Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

A PERFECT ALLIANCE.

ODU MINI-SNAP®

Miniature circular connectors
with Push-Pull locking.

SERIES F

ODU MINI-SNAP® F

ODU MINI-SNAP® L / K / B ODU AMC® ODU MEDI-SNAP® ODU MINI-SNAP® PC

www.odu.de

ODU MINI-SNAP® F

FEATURES

- Quick and easy mating and locking
- Quick and easy demating
- Blind mating and demating in difficult-to-reach places
- Low space requirements on the receptacles
- Definite and secure locking conditions
- Low power requirement
- Suitable for use with robots
- Easy cleaning of the connector plug housing possible

APPLICATIONS

- Medical
- Industrial
- Measuring and testing
- Military and security
- Energy
- eMobility

All shown connectors are according to IEC 61984:2008 (VDE 0627:2009); connectors without breaking capacity (COC).

ODU MINI-SNAP is UL-listed under file E110586,
fulfils the demands of RoHS (2011/65/EU) and
has a licence in accordance to VDE (Reg.-No. 40004941).
MIL-specification: Tests carried out (see page 86).

All dimensions in mm.
Most of the pictures are illustrations.
All data and specifications subject to change without notice.

Issue: 2016-11

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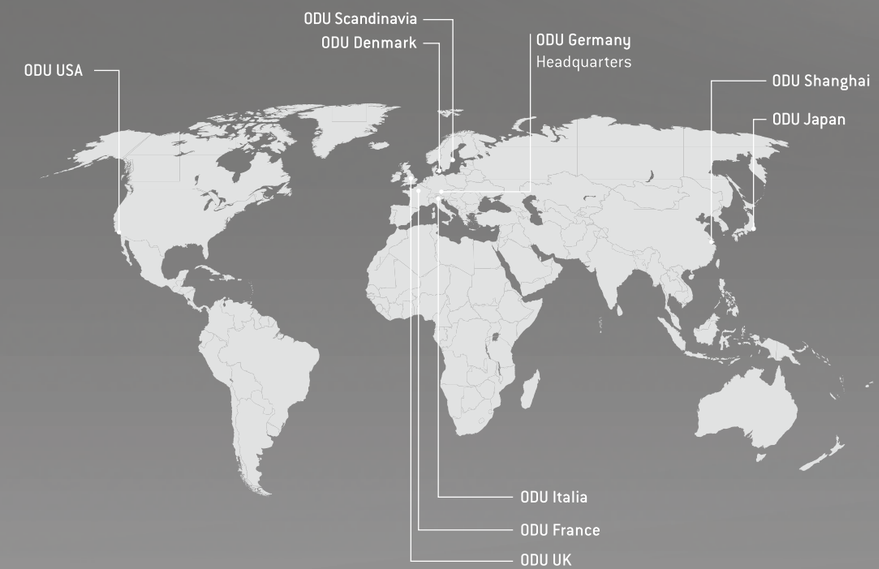
A PERFECT ALLIANCE.

CREATING CONNECTIONS, BUILDING ALLIANCES, COLLABORATING INTO THE FUTURE: WHETHER TWO TECHNICAL COMPONENTS COME TOGETHER TO FORM A UNIT OR PEOPLE COME TOGETHER TO STRIVE FOR GREAT RESULTS – THE KEY IS TO ASPIRE IN ACHIEVING SUPERB RESULTS. THIS GOAL DRIVES OUR WORK. **PERFECT CONNECTIONS THAT INSPIRE AND DELIVER ON THE PROMISES.**

ODU WORLDWIDE



ODU GROUP OVERVIEW

- More than 70 years of connector experience
- €146 million* in turnover
- Over 1,650 employees worldwide
- 9 sales subsidiaries: China, Denmark, France, Germany, Italy, Japan, Sweden, the UK and the US
- All technologies under one roof: Design and development, machine tool and special machine construction, injection, stamping, turning, surface technology, assembly and cable assembly

*As of February 2016

CERTIFIED QUALITY

- DIN EN ISO 9001
- ISO/TS 16949
- DIN EN ISO 14001
- ISO 13485
- Wide range of UL, CSA, VG and DVA licenses
- UL-certified cable assembly

For a complete list of our certifications, please visit our website.

INGENIOUS IDEAS
PERFECT SOLUTIONS

ODU'S PRODUCT PORTFOLIO.

A PERFECT ALLIANCE.

Versatile connector solutions for transmission of power, signals, data, or media – ODU never fails to offer the right interface when quality and absolute reliability are the top priorities.

COMPACT MODULAR CONNECTOR SOLUTION

- Application-specific hybrid interface
- For manual mating and automatic docking
- The highest packing density
- Flexible modular construction
- Multitude of data transmission modules
- Variety of locking options available
- For the transmission of power, high current, high voltage, coax, high-speed data, fiber optics and other media such as air or fluid.
- Mating cycles scalable as required from 10,000 to over 100,000 (1 million)

PUSH-PULL CIRCULAR CONNECTORS

- Circular connector series in robust metal or plastic housing
- Contacts for soldering, crimping and PCB termination
- With Push-Pull locking mechanism for a secure connector
- 2 up to 55 contacts
- IP 50 to IP 69
- Autoclavable for medical applications

SINGLE CONTACTS

- Versatile connector technologies
- More than 100,000 mating cycles (patented springwire technology)
- Reliable transmission of power and signal
- High level of vibration resistance with low wear
- Up to 2,000 A current-carrying capacity
- Low transition resistance

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HEAVY-DUTY & DOCKING AND ROBOTIC CONNECTOR SOLUTIONS

- Extremely durable even under extreme / harsh environments
- Interference-free and secure connection, even under vibration
- Up to 500 A (higher currents upon request)
- High contact security due to the springwire technology
- High pin density due to a minimum contact diameter
- Low transition resistance

APPLICATION AND CUSTOMER-SPECIFIC SOLUTIONS

- Contacts, connectors and assemblies for the highest technical requirements as well as special applications
- First-class implementation expertise
- High level of vertical manufacturing – all competences and key technologies under one roof
- Expert advice based on mutual partnership
- Fast development and production

CABLE ASSEMBLY

- Complete systems from a single source based on years of assembly expertise
- State-of-the-art production facilities with 100% end testing, high-voltage testing, component testing and pressure testing up to 100 bar
- Cleanroom production
- Hot-melt and high-pressure injection molding
- Customer-specific labeling
- Rapid prototyping of samples

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THE ODU GROUP

MORE THAN A CONNECTION

OUR KNOW-HOW FOR YOUR SUCCESS.

A PERFECT ALLIANCE.

HIGH PERFORMANCE CONNECTOR TECHNOLOGY FOR DEMANDING KEY MARKETS

Customers rely on ODU technology wherever first-class, high-performance connector solutions are required. All our skills go into our products to ensure your success. In addition to the top quality, reliable stability and maximum flexibility in customer-specific requirements, our products also stand for dynamics, reliability, safety, precision, efficiency and sustainability. And they guarantee unrestricted functionality for the final product due to our high quality connectors. ODU – A PERFECT ALLIANCE.

APPLICATION-SPECIFIC SOLUTIONS

Demands that can't be pigeon-holed call for creative specialists who think outside the box. ODU offers the type of expertise that focuses solely on the specific requirements of our customers. For every development order we get, we not only perform a thorough check to make sure it's feasible, we intensively incorporate our customers in the ongoing design process. This guarantees an impressive, custom-fit final result. Our solutions are frequently based on the modifications of our products, especially for the ODU MINI-SNAP and ODU-MAC connectors.

HIGH LEVEL OF VERTICAL INTEGRATION

ODU combines all the competences and key technologies for the connector manufacturing. These include design and development, machine tool and special machine construction, injection, stamping, turning, surface technology, assembly and cable assembly and our own test laboratory.

INDIVIDUAL CABLE ASSEMBLY

Our production skills together with our cutting edge production facilities from Europe, China and the USA enable us to deliver to our customers local tested assemblies and also global ones.

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ODU MINI-SNAP®

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THE COMPLETE SERIES OF ODU PUSH-PULL CONNECTORS AT A GLANCE

	Keying	Size	No. of possible mechanical keyings	Plug diameter in mm	Max. cable diameter in mm	Number of max. contacts	Solder	Crimp	PCB	International protection class A[1]	International protection class B[2]
ODU MINI-SNAP® F 	Half-shell	0	3	9.4	5.0	09	•	•	•	up to IP 68	up to IP 68
		1		12	7.5	14					
		1.5		13	7.5	19					
		2		15	9.5	19					
		3		18	11.5	27					

FURTHER PRODUCTS OF THE ODU PUSH-PULL CONNECTOR SERIES:

ODU MEDI-SNAP®

- Versatile keying possibilities – in terms of colour and mechanical
- Low weight
- 2 to 26 contacts
- IP 50, IP 64 and IP 67
- Shielded version (BG 2) available
- Simplest assembly
- Autoclaveable / sterilisable model

ODU MINI-SNAP® PC

- Keying over half-shell
- 2 to 27 contacts
- Low weight
- IP 50 and IP 67
- 3 sizes
- Plastic connector plug housing

ODU MINI-SNAP® L / K / B

- Keying over pin and groove
- 2 to 40 contacts
- 6 sizes
- IP 50 and IP 68
- Contacts for solder, crimp and PCB termination

ODU MINI-SNAP® S

- Keying over insulator
- 2 to 10 contacts / mixed inserts
- 3 sizes
- IP 50 and IP 68 with same outer diameter possible
- Contacts for solder, crimp and PCB termination

ODU AMC®

- Push-Pull and Break-Away version
- 3 to 55 contacts
- 6 sizes
- Watertight – IP 68
- Easy-Clean and High-Density version
- Tested acc. MIL
- Low weight (aluminium connector plug housing)

[1] International protection class in mated condition. [2] International protection class in unmated condition to the end device.

