FISCHER
KEYSTONE™

TACTICAL
CONNECTIVITY
SOLUTION

- **Tactical hubs – 100 W and USB 2.0**

- **4 and 6-port configurations**

- **Power management app – ATAK plug-in**

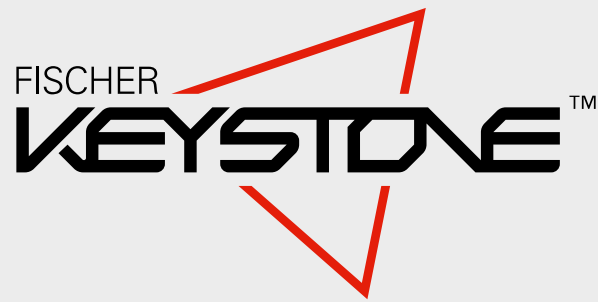- **Standard & customizable cable assembly solutions**

Fischer®
CONNECTORS

Part of Conextivity Group

FISCHER KEYSTONE™

–

EASY CONNECTIVITY AND **EFFICIENT**
DATA AND POWER MANAGEMENT
FOR **SOLDIER-WORN** DIGITAL EQUIPMENT

Power management app

6 and 4-port
tactical hubs

Standard & customizable
cable assembly solutions

EASY TO WEAR.

EASY TO CONNECT.

EASY TO CONTROL.

FISCHER KEYSTONE™

TACTICAL CONNECTIVITY SOLUTION

Overview

—

EMPOWER YOUR MISSION WITH THE FISCHER KEYSTONE SERIES: WHERE TACTICAL USB HUBS REVOLUTIONIZE HOW WARFIGHTERS OPERATE

In today's dynamic battlefield environments, the evolution of BMS (Battlefield Management System) electronics has significantly enhanced mission effectiveness. However, the proliferation of C4ISR devices has also increased the burden on soldiers, particularly in terms of added weight and the challenge of managing battery power efficiently. Fischer Connectors addresses these critical issues with its KEYSTONE tactical USB HUB series, by optimizing power distribution and data transfer capabilities.

A simple, easily deployable personal area network solution to the soldier connectivity challenge. Seamlessly integrated. The KEYSTONE 6 tactical USB HUB is specifically engineered for complex applications, providing precise control through a dedicated power management application integrated with ATAK (Android Team Awareness Kit). This empowers warfighters to enhance their situational awareness and operational efficiency in challenging scenarios, crucial for mission success.

FISCHER KEYSTONE™ HELPS SOLDIERS CONNECT THEIR DIGITAL EQUIPMENT AND MAKE BETTER DECISIONS.

Complementing the KEYSTONE 6, the KEYSTONE 4 tactical USB HUB offers a reliable and versatile solution for more general-purpose applications. Designed to meet a wide range of operational needs, it ensures seamless data transfer from tactical devices, enabling warfighters to adapt quickly and efficiently to different mission requirements by optimizing size and weight, but without compromising on power, ruggedness, and reliability.

Featuring NATO STANAG 4695 and 4851 compatible connectors, KEYSTONE tactical USB HUB facilitate seamless integration with existing systems, enhancing interoperability and deployment processes. The KEYSTONE series has been meticulously validated according to MIL-STD-810 standards, ensuring durability and reliability in harsh environmental conditions. Additionally, KEYSTONE HUBs have undergone rigorous testing for very severe EMI/EMC levels in accordance with MIL-STD-461, guaranteeing optimal performance even in demanding electromagnetic environments. With electrical fail-safe mechanisms on all ports, there is no compromise on reliability.

Fischer Connectors' KEYSTONE series empowers warfighters to adapt and excel in modern battlefield environments, where rapid decision-making and enhanced situational awareness are paramount for mission success.
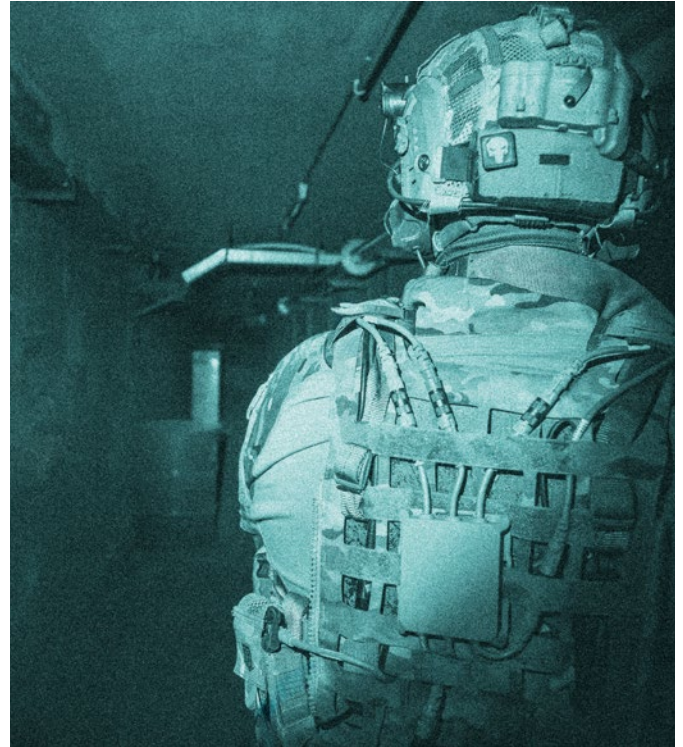
Swiss-engineered for MIL-spec digital connectivity with Fischer Connectors' world-renowned technologies in ruggedness, sealing, miniaturization and data transmission.

THE **RIGHT FEATURES** FOR TACTICAL DIGITAL CONNECTIVITY

- **Manages power (100 W – 5 A max) and data (USB 2.0 and SMBus)**
- **Meets MIL-STD 810 and 461**
- **Secure firmware**
- **ATAK plug-in**
- **USB-C bidirectional power delivery**

THE **RIGHT CHOICE** FOR MOST SOLDIER MODERNIZATION REQUIREMENTS

- **Connects to all Nett Warrior / NATO STANAG 4695 and 4851 standard components**
- **Simple operation with no training required**
- **No maintenance or repair parts**
- **Competitive multiport tactical hub**
- **Manages all digital equipment for most soldiers**
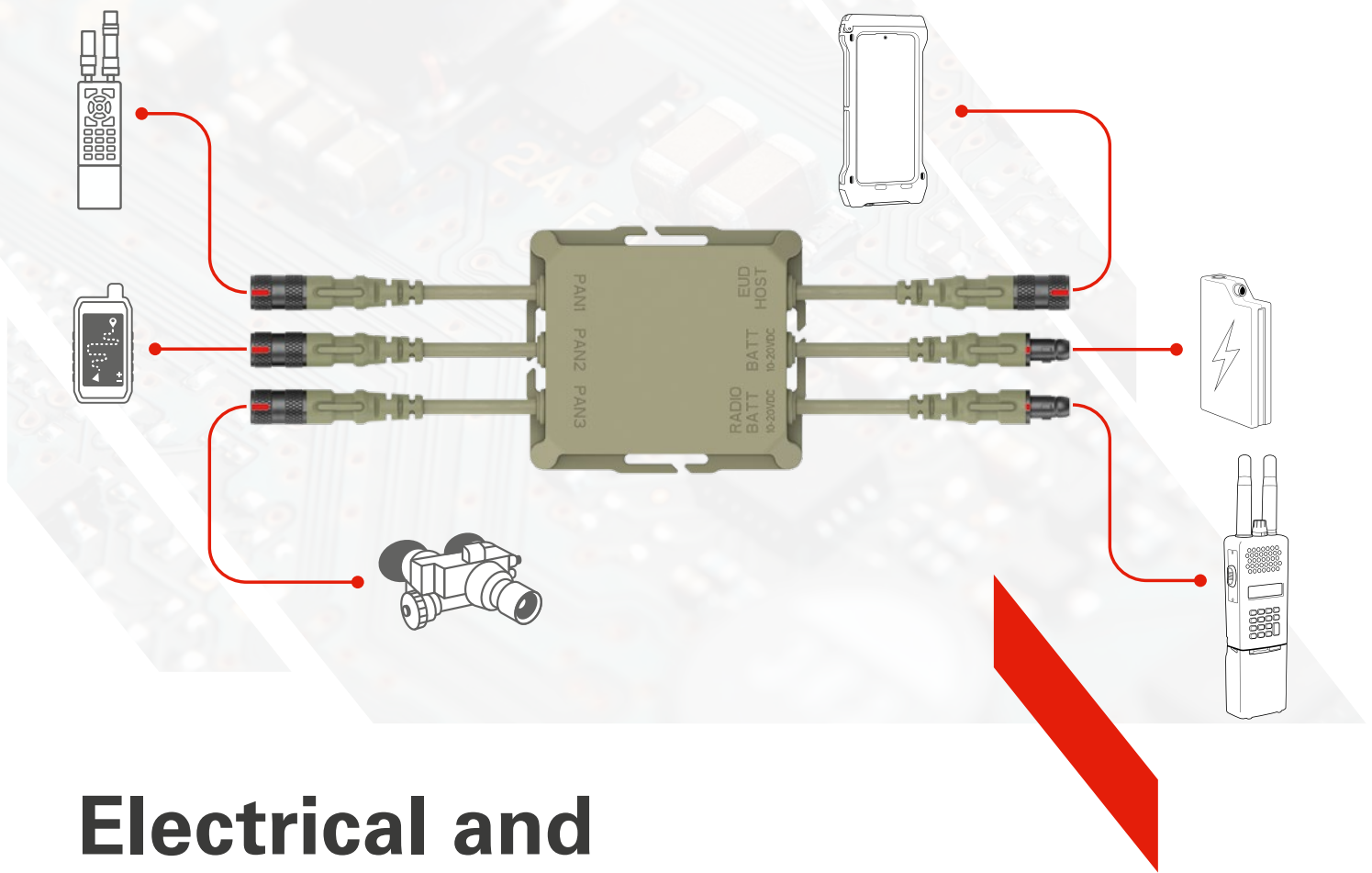
Electrical and data architecture

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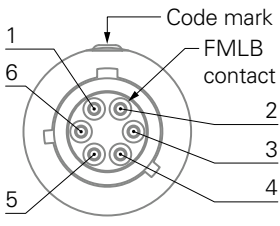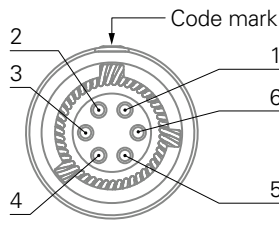## OPTIMIZED POWER MANAGEMENT FOR UNFAILING POWER SUPPLY.

