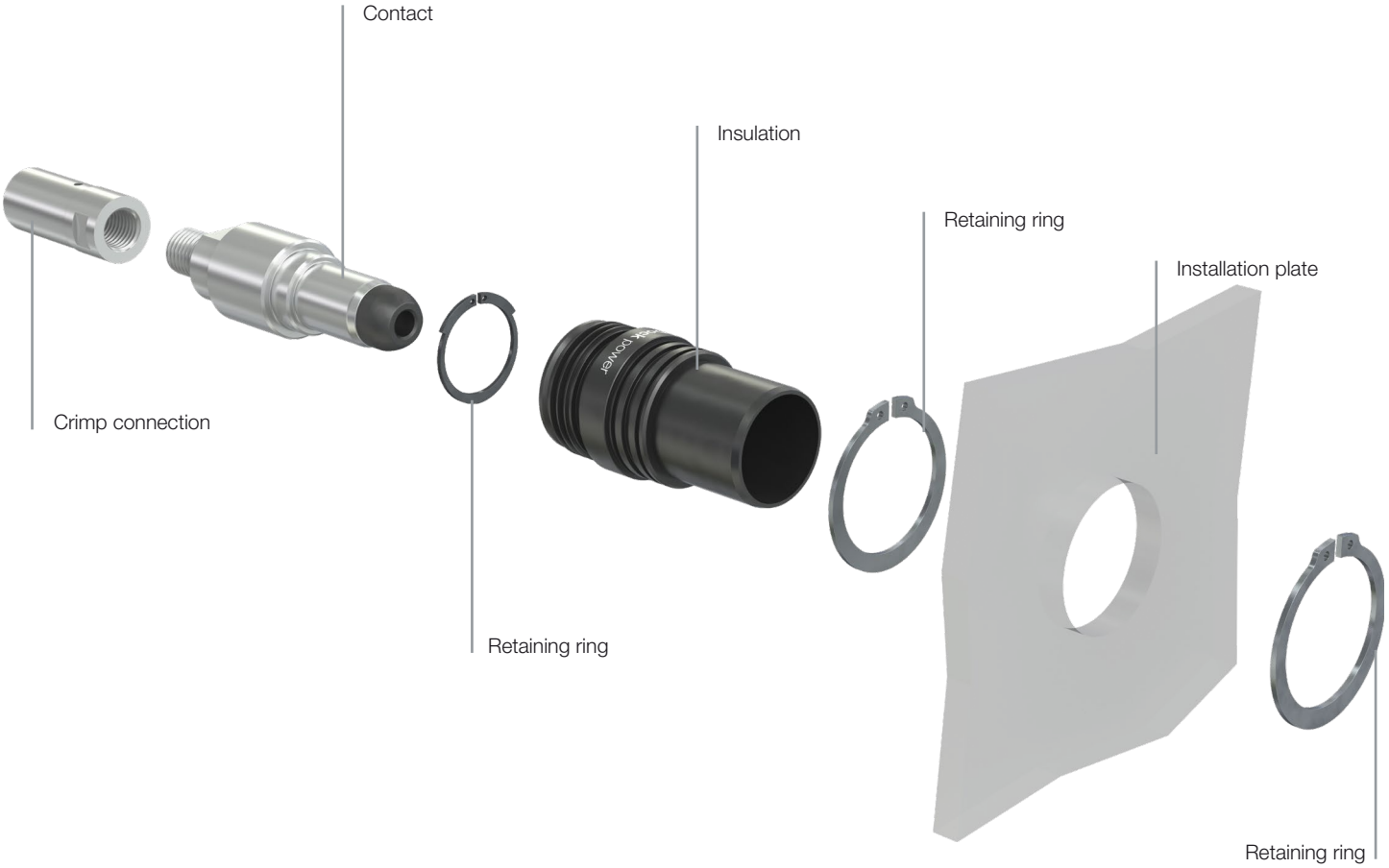
Performance and longevity

- High current capacity of up to 1900 A (dependent on version, duty cycle and ambient temperature)
- High withstand voltage of up to 1500 V
- High mating cycles, up to 100,000
- Very robust design for industrial environment
- Insulated versions with degree of protection up to IP57

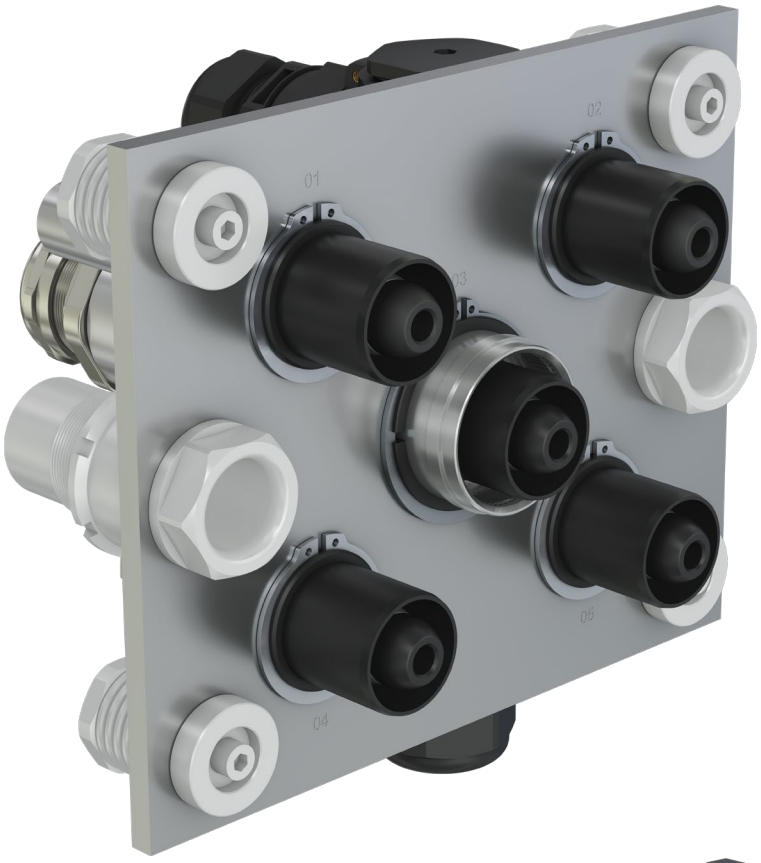
Installation situation

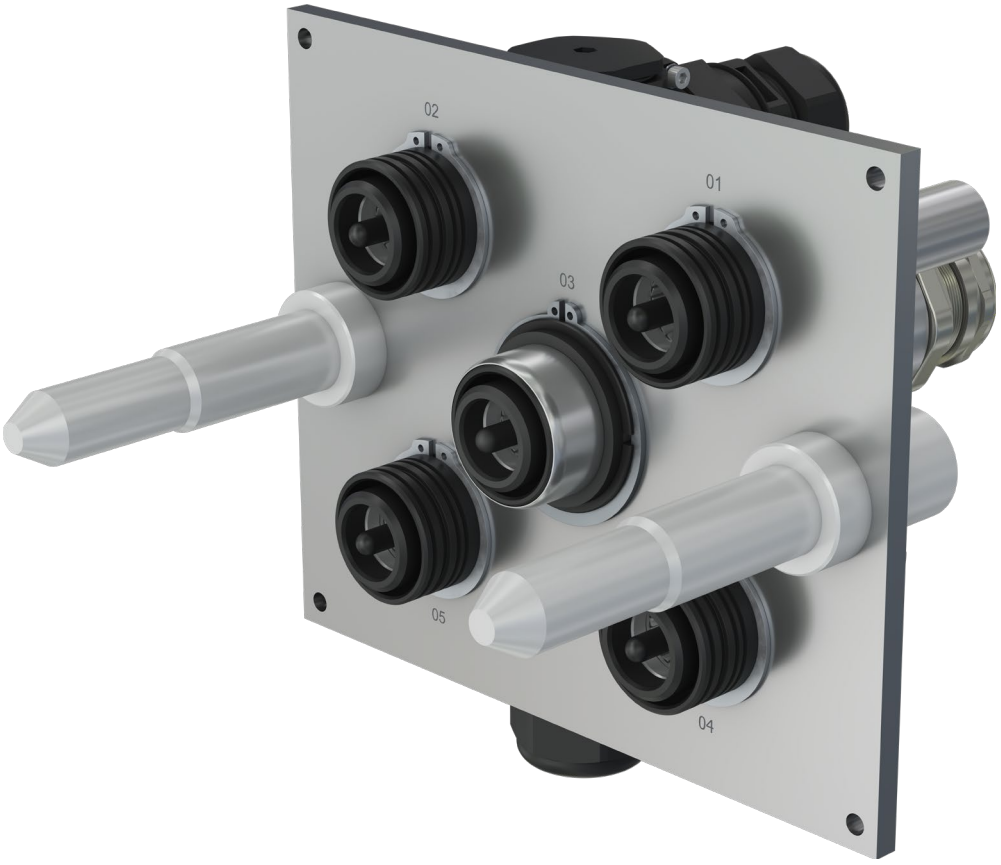
DuraDock power can be inserted in docking plates of 10 mm or 14 mm (0.39 or 0.55 in.) thickness, and at a plate spacing of 13 mm or 37 mm (0.51 and 1.45 in.). See page 29 for additional details.

Note:
The housing must not be used for mechanical alignment. Stable guiding elements must be used for safe application and correct alignment of the plates.
Locking has to be ensured by the plate design.



Installation example





DURADOCK POWER CONNECTOR

Uninsulated version

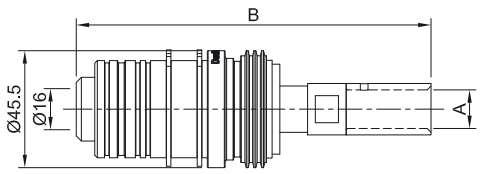
Cable outlet straight

Pin and socket without housing. The cable is crimped with a straight cable outlet. The connector is pre-assembled. The crimp connection and retaining rings are included in the delivery

Note

The user has to ensure that the touch protection on the cable side has been implemented.