CIRCULAR CONNECTORS WITH PUSH-PULL LOCKING IN METAL CONNECTOR PLUG HOUSING

ODU MINI-SNAP is the ideal self-locking circular connector for a wide range of applications. Whether used for transmitting power, signals, data or other media, this circular connector in its robust metal connector plug housing impresses customers with its exceptional quality, high reliability and ideal handling characteristics.

The Push-Pull principle reliably ensures that the connector will not come loose during application in practice: Once plugged in, the ODU MINI-SNAP locks itself into the receptacle automatically. It cannot be separated by pulling on the cable. Instead, the connector can easily be separated from the receptacle by pulling on the outer housing.

The ODU MINI-SNAP is available in a wide range of sizes and models. In addition, you can choose between three base codings.

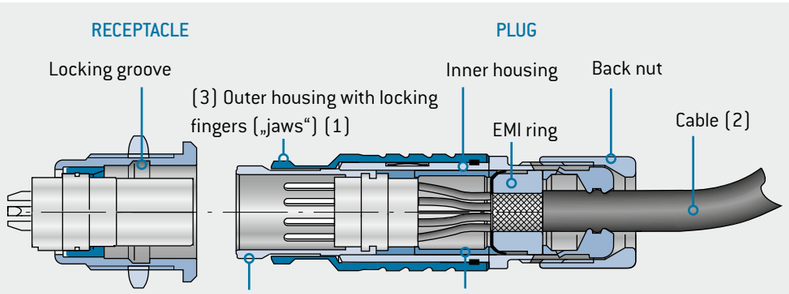
VERSATILE CONFIGURATION OPTIONS

There are 5 sizes, 3 termination types and a great variety of various contact inserts to choose from.

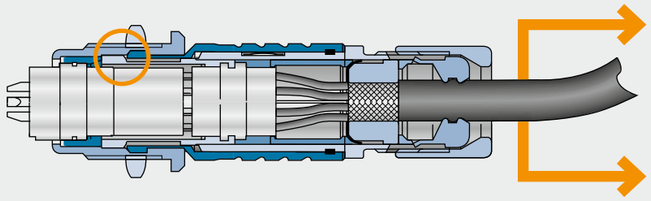
THE LOCKING PRINCIPLE FOR ODU SERIES F

Push-Pull locking systems have a **highly user-friendly locking mechanism**. When the connector is mated with the receptacle, the connector's locking fingers (1) will lock into place in the receptacle and form a **dependable connection** between both parts. **It cannot be separated** by pulling on the connector's cable (2). Instead, the connector can easily be separated from the receptacle **by pulling on the outer housing (3)**. Push-pull connectors from ODU are available in 5 different standard sizes with diameters from 9.4 mm to 18 mm.

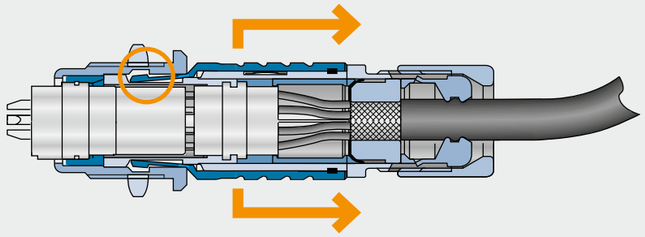
Connector in **unmated** condition.



Pulling on the cable or back nut causes the locking fingers to grip harder into the locking groove in the receptacle. **This prevents** the connector **from being disconnected.**



But pulling on the outer housing will cause the fingers to emerge from the locking groove, **making it easy to disconnect** the connector.



IMPORTANT ISSUES AT A GLANCE

CERTIFICATION

The series is RoHS compliant. RoHS 2011/65/EC
There are also various certifications for UL and VDE.

VARIOUS SIZES

- Metal connector plug housing deliverable in 5 sizes
- Outer diameter 9.4 mm to 18 mm
- Number of contacts 2 to 27 contacts, mixed inserts
- Protection class IP 50 and IP 68 are deliverable

APPLICATIONS AND MATERIALS

The ODU MINI-SNAP uses PEEK insulator material as a standard feature. Other materials are available upon request. ODU MINI-SNAP connector plug housings are made of brass, nickel plated and then matt chrome plated. Nickel and black chrome plated connector plug housings are available upon request as special materials. The internal parts are made of nickel plated brass.

Thanks to its versatility and autoclavability, the ODU MINI-SNAP is used in a wide range of fields, such as medical, measurement and testing, military and security, industrial electronics and energy.

The temperature of ODU MINI-SNAP range under general conditions of use runs from −40 °C to +120 °C, while autoclavable connectors can even be used at temperatures up to +134 °C (see page 86).

TURNED CONTACTS

Turned contacts are available in diameter 0.5 mm to 3.0 mm in the following termination types:
Solder, crimp and PCB

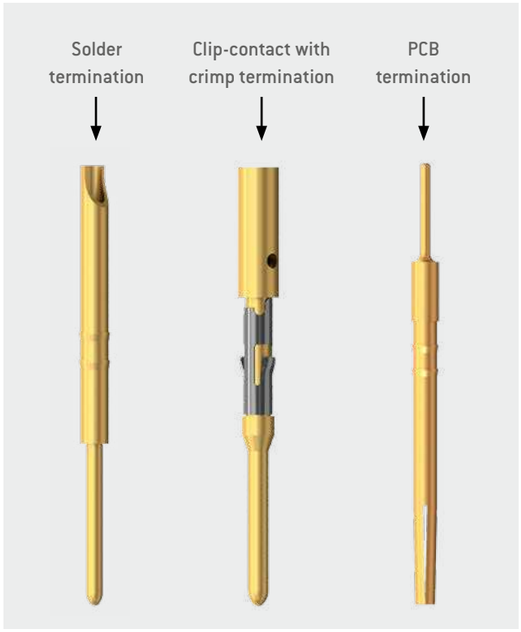
Mating cycles	> 5.000
Material	Brass
Plating	Ni and Au

TERMINATION TECHNOLOGIES

	Plug	Receptacle
Crimp termination[1]	•	•
Solder termination	•	•
PCB termination	•	•

[1] Crimp-clip-contacts available with diameter 0.7 mm, 0.9 mm and 1.3 mm.

STANDARD PIN CONTACTS



Information on diameters, terminal types and current-carrying capacity can be found after the inserts.

CONFIGURATION

Correct configuring – step by step

ODU MINI-SNAP®

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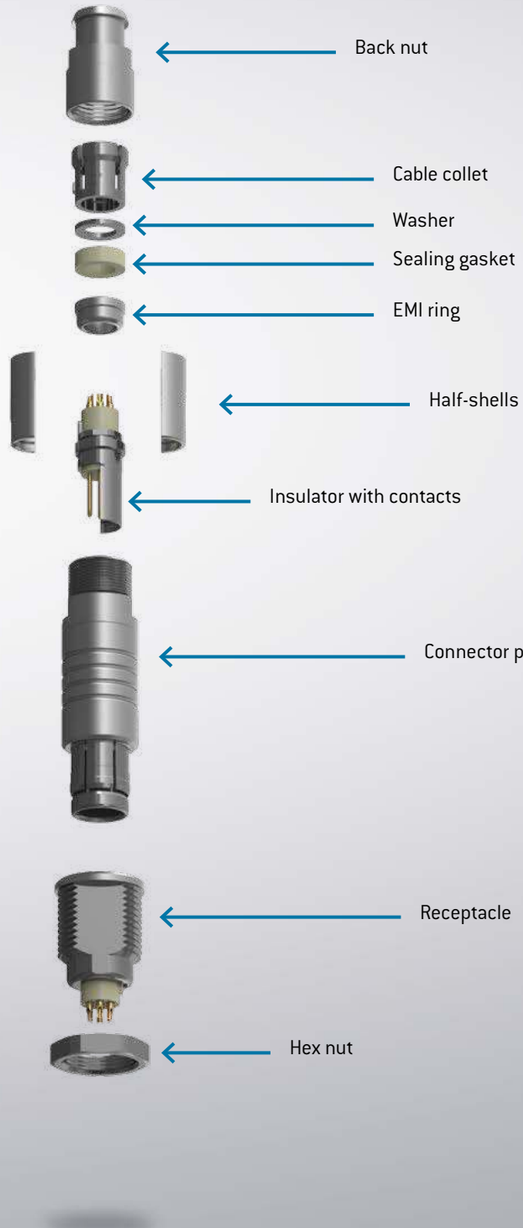
BIT BY BIT TO THE PERFECT CONNECTION

ODU offers you high-quality connectors and comprehensive service for the complete assembly. From connectors to watertight potting, we provide the complete system from a single source.



