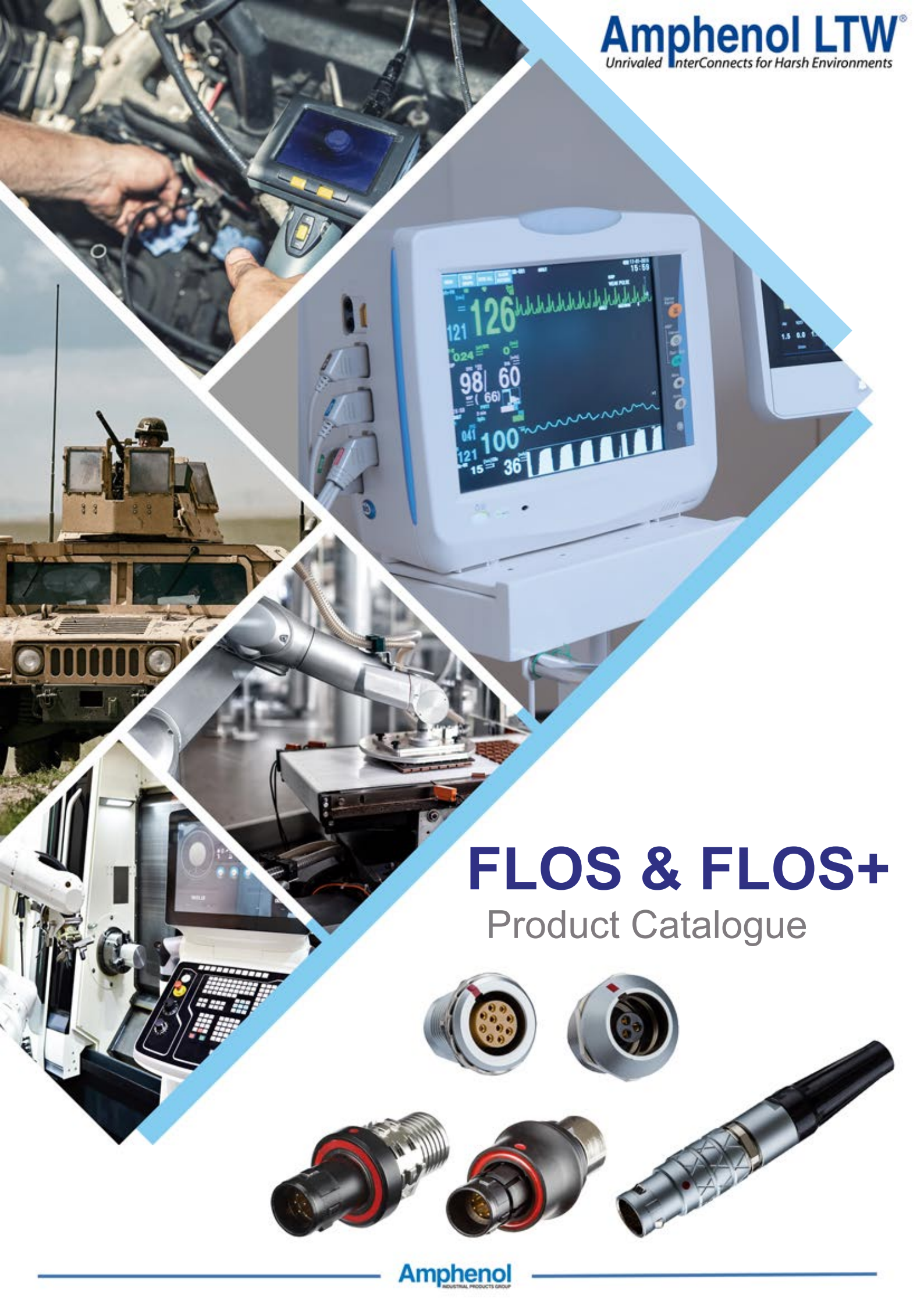




FLOS & FLOS+

Product Catalogue





Break Away



Push Pull



**Intermateable With Specific Series
Of Fischer, Lemo, ODU, Souriau**



IP50 / 66 /
67 / 68



Data
Transmission



Harsh
Environment



Quick
Installation



Fully
Shielded



Corrosion
Resistant



RoHS
Compliant



UL 94V-0

- 1-1** Key Features
- 1-2** Markets / Applications
- 1-3** Product Range Overview
- 1-5** B Series
- 1-14** FLOS & FLOS+ K Series
- 1-22** Y Series
- 1-31** Assembly Customization
- 1-33** Assembly Instruction

Key Features

- Intermateable With Specific Series Of Fischer, Lemo, ODU, Souriau
- Easy Auto-latching Plug, Fast & Secure
- Reliable Connection For Power / Data / Signal Transmission
- Metal Shell For 360° EMI Shielding
- Flexibility & Capability Of Customization
- Push-Pull locking and Break-Away Function

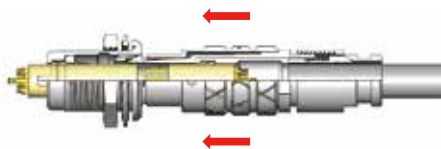
FLOS & FLOS+

Cross Reference

	B Series	K Series	FLOS+ K Series	C Series*	S Series*	Y Series	P Series*
Fischer's Series	/	/	/	Core Series	/	/	Core Series P***
Lemo's Series	B Series	K Series	K Series	/	S Series	/	REDEL P
ODU's Series	L Series***	K Series***	/	F Series***	/	AMC Y Series	MEDI SNAP P
Souriau Series	JBX***	JKX***	JKX***	/	JAX***	/	JMX***

* Coming Soon *** NOT Intermateable

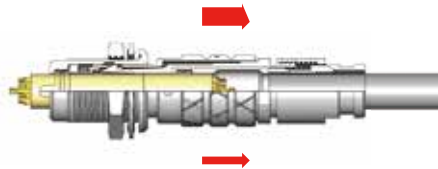
Locking Principle



ALTW Push-pull locking system allows connectors to be mated quickly and securely.



Once mated, the connection is fully locked against pulling cable or back nut accidentally.



By pulling the sleeve, the locking latches will be released easily to unlock.

Markets / Applications



Renewable Energy

- Communication System
- PDC (Power Distribution Control)
- Tidal Power Generation System
- Wind Turbine



Automated Meter Reading

- Electricity Meter
- Gas Meter
- Sewage
- Telemetry
- Water Meter



Remote Video Response Center

- Alarm System
- Automatic LPRS (License Plate Recognition System)
- CCTV / Dome / IP Camera
- Encoders



Medical

- Medical Displays
- Non-invasive Devices

Markets / Applications



Heavy Equipment

- Display
- Electronic Toll System
- Lidar & Radar
- Measurement Systems
- Sensors

- Automotive Diagnostics
- Camera & Monitoring
- Control System
- Agriculture Electronic Equipment
- ADAS (Advanced Driver Assistance Systems)



Test Equipment

- Air Flow Measurement
- Borescope
- Digital Microscopes
- Dosing Systems
- Earthquake Monitoring
- Sound Measuring
- Timers / Timer Display

- Floor Scales
- Gas Detectors
- Heavy-duty Scales
- Humidity Measurement
- Image Measurement
- Weigh Modules
- Weighing Devices

- In-Motion Weighing
- Laser Marking System
- Leak Detectors
- Light Measuring
- Precision Surveying
- Water Measurement
- Wet Area Weighing



Railway Mass Transit

- Infotainment Systems
- Interior Lighting
- In-Vehicle Information
- Speedometer
- Vehicle Monitoring

- Broadcasting System
- Cleaning Control
- Fuel Leakage Detector
- HVAC (Heating Ventilation Air Conditioning)



Industrial Automation

- Industrial PC & Displays
- Industrial Robots
- Machine Tools
- Packaging
- Power

- Communication System
- Conveyors
- Industrial Control
- Industrial Forklifts
- Industrial Network

- AVI (Automatic visual inspection)



Hybrid Electric Vehicles

- Controller Unit
- Electric Scooter
- Electric Wheelchair
- Motor Module
- Throttle Controller

- Electrical and Electronic Brake System
- Electrical and Electronic Speed Control
- Hoverboard



UAV

- Commercial Drone
- Consumer Drone
- Military Drone



Lifts & Materials Handling

- Forklift
- Industrial Lift
- Materials Handling



Mobile Devices

- Altimeter
- Barcode Reader
- DRC (Drone Remote Controller)



LED

- Outdoor LED Displays



Automotive Diagnostics

- Auto Crash Notification
- Remote Vehicle Diagnostics
- Vehicle Health Alert & Roadside Assistance



Rugged IT

- Communication Devices
- Night Vision Goggle
- Rugged & Military VR and AR
- Rugged Notebook
- Telemetry



Commercial Military

- Tank
- Aircraft
- Warship
- Military
- Dismounted Soldier
- Software Defined Radios



Autonomous

- GPS
- Lidar
- Radar Sensors
- Video Cameras
- Central Computer
- Inertial Measurement Unit
- Inertial Navigation Systems

Product Range Overview

FLOS & FLOS+

Sub-Series Name	B	K	K (FLOS+)
Mating Style	Push Pull	Push Pull	Push Pull
Plastic Version	-	-	-
Metal Version	✓	✓	✓
No. of Contacts	2 ~ 32	2 ~ 32	2 ~ 32
Plating of Contacts	Gold Plated	Gold Plated	Gold Plated
Operating Voltage (AC/DC)	160V ~ 700V	160V ~ 700V	160V ~ 700V
Nominal Current	1.5A ~ 25A	1.5A ~ 25A	1.5A ~ 25A
Operating Temperature		• Receptacle: -40°C ~ 125°C • Overmolded with Cable: -20°C ~ 85°C • Field Serviceable/Installable: -40°C ~ 125°C	
Fasten Style of Nut	Front & Rear	Front & Rear	Front & Rear
Receptacle	✓	✓	✓
Overmolded With Cable	✓	✓	✓
Field Serviceable/Installable	✓	✓	✓
Accessories	✓	✓	✓
Applicable Wire Gauge	16AWG ~ 28AWG (1.50 ~ 0.08mm ²)	16AWG ~ 28AWG (1.50 ~ 0.08mm ²)	16AWG ~ 28AWG (1.50 ~ 0.08mm ²)
Mating Cycles (Pin Contact)	5,000 Cycles	5,000 Cycles	5,000 Cycles
IP Rating	IP50 (Mated)	• Receptacle & Overmolded With Cable : IP68 (Mated, 1.5M / 24h) • Field Serviceable/Installable : IP68 (Mated By Applying O-ring & Potting Material, 1.5M / 24h)	• Receptacle : IP68 (Unmated, 1.5M / 24h) • Overmolded With Cable : IP68 (Mated, 1.5M / 24h) • Field Serviceable/Installable : IP68 (Mated, 1.5M / 24h)
Salt Spray (Connector, Mated)	144h	144h	1,000h
UV Resistant	-	-	-
Flammability Rating	UL94V-0	UL94V-0	UL94V-0
Vibration	Frequency Range 10 ~ 2000Hz / Amplitude 1.5mm		
EMI Option	✓	✓	✓
RoHS 2.0 Compliant	✓	✓	✓
REACH Compliant	✓	✓	✓

Product Range Overview

C	S	Y	P	N
Push Pull	Push Pull	Push Pull / Break Away	Push Pull	Push Pull
-	-	-	✓	-
✓	✓	✓	-	✓
2 ~ 19	1	2 ~ 26	2 ~ 14	2 ~19
Gold Plated	Gold Plated	Gold Plated	Gold Plated	Gold Plated
160V ~ 700V	260V ~ 1,000V	260V ~ 1,000V	200V ~ 400V	200V ~ 800V
1.5A ~ 20A	15A	5A ~ 14A	2A ~ 10A	5A ~ 22A
• Receptacle: -40°C ~ 125°C • Overmolded with Cable: -20°C ~ 85°C • Field Serviceable/Installable: -40°C ~ 125°C				
Front & Rear	Front	Front	Front & Rear	Front & Rear
✓	✓	✓	✓	✓
✓	✓	✓	✓	✓
✓	✓	✓	✓	✓
✓	✓	✓	✓	✓
-	-	-	-	-
3,000 Cycles	3,000 Cycles	5,000 Cycles	2,000 Cycles	3,000 Cycles
IP68 (Mated, 1.5M / 24h)	IP50 (Mated)	IP68 (Mated, 1.5M / 24h)	IP50 / IP66 (Mated)	IP68 (Mated, 1.5M / 24h)
144h	144h	96h	-	144h
-	-	-	✓	-
UL94V-0	UL94V-0	UL94V-0	UL94V-0	UL94V-0
Frequency Range 10 ~ 55Hz / Amplitude 1.52mm				
✓	✓	✓	✓	✓
✓	✓	✓	✓	✓
✓	✓	✓	✓	✓

FLOS & FLOS+

Ordering Information FLOS B Series

Example

FLB B - 02 EG F S - G C P - 001

XXX X - XX XX X X - X X X - XXX

1 2 3 4 5 6 7 8 9 10

Series / Sub-Series

(FLB) FLOS B Series

Size (See Table For Explanation At The Bottom)

(A) 00

(B) 0

(C) 1

(D) 2

Number Of Contacts

2 ~ 19 Contacts

e.g. (02) = 2 Contacts

Connector Style

> For Receptacle

(EG) 180° Female Panel With Hexagonal Nut (Rear Fasten)

(EC) 180° Female Panel With Hexagonal Nut & Slotted Nut (Both Side Fasten)

(EE) 180° Female Panel With Slotted Nut (Front Fasten)

(EN) 180° Female Panel With Earthing Tag & Hexagonal Nut (Rear Fasten)*

(EX) 90° Female Panel for PCB Board with Hexagonal Nut and Slotted Nut *

(EH) 180° Female Panel with Hexagonal Nut (Rear Fasten)*

> For Overmolded with Cable

(FM) 180° Male Overmolded

(RM) 90° Male Overmolded

(PM) 180° Female Overmolded

> For Field Serviceable/Installable

(FG) 180° Male Field Serviceable/Installable

(FH) 90° Male Field Serviceable/Installable

(PH) 180° Female Field Serviceable/Installable

*Upon Request

Connector & Contact Gender

(F) Female Connector, Female Contact

(M) Male Connector, Male Contact

(C) Hybrid Style *

*Upon Request

Assembly Style

> For Receptacle & Overmolded With Cable & Field Serviceable/Installable

(S) Solder Type

(P) 180° PCB Type

(R) 90° PCB Type

(C) Crimp Type *

Keying

(G) 1 KEY 0°

(A) 2 KEY 30°

(B) 2 KEY 60° / 45°

(C) 2 KEY 90° / 60°

*Upon Request

Housing Material & Surface Plating

(C) Copper Alloy / Chrome

(S) Copper Alloy / Black Chrome

(K) Copper Alloy / Black Chrome (Gray)

(R) Aluminum Alloy / Chrome *

*Upon Request

Insulation Material

(P) PPS

(K) PEEK *

*Upon Request

More Information

> For Receptacle

(001), (002).....