DPR16S-UIS-CB...



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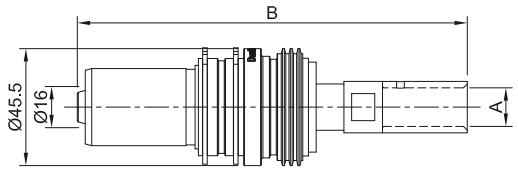

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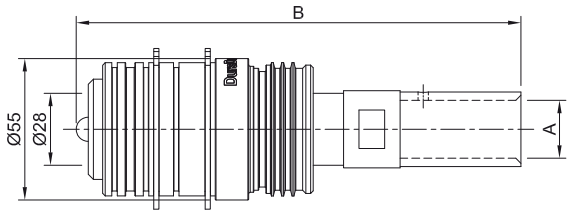

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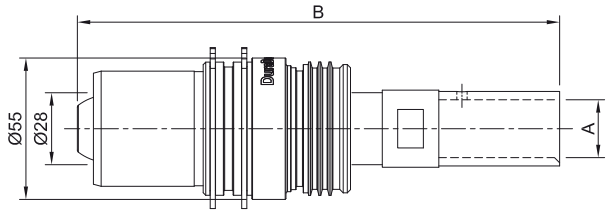

Order No.	Type	Socket	Pin	Nominal contact Ø	Conductor cross-section PE conductor cross-section		Recommended for conductor cross-section	Crimp connection inner Ø	Dimension B	Rated current at 20 °C ambient temperature	Connection type
				mm	mm^2	AWG/MCM	mm^2	A (mm)	B (mm)	A	
DuraDock power 16											
18.0393	DPR16S-UIS-CB35	×		16	35	AWG 2	–	9	138	235	Crimp connection
18.0390	DPR16P-UIS-CB35		×						152		
18.0394	DPR16S-UIS-CB50	×		16	50	AWG 1	–	11	138	275	
18.0391	DPR16P-UIS-CB50		×						152		
18.0395	DPR16S-UIS-CB70	×		16	70	AWG 2/0	–	13	138	295	
18.0392	DPR16P-UIS-CB70		×						152		
18.0541	DPR16S-UIS-CB95	×		16	95	AWG 3/0	–	15	138	345	
18.0540	DPR16P-UIS-CB95		×						152		
DuraDock power 28											
18.0294	DPR28S-UIS-CB120	×		28	120	250 MCM	–	17	168	475	Crimp connection
18.0296	DPR28P-UIS-CB120		×						183		
18.0288	DPR28S-UIS-CB150	×		28	150	300 MCM	–	19	168	520	
18.0286	DPR28P-UIS-CB150		×						183		
18.0276	DPR28S-UIS-CB185	×		28	185	AWG 6/0 350 MCM	–	21	173	565	
18.0280	DPR28P-UIS-CB185		×						188		
18.0266	DPR28S-UIS-CB240	×		28	240	AWG 7/0 450 MCM	–	22.5	173	630	
18.0267	DPR28P-UIS-CB240		×						188		
DuraDock power 16 PE											
18.0624	DPR16S-PE-UIS-CB35	×		16	35	AWG 2	35 (AWG 2), 50 (AWG 1), 70 (AWG 2/0)	9	138	–	Crimp connection
18.0620	DPR16P-PE-UIS-CB35		×						152		
18.0625	DPR16S-PE-UIS-CB50	×		16	50	AWG 1	95 (AWG 3/0)	11	138	–	
18.0621	DPR16P-PE-UIS-CB50		×						152		
18.0626	DPR16S-PE-UIS-CB70	×		16	70	AWG 2/0	120 (250 MCM), 150 (300 MCM)	13	138	–	
18.0622	DPR16P-PE-UIS-CB70		×						152		
18.0627	DPR16S-PE-UIS-CB95	×		16	95	AWG 3/0	185 (AWG 6/0, 350 MCM)	15	138	–	
18.0623	DPR16P-PE-UIS-CB95		×						152		
DuraDock power 28 PE											
18.0587	DPR28S-PE-UIS-CB120	×		28	120	250 MCM	240 (AWG 7/0, 450 MCM)	17	168	–	Crimp connection
18.0586	DPR28P-PE-UIS-CB120		×						183		

MA

Assembly instructions

DuraDock power 16: MA313

DuraDock power 28: MA312

DuraDock power PE: MA315

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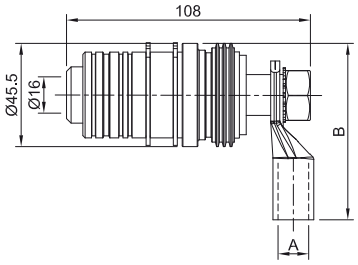
Cable outlet bent 90°

Pin and socket without housing. When the cable outlet is angled the cable is connected using a cable lug. The connector is pre-assembled. The cable lug, retaining rings, and other installation accessories are included in the delivery.

Note
The user has to ensure that the touch protection on the cable side has been implemented.

DPR16S-UIS-CLG...



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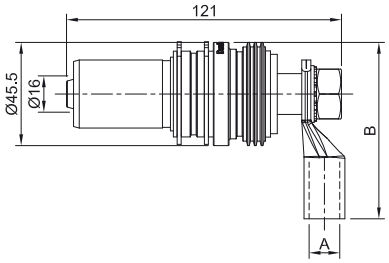

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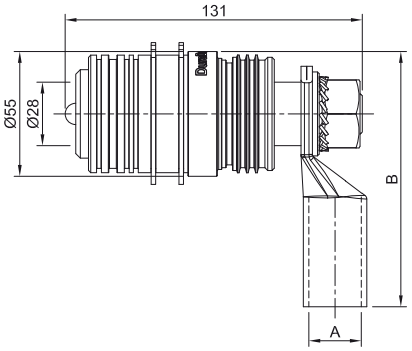

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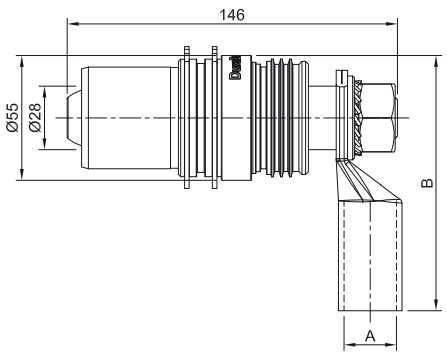

Order No.	Type	Socket	Pin	Nominal contact Ø	Conductor cross-section PE conductor cross-section		Recommended for conductor cross-section	Crimp connection inner Ø	Dimension B	Rated current at 20 °C ambient temperature	Connection type
				mm	mm²	AWG/MCM	mm²	A (mm)	B (mm)	A	
DuraDock power 16											
18.0544	DPR16S-UIS-CLG35	×		16	35	AWG 2	–	9.2	66	235	Cable lug
18.0547	DPR16P-UIS-CLG35		×								
18.0545	DPR16S-UIS-CLG50	×		16	50	AWG 1	–	11	71	275	
18.0548	DPR16P-UIS-CLG50		×								
18.0546	DPR16S-UIS-CLG70	×		16	70	AWG 2/0	–	13.1	74	295	
18.0549	DPR16P-UIS-CLG70		×								
18.0543	DPR16S-UIS-CLG95	×		16	95	AWG 3/0	–	14.5	78	345	
18.0542	DPR16P-UIS-CLG95		×								
DuraDock power 28											
18.0293	DPR28S-UIS-CLG120	×		28	120	250 MCM	–	16.2	93.5	475	Cable lug
18.0292	DPR28P-UIS-CLG120		×								
18.0284	DPR28S-UIS-CLG150	×		28	150	300 MCM	–	18	97.5	520	
18.0282	DPR28P-UIS-CLG150		×								
18.0278	DPR28S-UIS-CLG185	×		28	185	AWG 6/0 350 MCM	–	20.6	99.5	565	
18.0274	DPR28P-UIS-CLG185		×								
18.0250	DPR28S-UIS-CLG240	×		28	240	AWG 7/0 450 MCM	–	23.1	112.5	630	
18.0249	DPR28P-UIS-CLG240		×								
DuraDock power 16 PE											
18.0632	DPR16S-PE-UIS-CLG35	×		16	35	AWG 2	35 (AWG 2), 50 (AWG 1), 70 (AWG 2/0)	9.2	66	–	Cable lug
18.0628	DPR16P-PE-UIS-CLG35		×								
18.0633	DPR16S-PE-UIS-CLG50	×		16	50	AWG 1	95 (AWG 3/0)	11	71	–	
18.0629	DPR16P-PE-UIS-CLG50		×								
18.0634	DPR16S-PE-UIS-CLG70	×		16	70	AWG 2/0	120 (250 MCM), 150 (300 MCM)	13.1	74	–	
18.0630	DPR16P-PE-UIS-CLG70		×								
18.0635	DPR16S-PE-UIS-CLG95	×		16	95	AWG 3/0	185 (AWG 6/0, 350 MCM)	14.5	78	–	
18.0631	DPR16P-PE-UIS-CLG95		×								
DuraDock power 28 PE											
18.0580	DPR28S-PE-UIS-CLG120	×		28	120	250 MCM	240 (AWG 7/0, 450 MCM)	17	168	–	Cable lug
18.0582	DPR28P-PE-UIS-CLG120		×						183		

MA

Assembly instructions

DuraDock power 16: MA313

DuraDock power 28: MA312

DuraDock power PE: MA315

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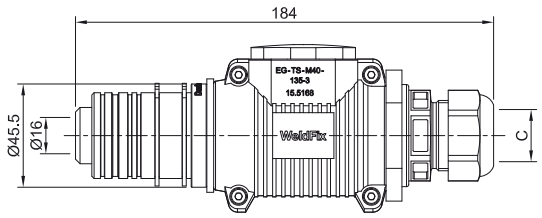
Insulated version

Cable outlet straight

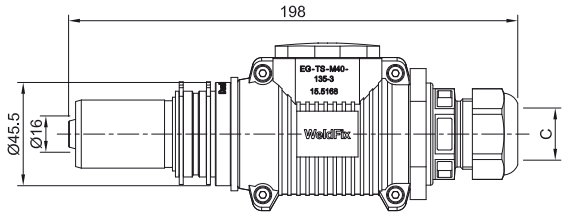
Pin and socket in plastic housing consisting of two half-shells.
The connector is pre-assembled. The crimpi connection, housing, and other installation accessories are included in the delivery (please correct in the hole flyer)

Note:
When using the straight cable outlet, the unused bent cable outlet is closed with a blind Pin (in the scope of delivery).