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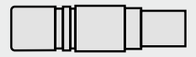
SAMPLE CONFIGURATION STEP BY STEP

The perfect product for you in just a few steps. These step-by-step instructions show you how to configure your own individual product with the ODU part number key based on a sample configuration.

Connector in style 2 / size 2 / series F / keying 1 / connector plug housing Ms matt chrome plated / insulator PEEK / 16 contacts / pin (solder) Au / termination cross-section AWG 22 / cable diameter 6,5 – 7 mm / back nut for silicone cable bend relief (silicone cable bend relief has to be ordered separately)

STEP 1: SERIES (SEE POSITION 4)

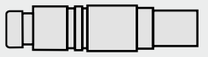
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
			F		C	–	P							–			0	



SERIES F

STEP 2: TYPE/STYLE (SEE POSITIONS 1, 2 AND 19) PAGE 28 – 41

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
S	2		F		C	–	P							–			0	S



STYLE S 2 WITH BACK NUT
FOR SILICONE CABLE BEND RELIEF

STEP 3: SIZE (SEE POSITION 3) PAGE 28 – 41

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
S	2	2	F		C	–	P							–			0	S

SIZE 2

STEP 4: KEYING (SEE POSITION 5) PAGE 42

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
S	2	2	F	1	C	–	P							–			0	S

KEYING 1

STEP 5: HOUSING MATERIAL (SEE POSITION 6) PAGE 42

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
S	2	2	F	1	C	–	P							–			0	S

CR
matt

SURFACE MATT CHROME
(FURTHER ON REQUEST)

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YOUR WAY TO AN INDIVIDUAL CONNECTION:
HOW TO CONFIGURE WITH THE PART NUMBER KEY

This shows you how ODU's part number key is composed. In the first part of the configuration, select the connector plug housing (such as style and size) of the connector. In the middle part of the part number key, you configure the contact insert and then the cable entry.

Type
A = Break-Away connector / panel mounted plug
G = Receptacle
K = In-line receptacle
S = Plug
W = Right-angled plug

Insulator material[1]
(PEEK = standard)

Cable collet system

Style
1 – 8, A – Z

Contact insert
e. g. 18 contacts = 18

Back nut
(Cable bend relief)

Size
0 – 3, A

Contact type / surface

Series
F

Contact diameter / termination cross-section

Keying

Housing material
matt chrome
(C)
Standard[2]

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
			F		C	–	P							–			0	

Connector plug housing
from page 28

Contact insert
from page 44

Cable entry
from page 59

[1] Other insulation materials on request. [2] Black chrome plated on request.

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STEP 6: INSULATOR MATERIAL (SEE POSITION 8)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
S	2	2	F	1	C	–	P							–			0	S

PEEK

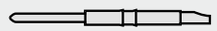
STEP 7: CONTACT INSERT (SEE POSITIONS 9 AND 10) PAGE 44 – 55

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
S	2	2	F	1	C	–	P	1	6					–			0	S

16 CONTACTS

STEP 8: CONTACT TYPE / SURFACE (SEE POSITION 11)

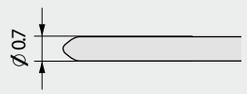
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
S	2	2	F	1	C	–	P	1	6	M				–			0	S



SOLDER (PIN)

STEP 9: CONTACT DIAMETER (SEE POSITION 12)

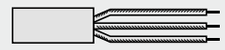
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
S	2	2	F	1	C	–	P	1	6	M	F			–			0	S



DIAMETER 0.7 MM

STEP 10: TERMINATION CROSS-SECTION (SEE POSITIONS 13 AND 14)

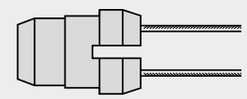
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
S	2	2	F	1	C	–	P	1	6	M	F	G	0	–			0	S



AWG 22

STEP 11: CABLE COLLET SYSTEM (SEE POSITIONS 16 AND 17)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
S	2	2	F	1	C	–	P	1	6	M	F	G	0	–	7	0	0	S



MAX. CABLE DIAMETER 7 MM
MIN. CABLE DIAMETER 6.5 MM

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ODU MINI-SNAP®

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SUMMARY ODU MINI-SNAP® SERIES F

The ODU MINI-SNAP series F with keying using a half-shell. These Push-Pull circular connectors can be configured in many different ways: a wide variety of sizes and termination types and contact inserts are available.

- Keying over half-shell
- 2 to 27 contacts / mixed inserts
- Up to 5 sizes and 3 termination types
- Choice of a multiplicity of connectors and receptacles
- Protection class IP 50 and protection class IP 68 available
- 5,000 mating cycles and more
- Contacts for solder, crimp and PCB termination

STRAIGHT PLUG P. 28

IP 50


S 1


S 2

IP 68


S 3


S 4

BREAK-AWAY CONNECTOR P. 30

IP 68


A 5


A 6

IP 50


A 7


A 8

PANEL MOUNTED PLUG P. 32

IP 50


A A

IP 68


A D

SUPER SHORTY PUSH-PULL PLUG P. 33

IP 68


S S


A S

RIGHT-ANGLED PLUG P. 34

IP 50


W 1


W 2

IP 68


W 3


W 4

IN-LINE RECEPTACLE P. 36

IP 50


K 1


K 2

IP 68


K 3


K 4

RECEPTACLE P. 38

IP 50


G 1

IP 68


G 2


G 4

IP 50


G 5

IP 68


G 8

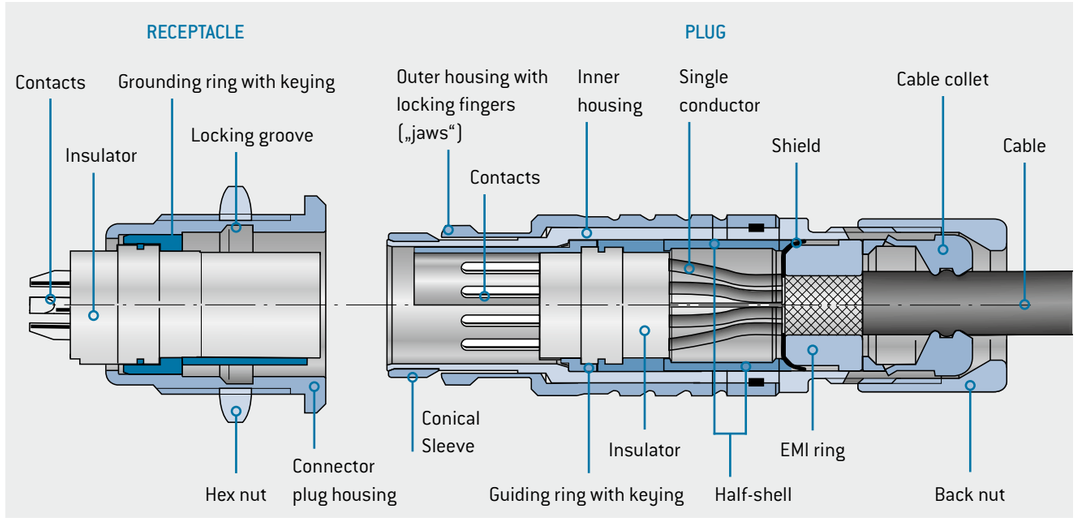
IP 50


G H


G K

For assembly instructions please refer to our website: www.odu.de/downloads.

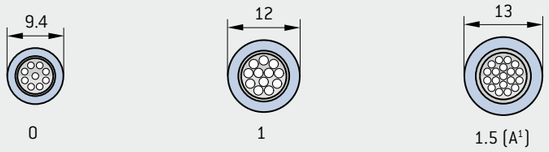
THE FP LOCKING SERIES F IN SECTIONAL VIEW



AVAILABLE SIZES

OUTER DIAMETER IN MM (PLUG)

Scale 1:1

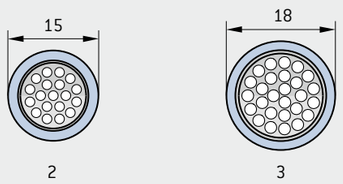


Size

0 | 1 | 1.5 (A[1])

OUTER DIAMETER IN MM (PLUG)

Scale 1:1



Size

2 | 3

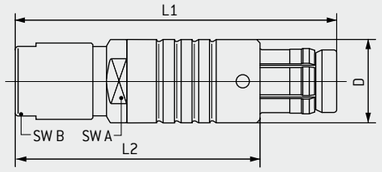
[1] Configuration in part number key for size 1.5.