For Different Versions

> For Overmolded With Cable

(□) + (■) Cable Type + Cable Length

e.g. (A01) = UL2464, PVC + 1M

(□) Cable Type

(A) PVC

(B) PU

(E) Cat. 5e

(■) Cable Length

From 1M ~ 99M

e.g. (01) = 1M

> For Field Serviceable/Installable

(□) + (■) Back Nut + Cable O.D.

e.g. (201) = Back Nut For Bend Relief + Cable O.D 2.2 ~ 3.2mm

(□) Back Nut

(1) Standard Back Nut

(2) Back Nut For Bend Relief

(■) Cable O.D.

e.g. (01) = 2.2 ~ 3.2mm

(See Table For Explanation At The Bottom)

B Series (Unit:mm)

Size	Panel Cut-out	Thread Size
(A) 00	6.3	M7*0.5
(B) 0	8.2	M9*0.6
(C) 1	10.5	M12*1.0
(D) 2	13.5	M15*1.0

B Series Cable O.D. Range (Unit:mm)

Code	(A) 00	Code	(B) 0	Code	(C) 1	Code	(D) 2
(20)	1.4 ~ 2.2	(01)	2.2 ~ 3.2	(02)	2.7 ~ 3.2	(11)	5.3 ~ 6.2
(21)	2.3 ~ 2.7	(04)	3.3 ~ 4.2	(04)	3.3 ~ 4.2	(14)	6.3 ~ 7.2
(22)	2.8 ~ 3.5	(07)	4.3 ~ 5.2	(07)	4.3 ~ 5.2	(16)	7.3 ~ 8.2
				(11)	5.3 ~ 6.2	(19)	8.3 ~ 9.2
				(14)	6.3 ~ 7.2		

Ordering Information FLOS B Series Double Ended

Example	FLB	B	02	-	G	C	P	FM	-	S	A001
	XXX	X	XX	-	X	X	X	XX	-	X	XXXX
	1	2	3	4	5	6	7	8	9		
Series / Sub-Series (FLB) FLOS B Series											
Size (A) 00 (B) 0 (C) 1 (D) 2											
Number Of Contacts 2 ~ 19 Contacts e.g. (02) = 2 Contacts											
Keying (G) 1 KEY 0° (A) 2 KEY 30° (B) 2 KEY 60° / 45° (C) 2 KEY 90° / 60°											
Housing Material & Surface Plating (C) Copper Alloy / Chrome (S) Copper Alloy / Black Chrome (K) Copper Alloy / Black Chrome (Gray) (R) Aluminum Alloy / Chrome * *Upon Request											
Insulation Material (P) PPS (K) PEEK * *Upon Request											
Connector Style For Connector 1 > FLO Series (FM) 180° Male Overmolded (RM) 90° Male Overmolded (PM) 180° Female Overmolded											
Connector Style For Connector 2 > FLO Series (FM) 180° Male Overmolded (RM) 90° Male Overmolded (PM) 180° Female Overmolded											
More Information > For Overmolded With Cable (□) + (■) Cable Type + Cable Length e.g. (A001) = UL2464, PVC + 1M (□) Cable Type (A) PVC (B) PU (E) Cat. 5e (■) Cable Length From 0.5M ~ 99M e.g. (A05) = 0.5M, (001) = 1M...(099) = 99M											

FLOS & FLOS+

Contact Configuration FLOS B Series

Size	00 (A)						0 (B)					
Connector Type	Receptacle			Field Serviceable/Installable Overmolded With Cable			Receptacle			Field Serviceable/Installable Overmolded With Cable		
Contact	Female			Male		Female	Female			Male		Female
	EG	EC	EE	FG	FH	PH	EG	EC	EE	FG	FH	PH
2 Pin												
	3.5A / 300V			3.5A / 300V			10A / 400V			10A / 400V		
3 Pin												
	3A / 250V			3A / 250V			8A / 400V			8A / 400V		
4 Pin												
	2A / 200V			2A / 200V			7A / 250V			7A / 250V		
5 Pin												
							6.5A / 250V			6.5A / 250V		
6 Pin												
							2.5A / 250V			2.5A / 250V		
7 Pin												
							2.5A / 250V			2.5A / 250V		
8 Pin												
9 Pin												
							2A / 150V			2A / 150V		
10 Pin												
12 Pin												
14 Pin												
16 Pin												
18 Pin												
19 Pin												
26 Pin												
32 Pin												

FLOS & FLOS+

Contact Configuration

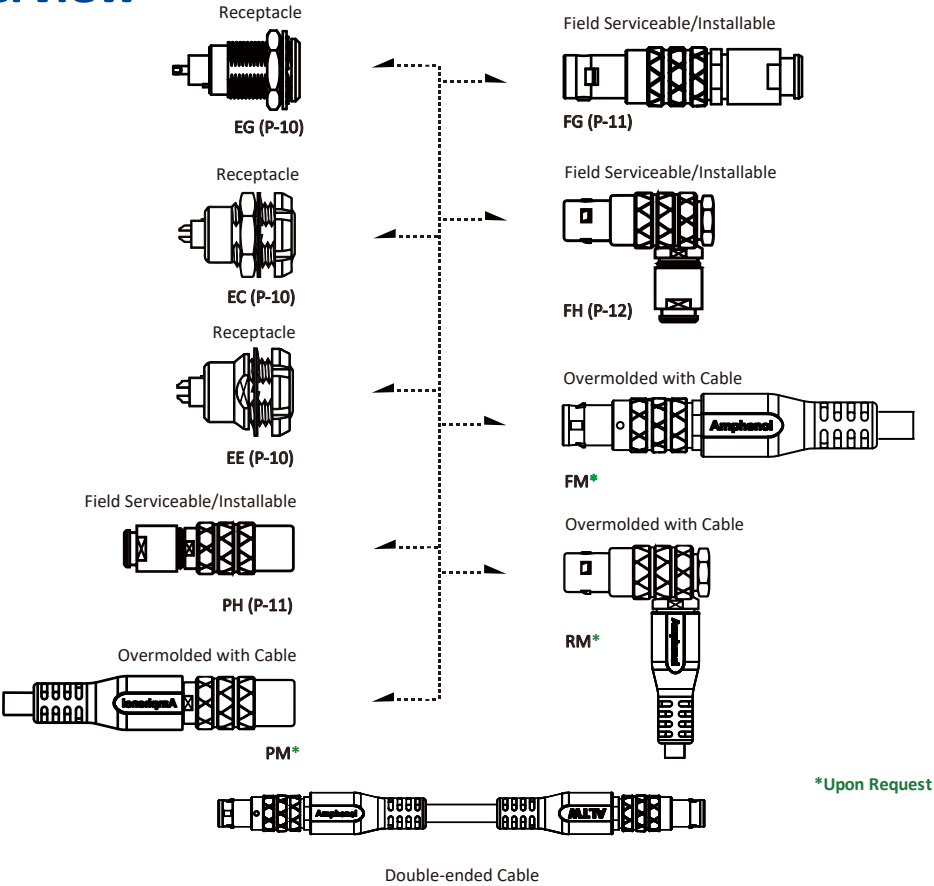
FLOS B Series

Size	1 (C)						2 (D)					
Connector Type	Receptacle			Field Serviceable/Installable Overmolded With Cable			Receptacle			Field Serviceable/Installable/ Overmolded With Cable		
Contact	Female			Male		Female	Female			Male		Female
	EG	EC	EE	FG	FH	PH	EG	EC	EE	FG	FH	PH
2 Pin												
	15A / 500V			15A / 500V			25A / 700V			25A / 700V		
3 Pin												
	12A / 400V			12A / 400V			17A / 650V			17A / 650V		
4 Pin												
	10A / 400V			10A / 400V			15A / 600V			15A / 600V		
5 Pin												
	9A / 400V			9A / 400V			14A / 550V			14A / 550V		
6 Pin												
	7A / 300V			7A / 300V			12A / 450V			12A / 450V		
7 Pin												
	7A / 300V			7A / 300V			11A / 450V			11A / 450V		
8 Pin												
	5A / 250V			5A / 250V			10A / 400V			10A / 400V		
9 Pin												
10 Pin												
	2.5A / 250V			2.5A / 250V			8A / 400V			8A / 400V		
12 Pin												
							7A / 400V			7A / 400V		
14 Pin												
	2A / 200V			2A / 200V			6.5A / 350V			6.5A / 350V		
16 Pin												
	1.5A / 200V			1.5A / 200V			6A / 300V			6A / 300V		
18 Pin												
							5.5A / 250V			5.5A / 250V		
19 Pin												
							5A / 250V			5A / 250V		
26 Pin												
							2A / 200V			2A / 200V		
32 Pin												
							1.5A / 200V			1.5A / 200V		

FLOS & FLOS+

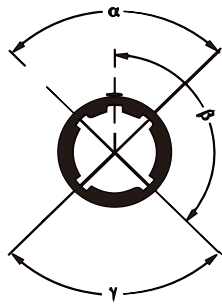
Range Overview

FLOS & FLOS+



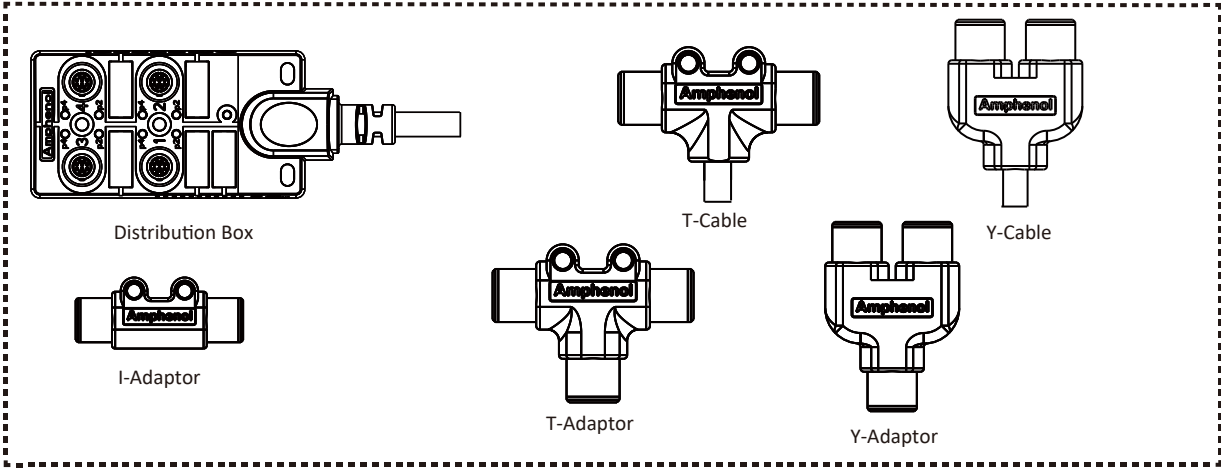
Alignment Keying

Front View of Receptacle

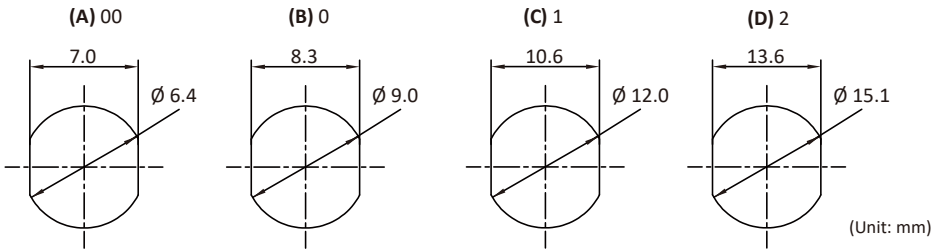


Code	Number of Keys	Angles	Series			Code	Number of Keys	Angles	Series	
			00	0B	1B				2B	3B
G	1	-	0°	0°	0°	G	1	-	0°	0°
A	2	α	30°	30°	30°	A	2	α	30°	30°
B	2		60°	60°	60°	B	2		45°	45°
C	2		-	90°	90°	C	2		60°	60°
D	2	β	-	135°	135°	D	2	β	95°	95°
E	2		-	145°	145°	E	2		120°	120°
F	2		-	155°	155°	F	2		145°	145°
J	2	γ	45°	45°	45°	J	2	γ	37.5°	37.5°

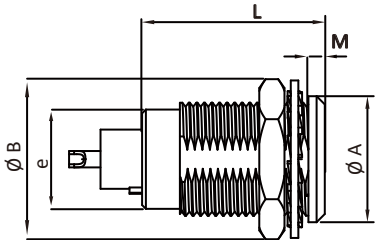
Customization - Upon Request



Panel Cut Out



EG Straight Female Panel with Hexagonal Nut (Rear Fasten)

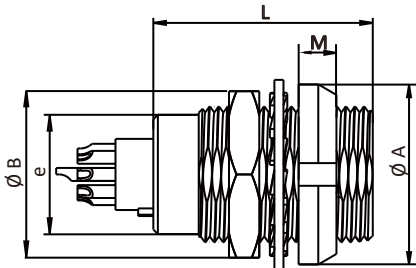


Mated With:
FG (4-11), FH (4-12), FM*, RM*

- Part Number: FLB ②-③ EGFS-GCP-001
- Operating Temperature: -40°C ~ 125°C
- Nut Torque Value: 4 ~ 6 kgf.cm
- Gender: Female
- Assembly Style: Solder
- Keying: G

② Size	Dimension (Unit: mm)					③ Contact	Recommended Panel Thickness
	A	B	e	L	M		
(A) 00	8.0	10.2	M7*0.5	12.1	1.0	2 ~ 4	6.0mm
(B) 0	10.0	12.4	M9*0.6	14.5	1.2	2 ~ 9	6.0mm
(C) 1	14.0	15.8	M12*1.0	16.5	1.5	2 ~ 16	7.0mm
(D) 2	18.0	19.2	M15*1.0	18.5	1.8	2 ~ 19	7.0mm