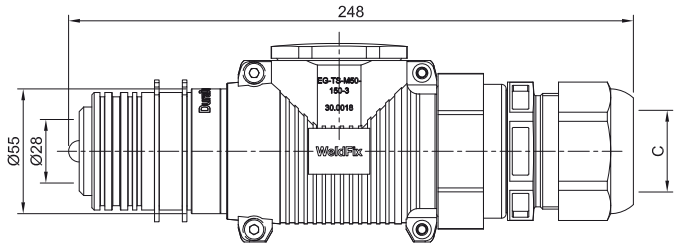
DPR16S-ISD-CB...M32



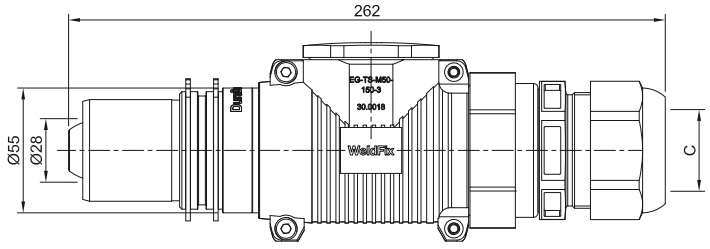
DPR16P-ISD-CB...M32



DPR28S-ISD-CB...M50



DPR28P-ISD-CB...M50



Order No.	Type	Socket	Pin	Nominal contact Ø	Conductor cross-section PE conductor cross-section		Recommended for conductor cross-section	Crimp connection inner Ø	Rated current at 20 °C ambient temperature	Cable Ø	Connection type
				mm	mm^2	AWG/MCM	mm^2	mm	A	C (mm)	
DuraDock power 16											
18.0524	DPR16S-ISD-CB35M32	×		16	35	AWG 2	–	9	235	min. 9 max. 21	Crimp connection
18.0396	DPR16P-ISD-CB35M32		×								
18.0525	DPR16S-ISD-CB50M32	×		16	50	AWG 1	–	11	275		
18.0397	DPR16P-ISD-CB50M32		×								
18.0526	DPR16S-ISD-CB70M32	×		16	70	AWG 2/0	–	13	295		
18.0398	DPR16P-ISD-CB70M32		×								
18.0521	DPR16S-ISD-CB95M32	×		16	95	AWG 3/0	–	15	345	min. 19 max. 25	
18.0520	DPR16P-ISD-CB95M32		×								
DuraDock power 28											
18.0295	DPR28S-ISD-CB120M50	×		28	120	250 MCM	–	17	475	min. 16 max. 35	Crimp connection
18.0297	DPR28P-ISD-CB120M50		×								
18.0289	DPR28S-ISD-CB150M50	×		28	150	300 MCM	–	19	520		
18.0287	DPR28P-ISD-CB150M50		×								
18.0277	DPR28S-ISD-CB185M50	×		28	185	AWG 6/0 350 MCM	–	21	565		
18.0281	DPR28P-ISD-CB185M50		×								
18.0253	DPR28S-ISD-CB240M50	×		28	240	AWG 7/0 450 MCM	–	22.5	630		
18.0262	DPR28P-ISD-CB240M50		×								
DuraDock power 16 PE											
18.0648	DPR16S-PE-ISD-CB35-M32	×		16	35	AWG 2	35 (AWG 2), 50 (AWG 1), 70 (AWG 2/0)	9	–	min. 9 max. 21	Crimp connection
18.0644	DPR16P-PE-ISD-CB35-M32		×								
18.0649	DPR16S-PE-ISD-CB50-M32	×		16	50	AWG 1	95 (AWG 3/0)	11	–		
18.0645	DPR16P-PE-ISD-CB50-M32		×								
18.0650	DPR16S-PE-ISD-CB70-M32	×		16	70	AWG 2/0	120 (250 MCM), 150 (300 MCM)	13	–		
18.0646	DPR16P-PE-ISD-CB70-M32		×								
18.0651	DPR16S-PE-ISD-CB95-M32	×		16	95	AWG 3/0	185 (AWG 6/0, 350 MCM)	15	–	min. 19 max. 25	
18.0647	DPR16P-PE-ISD-CB95-M32		×								
DuraDock power 28 PE											
18.0589	DPR28S-PE-ISD-CB120M50	×		28	120	250 MCM	240 (AWG 7/0, 450 MCM)	17	–	min. 16 max. 35	Crimp connection
18.0588	DPR28P-PE-ISD-CB120M50		×								

MA

Assembly instructions

DuraDock power 16: MA313

DuraDock power 28: MA312

DuraDock power PE: MA315

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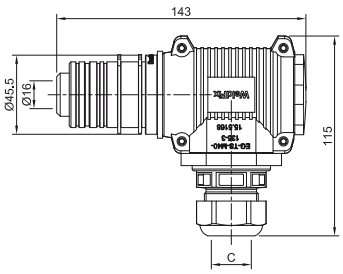
Insulated version

Cable outlet bent 90°

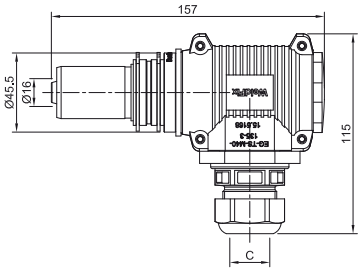
Pin and socket in plastic housing consisting of two half-shells. The connector is pre-assembled. The cable lug, housing, and other installation accessories are included in the delivery.

Note:
When using the bent cable outlet, the unused straight cable outlet is closed with a blind Pin (in the scope of delivery).

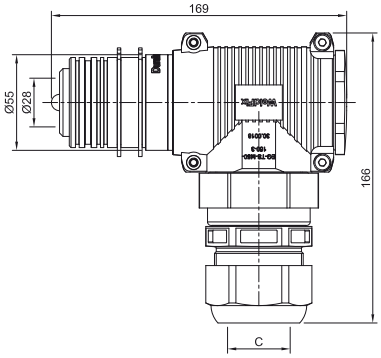
DPR16S-ISD-CLG...M32



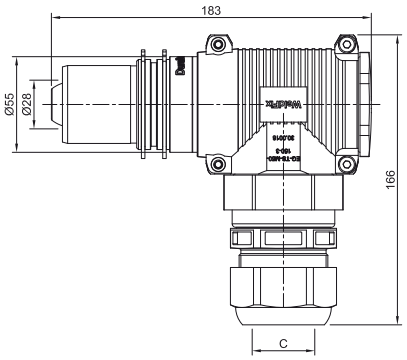
DPR16P-ISD-CLG...M32



DPR28S-ISD-CLG...M50



DPR28P-ISD-CLG...M50



Order No.	Type	Socket	Pin	Nominal contact Ø	Conductor cross-section PE conductor cross-section		Recommended for conductor cross-section	Cable lug inner Ø	Rated current at 20 °C ambient temperature	Cable Ø	Connection type
				mm	mm^2	AWG/MCM	mm^2	mm	A	C (mm)	
DuraDock power 16											
18.0527	DPR16S-ISD-CLG35M32	×		16	35	AWG 2	–	9.2	235	min. 9 max. 21	Cable lug with crimp connection
18.0530	DPR16P-ISD-CLG35M32		×								
18.0528	DPR16S-ISD-CLG50M32	×		16	50	AWG 1	–	11	275		
18.0531	DPR16P-ISD-CLG50M32		×								
18.0529	DPR16S-ISD-CLG70M32	×		16	70	AWG 2/0	–	13.1	295		
18.0532	DPR16P-ISD-CLG70M32		×								
18.0523	DPR16S-ISD-CLG95M32	×		16	95	AWG 3/0	–	14.5	345	min. 19 max. 25	
18.0522	DPR16P-ISD-CLG95M32		×								
DuraDock power 28											
18.0290	DPR28S-ISD-CLG120M50	×		28	120	250 MCM	–	16.2	475	min. 16 max. 35	Cable lug with crimp connection
18.0291	DPR28P-ISD-CLG120M50		×								
18.0285	DPR28S-ISD-CLG150M50	×		28	150	300 MCM	–	18	520		
18.0283	DPR28P-ISD-CLG150M50		×								
18.0279	DPR28S-ISD-CLG185M50	×		28	185	AWG 6/0 350 MCM	–	20.6	565		
18.0275	DPR28P-ISD-CLG185M50		×								
18.0254	DPR28S-ISD-CLG240M50	×		28	240	AWG 7/0 450 MCM	–	23.1	630		
18.0255	DPR28P-ISD-CLG240M50		×								
DuraDock power 16 PE											
18.0640	DPR16S-PE-ISD-CLG35-M32	×		16	35	AWG 2	35 (AWG 2), 50 (AWG 1), 70 (AWG 2/0)	9.2	–	min. 9 max. 21	Cable lug with crimp connection
18.0636	DPR16P-PE-ISD-CLG35-M32		×								
18.0641	DPR16S-PE-ISD-CLG50-M32	×		16	50	AWG 1	95 (AWG 3/0)	11	–		
18.0637	DPR16P-PE-ISD-CLG50-M32		×								
18.0642	DPR16S-PE-ISD-CLG70-M32	×		16	70	AWG 2/0	120 (250 MCM), 150 (300 MCM)	13.1	–		
18.0638	DPR16P-PE-ISD-CLG70-M32		×								
18.0643	DPR16S-PE-ISD-CLG95-M32	×		16	95	AWG 3/0	185 (AWG 6/0, 350 MCM)	14.5	–	min. 19 max. 25	
18.0639	DPR16P-PE-ISD-CLG95-M32		×								
DuraDock power 28 PE											
18.0584	DPR28S-PE-ISD-CLG120-M50	×		28	120	250 MCM	240 (AWG 7/0, 450 MCM)	16.2	–	min. 16 max. 35	Cable lug with crimp connection
18.0585	DPR28P-PE-ISD-CLG120-M50		×								

MA

Assembly instructions

DuraDock power 16: MA313

DuraDock power 28: MA312

DuraDock power PE: MA315

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Shielded/insulated version

Cable outlet straight

Pin and socket in shielded/insulated metal housing.
The connector is pre-assembled. The crimp connection, housing, and other installation accessories are included in the delivery.

