

Amphenol LTW

- Reliable connection for power / data / signal transmission
- Easy auto-latching plug, fast & secure
- Metal shell for 360° EMI shielding
- Meet IP50/IP68
- Operating temperature -40°C to 125°C

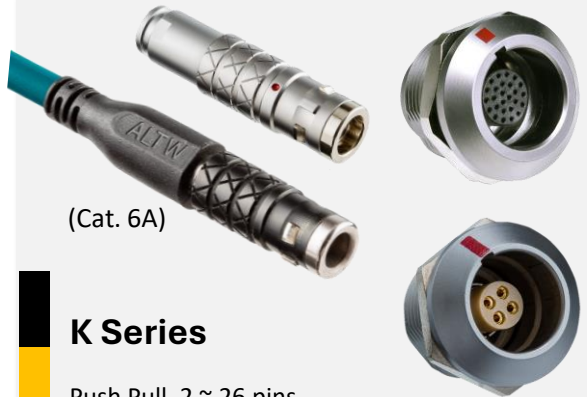
FLOS & FLOS+ Connector

Push Pull or Break Away



B Series

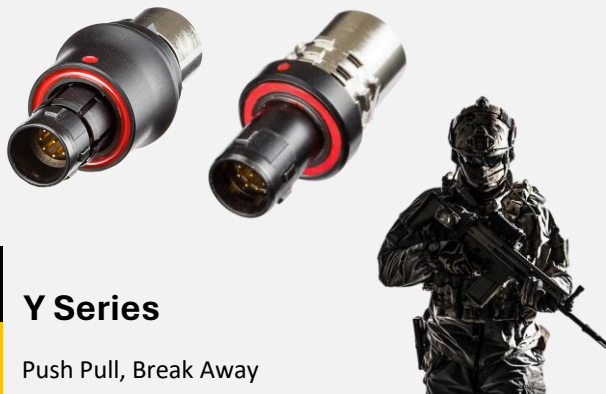
Push Pull, 2 ~ 19 pins



(Cat. 6A)

K Series

Push Pull, 2 ~ 26 pins



Y Series

Push Pull, Break Away



Accessory

Waterproof cap, Dust cap

Unrivalled InterConnects for Harsh Environments

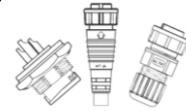
About ALTW

**3**

Production Sites
(Taiwan, China, Mexico)

**30+**

Market Applications

**90,000+**

Products

Since 1993, Amphenol LTW Technology “ALTW” lives and breathes to create, innovate, design and produce “***unrivaled interconnects for harsh environments***”. With over 300 worldwide patents, not only does ALTW offer the broadest and widest range of rugged interconnects in the industry but also customization with the mission of “Customer Satisfaction First”. Undoubtedly, ALTW is the leader in rugged interconnects, highly recognized for its uncompromising quality, short lead time, fast and tailored service and its very competitive pricing.

Regardless of the challenging environments that your products will be subject to; there is a very good chance that you will find what you are looking for with ALTW.

Unrivaled InterConnects for Harsh Environments

FLOS & FLOS+

Amphenol LTW's FLOS & FLOS+ Series connectors provide a full-metal push-pull and break-away solutions for data, signal, and power transmissions in indoor and outdoor environments. FLOS & FLOS+ Series not only offers high performance of interconnection with its push-pull coupling mechanism, corrosion-resistant coating and 360° EMI shielding but also cost-effective price in the market.