EC Straight Female Panel with Hexagonal Nut & Slotted Nut (Both Side Fasten)

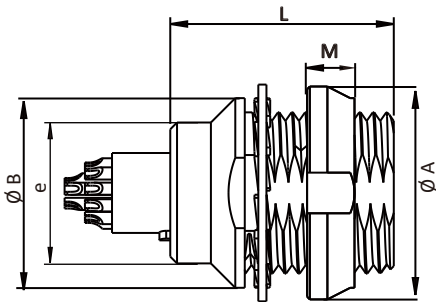


Mated With:
FG (4-11), FH (4-12), FM*, RM*

- Part Number: FLB ②-③ ECFS-GCP-001
- Operating Temperature: -40°C ~ 125°C
- Nut Torque Value: 4 ~ 6 kgf.cm
- Gender: Female
- Assembly Style: Solder
- Keying: G

② Size	Dimension (Unit: mm)					③ Contact	Recommended Panel Thickness
	A	B	e	L	M		
(A) 00	10.0	10.2	M7*0.5	12.1	2.5	2 ~ 4	4.0mm
(B) 0	12.0	12.4	M9*0.6	14.5	2.5	2 ~ 9	5.0mm
(C) 1	16.0	15.8	M12*1.0	16.5	3.5	2 ~ 16	6.0mm
(D) 2	20.0	19.2	M15*1.0	18.5	3.5	2 ~ 19	4.5mm

EE Straight Female Panel with Slotted Nut (Front Fasten)



Mated With:
FG (4-11), FH (4-12), FM*, RM*

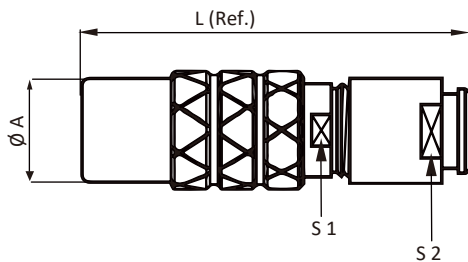
- Part Number: FLB ②-③ EEFS-GCP-001
- Operating Temperature: -40°C ~ 125°C
- Nut Torque Value: 4 ~ 6 kgf.cm
- Gender: Female
- Assembly Style: Solder
- Keying: G

② Size	Dimension (Unit: mm)					③ Contact	Recommended Panel Thickness
	A	B	e	L	M		
(A) 00	10.0	9.5	M7*0.5	12.1	2.5	2 ~ 4	2.0mm
(B) 0	12.0	12.5	M9*0.6	14.5	2.5	2 ~ 9	2.5mm
(C) 1	16.0	16.0	M12*1.0	16.5	3.5	2 ~ 16	6.0mm
(D) 2	20.0	20.0	M15*1.0	18.5	3.5	2 ~ 19	4.0mm

Recommended Wire AWG (Solder)							
③ Contact	(A) 00	③ Contact	(B) 0	③ Contact	(C) 1	③ Contact	(D) 2
2 ~ 4	28AWG (0.09mm ²)	2 ~ 5	22AWG (0.34mm ²)	2 ~ 3	20AWG (0.5mm ²)	2	16AWG (1.5mm ²)
				4 ~ 8	22AWG (0.34mm ²)	3	18AWG (1.0mm ²)
		6 ~ 9	28AWG (0.09mm ²)	9 ~ 16	28AWG (0.09mm ²)	4 ~ 7	22AWG (0.34mm ²)
						8 ~ 19	28AWG (0.09mm ²)

Recommended Cable O.D. (Unit: mm) (For Field Serviceable/Installable)							
⑩	(A) 00	⑩	(B) 0	⑩	(C) 1	⑩	(D) 2
(20)	1.4 ~ 2.2	(01)	2.2 ~ 3.2	(02)	2.7 ~ 3.2	(11)	5.3 ~ 6.2
(21)	2.3 ~ 2.7	(04)	3.3 ~ 4.2	(04)	3.3 ~ 4.2	(14)	6.3 ~ 7.2
(22)	2.8 ~ 3.5	(07)	4.3 ~ 5.2	(07)	4.3 ~ 5.2	(16)	7.3 ~ 8.2
				(11)	5.3 ~ 6.2	(19)	8.3 ~ 9.2
				(14)	6.3 ~ 7.2		

PH Straight Female Field Serviceable/Installable, PM Overmolded With Cable

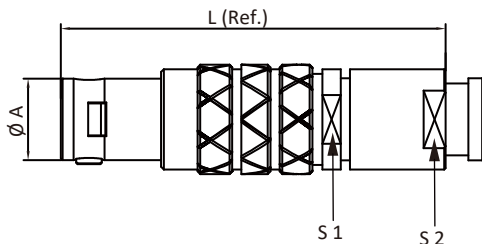


Mated With:
FG (4-11), FH (4-12), FM*, RM*

- Part Number:
Field Serviceable/Installable: FLB ② - ③ PHFS-GCP-2 ⑩
Overmolded: FLB ② - ③ PMFS-GCP-A ⑩
- Gender: Female
- Assembly Style: Solder
- Keying: G
- Operating Temperature:
Field Serviceable/Installable: -40°C ~ 125°C
Overmolded: -20°C ~ 85°C
- Cable Type: PVC, Black
⑩ Cable Length: From 0.5M ~ 99M
e.g. (A05) = 0.5M, (001) = 1M

② Size	Dimension (Unit: mm)				③ Contact
	A	L (Ref.)	S1	S2	
(A) 00	6.8	36.1	5.5	6.0	2 ~ 4
(B) 0	9.5	37.0	8.0	8.0	2 ~ 9
(C) 1	12.5	44.8	10.0	9.0	2 ~ 16
(D) 2	16.5	47.0	13.0	12.0	2 ~ 19

FG Straight Male Field Serviceable/Installable, FM Overmolded With Cable

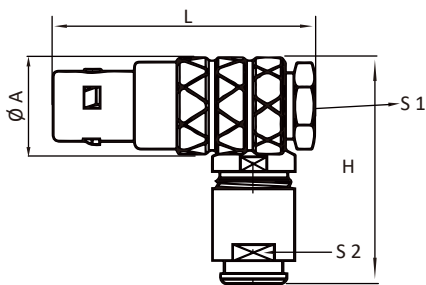


Mated With:
FG (4-11), EC (4-10), PH (4-11), PM*

- Part Number:
Field Serviceable/Installable: FLB ② - ③ FGMS-GCP-2 ⑩
Overmolded: FLB ② - ③ FMMS-GCP-A ⑩
- Gender: Female
- Assembly Style: Solder
- Keying: G
- Operating Temperature:
Field Installable: -40°C ~ 125°C
Overmolded: -20°C ~ 85°C
- Cable Type: PVC, Black
⑩ Cable Length: From 0.5M ~ 99M
e.g. (A05) = 0.5M, (001) = 1M

② Size	Dimension (Unit: mm)				③ Contact
	A	L (Ref.)	S1	S2	
(A) 00	6.8	36.1	5.5	6.0	2 ~ 4
(B) 0	9.5	37.0	8.0	8.0	2 ~ 9
(C) 1	12.5	44.8	10.0	9.0	2 ~ 16
(D) 2	16.5	47.0	13.0	12.0	2 ~ 19

FH Right Angle Male Field Serviceable/Installable, RM Overmolded With Cable

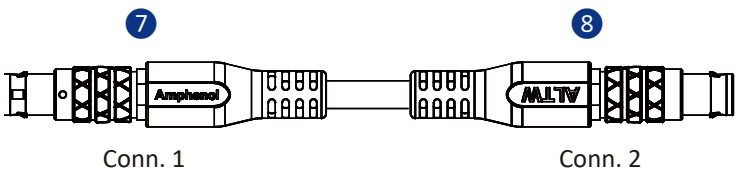


Mated With:
FG (4-11), EC (4-10), EE (4-10), PH (4-11), PM*

- Part Number:
Field Serviceable/Installable: FLB 2-3 FHMS-GCP-2 10
Overmolded: FLB 2-3 RMMS-GCP-A 10
- Gender: Female
- Assembly Style: Solder
- Keying: G
- Operating Temperature:
Field Serviceable/Installable: -40°C ~ 125°C
Overmolded: -20°C ~ 85°C
- Cable Type: PVC, Black
- 10 Cable Length: From 0.5M ~ 99M
e.g. (A05) = 0.5M, (001) = 1M

2 Size	Dimension (Unit: mm)					3 Contact
	A	L (Ref.)	H (Ref.)	S1	S2	
(A) 00	10.9	26.5	23.5	10.0	7.0	2 ~ 4
(B) 0	11.0	30.1	26.7	11.0	9.0	2 ~ 9
(C) 1	13.5	36.1	31.5	14.0	12.0	2 ~ 16
(D) 2	16.5	41.7	35.0	17.0	14.0	2 ~ 19

Double End Cable



- Part Number: FLB 2-3 GCP-7-8-A 9
- Assembly Style: Solder
- Keying: G
- Operating Temperature: -20°C ~ 85°C
- Cable Type: PVC, Black
- 9 Cable Length: From 0.5M ~ 99M
e.g. (A05) = 0.5M, (001) = 1M

PM 7 & 8

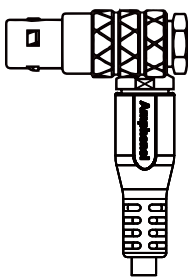
FM 7 & 8



Dimension (Unit: mm)		
2 Size	A	L (Ref.)
(A) 00	6.8	36.1
(B) 0	9.5	37.0
(C) 1	12.5	44.8
(D) 2	16.5	47.0

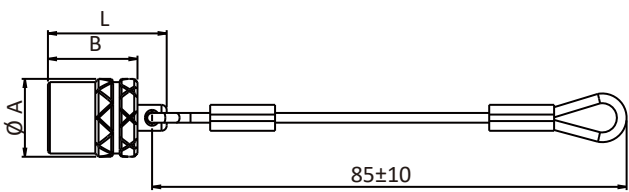
Dimension (Unit: mm)		
2 Size	A	L (Ref.)
(A) 00	6.8	36.1
(B) 0	9.5	37.0
(C) 1	12.5	44.8
(D) 2	16.5	47.0

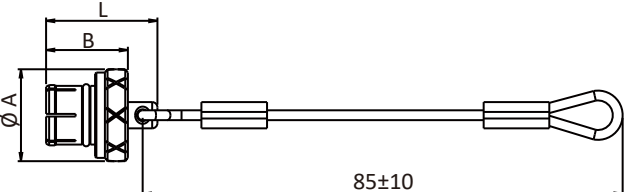
RM 7 & 8



Dimension (Unit: mm)					3 Contact
2 Size	A	L (Ref.)	H (Ref.)		
(A) 00	10.9	26.5	23.5		2 ~ 4
(B) 0	11.0	30.1	26.7		2 ~ 9
(C) 1	13.5	36.1	31.5		2 ~ 16
(D) 2	16.5	41.7	35.0		2 ~ 19

Cap

With Steel Line  (Unit: mm)	Dimension (Unit: mm)				Mating Pair (Gender)	Part Number	IP Rating
	Size	A	B	L			
	(B) 0	10.0	10.5	15.0	Female	CAP-DLBFQME2	IP50
	(C) 1	14.0	12.5	17.0	Female	CAP-DLBFQME3	
	(D) 2	18.0	14.0	20.0	Female	CAP-DLBFQME4	

With Steel Line  (Unit: mm)	Dimension (Unit: mm)				Mating Pair (Gender)	Part Number	IP Rating
	Size	A	B	L			
	(B) 0	10.6	12.5	16.5	Male	CAP-DLBMQCE2	IP50
	(C) 1	12.0	13.8	18.3	Male	CAP-DLBMQCE3	
	(D) 2	15.0	15.0	20.0	Male	CAP-DLBMQCE4	

- Increase Over 50% of Cable Assembly Outputs In Over 50% Less Time
- Eliminate Epoxy and Glue Production Process and Fallouts To Achieve IP68
- Fewer Parts To Manage And Stock
- More Productivities And Fewer Manpower



IP68
Protection



Harsh
Environment



Quick
Installation



Fully
Shielded



Corrosion
Resistant



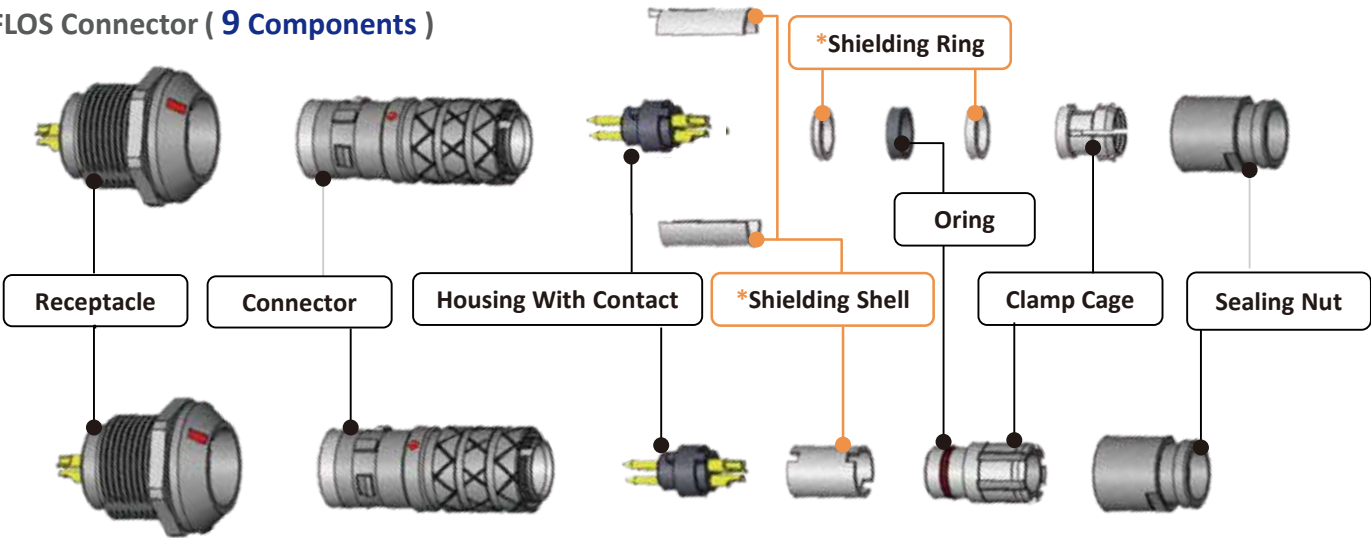
RoHS
Compliant



UL 94V-0

Comparison

FLOS Connector (9 Components)