FOR YOUR NOTES

STRAIGHT PLUG

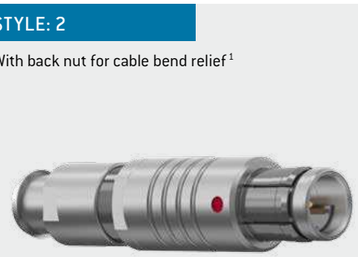
S 1 | 0 | STYLE: 1 | IP 50

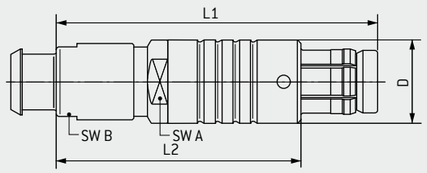
With standard back nut



S 2 | S | STYLE: 2 | IP 50

With back nut for cable bend relief [1]





Size	L1 mm	L2 mm	D mm	SW A mm	S1 SW B mm	S2 SW B mm
0	0	≈ 37	≈ 27	9.4	8	7	7
1	1	≈ 46	≈ 35	12	10	10	10
A	1.5	≈ 48	≈ 38	13	11	12	12
2	2	≈ 50	≈ 38	15	13	12	13
3	3	≈ 59	≈ 44	18	16	15	15

TECHNICAL DATA

- Contact inserts from page 44
- Compatible with all following receptacles and in-line receptacles

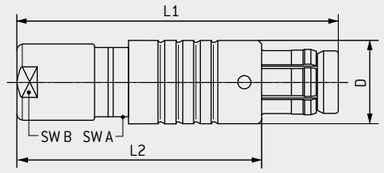
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
			F		C	–	P							–			0	

[1] Please order cable bend reliefs separately, see page 65.

STRAIGHT PLUG

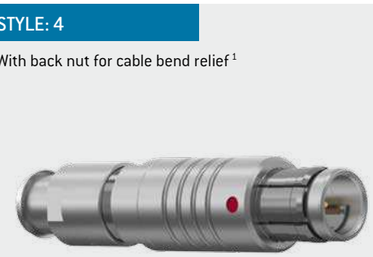
S 3 | 0 | STYLE: 3 | IP 68

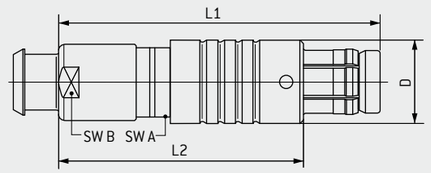
With standard back nut



S 4 | S | STYLE: 4 | IP 68

With back nut for cable bend relief [1]





Size	L1 mm	L2 mm	D mm	SW A mm	S3 SW B mm	S4 SW B mm
0	0	≈ 40	≈ 30	9.4	8	7	7
1	1	≈ 49	≈ 38	12	10	10	10
A	1.5	≈ 50	≈ 40	13	11	12	12
2	2	≈ 53	≈ 41	15	13	12	13
3	3	≈ 61	≈ 46	18	16	15	15

TECHNICAL DATA

- Contact inserts from page 44
- Compatible with all following receptacles and in-line receptacles

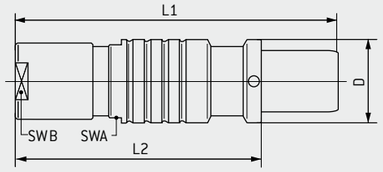
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
			F		C	–	P							–			0	

[1] Please order cable bend reliefs separately, see page 65.

BREAK-AWAY CONNECTOR (WITHOUT LOCKING)

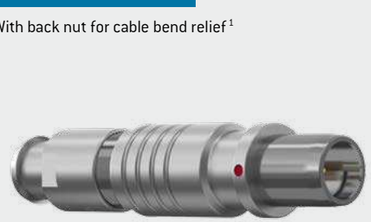
A 5 — 0 — STYLE: 5 — IP 68

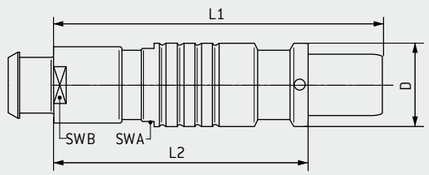
With standard back nut



A 6 — S — STYLE: 6 — IP 68

With back nut for cable bend relief [1]





Size	L1 mm	L2 mm	D mm	SW A mm	A5 SW B mm	A6 SW B mm
1	≈ 49	≈ 38	12	10	10	10
A	≈ 50	≈ 40	13	11	12	12
3	≈ 61	≈ 46	18	16	15	15

TECHNICAL DATA

- Contact inserts from page 44
- Compatible with all following receptacles and in-line receptacles
- Plug can be separated by pulling on the cable

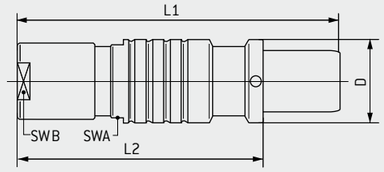
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
			F		C	–	P							–			0	

[1] Please order cable bend reliefs separately, see page 65.

BREAK-AWAY CONNECTOR (WITHOUT LOCKING)

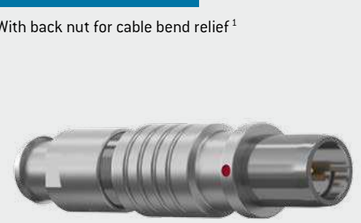
A 7 — 0 — STYLE: 7 — IP 50

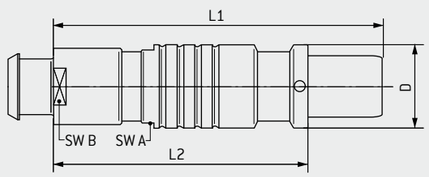
With standard back nut



A 8 — S — STYLE: 8 — IP 50

With back nut for cable bend relief [1]





Size	L1 mm	L2 mm	D mm	SW A mm	A7 SW B mm	A8 SW B mm
0	≈ 37	≈ 27	9.4	8	7	7
1	≈ 46	≈ 35	12	10	10	10
2	≈ 50	≈ 38	15	13	12	13

TECHNICAL DATA

- Contact inserts from page 44
- Compatible with all following receptacles and in-line receptacles
- Plug can be separated by pulling on the cable

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
			F		C	–	P							–			0	

[1] Please order cable bend reliefs separately, see page 65.

PANEL MOUNTED PLUG

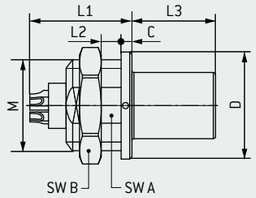
Suitable for creating a docking connection between 2 devices (e. g. on a charging station).

A A

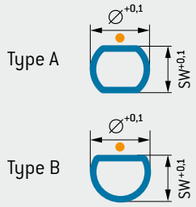
STYLE: A

IP 50

With hex nut, without locking, installation from front of panel



Panel cut-out



● Plug marking

	Size	L1 mm	L2 max. mm	L3 mm	C mm	D mm	SW A mm	SW B mm	M mm	Panel cut-out SW mm	Panel cut-out Ø mm	Panel cut-out Type
0	0	≈ 12	≈ 4	10	1.5	10	8.2	11	9 × 0.5	8.3	9.1	A
1	1	≈ 15.5	≈ 4	10.8	1.5	14	11.1	14	12 × 1	11.2	12.1	B
2	2	≈ 17.5	≈ 3.4	12	2	18	14.1	17	15 × 1	14.2	15.1	B
3	3	≈ 17	≈ 5.5	15	1.2	22	15.2	19	16 × 1	15.3	16.1	B

TECHNICAL DATA

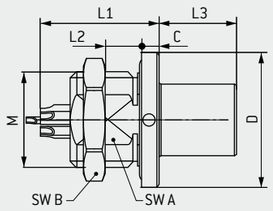
- Contact inserts from page 44
- PCB layouts see from page 45
- Compatible with all following receptacles and in-line receptacles
- IP 50 in reference to the tightness of the end device
- Anti-rotation feature

A D

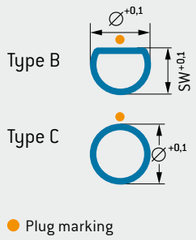
STYLE: D

IP 68

With hex nut, without locking, installation from front of panel



Panel cut-out



● Plug marking

	Size	L1 mm	L2 max. mm	L3 mm	C mm	D mm	SW A mm	SW B mm	M mm	Panel cut-out SW mm	Panel cut-out Ø mm	Panel cut-out Type
0	0	≈ 14.5	≈ 4.5	10	3	13	–	11	9 × 0.5	–	9.1	C
1	1	≈ 18.5	≈ 6.5	10.8	2.5	17	11	14	12 × 1	11.1	12.1	B
2	2	≈ 20	≈ 7	12	3	22	15.2	19	16 × 1	15.3	16.1	B

TECHNICAL DATA

- Contact inserts from page 44
- PCB layouts see from page 45
- Compatible with all following receptacles and in-line receptacles
- IP 68 in reference to the tightness of the end device even in unmated condition
- Anti-rotation feature
- No crimp contacts possible

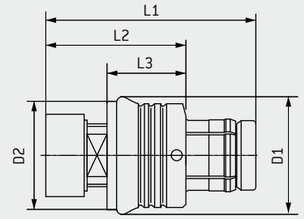
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
			F		C	–	P							–			0	0

SUPER SHORTY PUSH-PULL PLUG

S S

STYLE: S

IP 68



	Size	L1 mm	L2 mm	L3 mm	D1 mm	D2 mm	Max. cable Ø mm
0	0	≈ 28	≈ 18	10.5	13	11.9	5
1	1	≈ 32.7	≈ 22	12.5	15	13.9	6.5
A	1.5	≈ 32.5	≈ 23	13	15.7	14.5	8.8
2	2	≈ 34.3	≈ 22.6	13	19	17.6	10
3	3	≈ 38.4	≈ 23.3	13.8	23.9	21.9	12