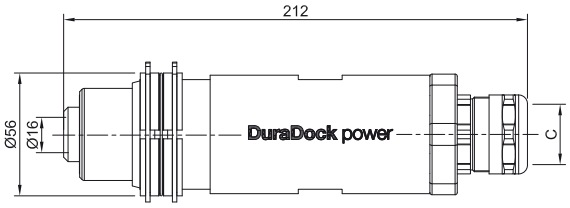
Shielding principle

The Stäubli MULTILAM serves as contact elements between the housings. They extend the shield and ensure optimal 360° shielding. An EMC cable gland connects the shield.

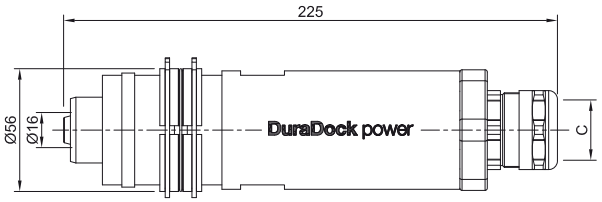
Advantages

- Easy cabling with EMC cable gland
- No electrical connection between housing and installation plate
- Shielding loops are prevented during installation

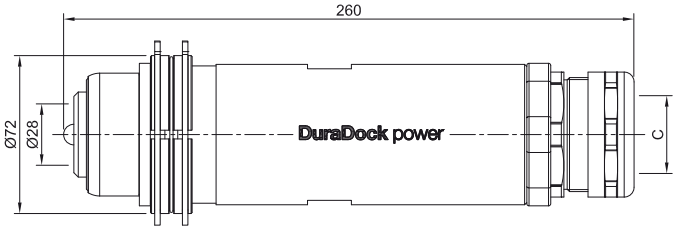
DPR16S-SDD-CB...



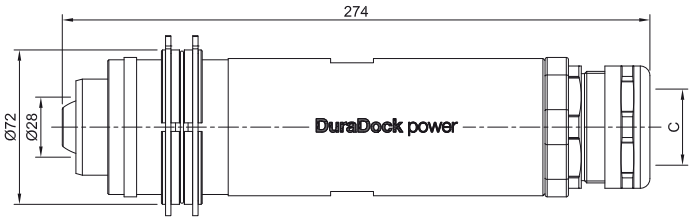
DPR16P-SDD-CB...



DPR28S-SDD-CB...



DPR28P-SDD-CB...



Order No.	Type	Socket	Pin	Nominal contact Ø	Conductor cross-section		Crimp connection inner Ø	Rated current at 20 °C ambient temperature	Cable Ø	Connection type	Screw connection
				mm	mm^2	AWG/MCM	mm	A	C (mm)		
DuraDock power 16											
18.0502	DPR16S-SDD-CB35M32	×		16	35	AWG 2	9	220	min. 15 max. 25	Crimp connection	EMV (M32)
18.0505	DPR16P-SDD-CB35M32		×								
18.0503	DPR16S-SDD-CB50M32	×		16	50	AWG 1	11	250			
18.0506	DPR16P-SDD-CB50M32		×								
18.0504	DPR16S-SDD-CB70M32	×		16	70	AWG 2/0	13	280			
18.0507	DPR16P-SDD-CB70M32		×								
18.0501	DPR16S-SDD-CB95M32	×		16	95	AWG 3/0	15	325			
18.0500	DPR16P-SDD-CB95M32		×								
DuraDock power 28											
18.0271	DPR28S-SDD-CB120M40	×		28	120	250 MCM	17	475	min. 20 max. 32	Crimp connection	EMV (M40)
18.0268	DPR28P-SDD-CB120M40		×								
18.0272	DPR28S-SDD-CB150M40	×		28	150	300 MCM	19	520			
18.0269	DPR28P-SDD-CB150M40		×								
18.0273	DPR28S-SDD-CB185M40	×		28	185	AWG 6/0 350 MCM	21	565			
18.0270	DPR28P-SDD-CB185M40		×								
18.0252	DPR28S-SDD-CB240M50	×		28	240	AWG 7/0 450 MCM	22.5	630	min. 31 max. 42		EMV (M50)
18.0251	DPR28P-SDD-CB240M50		×								

MA

Assembly instructions

DuraDock power 16: MA313

DuraDock power 28: MA312

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ACCESSORIES

Tools

Open-ended wrench insert for torque wrench

DuraDock power 16, DuraDock power 16-PE

Manufac-turer	Order No.	Type	Description	Width across flats (mm)	required for	torque
Tools of other manufacturer, not available via Stäubli						
						
Stahlwille	**731/100 SW 55**	Jaw insertion tools No 731/100	Clamping tool insert, tool holder 22 mm x 28 mm (0.866 in. x 1.102 in.)	SW 55	Shielded/insulated version	MA see MA 313 MA315

DuraDock power 28, DuraDock power 16-PE

Manufac-turer	Order No.	Type	Description	Width across flats (mm)	required for	torque
Stäubli tools						
						
Stäubli	**18.0551**	DE SW57_A	Clamping tool insert	SW 57	Shielded/insulated version	MA see MA 312, MA315
	18.0550	DE SW65-A	Clamping tool insert	SW 65		
Tools of other manufacturer, not available via Stäubli						
						
Stahlwille	**731/100 SW 55**	Jaw insertion tools No 731/100	Clamping tool insert, tool holder 22 mm x 28 mm (0.866 in. x 1.102 in.)	SW 55	Insulated version	MA see MA 312, MA315
	731/100 SW 60			SW 60		

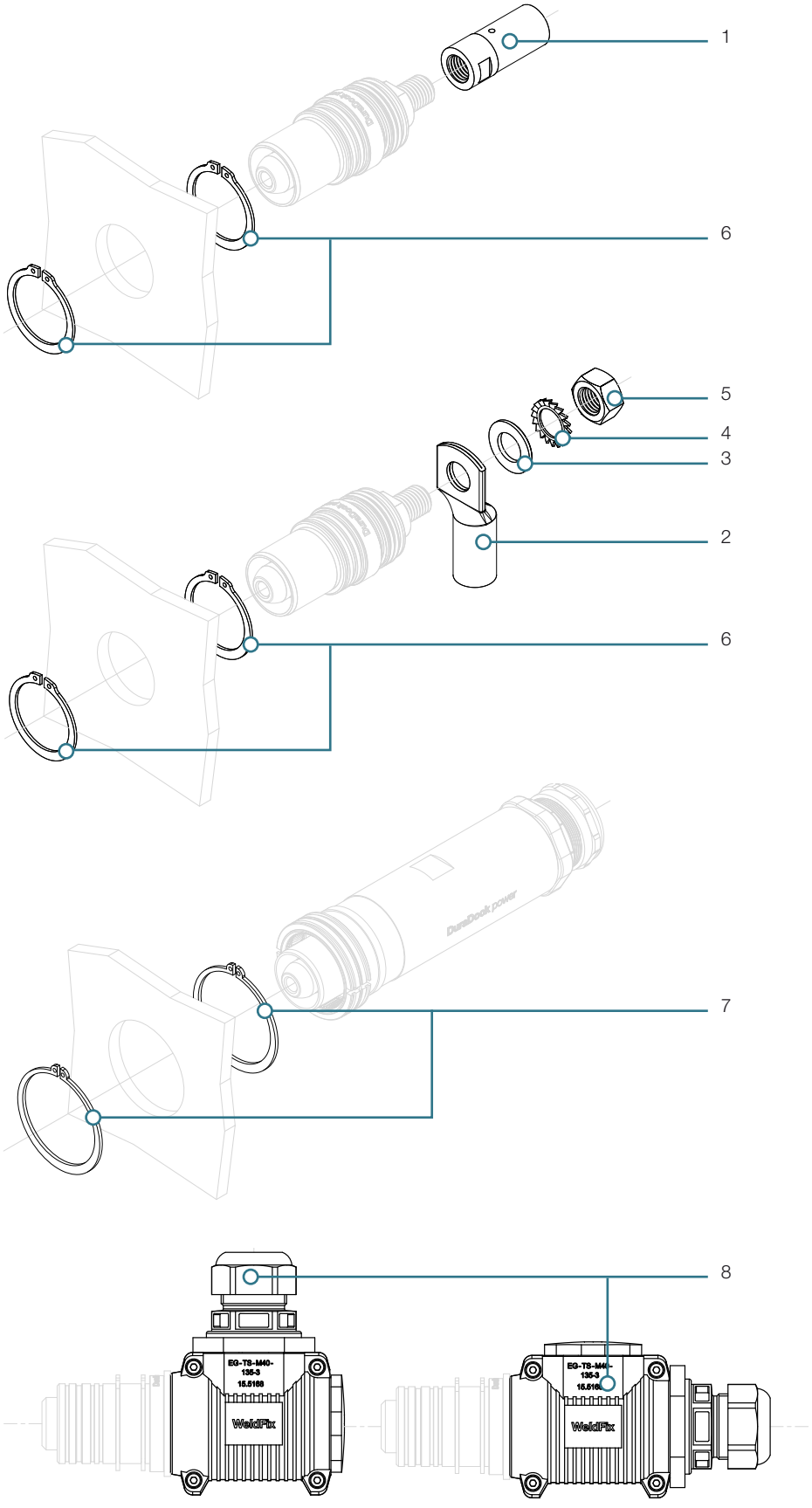
Crimping pliers

The crimping pliers listed guarantee a secure and high-quality crimp connection. Stäubli recommends electro-hydraulic pliers or a crimping head for series assembly, and manual pliers for smaller series or individual assemblies (see table below).