FLOS+ Connector (6 Components)

- * Shielding Shell: Combine into 1 component
- * Shielding Ring: Removed

Characteristics	FLOS+ Connector 	FLOS Connector
Waterproof (Field Serviceable/Installable)	No Glue Required For IP68	IP68 With Potting Materials (3 Times)
Waterproof (Receptacle)	Unmated IP68	Mated IP68
Assembly Efficiency	6 Components	9 Components

Example

FLK	B	-	02	EG	F	S	-	G	C	P	-	001
XXX	X	-	XX	XX	X	X	-	X	X	X	-	XXX
1	2	3	4	5	6	7	8	9	10			

Series / Sub-Series

(FLK) FLOS K Series (SLK) FLOS+ K Series

Size (See Table For Explanation At The Bottom)

- (B) 0
(C) 1
(D) 2

Number Of Contacts

2 ~ 19 Contacts
e.g. (02) = 2 Contacts

Connector Style

> For Receptacle

- (EG) 180° Female Panel With Hexagonal Nut (Rear Fasten)
(EC) 180° Female Panel With Hexagonal Nut & Slotted Nut (Both Side Fasten)
(EE) 180° Female Panel With Slotted Nut (Front Fasten)
(EN) 180° Female Panel With Earthing Tag & Hexagonal Nut (Rear Fasten)*
(EX) 90° Female Panel for PCB Board with Hexagonal Nut and Slotted Nut*
(EH) 180° Female Panel with Hexagonal Nut (Rear Fasten)*

> For Overmolded with Cable

- (FM) 180° Male Overmolded
(RM) 90° Male Overmolded
(PM) 180° Female Overmolded

> For Field Serviceable/Installable

- (FG) 180° Male Field Serviceable/Installable
(FH) 90° Male Field Serviceable/Installable
(PH) 180° Female Field Serviceable/Installable

*Upon Request

Connector & Contact Gender

- (F) Female Connector, Female Contact
(M) Male Connector, Male Contact
(C) Hybrid Style*

*Upon Request

Assembly Style

> For Receptacle & Overmolded With Cable & Field Serviceable/Installable

- (S) Solder Type
(P) 180° PCB Type
(R) 90° PCB Type
(C) Crimp Type*

*Upon Request

Keying

- (G) 1 KEY 0°
(A) 2 KEY 30°
(B) 2 KEY 45°
(C) 2 KEY 60°

Housing Material & Surface Plating

- (C) Copper Alloy / Chrome
(S) Copper Alloy / Black Chrome
(K) Copper Alloy / Black Chrome (Gray)
(R) Aluminum Alloy / Chrome*

*Upon Request

Insulation Material

- (P) PPS
(K) PEEK*

*Upon Request

More Information

> For Receptacle

(001), (002).....

For Different Versions

> For Overmolded With Cable

(□) + (■) Cable Type + Cable Length
e.g. (A01) = UL2464, PVC + 1M

(□) Cable Type

- (A) PVC
(B) PU
(E) Cat. 5e

(■) Cable Length
From 1M ~ 99M
e.g. (01) = 1M

> For Field Serviceable/Installable

(□) + (■) Back Nut + Cable O.D.

e.g. (201) = Back Nut For Bend Relief + Cable O.D 2.2 ~ 3.2mm

(□) Back Nut

(1) Standard Back Nut

(2) Back Nut For Bend Relief

(■) Cable O.D.

e.g. (03) = 2.8 ~ 3.0mm

(See Table For Explanation At The Bottom)

Dimension (Unit:mm)					
Size	A	B	e	L	M
(B) 0	10.0	12.4	M9*0.6	14.5	1.2
(C) 1	14.0	15.8	M12*1.0	16.5	1.5
(D) 2	18.0	19.2	M15*1.0	18.5	1.8

Recommended Cable O.D. (Unit:mm)					
(14) (15)	(B) 0	(14) (15)	(C) 1	(14) (15)	(D) 2
(03)	2.8 ~ 3.0	(06)	3.8 ~ 4.0	(15)	6.5 ~ 6.7
(05)	3.4 ~ 3.6	(08)	4.4 ~ 4.6	(17)	7.5 ~ 7.7
(06)	3.8 ~ 4.0	(10)	4.8 ~ 5.1	(18)	8.5 ~ 8.7
(09)	4.5 ~ 4.7	(12)	5.3 ~ 5.5		
		(13)	5.8 ~ 6.1		

Ordering Information FLOS & FLOS+ K Series Double ended

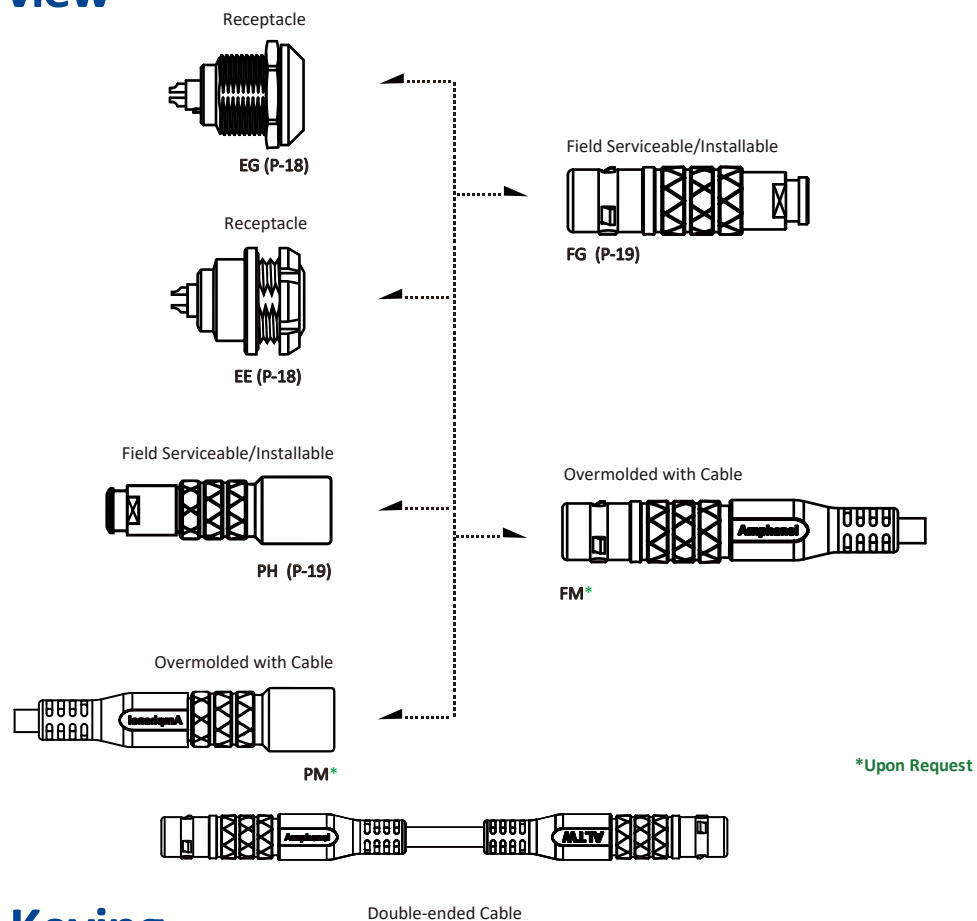
Example		FLK B - 02 G C P - FM -FM - A001											
		XXX X - XX X X X - XX - XX - XXXX											
		1 2 3 4 5 6 7 8 9											
Series / Sub-Series													
(FLK) FLOS K Series (SLK) FLOS+ K Series													
Size													
(A) 00													
(B) 0													
(C) 1													
(D) 2													
Number Of Contacts													
2 ~ 19 Contacts													
e.g. (02) = 2 Contacts													
Keying													
(G) 1 KEY 0°													
(A) 2 KEY 30°													
(B) 2 KEY 60° / 45°													
(C) 2 KEY 90° / 60°													
Housing Material & Surface Plating													
(C) Copper Alloy / Chrome													
(S) Copper Alloy / Black Chrome													
(K) Copper Alloy / Black Chrome (Gray)													
(R) Aluminum Alloy / Chrome *		*Upon Request											
Insulation Material													
(P) PPS													
(K) PEEK *		*Upon Request											
Connector Style For Connector 1													
> FLOS Series													
(FM) 180° Male Overmolded													
(RM) 90° Male Overmolded													
(PM) 180° Female Overmolded													
Connector Style For Connector 2													
> FLOS Series													
(FM) 180° Male Overmolded													
(RM) 90° Male Overmolded													
(PM) 180° Female Overmolded													
More Information													
> For Overmolded With Cable													
(□) + (■) Cable Type + Cable Length													
e.g. (A001) = UL2464, PVC + 1M													
(□) Cable Type													
(A) PVC													
(B) PU													
(E) Cat. 5e													
(■) Cable Length													
From 0.5M ~ 99M													
e.g. (A05) = 0.5M, (001) = 1M...(099) = 99M													

Contact Configuration FLOS & FLOS+ K Series

Size	0 (B)				1 (C)				2 (D)			
Connector Type	Receptacle		Field Serviceable/Installable Overmolded With Cable		Receptacle		Field Serviceable/Installable Overmolded With Cable		Receptacle		Field Serviceable/Installable Overmolded With Cable	
Contact	Female		Male	Female	Female		Male	Female	Female		Male	Female
	EG	EE	FG	PH	EG	EE	FG	PH	EG	EE	FG	PH
2 Pin												
	10A / 400V		10A / 400V		15A / 500V		15A / 500V		25A / 700V		25A / 700V	
3 Pin												
	8A / 400V		8A / 400V		12A / 400V		12A / 400V		17A / 650V		17A / 650V	
4 Pin												
	7A / 250V		7A / 250V		10A / 400V		10A / 400V		15A / 600V		15A / 600V	
5 Pin												
	6.5A / 250V		6.5A / 250V		9A / 400V		9A / 400V		14A / 550V		14A / 550V	
6 Pin												
	2.5A / 250V		2.5A / 250V		7A / 300V		7A / 300V		12A / 450V		12A / 450V	
7 Pin												
	2.5A / 250V		2.5A / 250V		7A / 300V		7A / 300V		11A / 450V		11A / 450V	
8 Pin												
					5A / 250V		5A / 250V		10A / 450V		10A / 450V	
9 Pin												
	2A / 150V		2A / 150V									
10 Pin												
					2.5A / 250V		2.5A / 250V		8A / 400V		8A / 400V	
12 Pin												
									7A / 400V		7A / 400V	
14 Pin												
					2A / 200V		2A / 200V		6.5A / 350V		6.5A / 350V	
16 Pin												
					1.5A / 200V		1.5A / 200V		6A / 300V		6A / 300V	
18 Pin												
									5.5A / 250V		5.5A / 250V	
19 Pin												
									5A / 250V		5A / 250V	
26 Pin												
									2A / 200V		2A / 200V	
32 Pin												
									1.5A / 200V		1.5A / 200V	

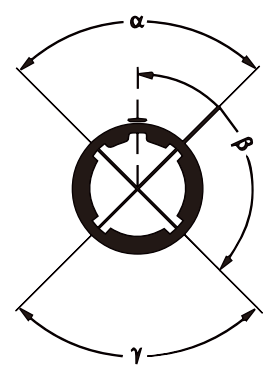
FLOS & FLOS+

Range Overview



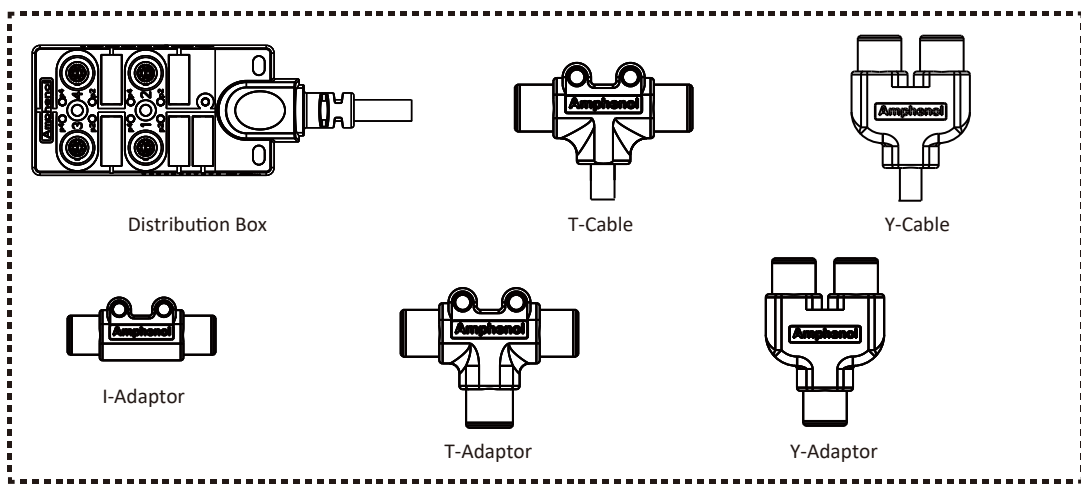
Alignment Keying

Front View of Receptacle

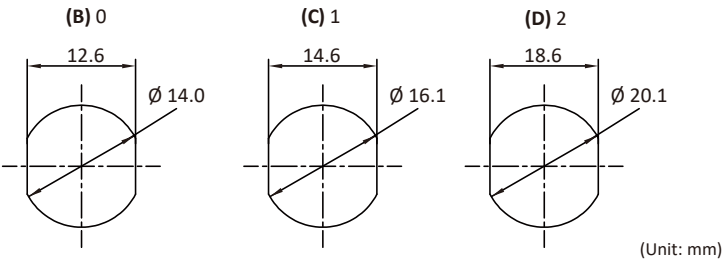


Code	Number of Keys	Angles	Series			
			0K	1K	2K	3K
G	1	-	0°	0°	0°	0°
A	2	α	30°	30°	30°	30°
B	2		45°	45°	45°	45°
C	2		60°	60°	60°	60°
D	2	γ	95°	95°	95°	95°
E	2	β	120°	120°	120°	120°
F	2		145°	145°	145°	145°