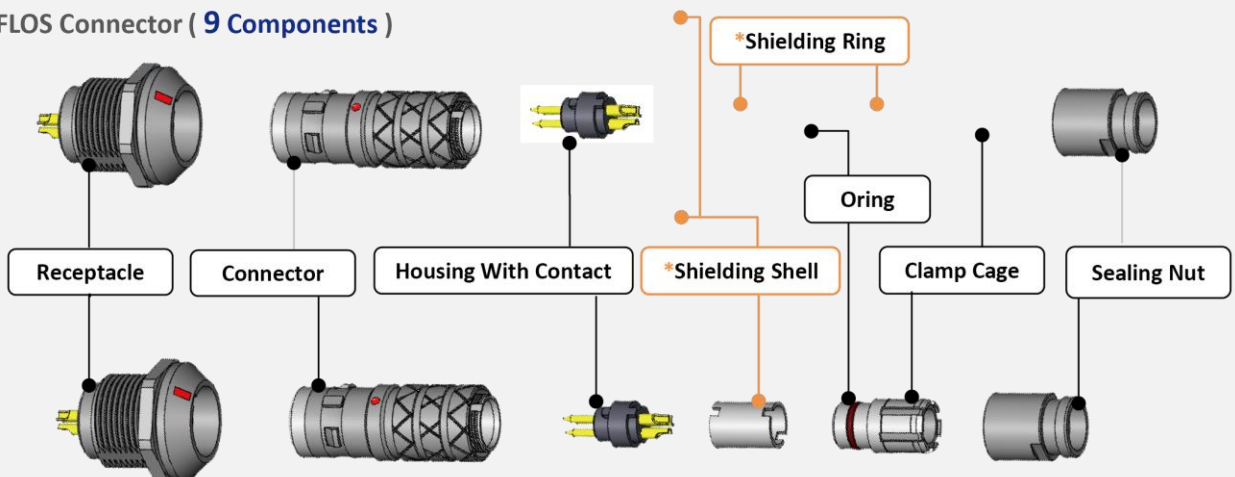
These push-pull connectors meet IP50/IP68 waterproof protection, and UL94V-0 flammability rating ideal for multiple applications include non-invasive medical electronic equipment, military, testing, and measurement equipment.

- ❖ IP50, IP68 mated or unmated
- ❖ Nominal current up to 25A
- ❖ Operating voltage up to 700V
- ❖ Push-pull locking and break-away function
- ❖ Flexibility & Capability Of Customization
- ❖ RoHS & REACH compliant



FLOS & FLOS+ Comparison

FLOS Connector (9 Components)



FLOS+ Connector (6 Components)

* Shielding Shell: Combine into 1 component

* Shielding Ring: Removed

FLOS Y Series - Military Connector



**Harsh
Environment**



**Corrosion
Resistant**



360° Shielded



**Quick
Disconnect**



UL94V-0

Amphenol LTW FLOS Y Series Robust Metal Circular Connectors are an advanced and highly reliable solution with Push-Pull or Break-Away locking for military applications.

- ❖ Push-pull mechanism
- ❖ Lightweight
- ❖ Simple mating and locking
- ❖ Compact design
- ❖ Affordable
- ❖ Extremely robust
- ❖ Blind mate
- ❖ Unmistaken locking and mating state



Product Range Overview

SUB SERIES	B Series A Size	B Series B Size	B Series C Size	B Series D Size
Mating Style	Push Pull	Push Pull	Push Pull	Push Pull
Plastic Version	-	-	-	-
Metal Version	✓	✓	✓	✓
No. of Contacts	5	2 ~ 9	2 ~ 16	2 ~ 19
Plating of Contacts	Gold Plated	Gold Plated	Gold Plated	Gold Plated
Operating Voltage (AC/DC)	150V, 200V	150V ~ 400V	150V ~ 500V	200V ~ 700V
Nominal Current	1.7A, 2A	2A ~ 10A	1.5A ~ 9A	1.7A ~ 25A
Operating Temperature	-40°C ~ 105°C	-40°C ~ 105°C	-40°C ~ 105°C	-40°C ~ 105°C
Fasten Style of Nut	Rear	Dual	Dual	Dual
Receptacle	✓	✓	✓	✓
Field Serviceable/Installable	✓	✓	✓	✓
Accessories	✓	✓	✓	✓
Mating Cycles (Pin Contact)	5000	5000	5000	5000
IP Rating	IP50	IP50	IP50	IP50
Salt Spray (Connector, Mated)	96h, 144h	144h	144h	144h
UV Resistant	-	-	-	-
Flammability Rating	UL94V-0	UL94V-0	UL94V-0	UL94V-0
Vibration Resistant	10 ~ 55Hz / Amplitude 1.52mm, 10 ~ 2000Hz/15g	10 ~ 55Hz / Amplitude 1.52mm		10 ~ 55Hz / Amplitude 1.52mm, 10 ~ 2000Hz/15g
EMI Option	✓	✓	✓	✓
RoHS Compliant	✓	✓	✓	✓
REACH Compliant	✓	✓	✓	✓
Applicable Wire Gauge	28 ~ 30 AWG	22 ~ 30 AWG	20 ~ 30 AWG	16 ~ 30 AWG