TECHNICAL DATA

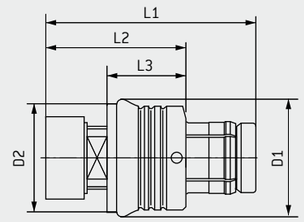
- Contact inserts from page 44
- Compatible with all following receptacles and in-line receptacles
- Crimping of the cable shield causes strain relief
- Suitable for overmolded shield crimping

A S

STYLE: S

IP 68

Without locking



	Size	L1 mm	L2 mm	L3 mm	D1 mm	D2 mm	Max. cable Ø mm
0	0	≈ 28	≈ 18	10.5	13	11.9	5
1	1	≈ 32.7	≈ 22	12.5	15	13.9	6.5
2	2	≈ 34.3	≈ 22.6	13	19	17.6	10

TECHNICAL DATA

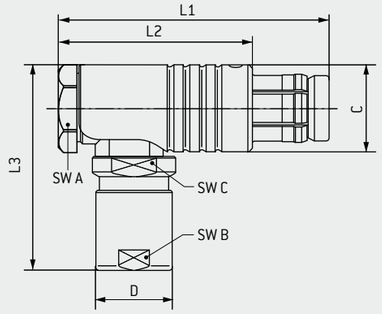
- Contact inserts from page 44
- Compatible with all following receptacles and in-line receptacles
- Crimping of the cable shield causes strain relief
- Suitable for overmolded shield crimping

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
			F		C	–	P							–			0	C

RIGHT-ANGLED PLUG

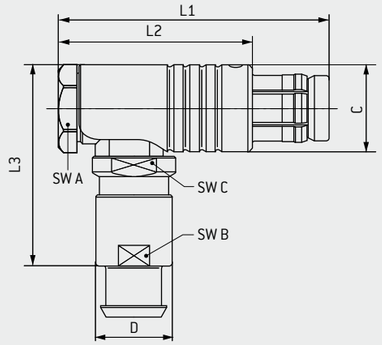
W 1 | 0 | STYLE: 1 | IP 50

With standard back nut



W 2 | S | STYLE: 2 | IP 50

With back nut for cable bend relief [1]



	Size	L1 mm	L2 mm	L3 mm	C mm	D mm	SW A mm	W1 SW B mm	W2 SW B mm	SW C mm
0	0	33	23	≈ 25	10	9	9	7	7	8
1	1	37.3	26.5	≈ 28	12	11	11	10	10	10
A	1.5	39	29	≈ 31	14	13	12	12	12	11
2	2	41.6	29.5	≈ 34.5	16	14	14	12	13	13
3	3	50	35	≈ 41	18	17	16	15	15	16

TECHNICAL DATA

- Contact inserts from page 44
- Compatible with all following receptacles and in-line receptacles

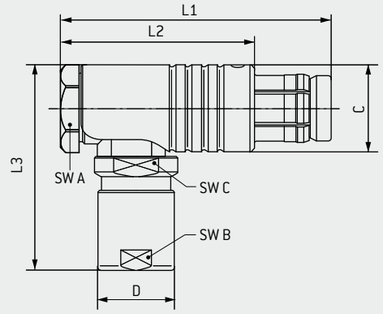
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
			F		C	–	P							–			0	

[1] Please order cable bend reliefs separately, see page 65.

RIGHT-ANGLED PLUG

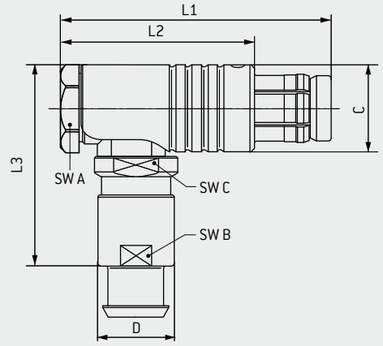
W 3 | 0 | STYLE: 3 | IP 68

With standard back nut



W 4 | S | STYLE: 4 | IP 68

With back nut for cable bend relief [1]



	Size	L1 mm	L2 mm	L3 mm	C mm	D mm	SW A mm	W3 SW B mm	W4 SW B mm	SW C mm
0	0	36	26	≈ 27	11.2	9	10	7	7	8
1	1	45.2	34.2	≈ 33	13	11	12	10	10	10
A	1.5	41.5	31.5	≈ 34.5	14.5	13	13	12	12	11
2	2	46.3	34.2	≈ 36	16	14	14	12	13	13
3	3	59.7	44.6	≈ 41	18	17	16	15	15	16

TECHNICAL DATA

- Contact inserts from page 44
- Compatible with all following receptacles and in-line receptacles

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
			F		C	–	P							–			0	

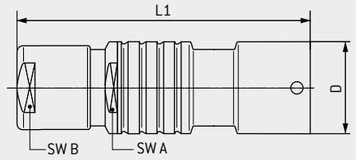
[1] Please order cable bend reliefs separately, see page 65.

IN-LINE RECEPTACLE

Suitable for creating a cable-cable connection.

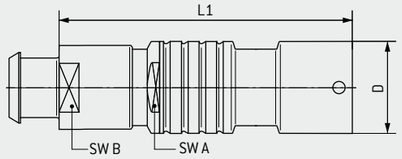
K 1 — 0 — **STYLE: 1** — **IP 50**

With standard back nut



K 2 — S — **STYLE: 2** — **IP 50**

With back nut for cable bend relief [1]



Size	L1 mm	D mm	SW A mm	K1 SW B mm	K2 SW B mm
0	≈ 35	9.4	8	7	7
1	≈ 44	12	10	10	10
2	≈ 48	15	13	12	13
3	≈ 58	18	16	15	15

TECHNICAL DATA

- Contact inserts from page 44

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
			F		C	–	P							–			0	

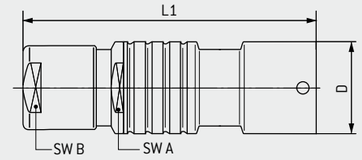
[1] Please order cable bend reliefs separately, see page 65.

IN-LINE RECEPTACLE

Suitable for creating a cable-cable connection.

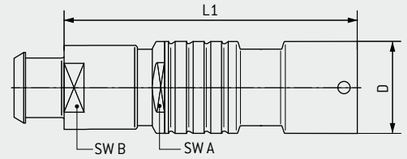
K 3 — 0 — **STYLE: 3** — **IP 68**

With standard back nut



K 4 — S — **STYLE: 4** — **IP 68**

With back nut for cable bend relief [1]



Size	L1 mm	D mm	SW A mm	K3 SW B mm	K4 SW B mm
0	≈ 38	10	8	7	7
1	≈ 47	13	10	10	10
2	≈ 51	16	13	12	13

TECHNICAL DATA

- Contact inserts from page 44

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
			F		C	–	P							–			0	

[1] Please order cable bend reliefs separately, see page 65.

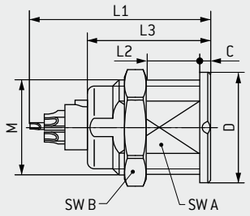
RECEPTACLE

G 1

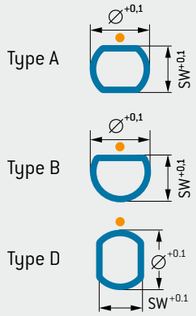
STYLE: 1

IP 50

Installation from front of panel



Panel cut-out



● Plug marking

	Size	L1[1] mm	L2 max mm	L3[2] mm	M mm	D mm	SW A mm	SW B mm	C mm	Panel cut-out SW mm	Panel cut-out Ø mm	Type
0	0	≈ 20	≈ 9	14.5	9 × 0.5	10	8.2	11	1.5	8.3	9.1	A
1	1	≈ 24	≈ 8	16.5	12 × 1	14	10	14	1.5	10.1	12.1	A
A	1.5	≈ 25	≈ 8	15.5	14 × 1	16	12	17	2	12.1	14.1	D
2	2	≈ 27	≈ 10	18.5	15 × 1	18	14.1	17	2	14.2	15.1	B
3	3	≈ 30.5	≈ 13	22.5	18 × 1	22	16.5	22	2	16.6	18.1	A

TECHNICAL DATA

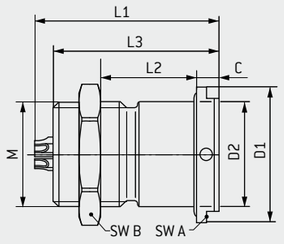
- Contact inserts from page 44
- PCB layouts see from page 45
- IP 50 in reference to the tightness of the end device
- Anti-rotation feature
- Only straight PCB contact possible

G 2

STYLE: 2

IP 68[4]

Installation from front of panel



Panel cut-out

● Plug marking

	Size	L1[1] mm	L2[3] mm	L3[2] mm	M mm	D1 mm	D2 mm	SW A mm	SW B mm	C mm	Panel cut-out Ø mm	Type
0	0	≈ 22.5	≈ 8	18.5	9 × 0.5	14.5	10	11	11	3	10.1	C
1	1	≈ 27	≈ 9	22.5	14 × 1	18	14	14	17	3	14.1	C
A	1.5	≈ 27	≈ 8	21.6	14 × 1	19	14	15	17	3.5	14.1	C
2	2	≈ 29.5	≈ 9	23	16 × 1	22	16	17	19	4	16.1	C
3	3	≈ 32	≈ 12	26.5	20 × 1	26	20	24	25	4	20.1	C

TECHNICAL DATA

- Contact inserts from page 44
- PCB layouts see from page 45
- IP 68 in reference to the tightness of the end device even in unmated condition
- Distance ring for wall-thickness adjustment see accessories see page 62
- No crimp contacts possible
- Only straight PCB contact possible

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
			F		C	–	P							–			0	0

[1] L1 = maximum length including contact insert. [2] L3 = Length of connector plug housing.
[3] Minimum wall-thickness without use of distance rings. [4] Tight, grouted receptacle see page 79, 3. Case.