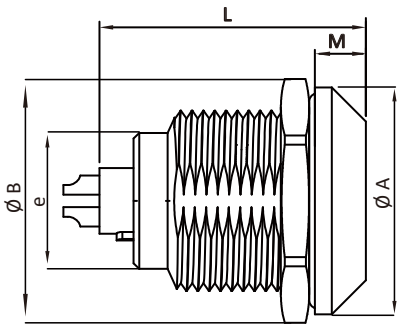
Customization - Upon Request



Panel Cut Out



EG Straight Female Panel with Hexagonal Nut (Rear Fasten)

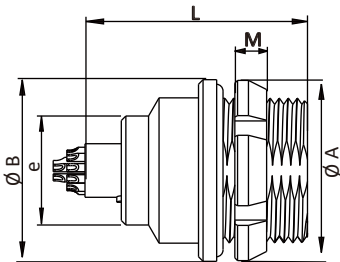


Mated With:
FG (4-20), FM*

- Part Number: ① ② - ③ EGFS-GCP-001
① FLK (FLOS), SLK (FLOS+)
- Operating Temperature: -40°C ~ 125°C
- Nut Torque Value: 4 ~ 6 kgf.cm
- Gender: Female
- Assembly Style: Solder
- Keying: G

② Size	Dimension (Unit: mm)					③ Contact	Recommended Panel Thickness
	A	B	e	L	M		
(B) 0	18.0	19.2	M14*1.0	21.9	4.0	2 ~ 9	6.0mm
(C) 1	20.0	21.5	M16*1.0	27.2	4.5	2 ~ 16	10.0mm
(D) 2	24.9	27.0	M20*1.0	28.9	5.0	2 ~ 19	8.0mm

EE Straight Female Panel with Slotted Nut (Front Fasten)



Mated With:
FG (4-20), FM*

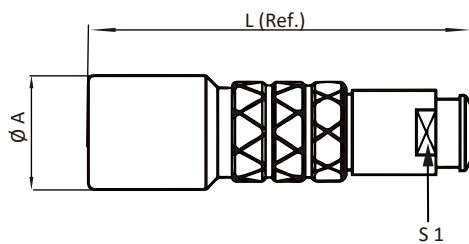
- Part Number: ① ② - ③ EEFS-GCP-001
① FLK (FLOS), SLK (FLOS+)
- Operating Temperature: -40°C ~ 125°C
- Nut Torque Value: 4 ~ 6 kgf.cm
- Gender: Female
- Assembly Style: Solder
- Keying: G

② Size	Dimension (Unit: mm)					③ Contact	Recommended Panel Thickness
	A	B	e	L	M		
(B) 0	18.0	18.0	M14*1.0	20.1	3.5	2 ~ 9	2.5mm
(C) 1	20.0	20.0	M16*1.0	25.1	3.5	2 ~ 16	6.0mm
(D) 2	25.0	25.0	M20*1.0	28.6	3.5	2 ~ 19	4.0mm

Recommended Wire AWG (Solder)					
③ Contact	(B) 0	③ Contact	(C) 1	③ Contact	(D) 2
2 ~ 5	22AWG (0.34mm²)	2 ~ 3	20AWG (0.5mm²)	2	16AWG (1.5mm²)
		4 ~ 8	22AWG (0.34mm²)	3	18AWG (1.0mm²)
6 ~ 9	28AWG (0.09mm²)	9 ~ 16	28AWG (0.09mm²)	4 ~ 7	22AWG (0.34mm²)
				8 ~ 19	28AWG (0.09mm²)

Recommended Cable O.D. (Unit: mm) (For Field Serviceable/Installable)					
⑩	(B) 0	⑩	(C) 1	⑩	(D) 2
(03)	2.8 ~ 3.0	(06)	3.8 ~ 4.0	(15)	6.5 ~ 6.7
(05)	3.4 ~ 3.6	(08)	4.4 ~ 4.6	(17)	7.5 ~ 7.7
(06)	3.8 ~ 4.0	(10)	4.8 ~ 5.1	(18)	8.5 ~ 8.7
(09)	4.5 ~ 4.7	(12)	5.3 ~ 5.5		
		(13)	5.8 ~ 6.1		

PH Straight Female Field Serviceable/Installable, PM Overmolded With Cable

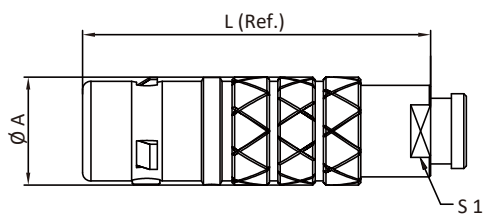


Mated With:
FG (4-20), FM*

- Part Number:
Field Serviceable/Installable: ① ② - ③ PHFS-GCP-2 ⑩
Overmolded: ① ② - ③ PMFS-GCP-A ⑩
① FLK (FLOS), SLK (FLOS+)
- Gender: Female
- Assembly Style: Solder
- Keying: G
- Operating Temperature:
Field Serviceable/Installable: -40°C ~ 125°C
Overmolded: -20°C ~ 85°C
- Cable Type: PVC, Black
⑩ Cable Length: From 0.5M ~ 99M
e.g. (A05) = 0.5M, (001) = 1M

② Size	Dimension (Unit: mm)			③ Contact
	A	L (Ref.)	S1	
(B) 0	13.0	36.5	8.0	2 ~ 9
(C) 1	14.9	46.3	9.0	2 ~ 16
(D) 2	19.0	55.8	12.0	2 ~ 19

FG Straight Male Field Serviceable/Installable, FM Overmolded With Cable

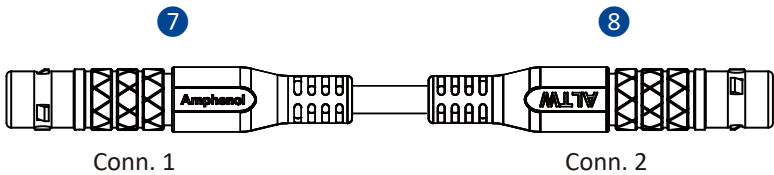


Mated With:
EG (4-19), PH (4-20), PM*

- Part Number:
Field Serviceable/Installable: ① ② - ③ FGMS-GCP-2 ⑩
Overmolded: ① ② - ③ FMMS-GCP-A ⑩
① FLK (FLOS), SLK (FLOS+)
- Gender: Female
- Assembly Style: Solder
- Keying: G
- Operating Temperature:
Field Serviceable/Installable: -40°C ~ 125°C
Overmolded: -20°C ~ 85°C
- Cable Type: PVC, Black
⑩ Cable Length: From 0.5M ~ 99M
e.g. (A05) = 0.5M, (001) = 1M

② Size	Dimension (Unit: mm)			③ Contact
	A	L (Ref.)	S1	
(B) 0	10.9	34.6	8.0	2 ~ 9
(C) 1	13.0	42.9	9.0	2 ~ 16
(D) 2	16.0	52.0	12.0	2 ~ 19

Double End Cable



- Part Number: ① ② - ③ GCP- ⑦ - ⑧ -A ⑨
- ① FLK (FLOS), SLK (FLOS+)
- Assembly Style: Solder
- Keying: G
- Operating Temperature: -20°C ~ 85°C
- Cable Type: PVC, Black
- ⑨ Cable Length: From 0.5M ~ 99M
e.g. (A05) = 0.5M, (001) = 1M

PM ⑦ & ⑧



FM ⑦ & ⑧

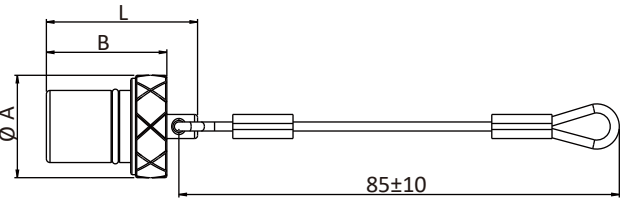


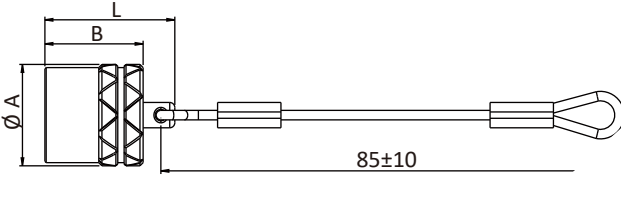
② Size	Dimension (Unit: mm)	
	A	L (Ref.)
(B) 0	13.0	36.5
(C) 1	14.9	46.3
(D) 2	19.0	55.8

② Size	Dimension (Unit: mm)		③ Contact
	A	L (Ref.)	
(B) 0	10.9	34.6	2 ~ 9
(C) 1	13.0	42.9	2 ~ 16
(D) 2	16.0	52.0	2 ~ 19

Accessories

Cap

With Steel Line 	Dimension (Unit: mm)				Mating Pair (Gender)	Part Number	IP Rating
	Size	A	B	L			
	(B) 0	15.0	15.0	20.0	Female	CAP-WLKFQME2	IP68
	(C) 1	17.0	20.0	25.1	Female	CAP-WLKFQME3	
	(D) 2	20.5	24.0	30.1	Female	CAP-WLKFQME4	

With Steel Line 	Dimension (Unit: mm)				Mating Pair (Gender)	Part Number	IP Rating
	Size	A	B	L			
	(B) 0	14.0	12.5	18.5	Male	CAP-WLKMQCE2	IP68
	(C) 1	16.0	15.5	20.5	Male	CAP-WLKMQCE3	
	(D) 2	19.5	17.5	22.5	Male	CAP-WLKMQCE4	

- Push-Pull locking or Break-Away function
- Easy handling and blind mateable
- Lightweight, small and easy handling
- Definite and secure locking condition



IP68
Protection



Harsh
Environment



Quick
Installation



Fully
Shielded



Corrosion
Resistant



RoHS
Compliant



UL 94V-0

Markets / Applications



Aircraft



Warship



Software Defined Radios

Antenna GPS

Thermal Sensor

Integrated
Electronics



Night Goggles

Radio / Audio
Communication

Weapon Control

Battery Power
/ Charging



Military



Tank



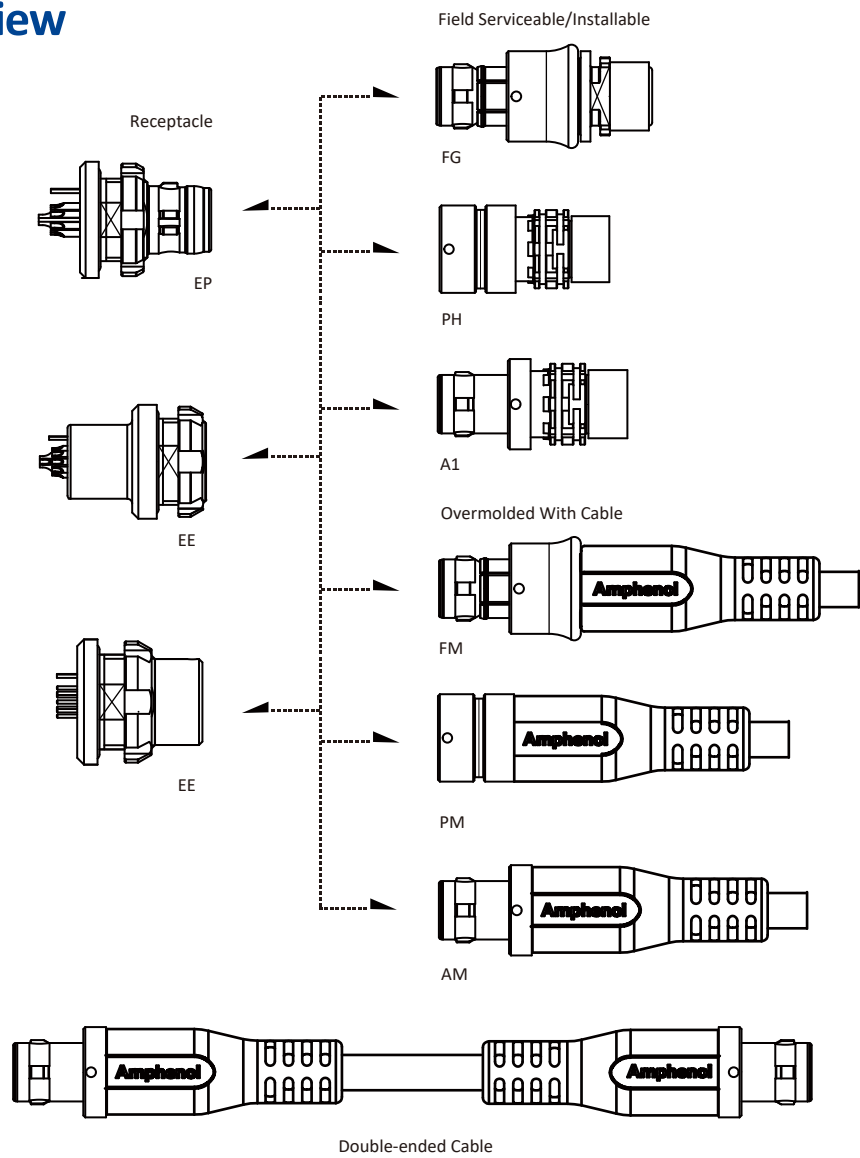
Dismounted Soldier

Example	FDY	B	-	02	EG	F	S	-	G	C	P	-	001
	XXX	X	-	XX	XX	X	X	-	X	X	X	-	XXX
	1	2		3	4	5	6		7	8	9		10
Series / Sub-Series (FDY) FLO Y Series													
Size (B) 0 (C) 1 (D) 2													
Number Of Contacts 2 ~ 26 Contacts e.g. (03) = 3 Contacts													
Connector Style > For Receptacle (EP) 180° Male Panel With Slotted Nut (Front Fasten)* (EE) 180° Female Panel With Slotted Nut (Front Fasten) > For Field Serviceable/Installable (FG) 180° Male Field Serviceable/Installable* (PH) 180° Female Field Serviceable/Installable* (A1) 180° Male Field Serviceable/Installable Break Away > For Overmolded With Cable (FM) 180° Male Overmolded Push Pull* (PM) 180° Female Overmolded Push Pull* (AM) 180° Male Overmolded Break Away*													
Connector & Contact Gender (F) Female Connector, Female Contact (M) Male Connector, Male Contact (C) Hybrid Style*													
Assembly Style > For Receptacle & Overmolded With Cable & Field Serviceable/Installable (S) Solder Type (P) 180° PCB Type (C) Crimp Type*													
Keying (N) 5 KEY / Green (P) 5 KEY / Red* (Q) 5 KEY / Blue (R) 5 KEY / Brown													
Housing Material & Surface Plating (U) Aluminium Alloy / Ruthenium (D) Aluminium Alloy / Black Chrome													
Insulation Material (P) PPS (K) PEEK*													
More Information > For Receptacle (000) FI None (001), (002)..... For Different Versions > For Overmolded Woth Cable (□)+(■) Cable Type + Cable Length e.g. (A01) = UL2464, PVC + 1M (□) Cable Type (A) PVC (B) PU (E) Cat. 5e (■) Cable Length From 1M ~ 99M e.g. (01) = 1M													