Product Range Overview

SUB SERIES	K Series B Size	K Series B Size (FLOS +)	K Series C Size	K Series C Size (FLOS+)
Mating Style	Push Pull	Push Pull	Push Pull	Push Pull
Plastic Version	-	-	-	-
Metal Version	✓	✓	✓	✓
No. of Contacts	2 ~ 9	7	2 ~ 16	2 ~ 8
Plating of Contacts	Gold Plated	Gold Plated	Gold Plated	Gold Plated
Operating Voltage (AC/DC)	150V ~ 400V	250V	150V ~ 500V	60V ~ 600V
Nominal Current	2A ~ 10A	2.5A	1.5A ~ 15A	2A ~ 15A
Operating Temperature	-40°C ~ 105°C			
Fasten Style of Nut	Dual	N/A	Dual	Dual
Receptacle	✓	✓	✓	✓
Field Serviceable/Installable	✓	✓	✓	✓
Accessories	✓	✓	✓	✓
Mating Cycles (Pin Contact)	5000	5000	5000	5000
IP Rating	IP68	IP68	IP68	IP68
Salt Spray (Connector, Mated)	144h	144h	144h	144h, 1000h
UV Resistant	-	-	-	-
Flammability Rating	UL94V-0	UL94V-0	UL94V-0	UL94V-0
Vibration Resistant	10 ~ 55Hz / Amplitude 1.52mm	10 ~ 2000Hz / Amplitude 1.5mm	10 ~ 55Hz / Amplitude 1.52mm	10 ~ 55Hz / Amplitude 1.52mm, 10 ~ 2000Hz / Amplitude 1.5mm
EMI Option	✓	✓	✓	✓
RoHS Compliant	✓	✓	✓	✓
REACH Compliant	✓	✓	✓	✓
Applicable Wire Gauge	22 ~ 30 AWG	28 ~ 30 AWG	20 ~ 30 AWG	20 ~ 22 AWG

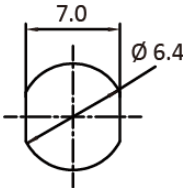
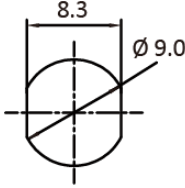
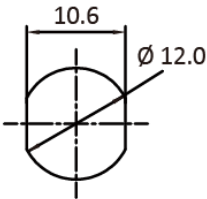
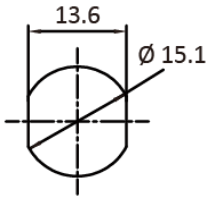
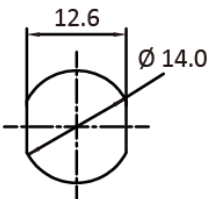
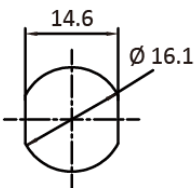
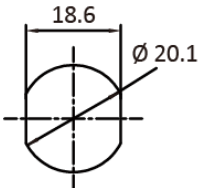
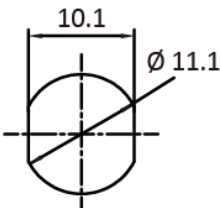
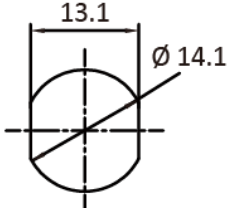
Product Range Overview

