



molliflex[®]

Flat woven e-textile
power and data cable

molliflex®

The next generation of body-worn cable technology.

In the demanding and dynamic environments faced by mobile operatives, field engineers and remote crew, reliable and robust equipment is not just an advantage – it's a necessity. Every component, no matter how small, plays a critical role in mission success and personnel safety. For too long, the humble power and data cable, often overlooked, has been a weak link in body-worn systems. Traditional harsh environment cables, while functional, present inherent limitations in flexibility, durability, and weight, leading to a host of issues from snagging and breakage to restricted movement and more.

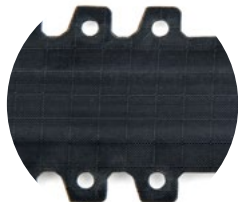
Molliflex represents a paradigm shift in this critical area. Engineered from the ground up as a direct, superior replacement for conventional harsh environment cable, Molliflex is a revolutionary woven e-textile cable designed specifically to meet the extreme demands of body-worn applications.



What is Molliflex?

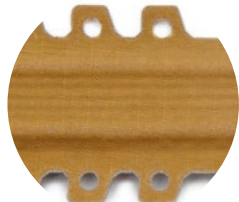
Unlike traditional cables with rigid insulation and cumbersome outer jackets, Molliflex incorporates high-performance strands of cable, woven into a flexible and strong e-textile. This groundbreaking design delivers:

- **Unrivalled Flexibility:** Molliflex moves with the operative, conforming to the body and equipment without kinking, snagging, or restricting movement.
- **Exceptional Durability:** Woven from advanced, high-tensile strength fibers, Molliflex offers superior resistance to abrasion, tears, and environmental stressors such as extreme temperatures and moisture. It is built to withstand the harshest field conditions.
- **Reduced Weight and Bulk:** By integrating into a thin, lightweight fabric, Molliflex significantly reduces the overall weight and bulk compared to traditional harsh environment cables, alleviating the burden and improving agility.
- **Enhanced Comfort and Integration:** The soft, pliable nature of Molliflex eliminates the rigid, often irritating feel of conventional cables, improving comfort during extended operations. Its flat, low-profile design allows for seamless integration into existing gear and next-generation smart textiles.
- **Customizable and Scalable:** Molliflex can be engineered with various connector configurations and fabric designs to meet specific requirements.



Black

A smart yet discreet colour ideal for officials, law enforcement or security personnel.



Coyote tan

Also known as coyote brown or nutria brown – suitable for desert, safari or bush conditions.



Flecktarn

Flecktarn is a disruptive pattern which lends itself well to forestry and conservation efforts.



Multicam

A traditional camouflage print widely used in the field, from relief work to tactical operations.



Molliflex Warrior Grip

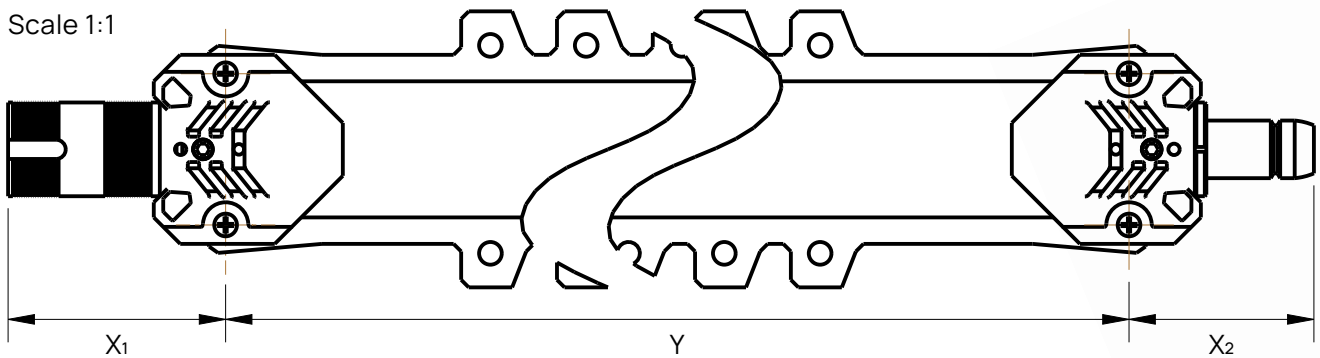


Warrior Grip Female

Warrior Grip Male

Features	Benefits
Compatibility	Intermateable with Existing Nett Warrior Push-Pull Connectors
Power	Warrior Grip Contact System - 6 amp capability in a size #23 contact
Locked & loaded	Unmating force of 13 +/- 3 lbs; Designed to prevent accidental disconnection

Scale 1:1



Reference Dimensions, mm (inch)	
X ₁ (Female)	28.8 (1.133)
X ₂ (Male)	24.4 (0.963)

Overall cable length depends on connector configuration.
Dimension X for chosen connector needs to be added to define overall length.