Example									
FDY B - 09 R D K - FG - FG - A001									
XXX X - XX X X X - XX - XX - XXXX									
1 2 3 4 5 6 7 8 9									
Series / Sub-Series									
(FDY) FLO+ Y Series									
Size									
(B) 0									
(C) 1									
(D) 2									
Number Of Contacts									
2 ~ 26 Contacts									
e.g. (03) = 3 Contacts									
Keying									
(N) 5KEY / Green									
(P) 5KEY / Red*									
(Q) 5KEY / Blue									
(R) 5KEY / Brown									
*Upon Request									
Housing Material & Surface Plating									
(U) Aluminium Alloy / Ruthenium									
(D) Aluminium Alloy / Black Chrome									
Insulation Material									
(P) PPS									
(K) PEEK*									
*Upon Request									
Connector Style For Connector 1									
> FLO Series									
(FM) 180° Male Overmolded Push-Pull*									
(AM) 180° Male Overmolded Break-Away*									
(PM) 180° Female Overmolded*									
*Upon Request									
Connector Style For Connector 2									
> FLO Series									
(FM) 180° Male Overmolded Push-Pull*									
(AM) 180° Male Overmolded Break-Away*									
(PM) 180° Female Overmolded*									
*Upon Request									
More Information									
> For Overmolded With Cable									
(□) + (■) Cable Type + Cable Length									
e.g. (A001) = UL2464, PVC + 1M									
(□) Cable Type									
(A) PVC									
(B) PU									
(E) Cat. 5e									
(■) Cable Length									
From 0.5M ~ 99M									
e.g. (A05) = 0.5M, (001) = 1M...(099) = 99M									

Size	0 (B)				1 (C)			2 (D)		
Connector Type	Receptacle		Field Serviceable/Installable Overmolded With Cable		Receptacle	Field Serviceable/Installable Overmolded With Cable		Receptacle	Field Serviceable/Installable Overmolded With Cable	
Contact	Male	Female	Male	Female	Female	Male	Female	Female	Male	Female
	EP	EE	FG / A1	PH	EE	FG / A1	PH	EE	FG / A1	PH
2 Pin										
	10A / 400V		10A / 400V							
3 Pin										
	10A / 400V		10A / 400V							
4 Pin										
	7A / 300V		7A / 300V		10A / 500V		10A / 500V		14A / 650V	
5 Pin										
						10A / 450V		10A / 450V		
6 Pin										
								14A / 500V		14A / 500V
7 Pin										
	5A / 300V		5A / 300V							
8 Pin										
					7A / 333V		7A / 333V			
9 Pin										
	5A / 200V		5A / 200V							
10 Pin										
	5A / 200V		5A / 200V							
14 Pin										
					5A / 200V		5A / 200V			
16 Pin										
					5A / 200V		5A / 200V			
19 Pin										
								7A / 333V		7A / 333V
26 Pin										
								5A / 300V		5A / 300V

Range Overview



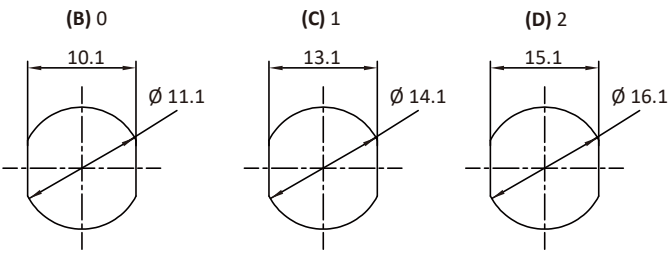
FLOS & FLOS+

Alignment Keying

NEW

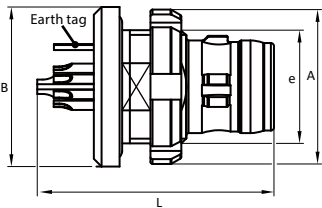
Code	Number of Keys	Color	Front View of Receptacle
N	5	Green	
P	5	Red	
Q	5	Blue	
R	5	Light brown	

Panel Cut Out



(Unit: mm)

EP 180° Male Panel With Slotted Nut (Front Fasten)

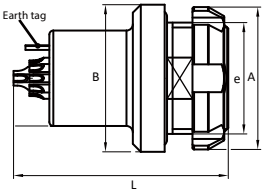


② Size	Dimension (Unit: mm)				③ Contact	Recommended Panel Thickness
	A	B	e	L		
(B) 0	12.8	13.2	M10*0.5	21.4	3 ~ 10	3mm

- Part Number:
FDY ②-③ EPMS-RU ⑨-001
FDY ②-③ EPMS-RD ⑨-001
- Operating Temperature: -40°C ~ 125°C
- Nut Torque Value: 1.0 Nm
- Gender: Female
- Assembly Style: PCB
- Keying: R
- ⑨ Insulation Material: (P)PPS / (K) PEEK

Mated With:
Break-Away : PH (4-28)

EE 180° Female Panel With Slotted Nut (Front Fasten)

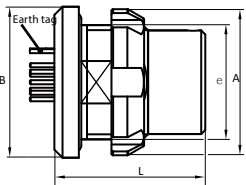


② Size	Dimension (Unit: mm)				③ Contact	Recommended Panel Thickness
	A	B	e	L		
(B) 0	15.0	15.5	M11*0.75	22.0	3 ~ 10	3mm
(C) 1	17.9	18.5	M14*1	27.0	4 ~ 16	3.5mm
(D) 2	21.9	20.8	M16*1	29.5	4 ~ 26	3mm

- Part Number:
FDY ②-③ EEFP-RU ⑨-001
FDY ②-③ EEFP-RD ⑨-001
- Operating Temperature: -40°C ~ 125°C
- Nut Torque Value: 1.0 Nm
- Gender: Female
- Assembly Style: PCB
- Keying: R
- ⑨ Insulation Material: (P) PPS / (K) PEEK

Mated With:
Push-Pull : FG (4-28), Break-Away : A1 (4-28)

EE 180° Female Panel With Slotted Nut (Front Fasten)

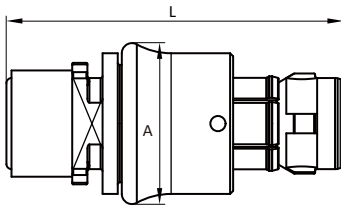


② Size	Dimension (Unit: mm)				③ Contact	Recommended Panel Thickness
	A	B	e	L		
(B) 0	15.0	15.5	M11*0.75	15.5	3 ~ 10	5mm
(C) 1	17.9	18.5	M14*1	18.5	4 ~ 16	4mm
(D) 2	21.9	20.8	M16*1	20.5	4 ~ 26	4mm

- Part Number:
FDY ②-③ EEFP-RU ⑨-002
FDY ②-③ EEFP-RD ⑨-002
- Operating Temperature: -40°C ~ 125°C
- Nut Torque Value: 1.0 Nm
- Gender: Female
- Assembly Style: PCB
- Keying: R
- ⑨ Insulation Material: (P) PPS / (K) PEEK

Mated With:
Push-Pull : FG (4-28), Break-Away : A1 (4-28)

FG 180° Male Field Serviceable/Installable, FM Overmolded With Cable

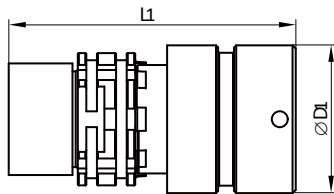


②	Dimension (Unit: mm)		③
Size	A	L	Contact
(B) 0	14.0	31.4	3 ~ 10
(C) 1	12.9	33.2	4 ~ 16
(D) 2	19.6	35.2	4 ~ 26

Mated With:
EP (4-27), EE (4-27)

- Part Number
Field Serviceable/Installable: FDY ②-③ FGMS-R ⑧ ⑨-000
Overmolded: FDY ②-③ FMMS-R ⑧ ⑨-⑩
- Operating Temperature:
Field Serviceable/Installable: -40°C ~ 125°C
Overmolded: -20°C ~ 85°C
- Nut Torque Value: N/A
- Gender: Male
- Assembly Style: Solder
- Keying: R
- ⑧ Housing Material & Surface Plating:
(U) Aluminium Alloy / Ruthenium
(D) Aluminium Alloy / Black Chrome
- ⑨ Insulation Material: (P) PPS / (K) PEEK
- Cable Type: PVC, Black
- ⑩ Cable Length: From 0.5M ~ 99M
e.g. (A05) = 0.5M, (001) = 1M

PH 180° Female Field Serviceable/Installable, PM Overmolded With Cable

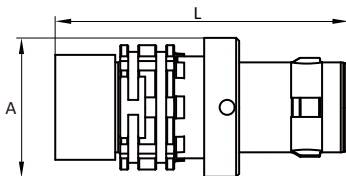


②	Dimension (Unit: mm)		③
Size	A	L	Contact
(B) 0	11.9	25.0	3 ~ 10
(C) 1	13.9	27.0	4 ~ 16
(D) 2	17.6	30.0	4 ~ 26

Mated With:
EP (4-27)

- Part Number
Field Serviceable/Installable: FDY ②-③ PHMS-R ⑧ ⑨-000
Overmolded: FDY ②-③ PMMS-R ⑧ ⑨-⑩
- Operating Temperature:
Field Serviceable/Installable: -40°C ~ 125°C
Overmolded: -20°C ~ 85°C
- Nut Torque Value: N/A
- Gender: Male
- Assembly Style: Solder
- Keying: R
- ⑧ Housing Material & Surface Plating:
(U) Aluminium Alloy / Ruthenium
(D) Aluminium Alloy / Black Chrome
- ⑨ Insulation Material: (P) PPS / (K) PEEK
- Cable Type: PVC, Black
- ⑩ Cable Length: From 0.5M ~ 99M
e.g. (A05) = 0.5M, (001) = 1M

A1 180° Male Field Serviceable/Installable Break Away, AM Overmolded With Cable

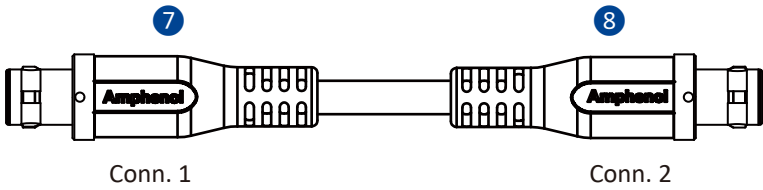


②	Dimension (Unit: mm)		③
Size	A	L	Contact
(B) 0	11.9	25.0	3 ~ 10
(C) 1	13.9	29.2	4 ~ 16
(D) 2	17.6	31.0	4 ~ 26

Mated With:
EE (4-27)

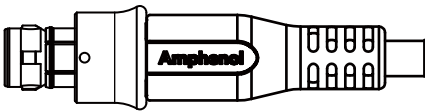
- Part Number:
Field Serviceable/Installable: FDY ②-③ A1MS-R ⑧ ⑨-000
Overmolded: FDY ②-③ AMMS-R ⑧ ⑨-⑩
- Operating Temperature:
Field Serviceable/Installable: -40°C ~ 125°C
Overmolded: -20°C ~ 85°C
- Nut Torque Value: N/A
- Gender: Male
- Assembly Style: Solder
- Keying: R
- ⑧ Housing Material & Surface Plating:
(U) Aluminium Alloy / Ruthenium
(D) Aluminium Alloy / Black Chrome
- ⑨ Insulation Material: (P) PPS / (K) PEEK
- Cable Type: PVC, Black
- ⑩ Cable Length: From 0.5M ~ 99M
e.g. (A05) = 0.5M, (001) = 1M

Double End Cable



- Part Number: FDY ②-③ RDK-⑦-⑧-A ⑨
- Assembly Style: Solder
- Keying: R
- Operating Temperature: -20°C ~ 85°C
- Cable Type: PVC, Black
- ⑨ Cable Length: From 0.5M ~ 99M
e.g. (A05) = 0.5M, (001) = 1M

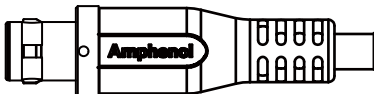
FM ⑦ & ⑧



PM ⑦ & ⑧



AM ⑦ & ⑧



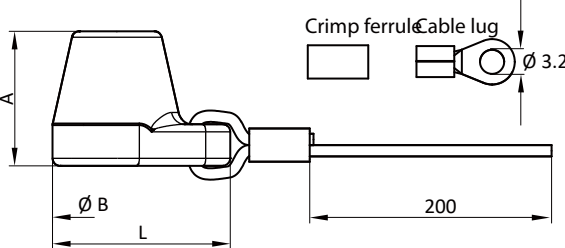
② Size	Dimension (Unit: mm)		③ Contact
	A	L	
(B) 0	14.0	31.4	3 ~ 10
(C) 1	12.9	33.2	4 ~ 16
(D) 2	19.6	35.2	4 ~ 26

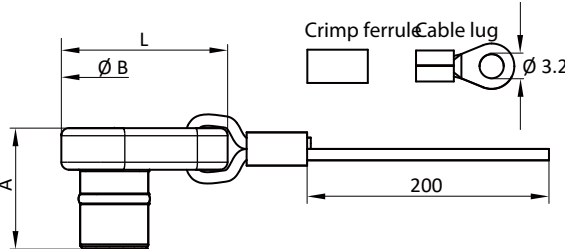
② Size	Dimension (Unit: mm)		③ Contact
	A	L	
(B) 0	11.9	25.0	3 ~ 10
(C) 1	13.9	27.0	4 ~ 16
(D) 2	17.6	30.0	4 ~ 26

② Size	Dimension (Unit: mm)		③ Contact
	A	L	
(B) 0	11.9	25.0	3 ~ 10
(C) 1	13.9	29.2	4 ~ 16
(D) 2	17.6	31.0	4 ~ 26

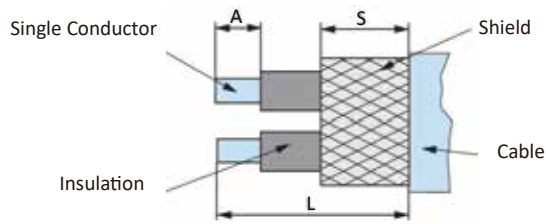
Accessories

Cap

With Steel Line	Dimension (Unit: mm)				Mating Pair (Gender)	Part Number	IP Rating
	Size	A	B	L			
	(B) 0	15.5	12.0	20.0	Female	CAP-WDYMQME0	IP67
	(C) 1	16.0	14.0	22.0	Female	CAP-WDYMQME1	
	(D) 2	17.5	17.0	25.0	Female	CAP-WDYMQME2	

With Steel Line	Dimension (Unit: mm)				Mating Pair (Gender)	Part Number	IP Rating
	Size	A	B	L			
	(B) 0	16.5	15.0	21.5	Male	CAP-WDYFQME0	IP67
	(C) 1	17.8	17.0	23.5	Male	CAP-WDYFQME1	
	(D) 2	19.5	21.0	28.0	Male	CAP-WDYFQME2	

Cable Preparation – straight cable exit / right angle cable exit



A = Stripping length single conductor
L = Stripping length cable jacket
S = Stripping length braided shield

Cable OD Max.