Power management is critical to infantry operations. Dismounted soldiers rely on a complex digital system that requires high levels of energy. Efficient management of **power supply, distribution and sourcing** is therefore key.

Fischer KEYSTONE™ has been specifically designed to **reduce the physical, cognitive and logistic burden** faced by soldiers who need to stay focused on their mission without carrying multiple batteries or constantly worrying that devices are correctly powered and charged throughout the duration of the mission.

The Fischer KEYSTONE™ multiport hub and cable assembly solutions enable soldiers to power their devices through a central battery, optimizing resource management for **lighter combat gear**.

With the SMBus technology, the Fischer KEYSTONE™ hub monitors battery state of charge and operating time, while the user manages the system's energy flow on the EUD power management app. The individual PANs' energy consumption can be independently monitored and controlled for **better efficiency**.

NETT WARRIOR COMPATIBLE INTERFACES

Pin ID	Power ports (plugs)	PAN/EUD ports (receptacles)
1	Direct Battery Voltage (V_{BATT}: [10-20] V DC, 5 A max)	Direct Battery Voltage (V_{BATT}: [10-20] V DC, 5 A max)
2	Ground	Ground
3	5 V DC IN*	5 V DC OUT**
4	USB+ / SMBus Data	USB+
5	USB- / SMBus Clock	USB-
6	NC	CC line***

*Only on RADIO/BATT port
**EUD port: INPUT/OUTPUT
***EUD port only

Connector front view

Pre-cabled plug

Pre-cabled receptacle

FEATURES COMPARISON

	Fischer KEYSTONE™ 4	Fischer KEYSTONE™ 6
PAN ports	2	3
Batt ports	1	2
Power	100 W total (5 A under 20 V DC)	
Data protocol	USB 2.0	USB 2.0 and SMBus 1.0/1.1 on Power port (BATT and RADIO/BATT)
EUD Power Delivery (PD)	Built in up to 1.5 A	Built in, bidirectional up to 1.5 A (powered by EUD when no external battery connected)
Software power management app*	Not applicable (all ports always active when hub is powered)	• Standalone Android app • ATAK plug-in
Weight	125 g (4.2 oz)	241 g (8.5 oz)
MOLLE mounting	Removable (clip)	Built-in (open slot)
Sealing	IP68 2 m/24 h	

*Software power management app is **not mandatory** to operate Fischer KEYSTONE™ 6. By default, all ports are active once hub is powered.

EXAMPLES OF SUPPORTED BATTERIES

Inventus Power *Conformal Wearable Battery*

Nominal voltage: 14.8 V
Rated capacity: 10 Ah
Nominal energy: 152 Wh

Galvion *SoloPack™ Battery*

Nominal voltage: 15.0 V
Rated capacity: 6.8 Ah
Nominal energy: 98 Wh

Fischer UltiMate™ 80 connectors

—

INTERMATEABLE WITH NETT WARRIOR CONNECTORS.

Compatible with components and standards such as **Nett Warrior, NATO STANAG 4695, 4851** and **GOSSRA***, the Fischer UltiMate™ 80 connector has been engineered to offer ultra-rugged, lightweight and IP68-sealed connectivity solutions for any harsh environments, especially for **soldier modernization programs**. The connector comes in two layouts featuring 6 or 7 signal and power contacts with up to AWG 22.

The Fischer UltiMate™ 80 outperforms most competitor connectors on the defense market. With its combination of rugged features in terms of sealing, resistance to corrosion / vibration / extreme temperatures, cable bending resistance and key coding, the connector offers unparalleled functionality and robustness in comparison with similar harsh-environment quick-release connectors. This makes it the **ideal solution for use in the devices and equipment** worn by dismounted soldiers in the field.

* Generic Open Soldier System Reference Architecture (GOSSRA) financed by the European Union through the European Preparatory Action on Defence Research (PADR) program

- Rugged, reliable, lightweight, high current
- IP68 sealing mated and unmated, salt mist up to 500 hours
- Up to 10,000 mating cycles

- Compatible with other Nett Warrior connectors
- Up to AWG 22
- 6 or 7 contacts
- Up to 10 A

BODY STYLES & TECHNICAL DIMENSIONS *(in millimeters – images are for reference only)*

PRE-CABLED PLUG

Max. ø5.5
58
14.2
ø12.4
12.6
ø7.95
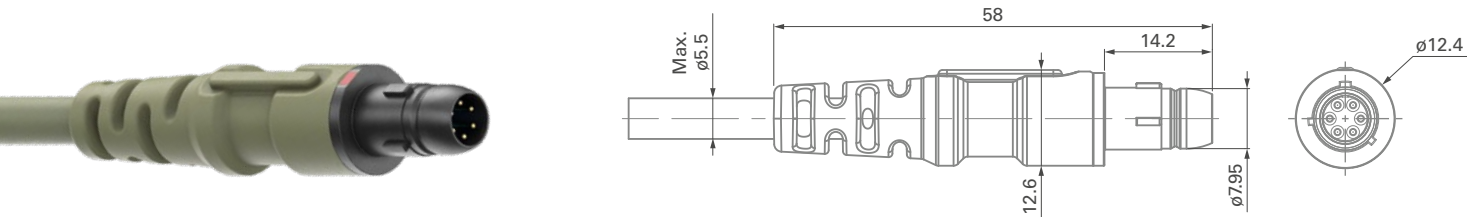
Available colors for cable and overmolding: ● ●

Note: Plug available pre-cabled with a standard cable length (1 meter), or with mounting kit for cabling. Contact us for customized solutions.

PRE-CABLED RECEPTACLE
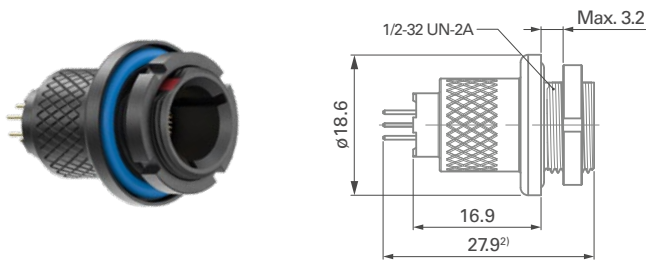
Max. ø5.5
62.2
20.2
ø12.8
12.6
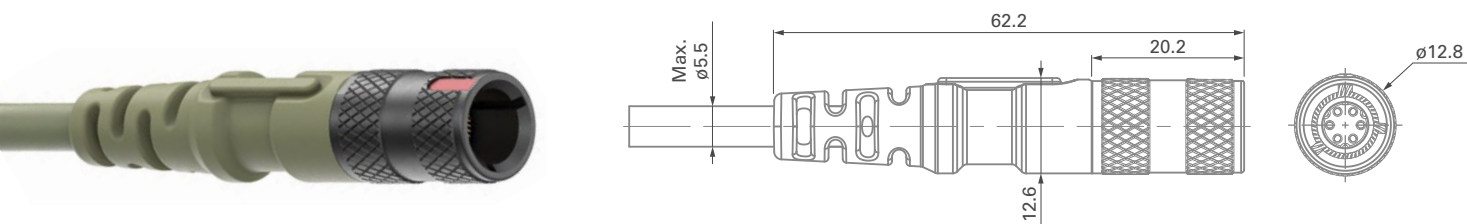
Available colors for cable and overmolding: ● ●

Note: Receptacle available pre-cabled with a standard cable length (1 meter), or with mounting kit for cabling. Contact us for customized solutions.

PANEL PLUG

Max. 3.2
1/2-32 UN-2A
ø18.54
21.2
2.9
27.43[1]
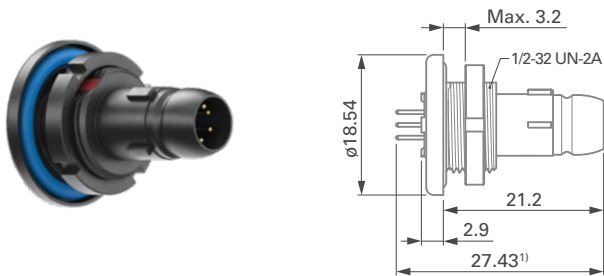
[1] Solder version: 26.97 mm

PANEL RECEPTACLE

1/2-32 UN-2A
Max. 3.2
ø18.6
16.9
27.9[2]

[2] Solder version: 28.8 mm

CONTACT BLOCK CONFIGURATION

6 contacts

7 contacts[3]

[3] available for panel plug as custom request only.