Table of Contents

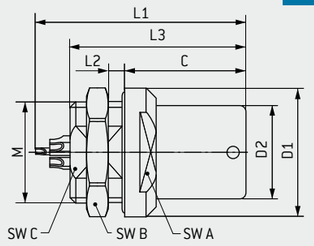
RECEPTACLE

G 4

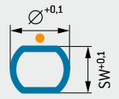
STYLE: 4

IP 68[3]

Installation from front of panel, with slight installation depth



Panel cut-out



● Plug marking

	Size	L1[1] mm	L2 max. mm	L3[2] mm	M mm	D1 mm	D2 mm	SW A mm	SW B mm	SW C mm	C mm	Panel cut-out SW mm	Panel cut-out Ø mm	Type
0	0	≈ 22.5	≈ 4	17.5	9 × 0.5	14.5	10.5	12	11	8.2	11	8.3	9.1	A
1	1	≈ 27	≈ 4	22.5	14 × 1	18	13	14	17	12	15.5	12.1	14.1	A
A	1.5	≈ 28	≈ 5	21.6	14 × 1	19	13.5	15	17	12	13.6	12.1	14.1	A
2	2	≈ 32	≈ 4.5	23	16 × 1	21	16	17	19	14	15.5	14.1	16.1	A

TECHNICAL DATA

- Contact inserts from page 44
- PCB layouts see from page 45
- IP 68 in reference to the tightness of the end device even in unmated condition
- Anti-rotation feature
- No crimp contacts possible
- Only straight PCB contact possible

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
			F		C	–	P							–			0	0

[1] L1 = maximum length including contact insert. [2] L3 = Length of connector plug housing.
[3] Tight, grouted receptacle see page 79, 3. Case.

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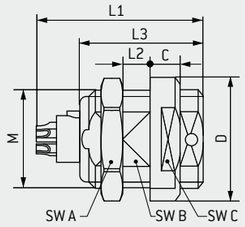
RECEPTACLE

G 5

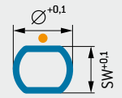
STYLE: 5

IP 50

With continuous thread, installation from front or rear of panel with optimal distance adjustment



Panel cut-out



● Plug marking

	Size	L1[1] mm	L2 max. mm	L3[2] mm	M mm	D mm	SW A mm	SW B mm	SW C mm	C mm	Panel cut-out SW mm	Panel cut-out ∅ mm	Type
0	0	≈ 20	≈ 8	14.5	9 × 0.5	11.5	11	8	10	2.5	8.1	9.1	A
1	1	≈ 24	≈ 8	16.5	12 × 1	15	14	10	13	4	10.1	12.1	A
A	1.5	≈ 25	≈ 7	15.5	14 × 1	19	17	12	17	3	12.1	14.1	A
2	2	≈ 27	≈ 10	18.5	15 × 1	20	17	13.5	17	4	13.6	15.1	A
3	3	≈ 30.5	≈ 12	22.5	18 × 1	23	22	16.5	20	5	16.6	18.1	A

TECHNICAL DATA

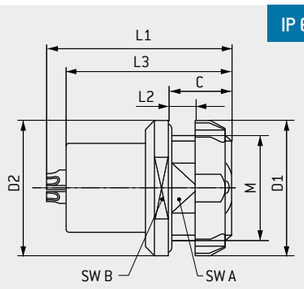
- Contact inserts from page 44
- PCB layouts see from page 45
- IP 50 in reference to the tightness of the end device
- Anti-rotation feature
- Right-angled PCB contact possible, see page 58

G 8

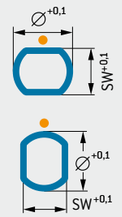
STYLE: 8

IP 68[3]

Installation from rear of panel, with designer nut



Panel cut-out



● Plug marking

	Size	L1[1] mm	L2 max. mm	L3[2] mm	M mm	D1 mm	D2 mm	SW A mm	SW B mm	C mm	Panel cut-out SW mm	Panel cut-out ∅ mm	Type
0	0	≈ 22.5	≈ 3.5	17	9 × 0.5	12	14	8.2	11	6.5	8.3	9.1	D
1	1	≈ 27.5	≈ 4	21	14 × 1	18	18	12	–	8	12.1	14.1	A
A	1.5	≈ 27	≈ 3	19.5	14 × 1	18	19	12	–	7	12.1	14.1	D
2	2	≈ 29.5	≈ 3	23	16 × 1	22	21	14.3	–	8	14.4	16.1	A
3	3	≈ 32	≈ 6	26.5	20 × 1	25	26	18	–	11	18.1	20.1	A

TECHNICAL DATA

- Contact inserts from page 44
- PCB layouts see from page 45
- IP 68 in reference to the tightness of the end device even in unmated condition
- Anti-rotation feature
- No crimp contacts possible
- Assembly wrench page 74
- Right-angled PCB contact possible, see page 58

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
			F		C	–	P							–			0	0

[1] L1 = maximum length including contact insert. [2] L3 = Length of connector plug housing.

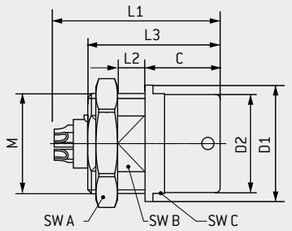
RECEPTACLE

G H

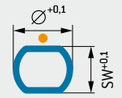
STYLE: H

IP 50

Projecting receptacle with slight installation depth, installation from front of panel with optimal distance adjustment



Panel cut-out



● Plug marking

	Size	L1[1] mm	L2 max. mm	L3[2] mm	M mm	D1 mm	D2 mm	SW A mm	SW B mm	SW C mm	C mm	Panel cut-out SW mm	Panel cut-out ∅ mm	Type
0	0	≈ 20	≈ 3	16	9 × 0.5	11	9	11	8.2	–	11	8.3	9.1	A
1	1	≈ 24	≈ 4.5	17.5	12 × 1	14	11.7	14	10	12	10	10.1	12.1	A
A	1.5	≈ 26	≈ 5	17	14 × 1	18	13.5	17	12	15	10	12.1	14.1	A
2	2	≈ 27	≈ 5.5	19.5	16 × 1	19	16	19	13.5	17	11	13.6	16.1	A

TECHNICAL DATA

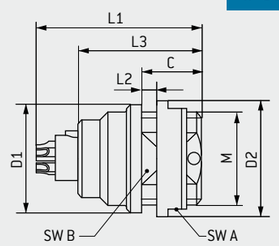
- Contact inserts from page 44
- PCB layouts see from page 45
- IP 50 in reference to the tightness of the end device
- Anti-rotation feature
- Only straight PCB contact possible

G K

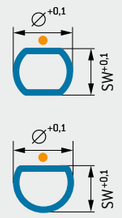
STYLE: K

IP 50

Installation from rear of panel, with slight installation depth



Panel cut-out



● Plug marking

	Size	L1[1] mm	L2 max. mm	L3[2] mm	M mm	D1 mm	D2 mm	SW A mm	SW B mm	C mm	Panel cut-out SW mm	Panel cut-out ∅ mm	Type
0	0	≈ 20	≈ 3	14.5	9 × 0.5	11	11.5	10	8	6.5	8.1	9.1	A
1	1	≈ 24	≈ 4	16.5	12 × 1	14	15	13	11	8	11.1	12.1	B
2	2	≈ 27	≈ 5	18.5	15 × 1	19	20	17	14	9	14.1	15.1	B
3	3	≈ 30.5	≈ 12	22.5	18 × 1	22	23	20	17.2	17	17.3	18.1	B

TECHNICAL DATA

- Contact inserts from page 44
- PCB layouts see from page 45
- IP 50 in reference to the tightness of the end device
- Anti-rotation feature
- Right-angled PCB contact possible, see page 58

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
			F		C	–	P							–			0	0

[1] L1 = maximum length including contact insert. [2] L3 = Length of connector plug housing.

KEYINGS

	Receptacle mating side	Plug mating side	Size 0	1	1.5	2	3
1			•	•	•	•	•
2			•	•			
					•	•	•
3			o				
				o			
					o	o	o

• Standard
o On request

	Housing material – surface	
C	Standard	Cu alloy / matt chrome plated
S	On request	Cu alloy / black chrome plated

Special materials and surfaces on request.