SUB SERIES	K Series D Size	K Series D Size (FLOS+)	Y Series B Size	Y Series C Size
Mating Style	Push Pull	Push Pull	Push Pull, Break-Away	Push Pull
Plastic Version	-	-	-	-
Metal Version	✓	✓	✓	✓
No. of Contacts	2 ~ 19	16 ~ 26	9	14
Plating of Contacts	Gold Plated	Gold Plated	Gold Plated	Gold Plated
Operating Voltage (AC/DC)	250V ~ 700V	200V, 300V	200V	300V
Nominal Current	5A ~ 17A	2A, 6A	5A	5A
Operating Temperature	-40°C ~ 105°C			
Fasten Style of Nut	Dual	Dual	Front	Front
Receptacle	✓	✓	✓	✓
Field Serviceable/Installable	✓	✓	✓	✓
Accessories	✓	✓	✓	✓
Mating Cycles (Pin Contact)	5000	5000	5000	5000
IP Rating	IP68	IP68	IP68	IP68
Salt Spray (Connector, Mated)	144h	1000h	96h	96h
UV Resistant	-	-	-	-
Flammability Rating	UL94V-0	UL94V-0	UL94V-0	UL94V-0
Vibration Resistant	10 ~ 55Hz / Amplitude 1.52mm	10 ~ 2000Hz / Amplitude 1.5mm	10 ~ 55Hz / Amplitude 1.52mm	
EMI Option	✓	✓	✓	✓
RoHS Compliant	✓	✓	✓	✓
REACH Compliant	✓	✓	✓	✓
Applicable Wire Gauge	16 ~ 24 AWG	22 ~ 30 AWG	26 AWG	26 AWG