ACCESSORIES – TOOLING

Receptacle soft cap

Plug soft cap

Nut driver
Part number 136883

MATERIAL & SURFACE FINISH

1 **Overmolding** – TPE
2 **Housing** – Aluminum black
3 **Contacts** – Brass/gold plated
4 **O-ring** – Fluorosilicone rubber

COMPATIBILITY SHEET *Fischer UltiMate™ 80 connectors are intermateable with other Nett Warrior connectors.*

6 CONTACTS

BODY STYLE	FISCHER CONNECTORS PART NUMBER	EQUIVALENT PART NUMBER	
Plug, pre-cabled	CA S 06 UP81Q08BBYA/OE PUR TN 1.0M	8070-1676-06ZNU6-6PY 804-001-06ZNU6-6PC 807-309-06ZNU6-6PY (alternative) 807-871-06ZNU6-6PY (alternative) 8070-1153-**ZNU6-6*Y (alternative) 804-002-06ZNU6-6PC (alternative)	2226910-1 2337319-1 (alternative) MKJ4A6Z6-6PC-*** MKJ4A6Z6-6EC-*** (alternative) MKJ4A6Z6-6PY-*** (alternative) 2M804-001-06ZNU6-6PC
Plug, panel PCB	UP80Q08 M105P BBY S2NA	8070-1153-07ZNU6-6PC 8070-1153-00ZNU6-6PC	2226910-2 MKJ4C9Z6-6GC-K140 MKJ4C9Z6-6GC-F261
Plug, panel solder	UP80Q08 M105S BBY S2NA	8070-1153-07ZNU6-6EC 8070-1153-00ZNU6-6EC	2226910-2 MKJ4C9Z6-6EC-K140 MKJ4C9Z6-6EC-F261 F2-742253-06Y
Receptacle, pre-cabled	CA S 06 UR80Z08BBYA/OE PUR TN 1.0M	8070-1675-01ZNU6-6SY 804-003-01ZNU6-6SC 807-348-01ZNU6-6SY (alternative) 804-004-01ZNU6-6SC (alternative)	2226920-1 2339799-1 (alternative) MKJ4A1Z6-6SC-*** MKJ4A1Z6-6FC-*** (alternative) 2M804-003-01ZNU6-6SC
Receptacle, panel PCB	UR81W08 F006P BBY S2NA	807-216-07ZNU6-6DY 804-020-07ZNU6-6SC	2329308-1 2828420-1 (alternative) MKJ4C7Z6-6DC-*** 2M804-005-07ZNU6-6SC
Receptacle, panel solder	UR81W08 F006S BBY S2NA	804-020-07ZNU6-6FC	MKJ4C7Z6-6FC-*** 2M804-005-07ZNU6-6FC

7 CONTACTS

BODY STYLE	FISCHER CONNECTORS PART NUMBER	EQUIVALENT PART NUMBER	
Plug, pre-cabled	CA S 07 UP81Q08BBYA/OE PUR TN 1.0M	804-001-06ZNU6-7PC	2-2226910-3 MKJ4A6Z6-7PC-*** 2M804-001-06ZNU6-7PC
Receptacle, pre-cabled	CA S 07 UR80Z08BBYA/OE PUR TN 1.0M	804-003-01ZNU6-7SC	2-2226920-3 MKJ4A1Z6-7SC-*** 2M804-003-01ZNU6-7SC
Receptacle, panel PCB	UR81W08 F007P BBY S2NA	804-020-07ZNU6-7SC	1-2329308-2 2828420-2 (alternative) MKJ4C7Z6-7DC-*** 2M804-005-07ZNU6-7SC
Receptacle, panel solder	UR81W08 F007S BBY S2NA	804-020-07ZNU6-7FC	MKJ4C7Z6-7FC-*** 2M804-005-07ZNU6-7FC

Note: Cabled receptacle and plug only available pre-cabled with a standard cable length (1 meter). Contact us for customized solutions.

ENHANCED CONTACT ALLOY

The introduction of a new contact material enhances conductivity by 50% for high-current applications, while ensuring and maintaining outstanding performance over time.
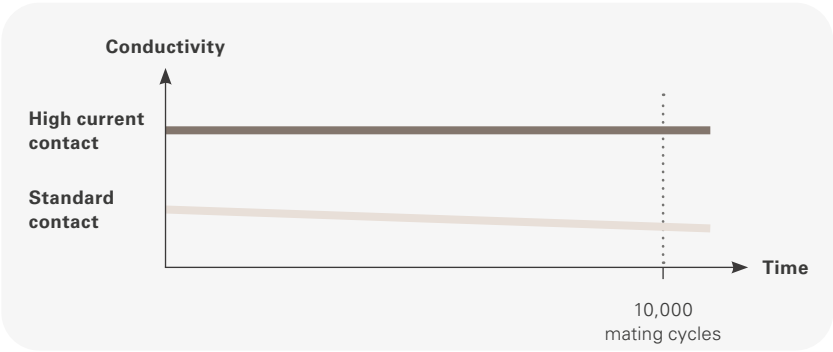
ENHANCED CONTACT ALLOY
=
HIGHER CONDUCTIVITY
=
LOWER HEAT RISE
=
OPTIMAL PERFORMANCE

Fischer KEYSTONE™ 4

—

EMPOWER YOUR MISSION: RELIABLE POWER DISTRIBUTION, SEAMLESS CONNECTIVITY, AND **HIGH ADAPTABILITY** FOR EVERY OPERATIONAL CHALLENGE.

The Fischer KEYSTONE™ 4 tactical USB HUB delivers robust performance without requiring external software for operation. It efficiently distributes power while seamlessly transferring data from tactical devices, adapting to diverse operational needs. Featuring NATO STANAG compatible connectors, it ensures seamless integration into existing systems.

The Fischer KEYSTONE™ 4 effectively reduces emissions and detection risks, meeting rigorous MIL-SPEC standards. Featuring minimal thermal and EMI/EMC signatures, alongside optimized circuitry and a fully shielded enclosure, it guarantees operational discretion in the most challenging environments.

The Fischer KEYSTONE™ 4 enhances situational awareness for warfighters and contributes to overall operational efficiency within the BMS framework.
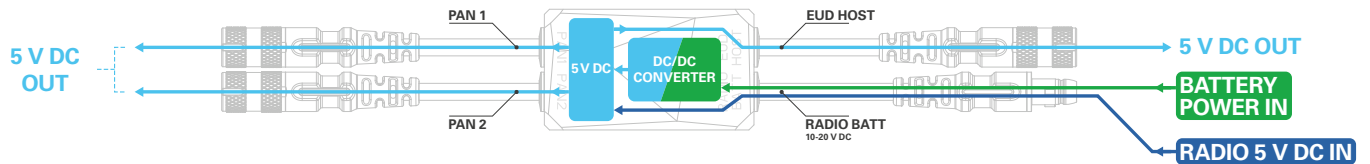
FISCHER KEYSTONE™ 4
KEY FEATURES

- **4-port power and data hub**
- **MIL-SPEC design**
- **IP68 2 m/24 h sealing**
- **Very compact and lightweight (125 g / 4.2 oz)**
- **Nett Warrior compatible**
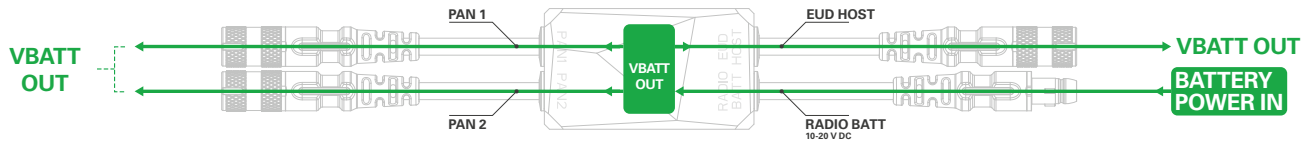
VBATT POWER DISTRIBUTION

- Wide range of batteries supported
- Unregulated VBATT distribution between 10–20 V DC
- Input current up to 5 A
- Electrical fail-safe mechanisms on all ports

5 V DC POWER DISTRIBUTION

- USB devices powered by regulated 5 V Bus
- USB-C power delivery on EUD port
- Radio 5 V DC Power IN functionality on RADIO/BATT port
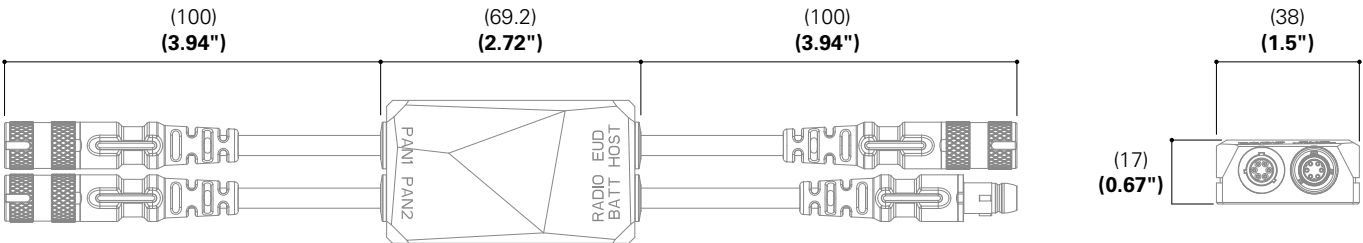- Robust protection of 5 V Bus circuits

DATA DISTRIBUTION
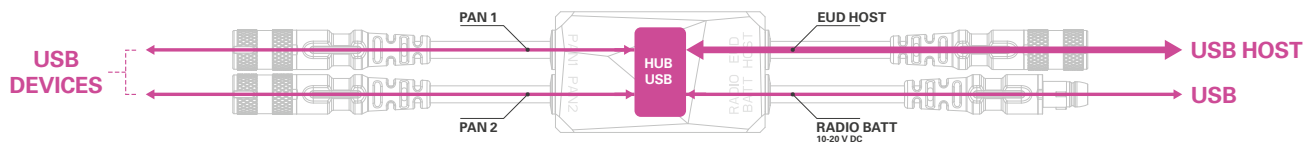
- EUD/HOST USB HUB upstream port
- PANs and RADIO/BATT USB downstream ports

ELECTRICAL

EUD / HOST	VBATT output power	Unregulated VBATT 10-20 V DC, up to 5 A
	USB output power	Power delivery, charge up to 1.5 A
PAN 1/2	VBATT output power	Unregulated VBATT 10-20 V DC, up to 5 A
	USB output power	Regulated 5 V DC, up to 2 A per port
RADIO/BATT	VBATT input power	Unregulated VBATT 10-20 V DC, up to 5 A
	USB input power	5 V DC IN power supply
Communication protocol		USB 2.0
Fault mode protection		Overcurrent, overvoltage and back-power