2	3	4	5	6	7	8	9	10
		F		C	–	P		

Position of the keying indication (red dot)

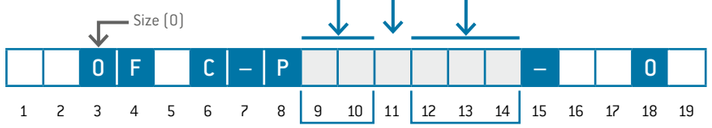
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
			F		C	–	P							–			O	

FOR YOUR NOTES

CONTACT INSERTS (SIZE 0)

Number of contacts		Contact type: Termination	Socket	Pin	Part number key			Contact diameter mm	Single contact nominal current[1] A	Clearance and creepage distance: Contact to contact mm	Clearance and creepage distance: Contact to housing mm	Test voltage[2] kVeff	Nominal voltage[5] kVrms	Termination diameter mm	Termination cross section: AWG	Termination cross section: mm²	View on termination area: Pin piece	View on termination area: Socket piece
0	2	Solder	L	M	J	G	0	0.9	10	1.0	0.8	1.500	0.500	0.85	22	0.38		
		PCB[4]	Q	R	J	0	0			1.3				0.7	–	–		
0	3	Solder	L	M	J	G	0	0.9	10	0.6	0.9	1.200	0.400	0.85	22	0.38		
		PCB[4]	Q	R	J	0	0			0.9	0.8			0.7	–	–		
0	4	Solder	L	M	F	G	0	0.7	10	0.6	0.7	0.900	0.300	0.85	22	0.38		
					F	D	0		7	0.8				0.6	26	0.15		
		Crimp[3]	N	P	F	G	0		10	1.1				–	22 – 26	0.38 – 0.15		
					F	C	0		7					–	28 – 32	0.09 – 0.04		
		PCB[4]	Q	R	F	0	0							0.5	–	–		
0	5	Solder	L	M	F	G	0	0.7	10	0.5	0.6	0.600	0.200	0.85	22	0.38		
					F	D	0		7	0.6		1.100	0.366	0.6	26	0.15		
		PCB[4]	Q	R	F	0	0			0.9				0.5	–	–		
0	7	Solder	L	M	C	C	0	0.5	4	0.7	0.6	0.900	0.300	0.4	28	0.08		
		PCB[4]	Q	R	C	0	0			0.9				0.5	–	–		
0	9	Solder	L	M	C	C	0	0.5	4	0.6	0.5	0.600	0.200	0.4	28	0.08		
		PCB[4]	Q	R	C	0	0			0.7				0.5	–	–		

[1] Derating factor see page 83.
[2] SAE AS 13441:2004 method 3001.1 (kVeff)
[3] Tools for crimping and adjustment dimensions for crimping tool see page 72.
[4] Print straight PCB layouts see from page 45. Termination diameter for right-angled PCB contacts see page 58.
[5] Max. operating voltage at NN (sea level) to 2,000 m acc. to SAE AS 13441: 2004 method 3001.1. Further information on page 84.



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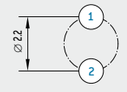
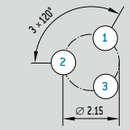
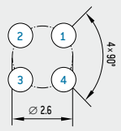
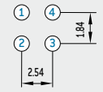
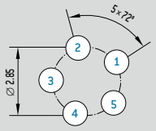
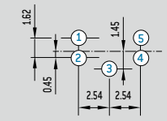
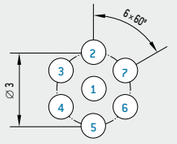
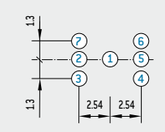
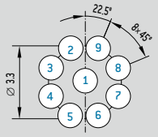
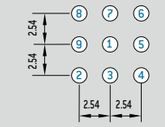
PCB LAYOUTS

For PCB contacts (size 0).

	Straight	90° right-angled
2 contacts	Hole: 0.8 mm 	Hole: 0.7 mm 
3 contacts	Hole: 0.8 mm 	Hole: 0.7 mm 
4 contacts	Hole: 0.6 mm 	Hole: 0.6 mm 

	Straight	90° right-angled
5 contacts	Hole: 0.6 mm 	Hole: 0.6 mm 
7 contacts	Hole: 0.6 mm 	Hole: 0.6 mm 
9 contacts	Hole: 0.6 mm 	Hole: 0.6 mm 

All specifications are only valid for socket inserts. Pin inserts on request.

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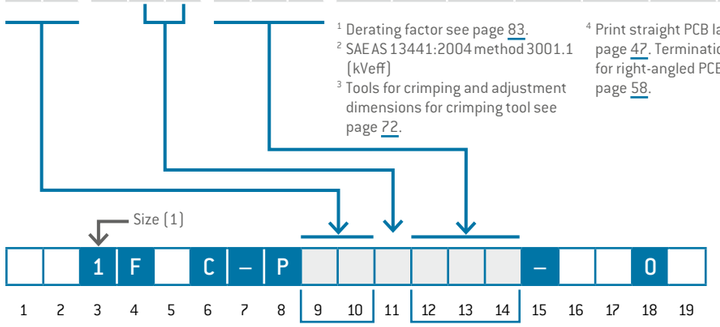
CONTACT INSERTS (SIZE 1)

Number of contacts		Contact type: Termination	Socket	Pin	Part number key			Contact diameter mm	Single contact nominal current [1] A	Clearance and creepage distance: Contact to contact mm	Clearance and creepage distance: Contact to housing mm	Test voltage [2] kVeff	Nominal voltage [5] kVrms	Termination diameter mm	Termination cross section: AWG	Termination cross section: mm²	View on termination area: Pin piece	View on termination area: Socket piece
0	2	Solder	L	M	P	N	0	1.3	20	0.8	0.9	1.650	0.550	1.4	18	1.0		
					P	H	0		14	1.3				1.1	20	0.5		
		PCB [4]	Q	R	P	O	0			1.5				0.7	–	–		
0	3	Solder	L	M	P	N	0	1.3	20	0.5	0.8	1.000	0.333	1.4	18	1.0		
					P	H	0		14	1.0		1.500	0.500	1.1	20	0.5		
		PCB [4]	Q	R	P	O	0			1.2				0.7	–	–		
0	4	Solder	L	M	J	G	0	0.9	10	1.2	0.8	1.500	0.500	0.85	22	0.38		
		Crimp [3]	N	P	J	H	0		13	1.5	0.7	1.000	0.333	–	20 – 24	0.50 – 0.25		
					J	G	0		10			1.500	0.500	–	22 – 26	0.38 – 0.15		
		PCB [4]	Q	R	J	O	0			1.2	0.8			0.7	–	–		
0	5	Solder	L	M	J	H	0	0.9	13	0.5	0.8	1.000	0.333	1.1	20	0.50		
					J	G	0		10	0.8		1.350	0.450	0.85	22	0.38		
		Crimp [3]	N	P	J	H	0		13	1.0	0.7	1.000	0.333	–	20 – 24	0.50 – 0.25		
					J	G	0		10			1.350	0.450	–	22 – 26	0.38 – 0.15		
		PCB [4]	Q	R	J	O	0			0.8	0.8			0.7	–	–		
0	6	Solder	L	M	F	G	0	0.7	10	0.6	0.8	1.000	0.333	0.85	22	0.38		
					F	D	0		7	0.8		1.200	0.400	0.65	26	0.15		
		Crimp [3]	N	P	F	G	0		10	0.7	0.6	1.000	0.333	–	22 – 26	0.38 – 0.15		
					F	C	0		7	1.1	0.8	1.200	0.400	–	28 – 32	0.09 – 0.04		
		PCB [4]	Q	R	F	O	0							0.5	–	–		
0	7	Solder	L	M	F	G	0	0.7	10	0.6	0.8	1.000	0.333	0.85	22	0.38		
					F	D	0		7	0.8		1.200	0.400	0.65	26	0.15		
		Crimp [3]	N	P	F	G	0		10	0.7	0.6	1.000	0.333	–	22 – 26	0.38 – 0.15		
					F	C	0		7	1.1	0.8	1.200	0.400	–	28 – 32	0.09 – 0.04		
		PCB [4]	Q	R	F	O	0							0.5	–	–		
0	8	Solder	L	M	F	G	0	0.7	10	0.4	0.7	0.900	0.300	0.85	22	0.38		
					F	D	0		7	0.6		1.000	0.333	0.65	26	0.15		
		Crimp [3]	N	P	F	G	0		10	0.9		0.900	0.300	–	22 – 26	0.38 – 0.15		
					F	C	0		7			1.000	0.333	–	28 – 32	0.09 – 0.04		
		PCB [4]	Q	R	F	O	0							0.5	–	–		
1	0 [6]	Solder	L	M	C	D	9	0.5	6	0.3	0.8	0.600	0.200	0.65	26	0.15		
					C	C	9		4	0.5		1.000	0.333	0.45	28	0.08		
		PCB [4]	Q	R	C	O	9			0.8				0.5	–	–		
1	2	Solder	L	M	C	C	0	0.5	4	0.5	0.6	1.100	0.366	0.45	28	0.08		
		PCB [4]	Q	R	C	O	0			0.8				0.5	–	–		
1	4 [6]	Solder	L	M	C	C	9	0.5	4	0.4	0.5	0.900	0.300	0.45	28	0.08		
		PCB [4]	Q	R	C	O	9			0.7				0.5	–	–		

[1] Derating factor see page 83.
[2] SAE AS 13441:2004 method 3001.1 (kVeff)
[3] Tools for crimping and adjustment dimensions for crimping tool see page 72.
[4] Print straight PCB layouts see from page 47. Termination diameter for right-angled PCB contacts see page 58.
[5] Max. operating voltage at NN (sea level) to 2,000 m acc. to SAE AS 13441: 2004 method 3001.1. Further information on page 84.
[6] Not compatible to competition.