Manufacturer	Electrohydraulic pliers	Hand pliers	Crimping head	Possible conductor cross sections	Name	Condition
Klauke	×			16 mm² – 300 mm²	EK60VPFTCFM	Class 5 and class 6 cables
		×		10 mm² – 240 mm²	HK 60 VP	
		×		16 mm² – 300 mm²	HK 60 VP/FT	
			×	10 mm² – 240 mm²	PK 60 VP	
			×	16 mm² – 300 mm²	PK 60 VP/FT	

Spare parts

DuraDock power 16, DuraDock power 16-PE



Pos.	Order No.	Type	Description	Version		
				uninsulated	insulated	shielded
Crimp connection (cable outlet straight)						
1	**18.7577**	H35N/M14	Crimp connection, conductor cross section 35 mm²	×	×	×
1	**18.7580**	H50N/M14	Crimp connection, conductor cross section 50 mm²	×	×	×
1	**18.7574**	H70N/M14	Crimp connection, conductor cross section 70 mm²	×	×	×
1	**07.0022**	H95N/M14	Crimp connection, conductor cross section 95 mm²	×	×	×
Cable lugs and accessories (cable outlet bent 90°)						
2	**17.1015**	K-SCH35-14/K	Cable lug, conductor cross section 35 mm²	×	×	
2	**17.1014**	K-SCH50-14/K	Cable lug, conductor cross section 50 mm²	×	×	
2	**17.1013**	K-SCH70-14/K	Cable lug, conductor cross section 70 mm²	×	×	
2	**17.0067**	K-SCH95-14/K	Cable lug, conductor cross section 95 mm²	×	×	
3	**08.0404**	UE/M14X1 AG	Washer, all conductor cross sections	×	×	
4	**08.0708**	F/M14 DIN6798A BN781	Spring washer, all conductor cross sections	×	×	
5	**08.0108**	MU0,8D/M14 AG	Nut, all conductor cross sections	×	×	
Retaining rings						
6	**18.5627**	SI-RG A38 DIN471 FS	Retaining ring	×	×	
7	**33001199**	SI-RG A56 DIN471 FS	Retaining ring for fastening the insulating sleeve to the plug connector and the plug connector in the plate.			×
Housings						
8	**18.0569**	SPD-DPR16-ISD	End housing with cable gland, conductor cross section 35 – 70 mm²		×	
8	**18.0572**	SPD-DPR16S/95-ISD	End housing with cable gland, conductor cross section 95 mm²		×	

MA

Assembly instructions

DuraDock power 16: MA313

DuraDock power PE: MA315

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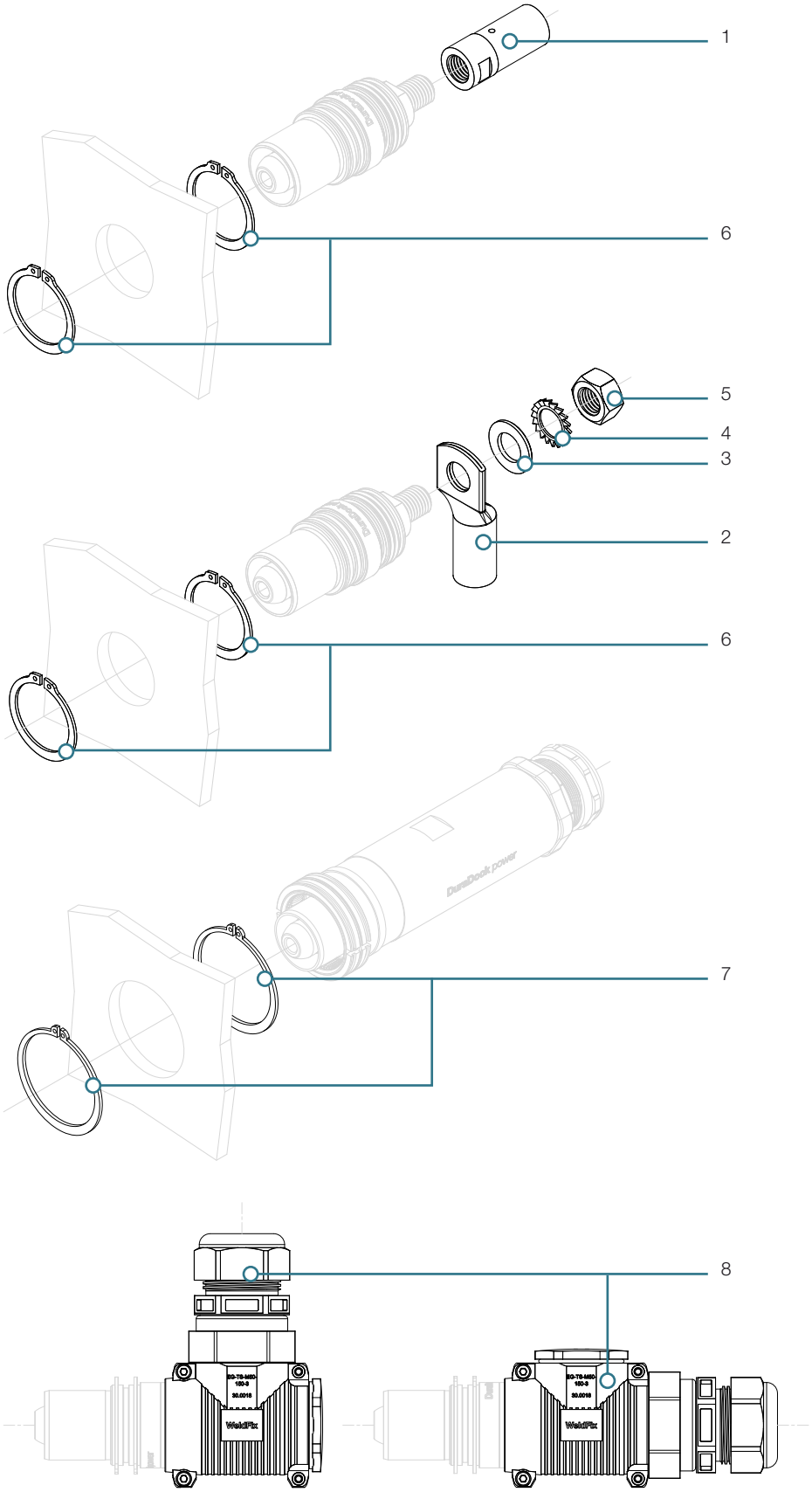
Spare parts

DuraDock power 28



Pos.	Order No.	Type	Description	Version		
				uninsulated	insulated	shielded
Crimp connection (cable outlet straight)						
1	**18.7566**	H120N/M20	Crimp connection, conductor cross section 120 mm²	×	×	×
1	**18.7563**	H150N/M20	Crimp connection, conductor cross section 150 mm²	×	×	×
1	**18.7560**	H185N/M20	Crimp connection, conductor cross section 185 mm²	×	×	×
1	**33004292**	H240N/M20/DDP	Crimp connection, conductor cross section 240 mm²	×	×	×
Cable lugs and accessories (cable outlet bent 90°)						
2	**17.1011**	K-SCH120-20/K	Cable lug, conductor cross section 120 mm²	×	×	
2	**17.1010**	K-SCH150-20/K	Cable lug, conductor cross section 150 mm²	×	×	
2	**17.1009**	K-SCH185-20/K	Cable lug, conductor cross section 185 mm²	×	×	
2	**17.0066**	K-SCH240-20/K	Cable lug, conductor cross section 240 mm²	×	×	
3	**08.0311**	U/M20 AG	Washer, all conductor cross sections	×	×	
4	**08.0711**	F/M20 DIN6798A BN781	Spring washer, all conductor cross sections	×	×	
5	**08.0111**	MU0,8D/M20 AG	Nut, all conductor cross sections	×	×	
Retaining rings (for plate installation)						
6	**18.5609**	SI-RG A52 DIN471 FS	Retaining ring	×	×	
7	**18.5805**	SI-RG A72 DIN471	Retaining ring for fastening the insulating sleeve to the plug connector and the plug connector in the plate.			×
Housings						
10	**18.0570**	SPD-DPR28-ISD	End housing with cable gland, all conductor cross sections		×	

The housing for the shielded version is not available as a spare part..

MA

Assembly instructions

DuraDock power 28: MA312

DuraDock power PE: MA315

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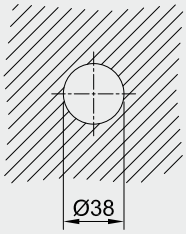
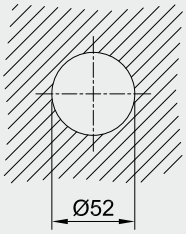
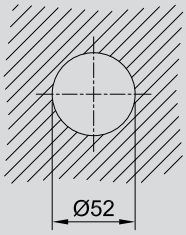
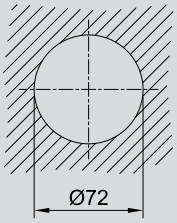
TECHNICAL SPECIFICATIONS

Drilling plan and installation dimensions

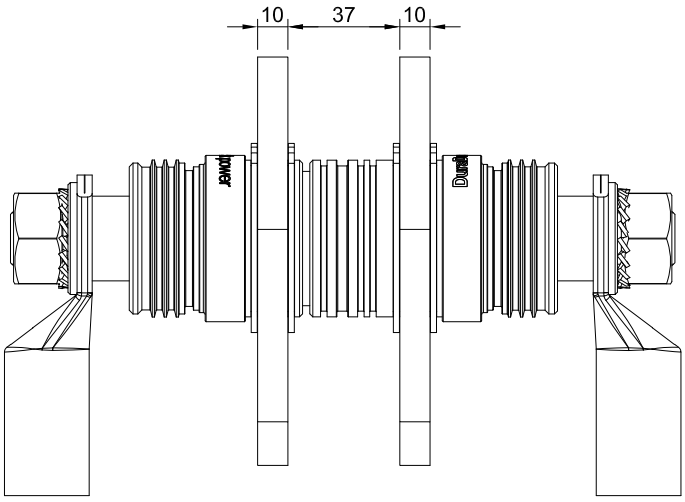
Drilling plan for a docking plate

Drilling hole size can be used for model...	
DuraDock power 16, DuraDock power 16-PE **Version uninsulated** **Version insulated**  Specification in mm, tolerance: D^{E8}	**DuraDock power 16** **Version insulated/shielded**  Specification in mm, tolerance: D^{E8}
DuraDock power 28, DuraDock power 28-PE **Version uninsulated** **Version insulated**  Specification in mm, tolerance: D^{E8}	**DuraDock power 28** **Version insulated/shielded**  Specification in mm, tolerance: D^{E8}