DIMENSIONS

*in millimeters / **in inches***

(100)	(69.2)	(100)	(38)
(3.94")	**(2.72")**	**(3.94")**	**(1.5")**

(17)
(0.67")

ENVIRONMENTAL

Temperature	Storage: -40 °C to +60 °C	MIL-STD-810G, Procedure I of Method 501
	Operating: -32 °C to +55 °C	MIL-STD-810G, Procedure II of Method 501
Altitude	Storage: up to +12,192 m	MIL-STD-810G, Procedure I of Method 500
	Operating: up to +9,754 m	MIL-STD-810G, Procedure II of Method 500
	Rapid decompression: from 2,438 to 12,192 m	MIL-STD-810G, Procedure III of Method 500
Sealing	IP68 2 m/24 h	MIL-STD-810G, Procedure I of Method 512
Shock	40 G, 11 ms	MIL-STD-810G, Procedure I of Method 516
Vibration	7.7 Grms, 1 h per axis	MIL-STD-810G, Procedure I of Method 514.7
Weather conditions	Solar radiation	MIL-STD-810G, Method 505, Procedure I
	Salt atmosphere	MIL-STD-810G, Method 509, Procedure I
	Sand and dust	MIL-STD-810G, Method 510, Procedure I/II
	Rain and water	MIL-STD-810G, Method 506, Procedure I
	Fungus	MIL-STD-810G, Method 508
EMI / EMC	CE101, CE102, CS101, CS114, CS115, CS116, RE101, RE102, RS101, RS103	MIL-STD-461G
Electrostatic Discharge ESD	CS118 Level IV	MIL-STD-461G
Compliance	CE, FCC, UKCA, RoHS and REACH standards	

MATERIAL AND MECHANICAL

Housing material	Aluminum
Standard colors	TAN 499 or BLACK
Weight	125 g (4.2 oz)
MOLLE mounting	Removable (clip)
Pull force – pigtail cables	>100 lbs. (>450 N)

Fischer KEYSTONE™ 6

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EMPOWER YOUR MISSION: ADVANCED POWER MANAGEMENT, SEAMLESS DATA TRANSMISSION, AND HIGH PERFORMANCE FOR THE **MODERN WARFIGHTER**.

The Fischer KEYSTONE™ 6 solves power distribution problems with its versatile compatibility, supporting a wide range of standard batteries. It provides comprehensive battery monitoring capabilities via the SMBus protocol, allowing users to track state of charge, voltage, and current for efficient operational planning. Hot-swap battery functionality ensures power source switching without downtime for connected devices.

The Fischer KEYSTONE™ 6 ensures solid power management and protection for all connected devices, with controls accessible through an Android power management application, seamlessly integrated into ATAK. Each port can be individually controlled, enhancing operational flexibility.

Featuring robust security measures, including AES256 encryption and FIPS 140-2/3 capability, the Fischer KEYSTONE™ 6 ensures data integrity. Its compact and durable design, IP68-sealed, withstands harsh environments while maintaining lightweight portability. MOLLE mounts integrated into the chassis enhance deployment versatility.

The Fischer KEYSTONE™ 6 minimizes emissions and detection risks, meeting stringent U.S. Army specifications for the Next Generation Hub (NGH). With low thermal and EMI/EMC signatures, efficient circuitry design, and fully shielded enclosure, it ensures operational stealth and reliability in the most demanding operational environments.
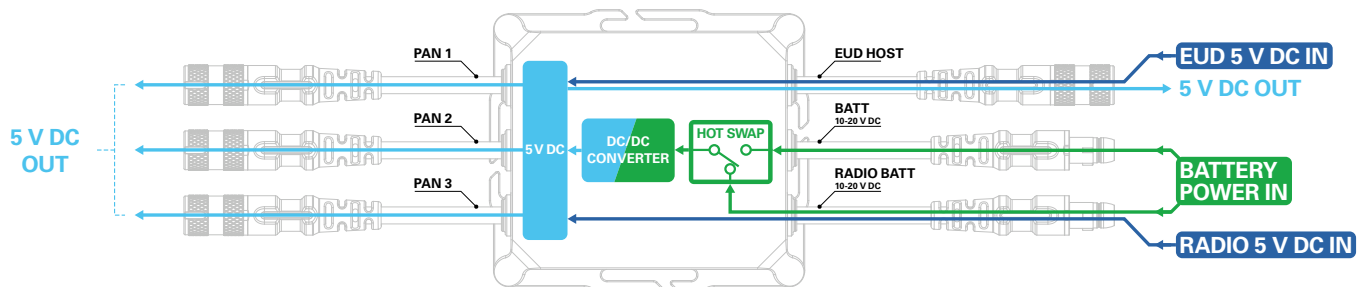
FISCHER KEYSTONE™ 6
KEY FEATURES

- **6-port power and data hub**
- **MIL-SPEC design**
- **100 W power / USB 2.0**
- **Embedded ATAK plug-in**
- **Nett Warrior compatible**

VBATT POWER DISTRIBUTION
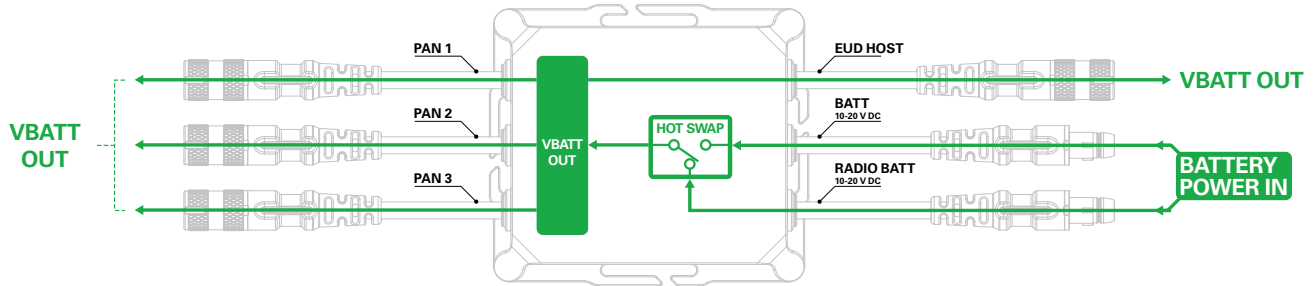
- Wide range of batteries supported, incl. SMBus protocol
- Unregulated VBATT distribution between 10–20 V DC
- Dual battery hot-swap functionality
- Electrical fail-safe mechanisms on all ports

5 V DC POWER DISTRIBUTION

- USB devices powered by regulated 5 V bus
- USB-C bidirectional power delivery on EUD port
- Radio 5 V DC Power IN functionality on RADIO/BATT port
- Robust protection of 5 V bus circuits

DATA DISTRIBUTION
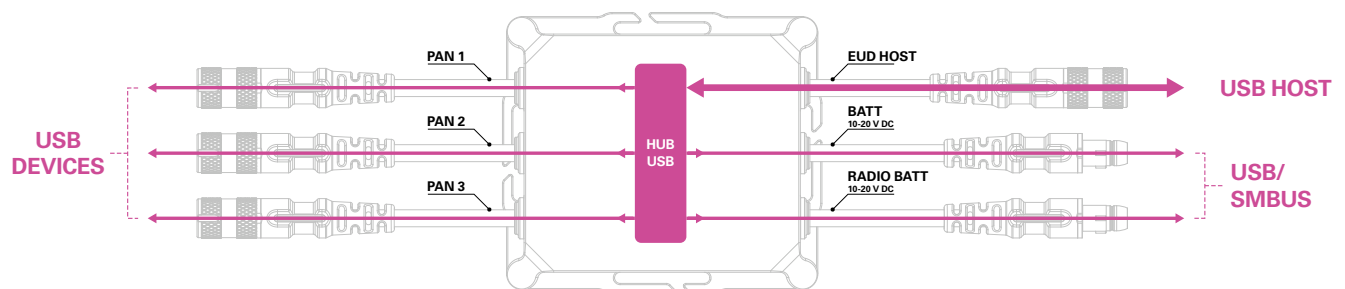
- EUD/HOST USB HUB upstream port
- PANs, BATT and RADIO/BATT USB downstream ports
- Automatic detection between USB and SMBus on BATT and RADIO/BATT ports

ELECTRICAL

EUD / HOST	USB power	EUD charge up to 1.5 A via integrated Power Delivery
	Output power	Unregulated 10-20 VBATT, up to 5 A
PAN 1/2/3	USB power	Regulated 5 V DC, up to 2 A per port
	Output power	Unregulated 10-20 VBATT, up to 5 A
HUB output power	USB	Up to 6 A 5 V DC across combined EUD / HOST and PAN 1/2/3 ports, 5 A system total
	VBATT	Up to 5 A 10-20 VBATT, across combined EUD / HOST and PAN 1/2/3 ports, 5 A system total
BATT, RADIO/BATT input power		10-20 VBATT, 5 A max
BATT SMBus		Versions 1.0/1.1 compatible
Communication protocol		USB 2.0
Fault mode protection		Over current, over voltage and back-power

DIMENSIONS

*in millimeters / **in inches***

ENVIRONMENTAL

Temperature	Storage: -40 °C to +60 °C Operating: -32 °C to +55 °C	MIL-STD-810G, Procedure I of Method 501 MIL-STD-810G, Procedure II of Method 501
Altitude	Storage: up to +12,192 m Operating: up to +9,754 m Rapid decompression: from 2,438 to 12,192 m	MIL-STD-810G, Procedure I of Method 500 MIL-STD-810G, Procedure II of Method 500 MIL-STD-810G, Procedure III of Method 500
Sealing	IP68 2 m/24 h	MIL-STD-810G, Procedure I of Method 512
Shock	40 G, 11 ms	MIL-STD-810G, Procedure I of Method 516
Vibration	7.7 Grms, 1 h per axis	MIL-STD-810G, Procedure I of Method 514.7
Weather conditions	Solar radiation Salt atmosphere Sand and dust Rain and water Fungus	MIL-STD-810G, Method 505, Procedure I MIL-STD-810G, Method 509, Procedure I MIL-STD-810G, Method 510, Procedure I/II MIL-STD-810G, Method 506, Procedure I MIL-STD-810G, Method 508
EMI / EMC	CE101, CE102, CS101, CS114, CS115, CS116, RE101, RE102, RS101, RS103	MIL-STD-461G
Electrostatic Discharge ESD	CS118 Level IV	MIL-STD-461G
Compliance	CE, FCC, UKCA, RoHS and REACH standards	