Size	max. cable $\varnothing$ mm
0	5.5
1	6.5
2	10.0

Size	Contact $\varnothing$	Straight Cable Assembly			Right Angle Cable Assembly		
		L	A	S	L	A	S
0	0.5	9	3.5	8	14	3.5	14
	0.6	9	3.5	8	14	3.5	14
	0.7	9	3.7	8	14	3.7	14
	0.9	9	3.7	8	14	3.7	14
1	0.5	11	3.5	8	15	3.5	15
	0.6	11	3.5	8	15	3.5	15
	0.7	11	3.7	8	15	3.7	15
	0.9	11	3.7	8	15	3.7	15
1.5(A)	0.5	11	3.5	8	15	3.5	15
	0.6	11	3.5	8	15	3.5	15
	0.7	11	3.7	8	15	3.7	15
	0.9	11	3.7	8	15	3.7	15
2	0.5	11	3.5	8	15	3.5	15
	0.7	11	3.7	8	15	3.7	15
	1.3	11	4.1	8	15	4.1	15
	2.0	11	4.1	8	15	4.1	15
3	0.5	13	13	8	30	3.5	25
	0.7	13	13	8	30	3.7	25
	0.9	13	13	8	30	3.7	25
	2.0	13	13	8	30	5.4	25

All dimensions in mm

Tolerance: +10 %

Exceptions are noted on special instructions.

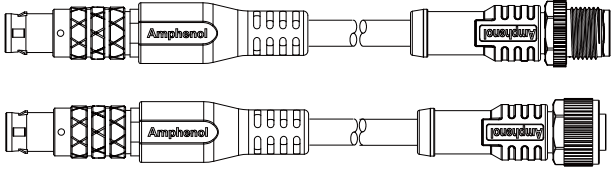
Right-angle plugs have special instructions.

Notes for data-rate-connectors

Before soldering, twist the strands back slightly in the original direction. If a shield is available for the separately pairs of wires (e.g. STP-Cables), wrap it around the pairs so as far as possible.

Cable Assembly Customization

➤ FLOS / FLOS+ to M12



1 Conn. 1: (FLB)
(FLK)
(SLK)

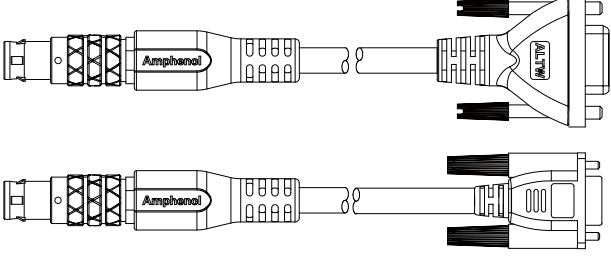
4 Conn. 2

	3 Pin	4 Pin	5 Pin	8 Pin	10 Pin	12 Pin	17 Pin
A Code (MSAS)	✓	✓	✓	✓	✓	✓	✓
B Code (MSBS)		✓	✓				
D Code (MSDS)		✓					
S Code (M12S)		✓					
T Code (M12T)		✓					
X Code (MSXS)				✓			

• Code (Example):

FLB	B	02	-	MSAS	02	-	01
1	Size	Contact		4	Contact		Cable Length (M)
FLB	00 (A)	02 ~ 19	-	MSAS	02 ~ 17	-	01 ~ 99
FLK	0 (B)			MSBS			
SLK	0 (C)			MSDS			
	0 (D)			M12S			
				M12T			
				MSXS			

➤ FLOS / FLOS+ to D-Sub



1 Conn. 1: (FLB)
(FLK)
(SLK)

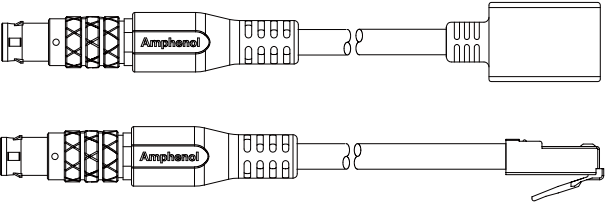
4 Conn. 2

	9 Pin	15 Pin	26 Pin
Standard D-Sub (SDB)	✓	✓	
High Density D-Sub (HDB)		✓	✓

• Code (Example):

FLB	B	02	-	SDB	02	-	01
1	Size	Contact		4	Contact		Cable Length (M)
FLB	00 (A)	02 ~ 19	-	SDB	09 ~ 26	-	01 ~ 99
FLK	0 (B)			HDB			
SLK	0 (C)						
	0 (D)						

➤ FLOS / FLOS+ to RJ45



1 Conn. 1: (FLB)
(FLK)
(SLK)

4 Conn. 2

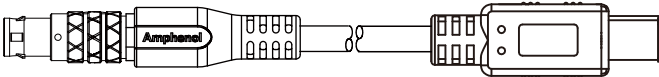
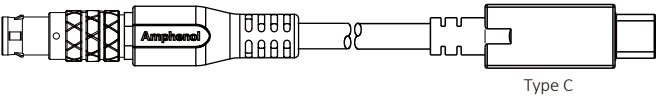
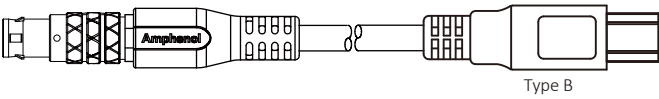
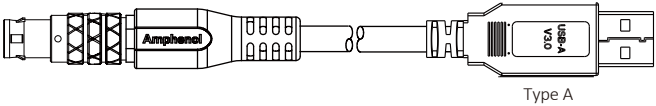
	Cat. 5e	Cat. 6A
RJ45 Jack (JACK)	✓	✓
RJ45 Plug (PLUG)	✓	✓

• Code (Example):

FLB	B	02	-	PLUG	08	-	01
1	Size	Contact		4	Contact		Cable Length (M)
FLB	00 (A)	02 ~ 19	-	JACK	08	-	01 ~ 99
FLK	0 (B)			PLUG			
SLK	0 (C)						
	0 (D)						

Cable Assembly Customization

➤ FLOS / FLOS+ to USB



1 Conn. 1: (FLB)
(FLK)
(SLK)

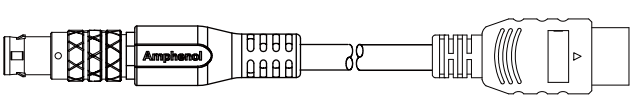
4 Conn. 2

	2.0	3.2 Gen 1	3.2 Gen 2
USB Type A Plug (UA)	✓	✓	
USB Type B Plug (UB)	✓		
USB Type C Plug (UC)	✓	✓	✓
Mini Type B Plug (NUB)	✓		

• Code (Example):

FLB	B	02	-	UA	20	-	01
1	Size	Contact		4	Speed		Cable Length (M)
FLB	00 (A)	02 ~ 19	-	UA	2.0 (20)	-	01 ~ 99
FLK	0 (B)			UB	3.2 (G1)		
SLK	0 (C)			UC	3.2 (G2)		
	0 (D)			NUB			

➤ FLOS / FLOS+ to HDMI

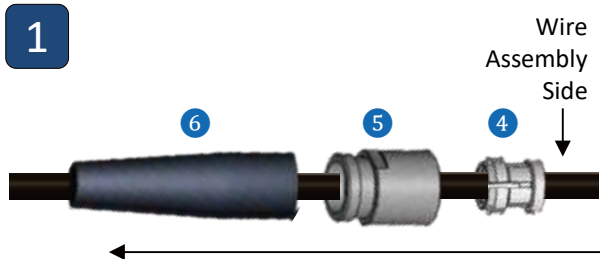
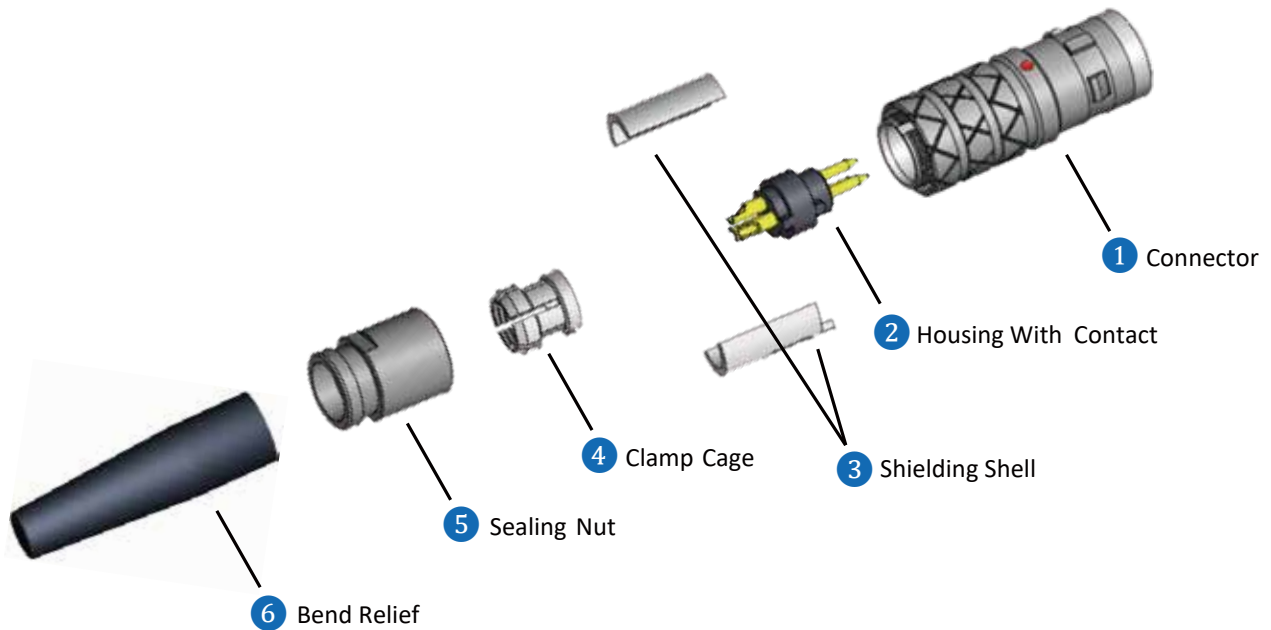


1 Conn. 1: (FLB)
(FLK)
(SLK)

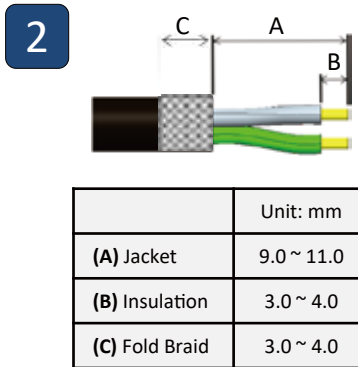
4 Conn. 2

• Code (Example):

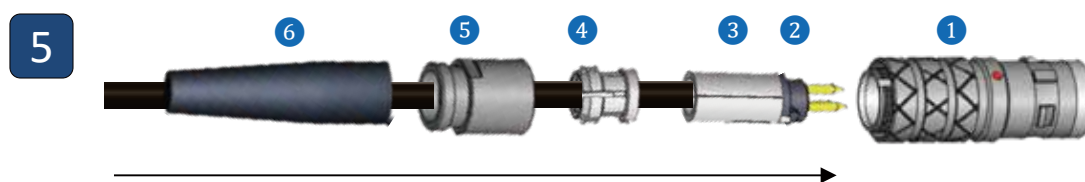
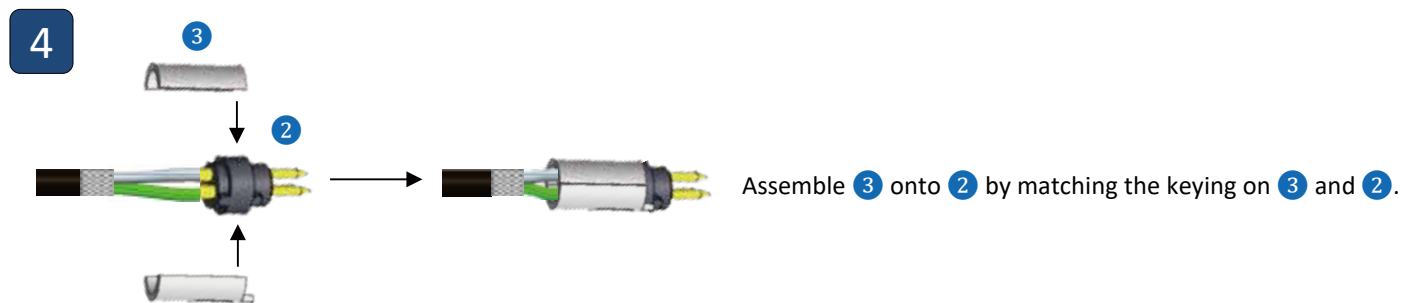
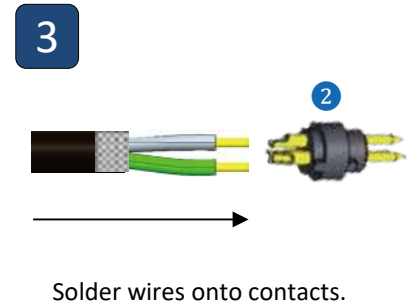
FLB	B	02	-	HDMI	A	-	01
1	Size	Contact		4	Type		Cable Length (M)
FLB	00 (A)	02 ~ 19	-	HDMI	A	-	01 ~ 99
FLK	0 (B)						
SLK	0 (C)						
	0 (D)						



Follow the order from 6 to 4 (*6 is optional*) and put components through cable accordingly, no need to assemble here.