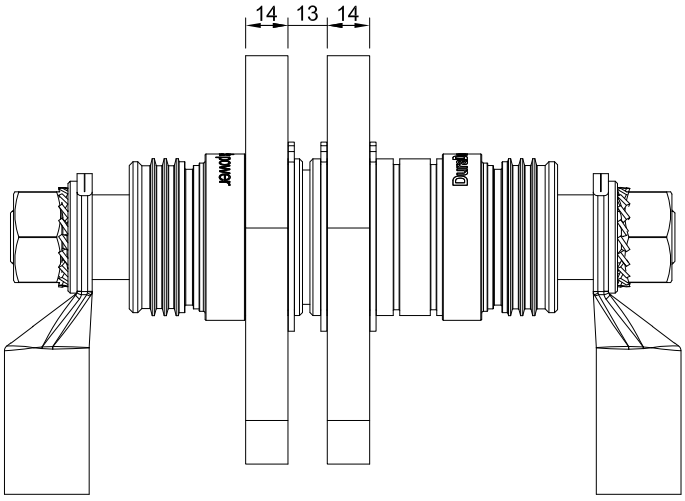
Installation dimensions

The installation plate has to be either 10 mm or 14 mm (0.39 or 0.55 in.) thick.
The spacing between these installation plates has to be either 13 mm or 37 mm (0.51 and 1.45 in.).

It is possible to combine the plate thicknesses, e.g. the plug side with 10 mm and the socket side with 14 mm thickness.



Example with 10 mm (0.39 in.) plate thickness and 37 mm (1.45 in.) plate spacing



Example with 14 mm (0.55 in.) plate thickness and 13 mm (0.51 in.) plate spacing

Technical data

Technical data		Version		
		Uninsulated	Insulated	Insulated/ shielded
Contact system		MULTILAM		
Rated current at 20 °C ambient temperature[1] (derating diagrams, from page 31)	DuraDock power 16 DuraDock power 28	max. 340 A max. 630 A		
Rated voltage		AC 25 V/DC 60 V (without protection area)	AC 1000 V/DC 1500 V	
Conductor cross-section	DuraDock power 16, DuraDock power 16-PE DuraDock power 28, DuraDock power 28-PE	35 mm² – 95 mm² (2 AWG – 3/0 AWG) 120 mm² – 240 mm² (250 MCM – 450 MCM)		
Overvoltage category		CATIII		
Degree of pollution		3		
Insulating material group		I		
Total contact resistance	DuraDock power 16, DuraDock power 16-PE DuraDock power 28, DuraDock power 28-PE	<80 µΩ <40 µΩ		
Test voltage		8.25 kV (50 – 60 Hz) for 1 min.		
Insulation coordination according to IEC 60664-1, DIN VDE 0110-1		15 kV		
Insulation temperature resistance		POM: -40 °C ... +100 °C		
Ambient temperature		-10 °C ... +40 °C [1]		
Operating temperature		-10 °C ... +100 °C		
Max. Temperature difference pin/socket when plugged in		30 K		
Storage temperature		-40 °C ... +80 °C		
Protection type, unplugged		IP2X[2]	IP2X	IP2X
Protection type, plugged in		IP2X[2]	IP54	IP55, IP56, IP57
Total connector insertion force	DuraDock power 16, DuraDock power 16-PE DuraDock power 28, DuraDock power 28-PE	max. 20 N max. 100 N	max. 130 N max. 200 N	max. 200 N ca. 400 N
Safety class		II		
Connection type	axial outlet 90° outlet	Crimp connection Cable lug		
Contact material		CuZn alloy, silver-plated		
Insulation material		POM		
Housing material		-	PA	Aluminum alloy
Shielding (360°) (diagrams, from page 36)		-	-	>71 dB
Additional regulations		IEC 60664-1:2020 DIN VDE 0627/EN 61984:2009 DIN VDE 0298-4:2003		

Notes:

- The housing must not be used for mechanical alignment. Stable guides and alignment elements must be used for safe application and correct alignment of the plates (see illustration page 11).
- With the uninsulated version, ensure that the contact protection on the cable outlet side (behind the docking plate) is designed in accordance with the assembly instructions. The user must ensure there is protection against electric shock.

[1] At ambient temperatures above 40°C the current must be reduced according to the derating diagram.

[2] Only in the insertion area in front of the plate (see note)

Derating diagram

The current-carrying capacity of connectors is limited by the thermal load capacity of the materials of the contact elements including connections and insulating parts. The derating curve applies to currents that are **continuous**, not intermittent, allowed to flow through each contact element of the connector, at the same time, without the upper temperature limit being exceeded.

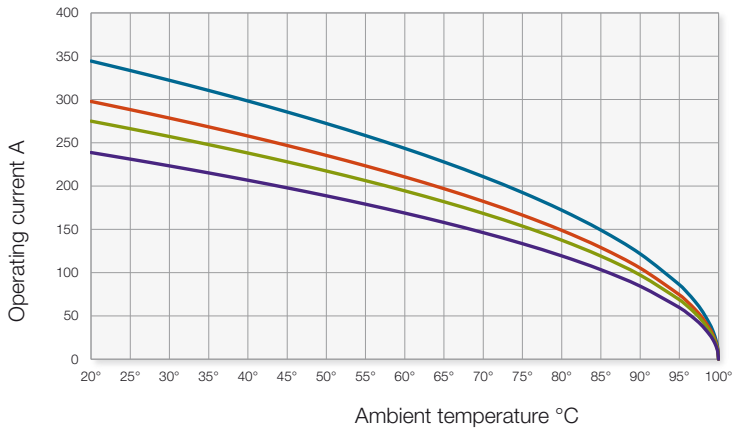
In addition to the maximum continuous currents, current characteristics apply for short-time operation. The duty cycle (ED) is determined within a cycle time of 10 minutes (ratio of switch-on and pause time).

Measuring and test methods according to DIN 41640 Part 3.

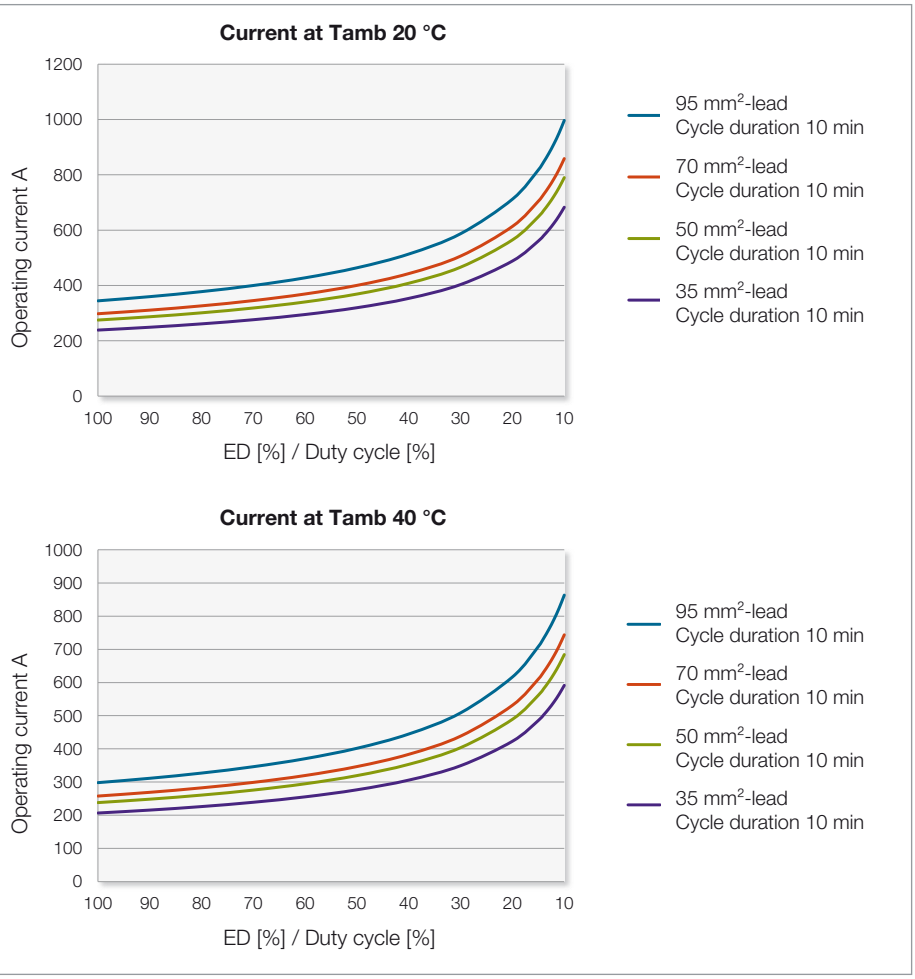
The values given in the derating diagrams apply to connectors (see Standard EN 60204). For the permissible load of the cables, refer to the relevant regulations such as DIN VDE 0298-4 and DIN EN 60204-1, IEC 60204-1.