MATERIAL AND MECHANICAL

Housing material	Aluminum
Finish	Standard color: TAN 499 – Optional color: Black
Weight	241 g (8.5 oz)
Mounting	MOLLE mount built in
Pull force – pigtail cables	>100 lbs. (>450 N)

SOFTWARE / FIRMWARE

Android power management application	• Battery power status • PAN management: monitoring and control of power and data for each port
Android Team Awareness Kit (ATAK)	• Plug-in available for power management application in ATAK
Security	• Only booting signed software – verified using a SHA256 checksum and an ECC256 signature • Software update files are encrypted using an AES 256 encryption
Certification	• FIPS 140-2/3 capable

SOFTWARE APPLICATION

The Fischer KEYSTONE™ system software has been designed to provide an easy-to-use **all-in-one** application to manage the power and data flows of all worn devices, enhancing the situational awareness and efficiency of soldiers at every level of their mission in the field.

The Android power management application delivered by the Fischer KEYSTONE™ software comes as a standalone app and/or as a plug-in seamlessly integrated within the industry standard **ATAK (Android Team Awareness Kit)**, the leading battlefield awareness software application known to dismounted soldiers, Fischer Connectors' customers and Soldier Modernization programs.

The app or plug-in serves as a single, centralized PAN management application with an easy-to-read GUI on the soldier EUD – smartphone or tablet. It allows soldiers to quickly and easily **monitor** battery charge and system status, independently **control** power and data for each port of the Fischer KEYSTONE™ hub, and **manage** the power and data flows of all interconnected peripherals and devices – **without switching between different apps or leaving the ATAK environment**. This reduces the risk of distraction, and soldiers stay focused on their mission.

Software security is ensured through only booting signature verified with a SHA256 checksum and an ECC256 signature, while update files are encrypted using an AES 256 encryption. **The firmware code has been designed to meet the FIPS 140-2/3 requirements**.
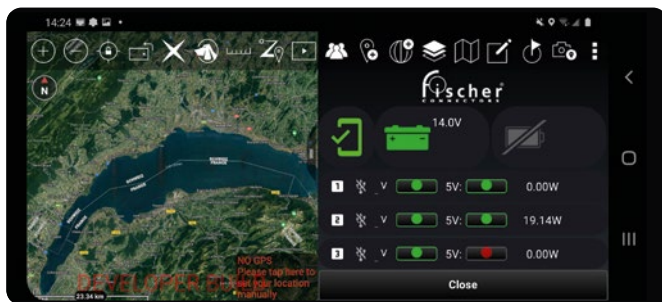
THE FISCHER KEYSTONE™ POWER MANAGEMENT APP COMES AS A STANDALONE APP AND/OR AN ATAK PLUG-IN.

STANDALONE POWER MANAGEMENT APP

Fischer KEYSTONE™ provides solid power management of the devices connected to the tactical hub. It supports all types of batteries, from 'dumb' to smart batteries compatible with the System Management Bus (SMBus). Through its SMBus, it allows the user to monitor battery life, voltage and current.

ATAK PLUG-IN

Users of Fischer KEYSTONE™ benefit from the essential functionalities of the industry standard Android Team Awareness Kit (ATAK) software application when the system power management app is integrated as a plug-in.

Data and power management controls are available within the ATAK plug-in. The hub operates from a wide range of non-SM batteries and displays voltage and current within the ATAK plug-in. Each network port can be individually controlled and configured to enable/disable VBus and VBatt power in addition to other features and settings.

FISCHER KEYSTONE™ 6
SOFTWARE KEY FEATURES

- All-in-one use through Android power management app with seamless ATAK integration

- Independent port power and data management

- Security through only booting signed software – SHA256 checksum and ECC256 signature

- AES 256 encryption and FIPS 140-2/3 compliance

- API interface for specific software development and integration

THE **FISCHER KEYSTONE™ STANDALONE POWER MANAGEMENT APP** IS AVAILABLE ON GOOGLE PLAYSTORE.

Accessories & options

—

ALL-IN-ONE TO ENSURE MISSION FOCUS.

KEYSTONE 6

Color	TAN	BLACK
Without soft caps*	141955	142535

*Caps available on request. Please contact your sales representative.
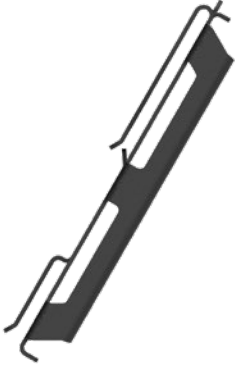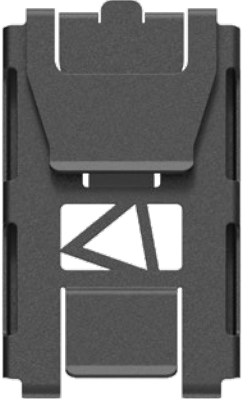
KEYSTONE 4

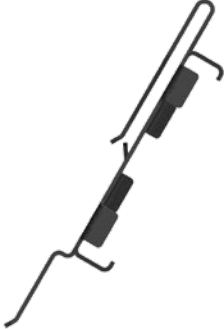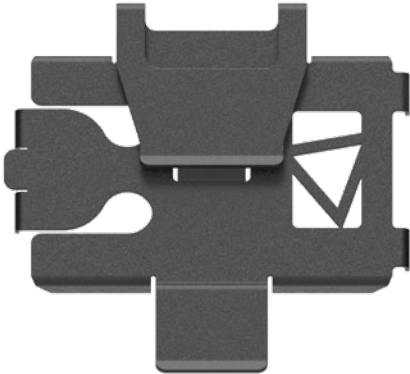| Color	TAN	BLACK
With soft caps	144100	144102
Without soft caps	144098	144101

*Each Fischer KEYSTONE™ 4 set includes one vertical clip and one horizontal clip as standard.
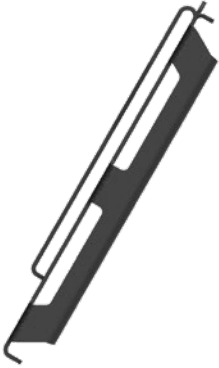
MOLLE CLIPS

The Fischer KEYSTONE™ MOLLE clips are available in three types to allow for maximum optimization of the warfighter's tactical setup. All three types can be ordered separately.

Vertical

Horizontal

Belt

Orientation	Part number
Vertical	226075
Horizontal	226411
Belt (vertical)	226412

Standard cable assemblies and connectors

CABLE TYPES

| Description	Page
General Purpose And Power Cables	**23**
Radio Cables	**36**
EUD Cables	**41**
Device Cables	**43**
Other options available on request	

THE FISCHER KEYSTONE™ SOLUTION OFFERS VARIOUS CABLE ASSEMBLIES THAT CAN BE **CUSTOMIZED** UPON REQUEST.
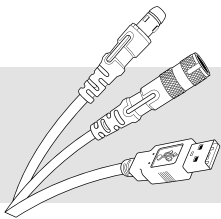
Nett Warrior compatible plug-to-receptacle cable

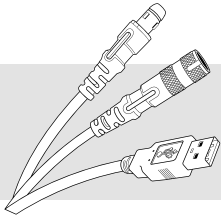**DESIGNATION EXAMPLE: CA D 06 UP81Q08BBY/UR80 PUR TN 0.3m**

- Extension cable

- Compatible with NATO STANAG 4695 and 4851 standards

- Shielded cable with 3x AWG 22 wires

- Environmental performances: -50 °C to +90 °C │ 1,000 hours salt spray │ IP68 2 m/24 h mated and unmated

- 10,000 mating cycles

- Recommended bending radius: 27 mm static / 54 mm dynamic

- PUR outer sheath, halogen free, flame-retardant

Available in right angle
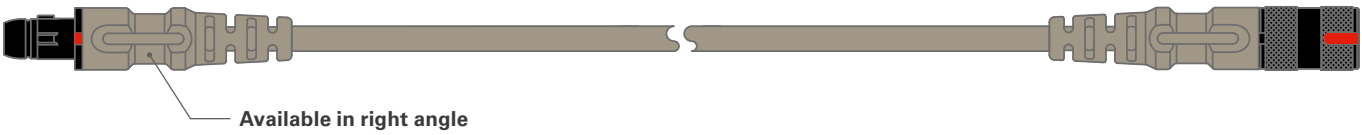
STANDARD REFERENCE	0.3 m	0.5 m	0.75 m	1.0 m
TAN 499	139292	142618	142619	143659
Other options available on request				

Available in right angle

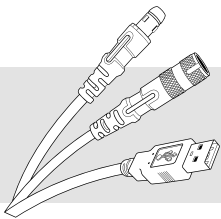| STANDARD REFERENCE	0.3 m	0.5 m	0.75 m	1.0 m
BLACK	142049	142620	142621	143655
Other options available on request				

Nett Warrior compatible 90° plug-to-receptacle cable

DESIGNATION EXAMPLE: CA D 06 UP81Q08BBYA 6H/UR80 PUR TN 0.5m

- Extension cable

- Compatible with NATO STANAG 4695 and 4851 standards

- 4 orientations: 3H, 6H, 9H and 12H

- Environmental performances: -50 °C to +90 °C │ 1,000 hours salt spray │ IP68 2 m/24 h mated and unmated │ 10,000 mating cycles