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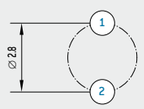
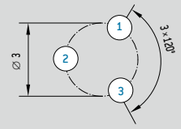
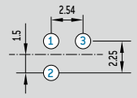
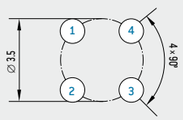
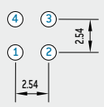
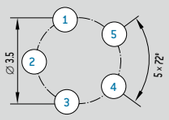
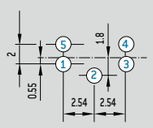
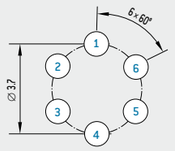
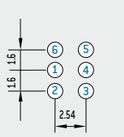
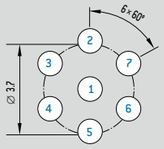
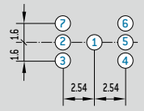
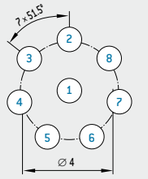
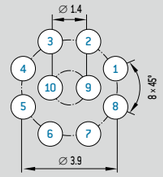
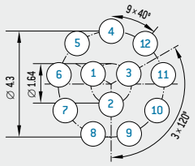
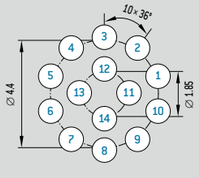
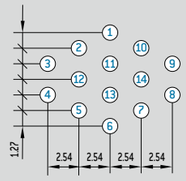
PCB LAYOUTS

For PCB contacts (size 1).

	Straight	90° right-angled
2 contacts	Hole: 0.8 mm 	Hole: 0.9 mm 
3 contacts	Hole: 0.8 mm 	Hole: 0.9 mm 
4 contacts	Hole: 0.8 mm 	Hole: 0.7 mm 
5 contacts	Hole: 0.8 mm 	Hole: 0.7 mm 
6 contacts	Hole: 0.6 mm 	Hole: 0.6 mm 

	Straight	90° right-angled
7 contacts	Hole: 0.6 mm 	Hole: 0.7 mm 
8 contacts	Hole: 0.6 mm 	on request
10 contacts	Hole: 0.6 mm 	on request
12 contacts	Hole: 0.6 mm 	on request
14 contacts	Hole: 0.6 mm 	Hole: 0.7 mm 

All specifications are only valid for socket inserts. Pin inserts on request.

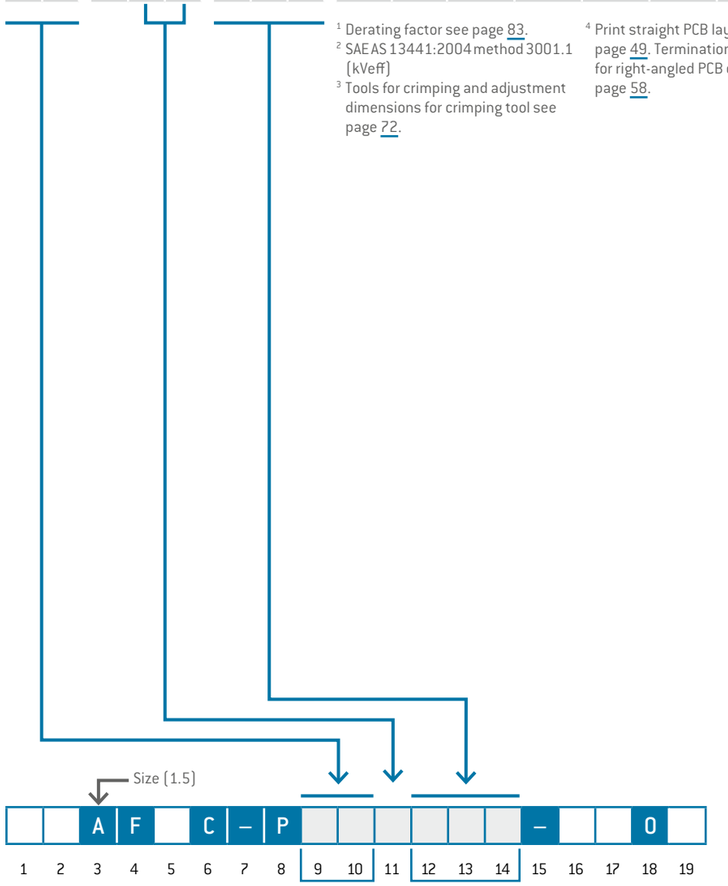
CONTACT INSERTS (SIZE 1.5)

Number of contacts		Contact type: Termination	Socket	Pin	Part number key			Contact diameter mm	Single contact nominal current [1] A	Clearance and creepage distance: Contact to contact mm	Clearance and creepage distance: Contact to housing mm	Test voltage [2] kVeff	Nominal voltage [5] kVrms	Termination diameter mm	Termination cross section: AWG	Termination cross section: mm²	View on termination area: Pin piece	View on termination area: Socket piece
1	0	Solder	L	M	F	G	0	0.7	10	0.6	0.6	^1.000	^0.300	0.85	22	0.38		
					F	D	0		7	0.8		1.200	0.400	0.6	26	0.15		
		PCB [4]	Q	R	F	0	0			0.4				0.5	–	–		
1	2	Solder	L	M	F	G	0	0.7	10	0.4	0.7	1.000	0.300	0.85	22	0.38		
					F	D	0		7	0.6		1.200	0.400	0.6	26	0.15		
		Crimp [3]	N	P	F	G	0		10	0.9		1.000	0.300	–	22 – 26	0.38 – 0.15		
					F	C	0		7			1.200	0.400	–	28 – 32	0.09 – 0.04		
		PCB [4]	Q	R	F	0	0			0.3				0.5	–	–		
1	9	Solder	L	M	C	C	0	0.5	4	0.6	0.6	1.000	0.333	0.4	28	0.08		
		PCB [4]	Q	R	C	0	0			0.3				0.5	–	–		

SPECIFIC INSERTS FOR HIGH DATA TRANSMISSION RATES

Ethernet [7] Type CAT5E up to 1 Gbit

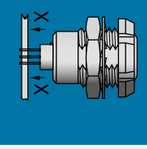
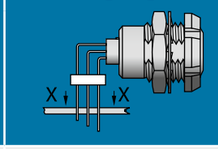
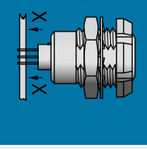
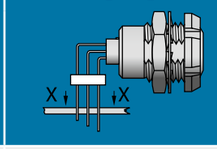
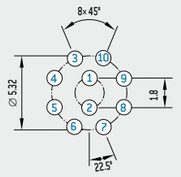
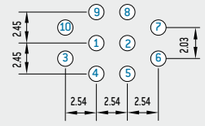
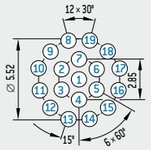
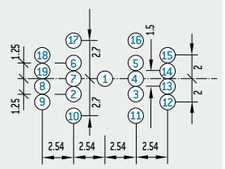
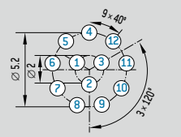
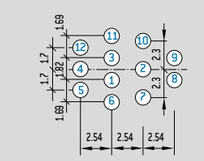
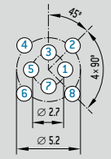
D	8 [6]	Solder	L	–	F	G	9	0.9	10	0.7	1.8	1.200	0.400	0.85	22	0.38		
		PCB [4]	Q	–	F	0	9			1.4	1.2			0.5	–	–		
		Solder	–	M	F	G	9			0.7	0.7			0.85	22	0.38		



[1] Derating factor see page 83.
[2] SAE AS 13441:2004 method 3001.1 (kVeff)
[3] Tools for crimping and adjustment dimensions for crimping tool see page 72.
[4] Print straight PCB layouts see from page 49. Termination diameter for right-angled PCB contacts see page 58.
[5] Max. operating voltage at NN (sea level) to 2,000 m acc. toSAE AS 13441: 2004 method 3001.1. Further information on page 84.
[6] Not compatible to competition.
[7] Acc. IEC 11801:2010. Further information on request.

PCB LAYOUTS

For PCB contacts (size 1.5).

	Straight	90° right-angled		Straight	90° right-angled
					
10 contacts	Hole: 0.6 mm 	Hole: 0.7 mm 	19 contacts	Hole: 0.6 mm 	Hole: 0.6 mm 
12 contacts	Hole: 0.6 mm 	Hole: 0.7 mm 	Ethernet 8 contacts	Hole: 0.6 mm 	on request

All specifications are only valid for socket inserts. Pin inserts on request.