DuraDock power 16 uninsulated and insulated

Current carrying capacity (continuous current)



Current-carrying capacity in intermittent operation (short-time operation)



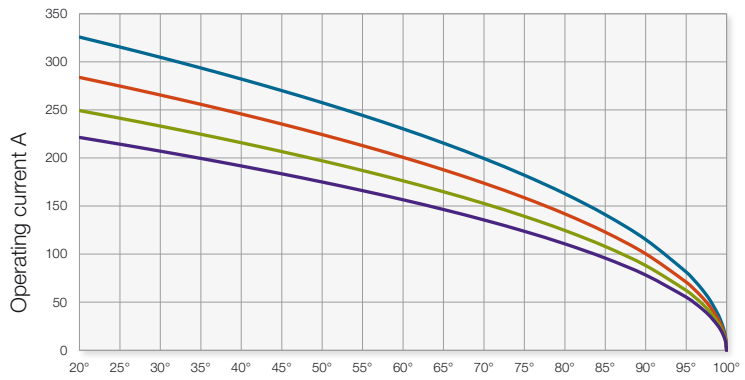
Example:

With 95 mm² leads, DuraDock power 16 can transmit up to max. 300 A continuous thermal current at an ambient temperature of 40 °C; this corresponds to a duty cycle (ED) of 100 %.

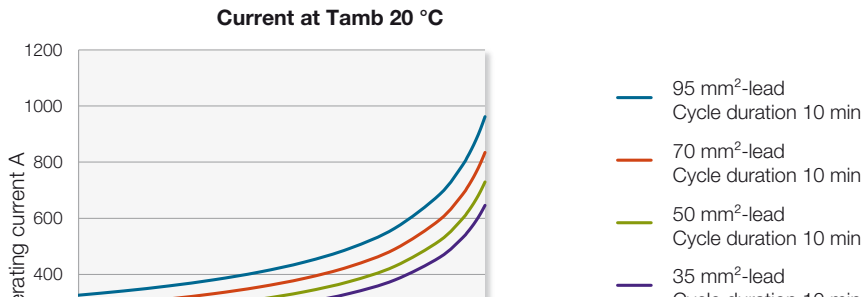
With a duty cycle of 20 % and a pause time of 80 %, the connector can transmit 610 A with the 95 mm² lead. This is based on a cycle time of 10 minutes, i.e. ED 20 % corresponds to 2 minutes “On”, 8 minutes “Off”.

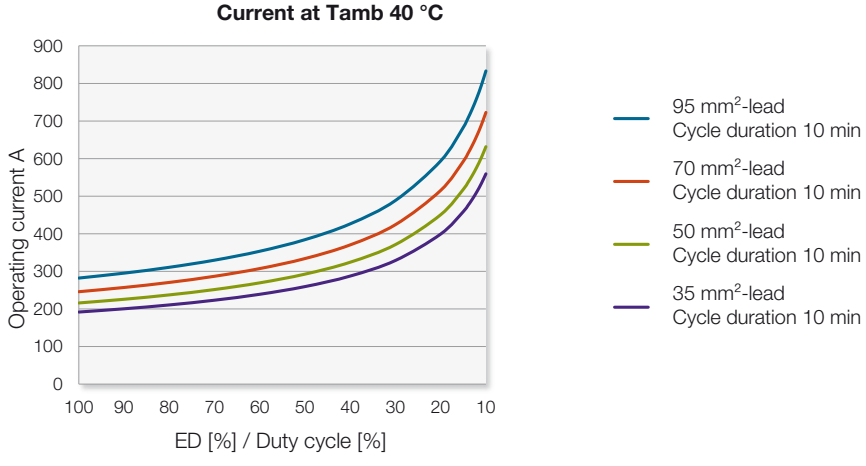
DuraDock power 16 insulated/shielded

Current carrying capacity (continuous current)



Current-carrying capacity in intermittent operation (short-time operation)





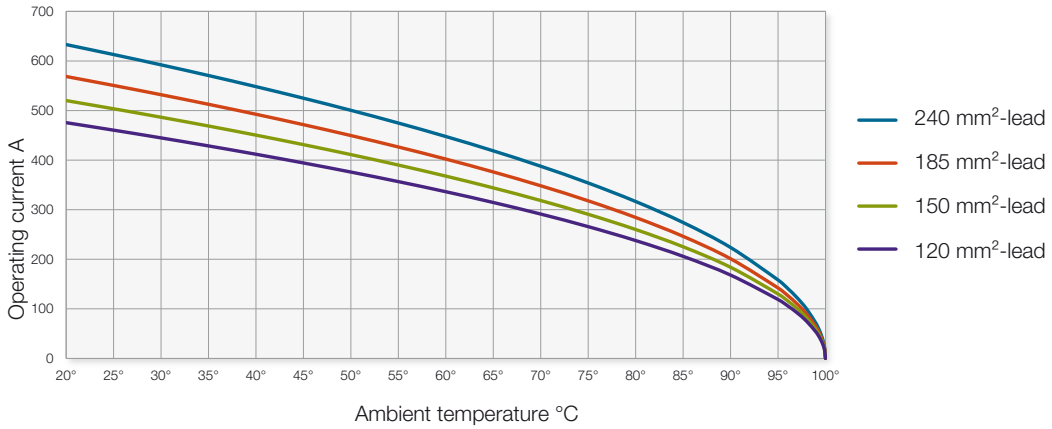
Example:

With 50 mm² leads, DuraDock power 16 can transmit up to max. 250 A continuous thermal current at an ambient temperature of 20 °C; this corresponds to a duty cycle (ED) of 100 %.

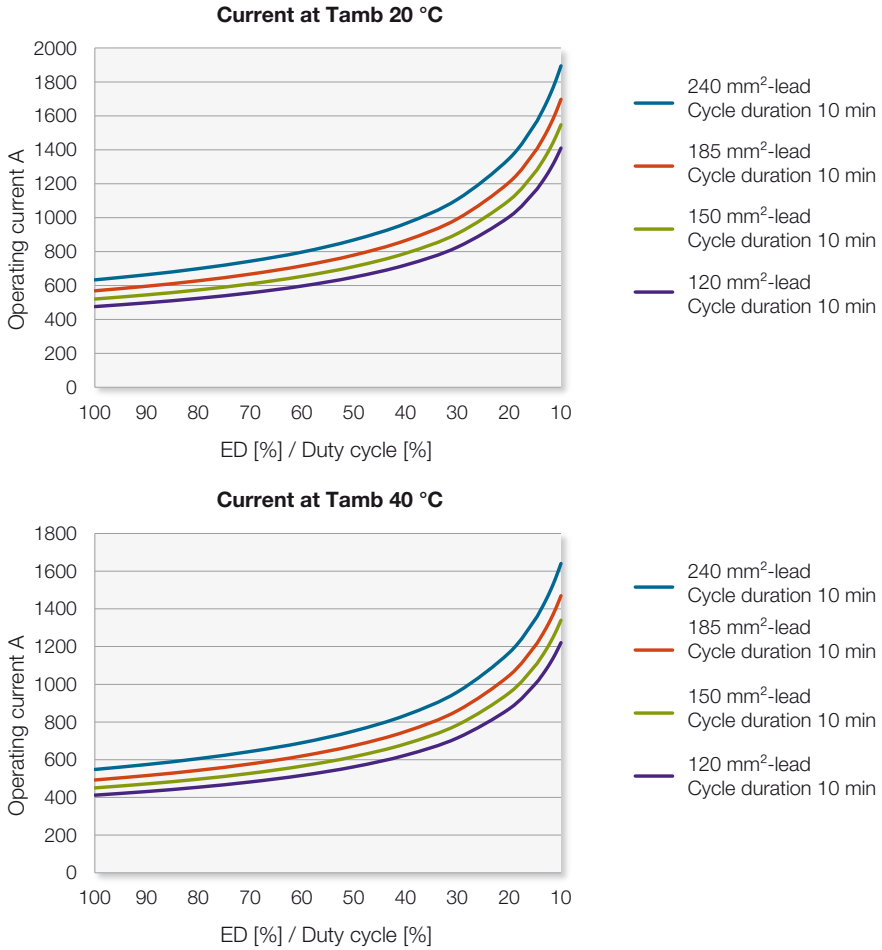
With a duty cycle of 20 % and a pause time of 80 %, the connector with the 50 mm² lead can transmit a maximum of 520 A. This is based on a cycle time of 10 minutes, i.e. ED 20 % corresponds to 2 minutes “On”, 8 minutes “Off”.

DuraDock power 28

Current carrying capacity (continuous current)



Current-carrying capacity in intermittent operation (short-time operation)



Example:

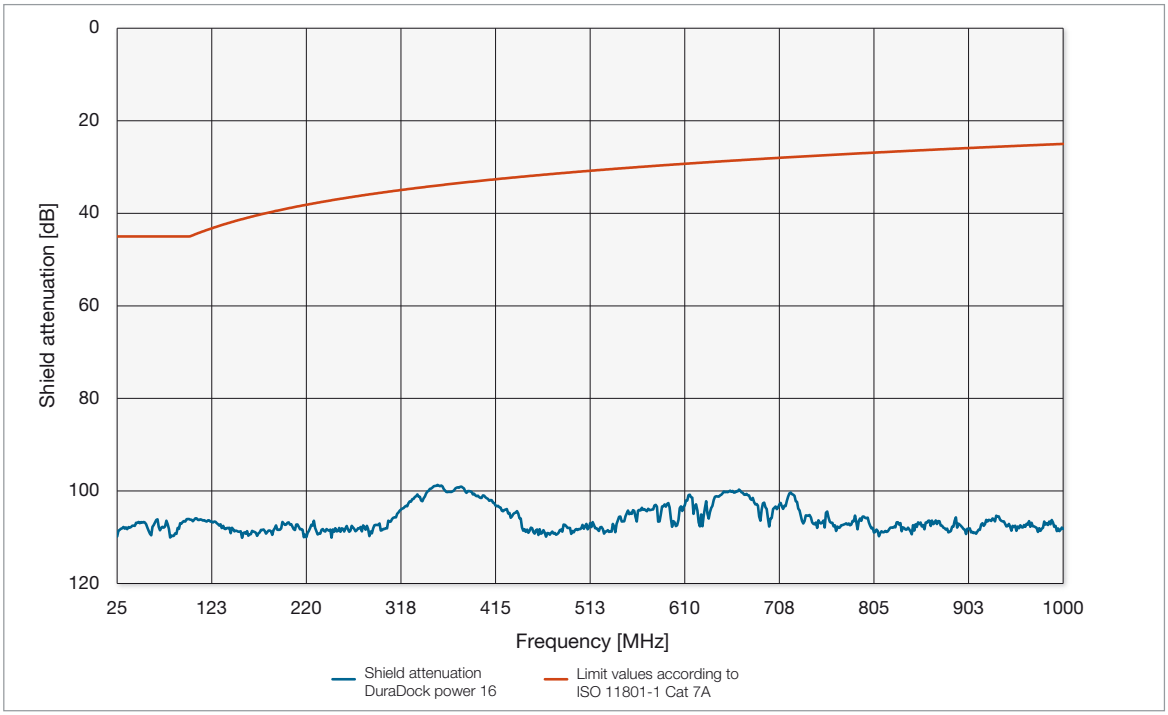
With 150 mm² conductors, DuraDock power 28 can transmit up to max. 520 A continuous thermal current at an ambient temperature of 20 °C; this corresponds to a duty cycle (ED) of 100 %.