- Shielded cable with 3x AWG 22 wires

- Recommended bending radius: 27 mm static / 54 mm dynamic

- PUR outer sheath, halogen free, flame-retardant

Guide Mark
(keying orientation)

12H

9H   3H

View from back of plug

6H
Default
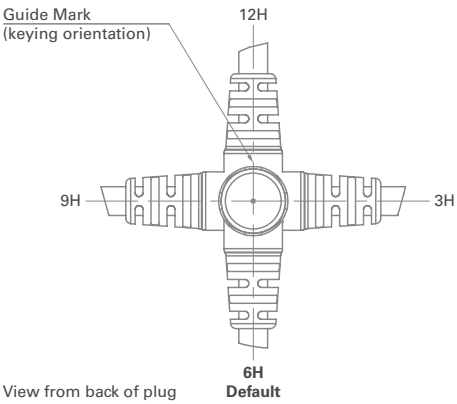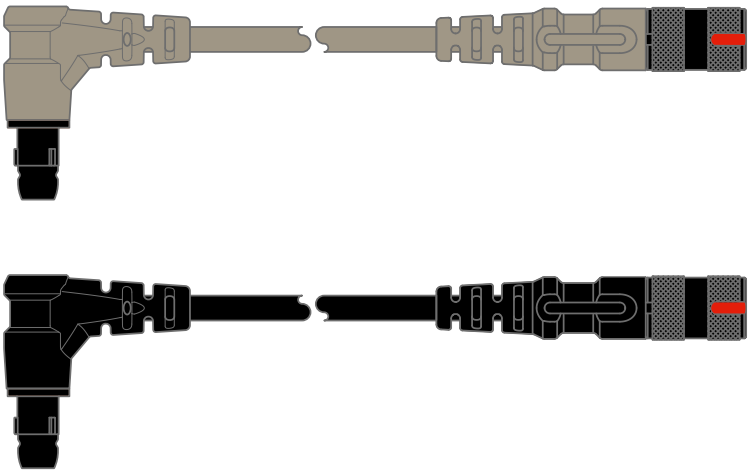
STANDARD REFERENCES (0.5 m)	3H	6H	9H	12H
TAN 499	144868	144869	144870	144867
BLACK	144872	144873	144874	144871
Other options available on request				

GENERAL PURPOSE CABLES

Nett Warrior compatible receptacle-to-receptacle cable

DESIGNATION EXAMPLE: CA D 06 UR80Z08BBYA/UR80 PUR TN 0.3m

- Gender cable adapter

- Compatible with NATO STANAG 4695 and 4851 standards

- Shielded cable with 3x AWG 22 wires

- Environmental performances: -50 °C to +90 °C │ 1,000 hours salt spray │ IP68 2 m/24 h mated and unmated

- 10,000 mating cycles

- Recommended bending radius: 27 mm static / 54 mm dynamic

- PUR outer sheath, halogen free, flame-retardant

STANDARD REFERENCE	0.3 m	0.5 m	0.75 m
TAN 499	142151	142622	142623
Other options available on request			

STANDARD REFERENCE	0.3 m	0.5 m	0.75 m
BLACK	142154	142624	142625
Other options available on request			

Nett Warrior compatible plug-to-plug cable

DESIGNATION EXAMPLE: CA D 06 UP81Q08BBYA/UP81 PUR TN 0.3m
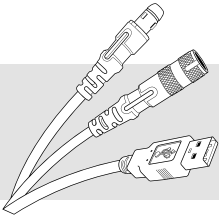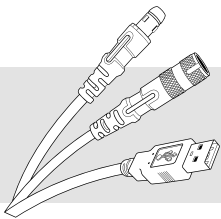
- Gender cable adapter

- Compatible with NATO STANAG 4695 and 4851 standards

- Shielded cable with 3x AWG 22 wires

- Environmental performances: -50 °C to +90 °C │ 1,000 hours salt spray │ IP68 2 m/24 h mated and unmated

- 10,000 mating cycles

- Recommended bending radius: 27 mm static / 54 mm dynamic

- PUR outer sheath, halogen free, flame-retardant

Available in right angle   **Available in right angle**
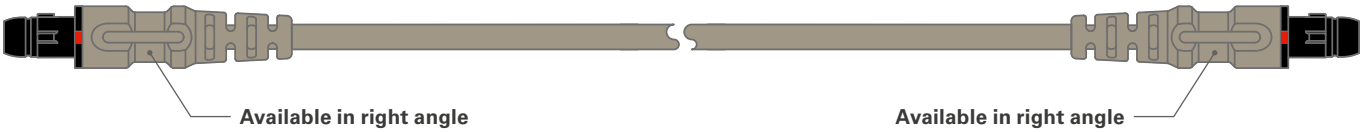
STANDARD REFERENCE	0.3 m	0.5 m	0.75 m
TAN 499	142157	142626	142627
Other options available on request			

Available in right angle   **Available in right angle**

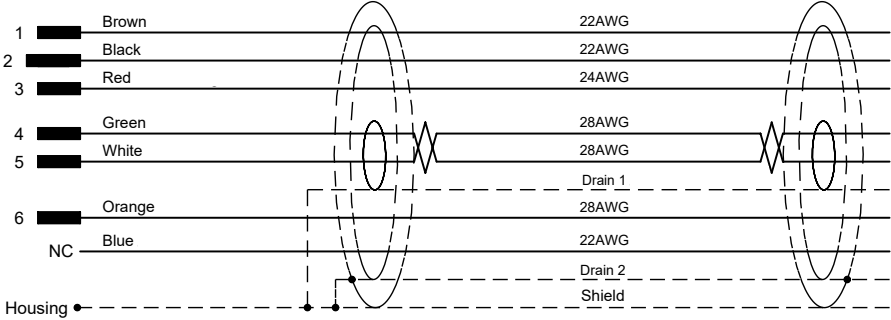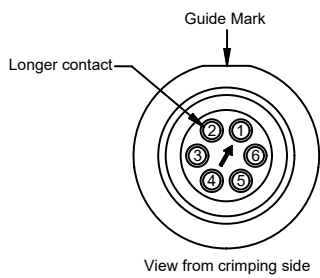| STANDARD REFERENCE	0.3 m	0.5 m	0.75 m
BLACK	142158	142628	142629
Other options available on request			

Nett Warrior compatible pre-cabled plug

DESIGNATION EXAMPLE: CA S 06 UP81Q08BBYA/OE PUR TN 1.0M

- Open-end cable for prototyping

- Compatible with NATO STANAG 4695 and 4851 standards

- Shielded cable with 3x AWG 22 wires

- Environmental performances: -50 °C to +90 °C │ 1,000 hours salt spray │ IP68 2 m/24 h mated and unmated

- 10,000 mating cycles

- Recommended bending radius: 27 mm static / 54 mm dynamic

- PUR outer sheath, halogen free, flame-retardant

Available in right angle

Available in right angle

STANDARD REFERENCE	-	-	1.0 m
TAN 499	-	-	140599
BLACK	-	-	140608
Other options available on request			

Guide Mark

Longer contact

View from crimping side

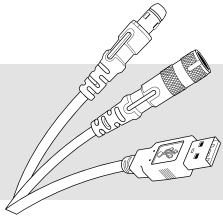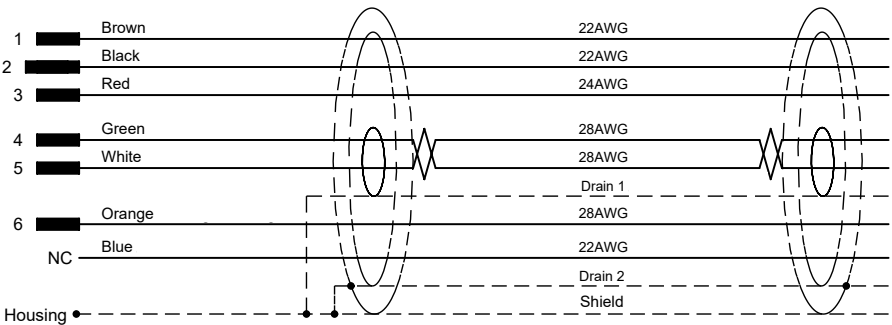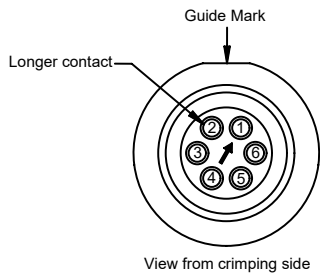|		
1	Brown	22AWG
2	Black	22AWG
3	Red	24AWG
4	Green	28AWG
5	White	28AWG
		Drain 1
6	Orange	28AWG
NC	Blue	22AWG
		Drain 2
Housing		Shield

Nett Warrior compatible pre-cabled 90° plug

DESIGNATION EXAMPLE: CA S 06 UP81Q08BBYA 6H/OE PUR TN 1.0m

- Open-end cable for prototyping

- Compatible with NATO STANAG 4695 and 4851 standards

- 4 orientations: 3H, 6H, 9H and 12H

- Environmental performances: -50 °C to +90 °C │ 1,000 hours salt spray │ IP68 2 m/24 h mated and unmated │ 10,000 mating cycles

- Shielded cable with 3x AWG 22 wires

- Recommended bending radius: 27 mm static / 54 mm dynamic

- PUR outer sheath, halogen free, flame-retardant

Guide Mark
(keying orientation)