Served Markets & Applications

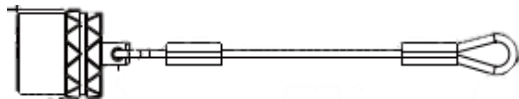
Market	Application	
LED Lighting	- Architectural Lighting - Residential, Medical, and Commercial Lighting - Street, Parking, Park Lot, and Tunnel Lighting - Entertainment and Signage Lighting	- Horticulture, Grow, & Warehouse Lighting - Mass Transportation and Vehicles - Marine Vessel and Submersible Lighting - Appliances and Equipment Lighting
Marine	- Navigation System: Radar, GPS, Sonar, Fish-finder, Auto-pilot, Sailing Instruments, Chart Plotter - Communication: Antenna, Radio, AIS, SCS - Instrumentation & Monitoring: MFD, CCTV, Sensors	- Power Distribution: Appliances, Charging, HVAC - Entertainment: Video, Audio, Decorative Fixture
Broadband Wireless Access	- Access Point: LTE, 5G - Cellular, Subscriber, and Mobile Station - Wireless Router and Mobile Backhaul	- Power Supply and distribution system - Other Communication Equipment
Industrial Automation	- Data Communication: Router, Switches - Motors: Servo, Step, Encoder, Actuator - Power Supply and Distribution - Robotic Arms, Packaging, and Conveyor System	- Controller: Machine Vision, AVI, Sensors - Autonomous Robots, Forklifts, Power Tools - Industrial PC, Counters, and Display
Renewable Energy	- Device Communication and Tracker - Wind Turbine and Tidal Power Generation	Energy Storage and Portable Energy
Heavy Equipment	- Navigation System: GPS, Lidar, Radar, Ultrasonic - Instrumentation, Control, and Diagnostic Systems - Monitoring: Display, Camera, Imaging	- Safety System: Sensor, ADAS, Telematics & Tracking - Communication and Electronic Toll Systems - Power Distribution: Charging, Lighting, Equipment
Autometer	- Metering: Water, Electric, & Gas Meter - Power and Control: Drone, Security Alarm	Monitoring: Sewage, Telemetry, and Vehicle Tracking
Test Equipment	- Measuring Device: Air, Humidity, Light, Sound, Water, Image, Weight, Height - Detectors: Gas, Fire, Leak, Motion, Heat - Monitoring: Seismic (earthquake), Climatic	- Weighing: Weigh, In-motion - Geodetic System: Surveying, Laser Marking, Borroscope
Hybrid Electric Vehicles	- Motor Module: Scooter, Hoover board, Wheelchair - Safety System: Speed, Brake, Throttle, Gear - Power System: Controller	- Sensors: Speedometer, Fuel, Cleaning - Device Communication: CAN, In-vehicle Info - Lighting: Interior and Exterior LED
Railway Mass Transit	- Navigation: GPS, Radar, Lidar, Ultrasonic - HVAC - Infotainment: Display, sound, Broadcasting, monitor	- Sensors: Speedometer, Fuel, Cleaning - Communication: Main Controller, In-vehicle Info - Lighting: Interior and Exterior
Mobile Devices	- Drone Remote Controller - Measurement: Altimeter, Gesture, Piezoelectric	Handheld: Barcode, Scanner, Portable lamp, GPS
Transpo	- Monitoring: Display ,C CTV, Lidar, Surveillance Cam - Communication: Wifi, router, Fleet Management	- Navigation: GPS, Radar - Peripherals: Speaker, Electronic seats
Medical Equipment	- Patient Care: Electric Beds, Wheelchair Lift & Stair, Rehabilitation System, Mobile Carts - Visualization: Display and Monitors	- Diagnostic: MRI, CT Scan, Ultrasound, X-ray - Monitoring: ECG, Holter, Blood Pressure, Sugar
Automotive Diagnostics	- Auto-crash Detection & Notification System - Vehicle Tracking and Roadside Assistance System	Remote Diagnostics
UAV	Drone: Commercial, Consumer, & Military	
Lifts & Materials Handling	Forklift, Industrial Lift, Material Handling	
Remote Video Response Center	- Monitoring: Display ,CCTV, Dome, IP Camera - Detection: Auto-License Plate Recognition, Alarm - Identification: Face Detection, Encoders	- Remote Control Devices and Sensors - Peripherals: Junction Boxes and Cabling System - Lighting: Interior and Exterior
Autonomous	- Navigation & Sensor: GPS, Lidar, Radar, Ultrasonic, IMU - Imaging: Cameras, Monitors, Infotainment Display	Controller: Inertial Measurement System, Central Computer
Communication	- Transmitter and Receiver Equipment - Data: Router and Switches	- Base Station and Access Point - High Bandwidth: Multiplexer & Demultiplexer
Commercial Military	- Vehicle: Tank, Aircraft, Warship, Submarine - Communication: Radios, VoIP, Telephone, Computer	- Imaging: Thermal and Night Vision Camera - Peripherals: Lighting and Charging Equipment
Rugged IT	- Telemetry - Military Notebook & Tablet and VR & AR	- Night Vision Goggles and Camera - Communication Equipment

Panel Cut-Out

(unit: mm) B Series	✓ Push Pull A Size  B Size  C Size  D Size 
K Series	✓ Push Pull B Size  C Size  D Size 
Y Series	✓ Push Pull ✓ Break Away B Size  C Size 

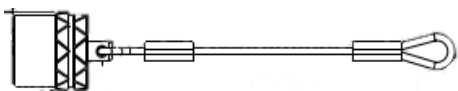
Waterproof Cap

✓ With Steel Line



Dust Cap

✓ With Steel Line





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