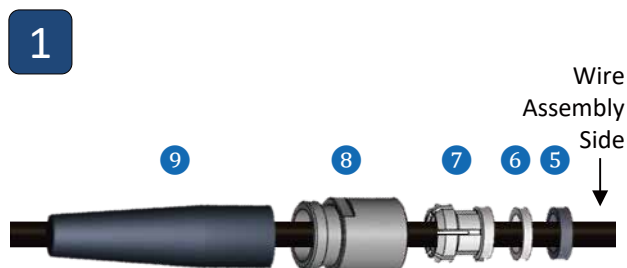
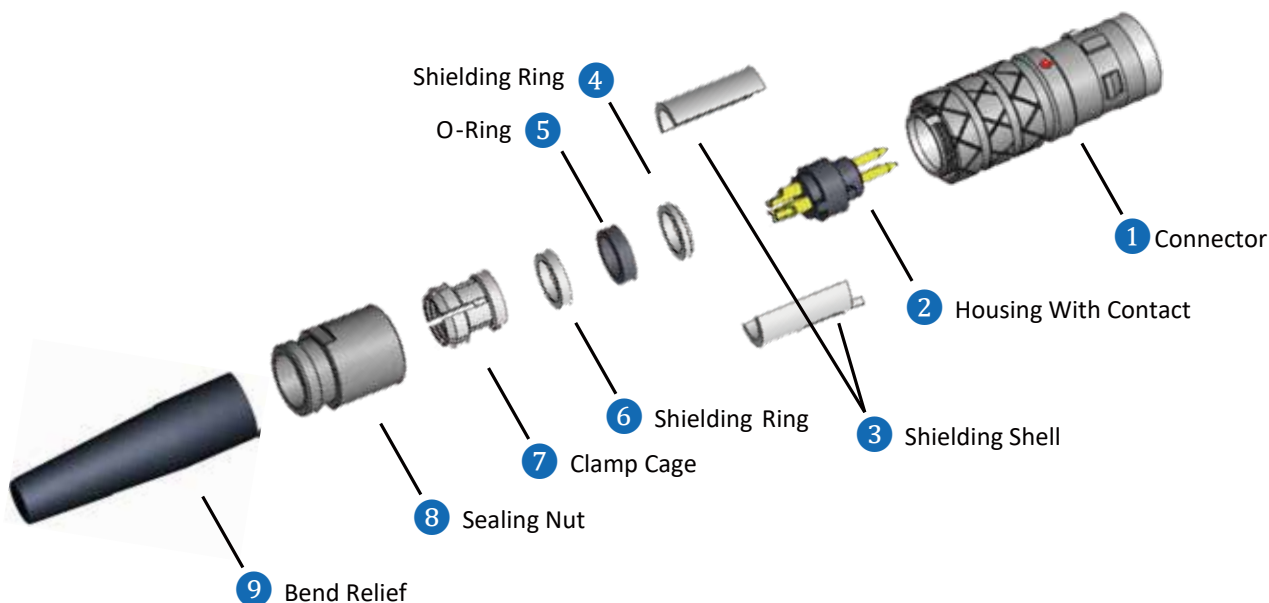


Follow suggested stripping length of (A) Jacket, (B) Insulation, (C) Fold Braid.

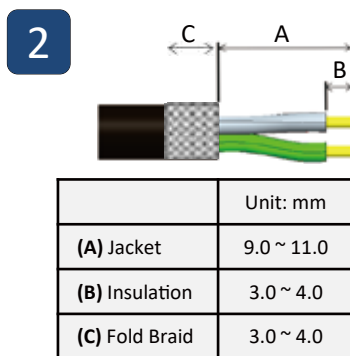


- Assemble 2、3、4 → 1, and make sure the keying on 4 & 1 are matched.
- Assemble components in the order 5 → 1 with suggested torque force.
- Assemble 6 → 5

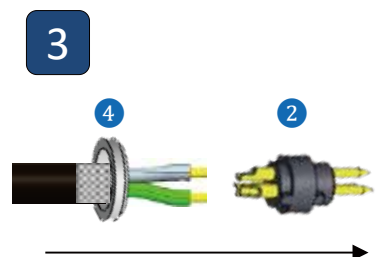
	1 & 5
Torque Force (Unit: kgf-cm)	3.0 ~ 4.0



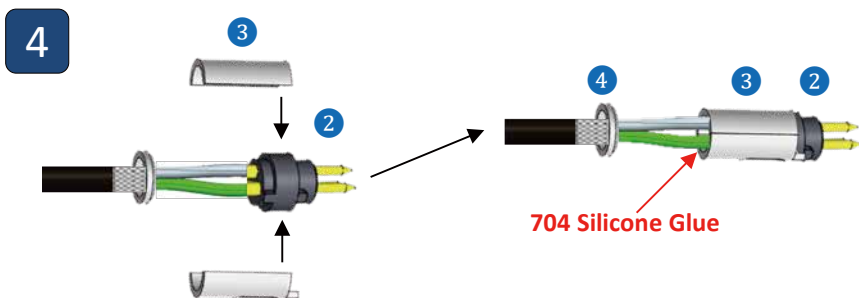
Follow the order from ⑨ to ⑤ (⑨ is optional) and put components through cable accordingly, no need to assemble here.



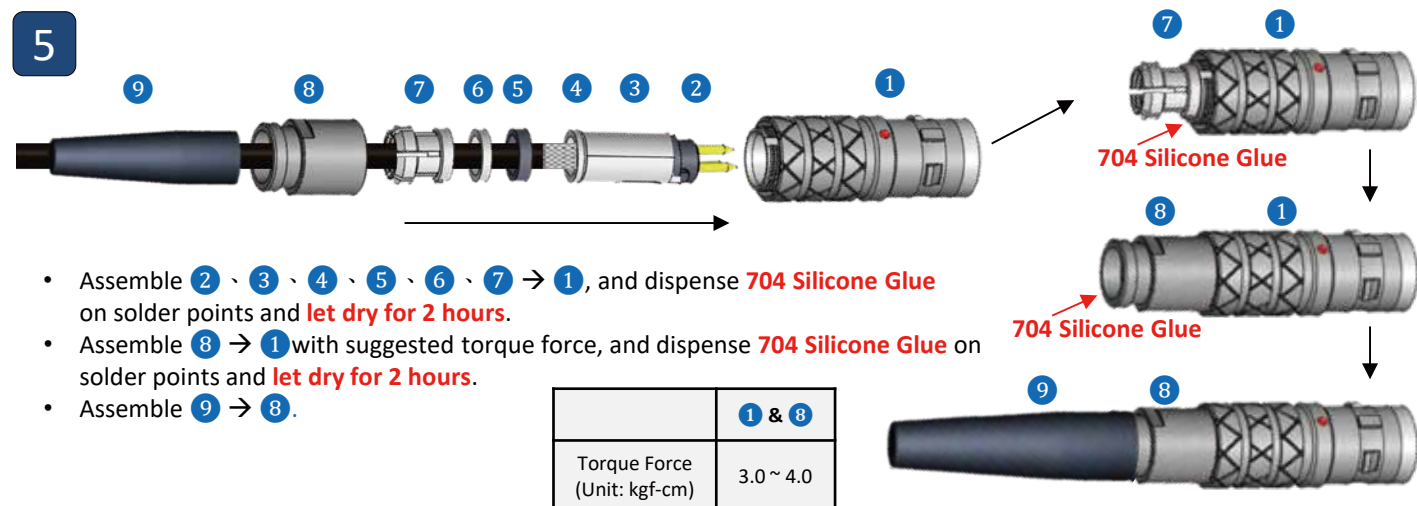
Follow suggested stripping length of (A) Jacket, (B) Insulation, (C) Fold Braid.

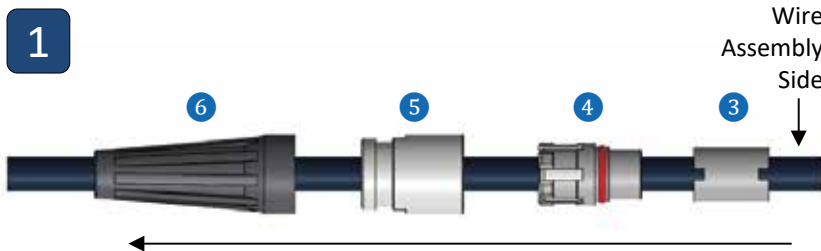
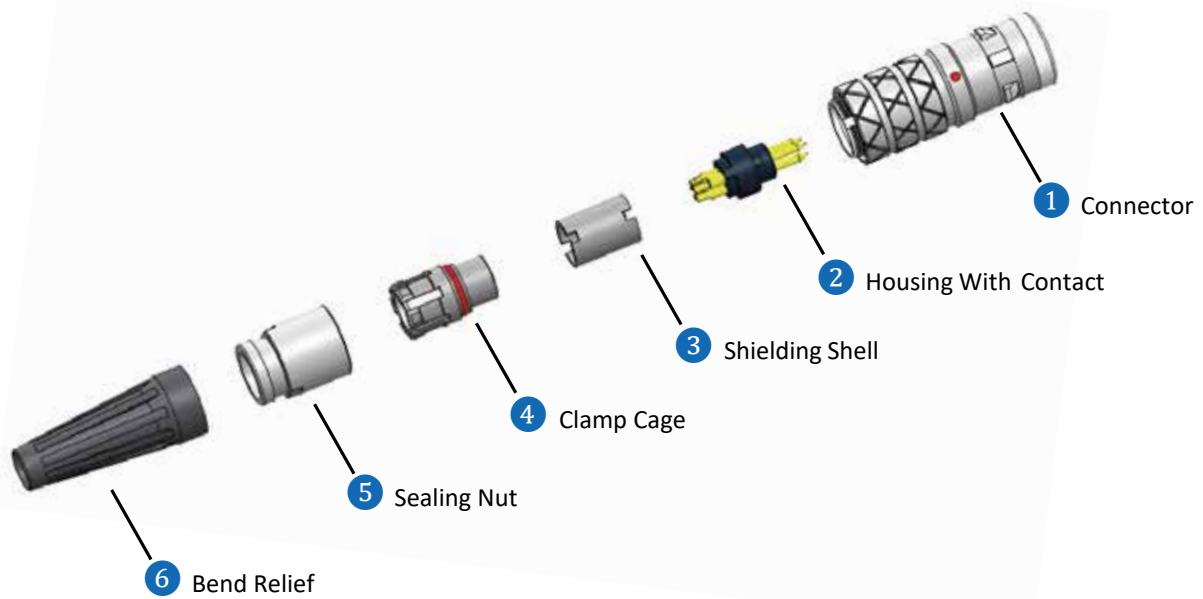


Put wires through ④, and it should be blocked before braid. Then solder wires onto contacts.

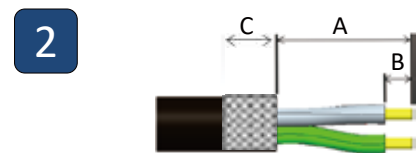


Assemble ③ onto ② by matching the keying on ③ and ②. Then dispense **704 Silicone Glue** on solder points and **let dry for 2 hours**.



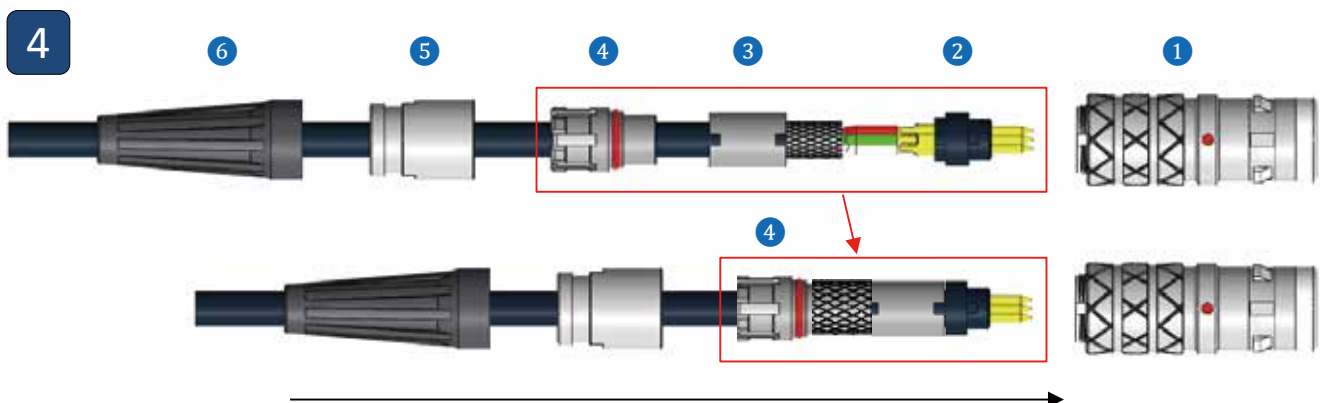
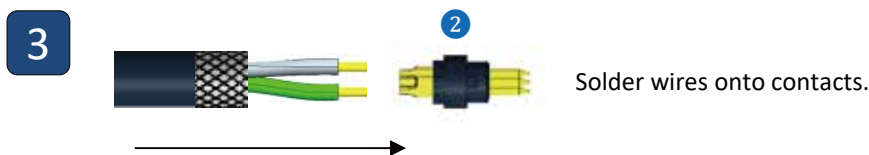


Follow the order from ⑥ to ③ (⑥ is optional) and put components through cable accordingly, no need to assemble here.



	Unit: mm
(A) Jacket	9.0 ~ 11.0
(B) Insulation	3.0 ~ 4.0
(C) Fold Braid	3.0 ~ 4.0

Follow suggested stripping length of (A) Jacket, (B) Insulation, (C) Fold Braid.



- Assemble ②、③、④ → ①, make sure the front part of ④ is covered by **Braid**. Then rotate ④ in order to match all the keying on ④、③、②.
- Assemble ⑤ → ① with suggested torque force.
- Assemble ⑥ → ⑤.

	① & ⑤
Torque Force (Unit: kgf-cm)	3.0 ~ 4.0