12H

9H   3H

6H
Default

View from back of plug
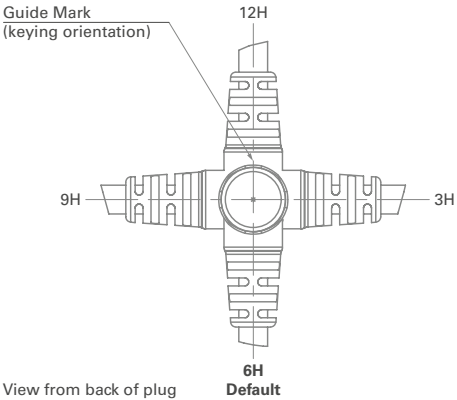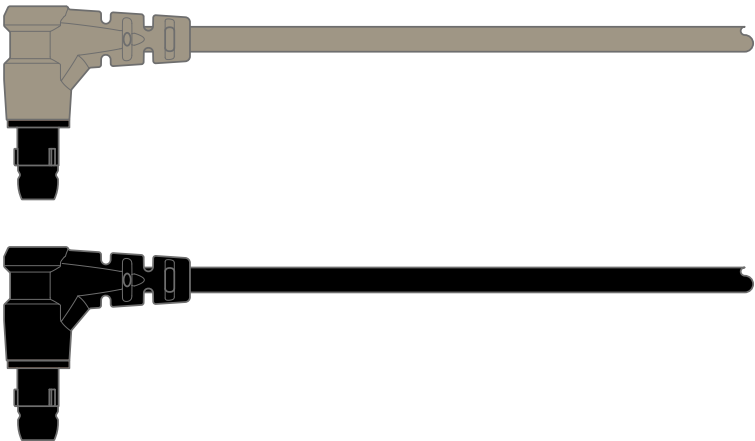
STANDARD REFERENCES (1.0 m)	3H	6H	9H	12H
TAN 499	144861	144455	144862	144859
BLACK	144865	144863	144866	144864
Other options available on request				

Guide Mark

Longer contact

View from crimping side

1	Brown	22AWG
2	Black	22AWG
3	Red	24AWG
4	Green	28AWG
5	White	28AWG
		Drain 1
6	Orange	28AWG
NC	Blue	22AWG
		Drain 2
Housing		Shield

Nett Warrior compatible pre-cabled receptacle

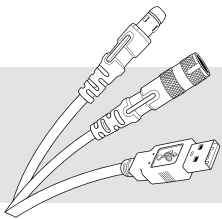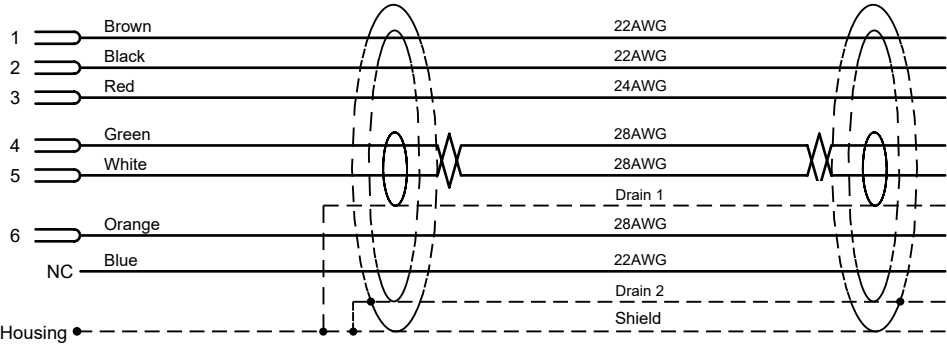**DESIGNATION EXAMPLE: CA S 06 UR80Z08BBYA/OE PUR TN 1.0M**

- Open-end cable for prototyping

- Compatible with NATO STANAG 4695 and 4851 standards

- Shielded cable with 3x AWG 22 wires

- Environmental performances: -50 °C to +90 °C │ 1,000 hours salt spray │ IP68 2 m/24 h mated and unmated

- 10,000 mating cycles

- Recommended bending radius: 27 mm static / 54 mm dynamic

- PUR outer sheath, halogen free, flame-retardant

STANDARD REFERENCE	-	-	1.0 m
TAN 499	-	-	140601
BLACK	-	-	140610
Other options available on request			

Guide Mark

View from crimping side

Pin	Color	AWG
1	Brown	22AWG
2	Black	22AWG
3	Red	24AWG
4	Green	28AWG
5	White	28AWG
	Drain 1	
6	Orange	28AWG
NC	Blue	22AWG
	Drain 2	
Housing	Shield	
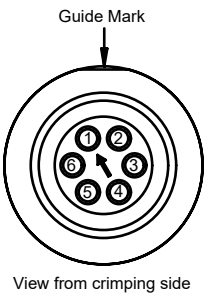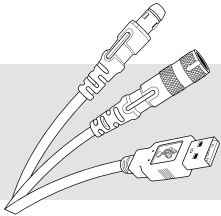
BB-2590 battery adapter cable with SMBus

DESIGNATION EXAMPLE: CA D 5xLV UR80Z08 F006/2590 PUR BK 1.0m

- Fischer KEYSTONE™ to BB-2590 or BA-5590 battery adapter

- SMBus Compatible

- Wired in 12V configuration

- Operating temperature: -40 °C + 60 °C

- Black retainer strap

STANDARD REFERENCE	0.4 m	0.6 m	0.8 m	1.0 m
BLACK	144621	144620	144619	144618
Other options available on request				
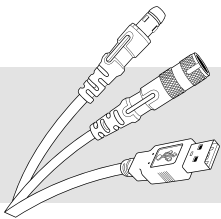
Nett Warrior compatible plug-to-USB 2.0 type A plug cable

DESIGNATION EXAMPLE: CA D 5xLV UP81Q08BBYA/USB2 MA PUR B 0.3m

- Fischer KEYSTONE™ to USB 2.0 EUDs interface cable

- Compatible with NATO STANAG 4695 and 4851 standards

- USB 2.0 type A plug interface for PAN

- Operating temperature: -20 °C to +80 °C

- Recommended bending radius: 27 mm static / 54 mm dynamic

- PUR outer sheath

— **Available in right angle**

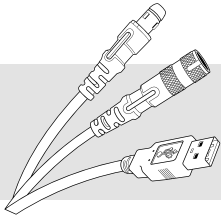| STANDARD REFERENCE	0.3 m	0.5 m	0.75 m
BLACK	145789	145790	145791
Other options available on request			

Nett Warrior compatible plug-to-USB 2.0 type A receptacle cable

DESIGNATION EXAMPLE: CA D 4XLV UP81Q08BBYA/USB2 F PUR BK 0.3M

- Fischer KEYSTONE™ to USB 2.0 EUDs interface cable

- Compatible with NATO STANAG 4695 and 4851 standards

- USB2.0 type A receptacle interface for PAN

- Operating temperature: -20 °C to +80 °C

- Recommended bending radius: 27 mm static / 54 mm dynamic

- PUR outer sheath, halogen free, flame-retardant

— Available in right angle

STANDARD REFERENCE	0.3 m	0.5 m	0.75 m	1.0 m
BLACK	139298	143612	143613	143614
Other options available on request				
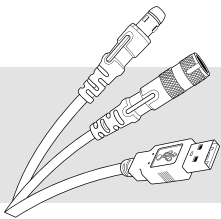
Nett Warrior compatible plug-to-RJ45 plug cable with Ethernet converter

DESIGNATION EXAMPLE: CA B 5xLV UP81/PCB/RJ45M PUR BK 0.80m

- Converter cable USB 2.0 to Ethernet CAT5e

- Compatible with NATO STANAG 4695 and 4851 standards

- Operating temperature: -20 °C to +80 °C

- Recommended bending radius: 27 mm static / 54 mm dynamic

- PUR outer sheath, halogen free, flame-retardant

Available in right angle

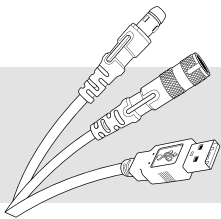| STANDARD REFERENCE	0.8 m	1.3 m	2.3 m
BLACK	143619	143620	143621
Other options available on request			

Nett Warrior compatible plug-to-RJ45 receptacle cable with Ethernet converter

DESIGNATION EXAMPLE: CA B 5XLV UP81/PCB/RJ45 PUR BK 0.55M

- Converter cable USB 2.0 to Ethernet CAT5e

- Compatible with NATO STANAG 4695 and 4851 standards

- Operating temperature: -30 °C to +55   °C

- Recommended bending radius: 27 mm static / 54 mm dynamic

- PUR outer sheath, halogen free, flame-retardant

Available in right angle

STANDARD REFERENCE	-	0.55 m	-
BLACK	-	141428	-
Other options available on request			
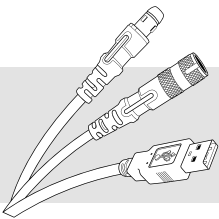
Nett Warrior compatible plug-to-DB9 connector cable with RS-232 converter

DESIGNATION EXAMPLE: CA B 13xLV UP81Q08BBYA/DB9 PUR BK 0.5m

- Converter cable RS-232 to USB (max speed 1 Mbit/s)

- Compatible with NATO STANAG 4695 and 4851 standards

- Operating temperature: -32 °C to +49 °C

- Recommended bending radius: 27 mm static / 54 mm dynamic

- PUR outer sheath, halogen free, flame-retardant

Available in right angle

STANDARD REFERENCE	-	0.5 m	-
BLACK	-	142839	-
Other options available on request			

Silvus SC4200/SC4400 radio cable (AUX port)

DESIGNATION EXAMPLE: CA D 4xLV UP81Q08M105C/ODU PUR BK 1.0m

- Connects the StreamCaster 4200/4400 Enhanced Plus radio to the Fischer KEYSTONE™ tactical hub

- PAN port (Peripheral) or EUD connection (HOST)

- Nett Warrior compatible Fischer Ultimate™ 80 connector and ODU AMC Size 0 connector

- Operating temperature: -40 °C to +90 °C

- Recommended bending radius: 40 mm static / 60 mm dynamic

- PUR outer sheath, halogen free, flame-retardant

Available in right angle

STANDARD REFERENCES	-	1.0 m	-
Silvus radio cable HOST mode BLACK	-	143242	-
Silvus radio cables Peripheral mode BLACK	-	143240	-
Other options available on request			