With a duty cycle of 20 % and a pause time of 80 %, the connector can transmit a maximum of 1100 A with the 150 mm² lead. This is based on a cycle time of 10 minutes, i.e. ED 20 % corresponds to 2 minutes “On”, 8 minutes “Off”.

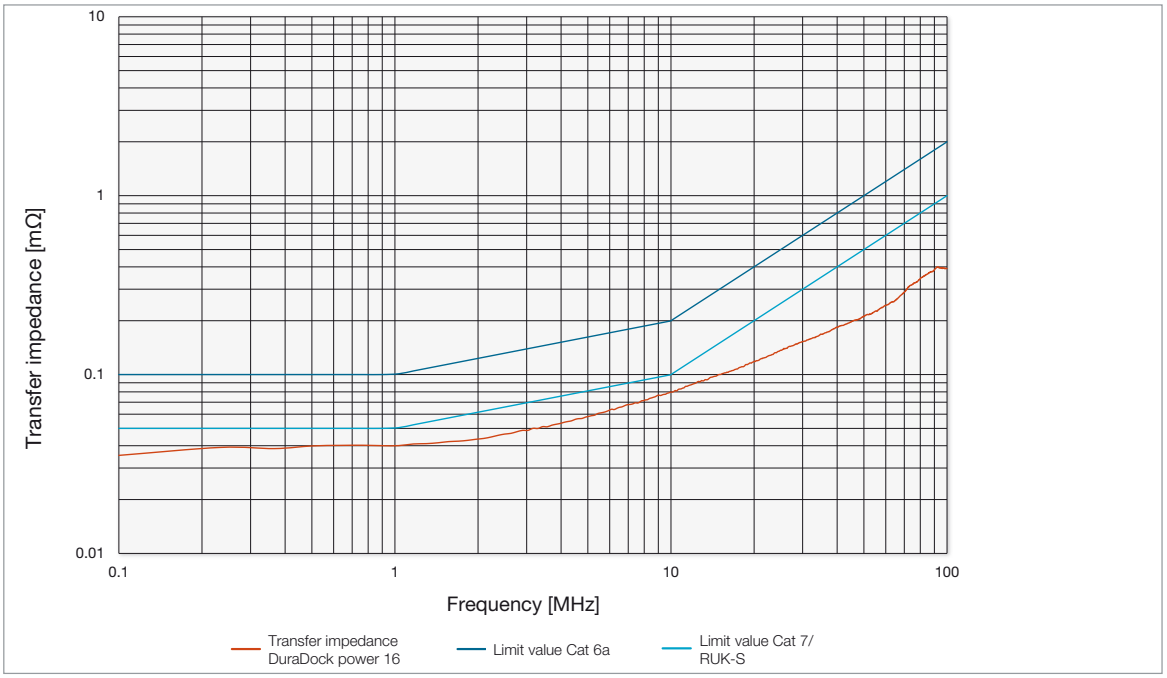
Diagrams for the shielded connectors

DuraDock power 16

Shield attenuation

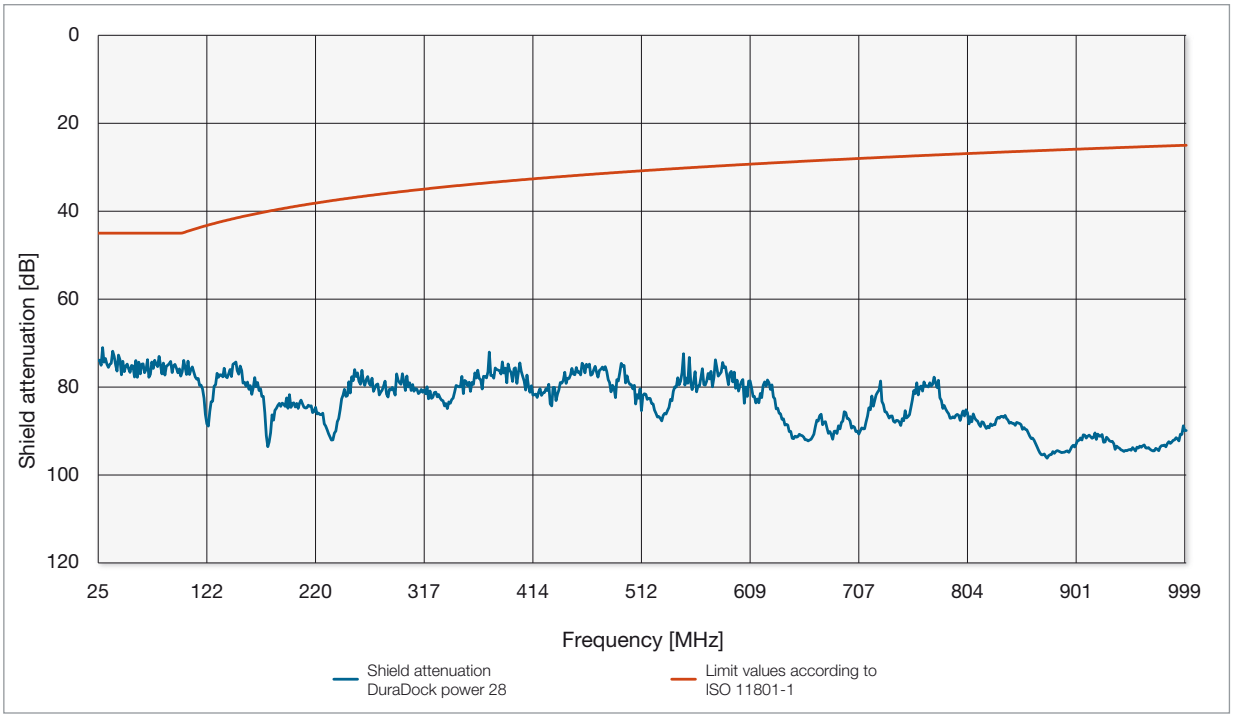


Transfer impedance

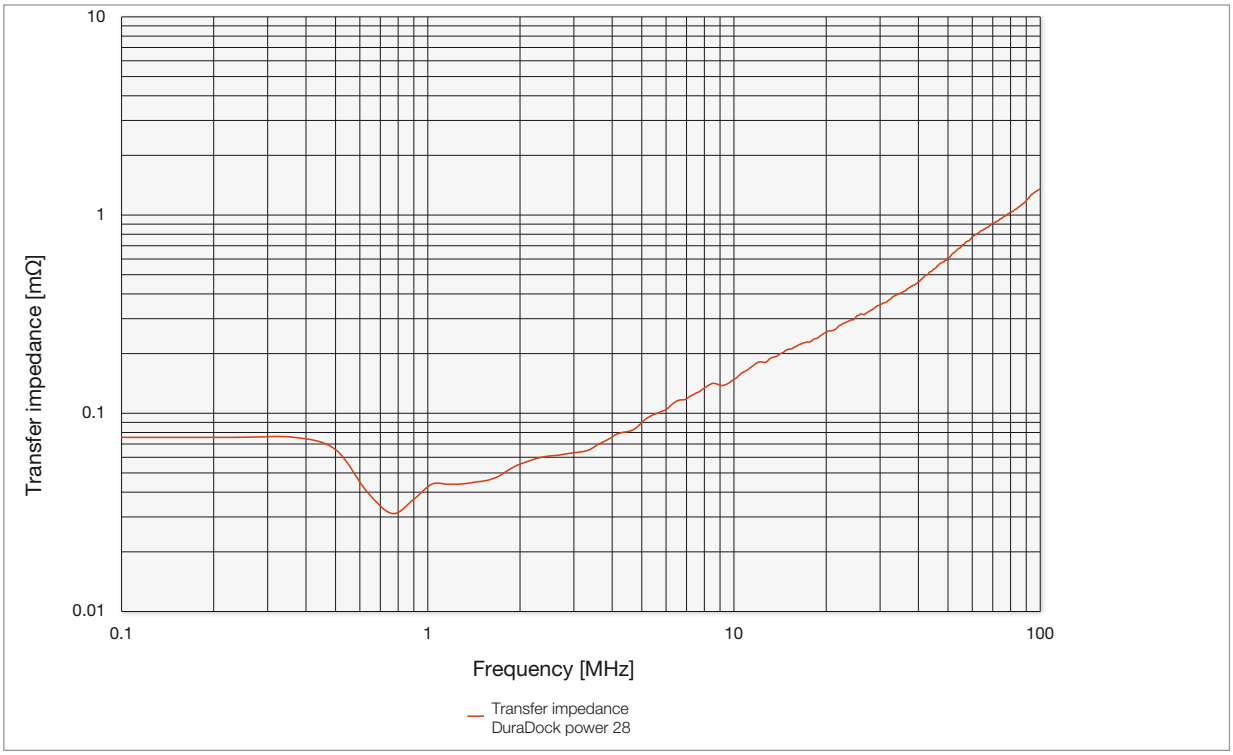


DuraDock power 28

Shield attenuation



Transfer impedance



Index, sorted by type

Index, sorted by order no.

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