Bittium Tough SDR Handheld™ radio cable

DESIGNATION EXAMPLE: CA D 4xLV UR80Z08 F006 / ODU PUR BK 1.0m

- Connects the Bittium Tough SDR Handheld™ radio to the Fischer KEYSTONE™ tactical hub

- RADIO/BATT port

- Nett Warrior compatible Fischer Ultimate™ 80 connector and ODU AMC Size 2 connector

- Operating temperature: -50 °C to +90 °C

- Recommended bending radius: 27 mm static / 54 mm dynamic

- PUR outer sheath, halogen free, flame-retardant

- Integrated ferrites for EMI/EMC optimization
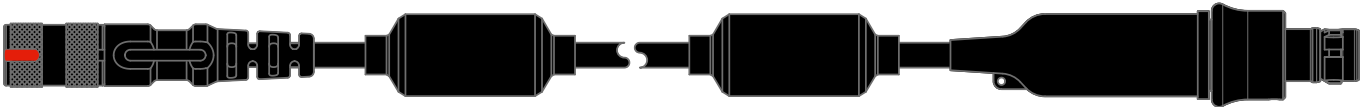
STANDARD REFERENCE	-	1.0 m	-
BLACK	-	143195	-
Other options available on request			

L3 Harris AN/PRC-117G radio cable
(compatible with AN/PRC-152A KDU adapter)

DESIGNATION EXAMPLE: CA D 4xLV SS102Z056/UP81Q08 PUR BK 1.2m

- Connects the AN/PRC-117G radio and the AN/PRC-152A KDU adapter to

  the Fischer KEYSTONE™ tactical hub

- PAN port connection ONLY (Peripheral)

- Nett Warrior compatible Fischer Ultimate™ 80 connector and Fischer Core 102 connector

- Operating temperature: -40 °C to +90 °C

- PUR outer sheath

Available in right angle

STANDARD REFERENCE	-	1.2 m	-
BLACK	-	143200	-
Other options available on request			

Thales AN/PRC-170 radio cable

DESIGNATION EXAMPLE: CA D 06 UP81Q08BBYA/UP81 PUR TN 0.3m

- Connects the Thales Radio to the Fischer KEYSTONE™ tactical hub

- PAN port (Peripheral)

- Operating temperature: -50 °C to +90 °C

- Recommended bending radius: 27 mm static / 54 mm dynamic

- PUR outer sheath, halogen free, flame-retardant

Available in right angle   Available in right angle

| STANDARD REFERENCE	0.3 m	0.5 m	0.75 m
BLACK	142158	142628	142629
Other options available on request			

DTC Sentry Mesh 6161 radio cable

DESIGNATION EXAMPLE: CA D 06 UP81Q08BBYA/UP81 PUR TN 0.3m

- Connects the DTC Sentry Mesh 6161 radio to the Fischer KEYSTONE™ tactical hub

- PAN port to J1 (radio in device mode)

- Operating temperature: -50 °C to +90 °C

- Recommended bending radius: 27 mm static / 54 mm dynamic

- PUR outer sheath, halogen free, flame-retardant

Available in right angle   Available in right angle

| STANDARD REFERENCE	0.3 m	0.5 m	0.75 m
BLACK	142158	142628	142629
Other options available on request			
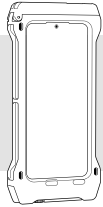
Juggernaut OPRTR case EUD cable

DESIGNATION EXAMPLE: CA 5xLV UP81Q08BBYA/JG PUR BK USB2 0.4m

- Fischer KEYSTONE™ to Juggernaut USB-C adapter

- Compatible with USB-C power delivery mode built into Fischer KEYSTONE™

- Compatible to OPRTR cases available for XCover6 Pro or Galaxy S23, S22, S22 Ultra, S21, S20, S9 (among others)

- EMI/RFI shielded

- Closed cell foam seal for IP67 sealing between case and connector assembly

- TPE jacket

- Overmolded strain relief

Available in right angle

STANDARD REFERENCES	0.4 m	0.6 m	0.8 m
For Juggernaut OPRTR cases	144265	144266	144267
Other options available on request			
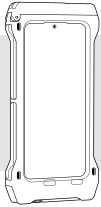
Nett Warrior compatible plug-to-USB-C for EUDs

DESIGNATION EXAMPLE: CA D 5xLV UP81QBBYA/USB2CR PVC BK 0.3m

- Fischer KEYSTONE™ to USB-C EUDs interface cable

- Compatible with NATO STANAG 4695 and 4851 standards

- Compatible with the KÄGWERKS GALAXY S20 OPERATORS KIT

- Operating temperature: -20 °C to +80 °C

- Recommended bending radius: 27 mm static / 54 mm dynamic

- PVC outer sheath

Available in right angle

STANDARD REFERENCE	0.3 m	0.5 m	0.75 m
BLACK	141421	143615	143616
Other options available on request			

MOHOC® 2 IP camera cable with Ethernet converter

DESIGNATION EXAMPLE: CA C 6xLV UP81/USB-ETH/LEMO PUR BK 1.0m

- Connect the MOHOC® 2 IP camera to the Fischer KEYSTONE™ tactical hub

- PAN port (Peripheral)

- Nett Warrior compatible Fischer Ultimate™ 80 connector and LEMO Solder cup

- Ethernet/USB converter

- Operating temperature: -32 °C to +49 °C

- Recommended bending radius: 27 mm static / 54 mm dynamic

- PUR outer sheath, halogen free, flame-retardant

Available in right angle

STANDARD REFERENCE	-	1.0 m	-
BLACK	-	145352	-
Other options available on request			

Vectronix PLRF25C data cable with RS-232 converter

DESIGNATION EXAMPLE: CA B 4xLV UP81Q08BBYA/LEMO PUR BK X.XXM

- Connects the PLRF25C to the Fischer KEYSTONE™ tactical hub

- PAN port connection (Peripheral)

- RS-232 to USB converter (max speed 1 Mbit/s)

- Operating temperature: -32 °C to +49 °C

- PUR outer sheath, halogen free, flame-retardant

Available in right angle

STANDARD REFERENCES	0.8 m	1.0 m	1.2 m
For Juggernaut OPRTR cases	144646	144647	144648
Other options available on request			

Vectronix MOSKITO TI cable with RS-232 converter

DESIGNATION EXAMPLE: CA B 12xLV UP81Q08/SS102 PUR BK 0.75m

- Connects the Vectronix MOSKITO TI to the Fischer KEYSTONE™ tactical hub

- PAN port (Peripheral)

- Nett Warrior compatible Fischer Ultimate™ 80 connector and Fischer Core 102 connector

- RS-232 to USB converter (max speed 1 Mbit/s)

- Operating temperature: -32 °C to +49 °C

- Recommended bending radius: 27 mm static / 54 mm dynamic

- PUR outer sheath, halogen free, flame-retardant

Available in right angle

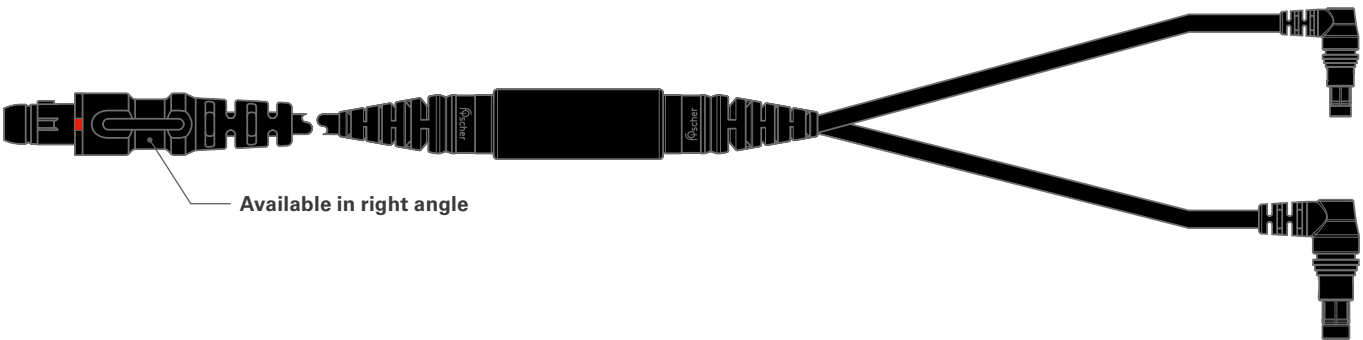| STANDARD REFERENCE	-	0.75 m	-
BLACK	-	142841	-
Other options available on request			

DEVICES CABLES

Vectronix MOSKITO TI cable with Ethernet converter

DESIGNATION EXAMPLE: CA B 15LV UP81/SS102/SS1031 PUR BK 0.75M

- Connects the Vectronix MOSKITO TI to the Fischer KEYSTONE™ tactical hub

- PAN port (Peripheral)

- Nett Warrior compatible Fischer Ultimate™ 80 connector, Fischer Core 102 connector and Fischer Core 1031 connector

- Ethernet to USB converter: data and power

- Operating temperature: -32 °C to +49 °C

- PUR outer sheath, halogen free, flame-retardant

Available in right angle

STANDARD REFERENCE	-	0.75 m	-
BLACK	-	143207	-
Other options available on request			

Vectronix STERNA TNF cable with RS-232 converter

DESIGNATION EXAMPLE: CA B 13xLV UP81Q08/SS1031 PUR BK 0.75m

- Connects the Vectronix STERNA to the Fischer KEYSTONE™ tactical hub

- PAN port (Peripheral)

- Nett Warrior compatible Fischer Ultimate™ 80 connector and Fischer Core 1031 connector

- RS-232 to USB converter (max speed 1 Mbit/s)

- Operating temperature: -32 °C to +49 °C

- Recommended bending radius: 27 mm static / 54 mm dynamic

- PUR outer sheath, halogen free, flame-retardant

Available in right angle

STANDARD REFERENCE	-	0.75 m	-
BLACK	-	142843	-
Other options available on request			

Locations

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