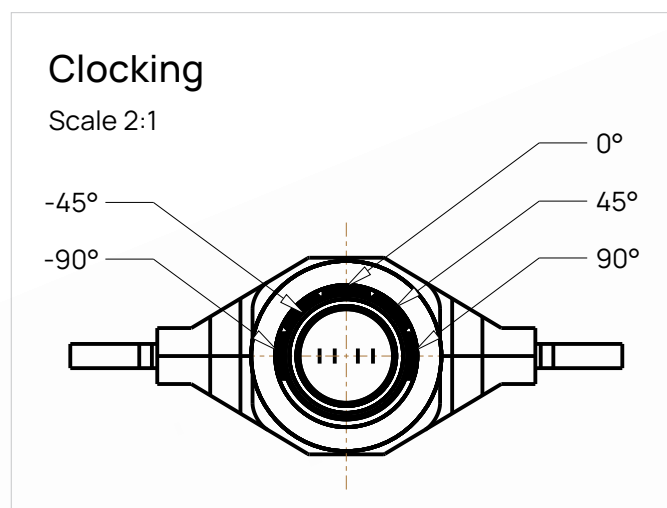
Part numbering

Example: CAMF02910301NMB-500

Connector A: Male, 0°, Connector B: Female, 0°, Non-locking Fin, Colour: Multicam, Protocol: USB 2, Length: 500mm

Series	Connector A	Clocking	Connector B	Clocking	Fin	Cable colour	Protocol	Cable length Y (mm)
CAMF	XXX	X	XXX	X	X	X	X-	XXX
CAMF	029: Male 030: Female	1: 0° 2*: 45° 3*: 90° 4*: -45° 5*: -90°	029: Male 030: Female	1: 0° 2*: 45° 3*: 90° 4*: -45° 5*: -90°	L: Locking N: Non-locking S: No fins	M: Multicam F: Flecktarn T: Coyote Tan B: Black	A: Power B: USB 2	

*Clocking 2, 3, 4 and 5 is only available for circular connectors.

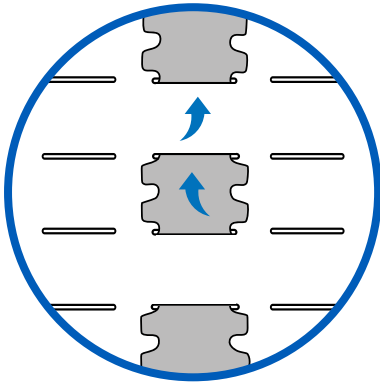


Performance data

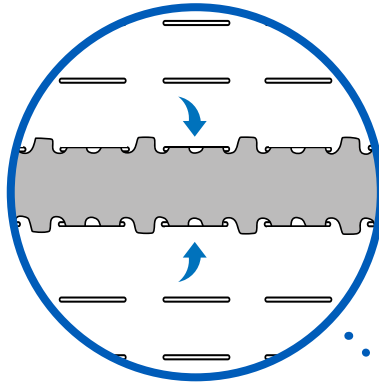
Physical	
Length	150mm (6 inches) to 1500mm (59 inches)
Thickness	2 mm (0.08 inch)
Width	25 mm internal, 36 mm external (1.0 inch, 1.4 inch)
Weight	41 grams (1.44 ounces), 600mm version with Amphenol Warrior Grip connectors
Finishes	DWR nylon: Multicam®, Coyote, Flecktarn, CADPAT, black (Standard finishes available)
Mechanical	
Cyclic bend	100 cycles @ 0mm radius, 140° bend
Tensile stress	150 Newtons UTS
Environmental	
Submersion	IP67 @ 1m for 0.5 hours
Thermal cycle	5 cycles, -55°C to +85°C @ 0mm radius, 180° bend
Electrical	
Rating	5 amps, < 50 volts DC ¹ , 2 power lines
Data	USB 2.0, 480 Mbps
EMC	EMI Screened Product



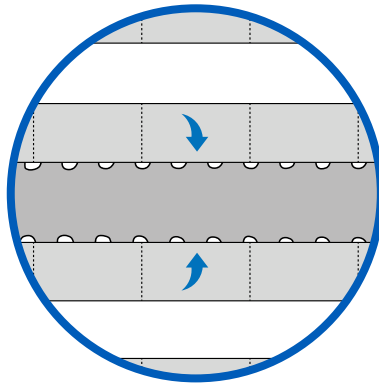
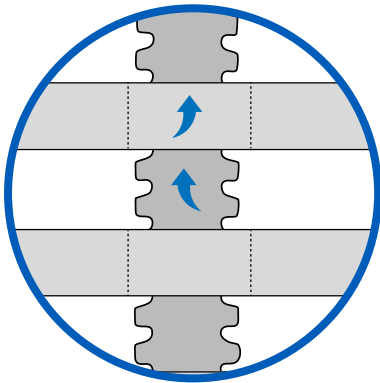
Molliflex attachment instructions



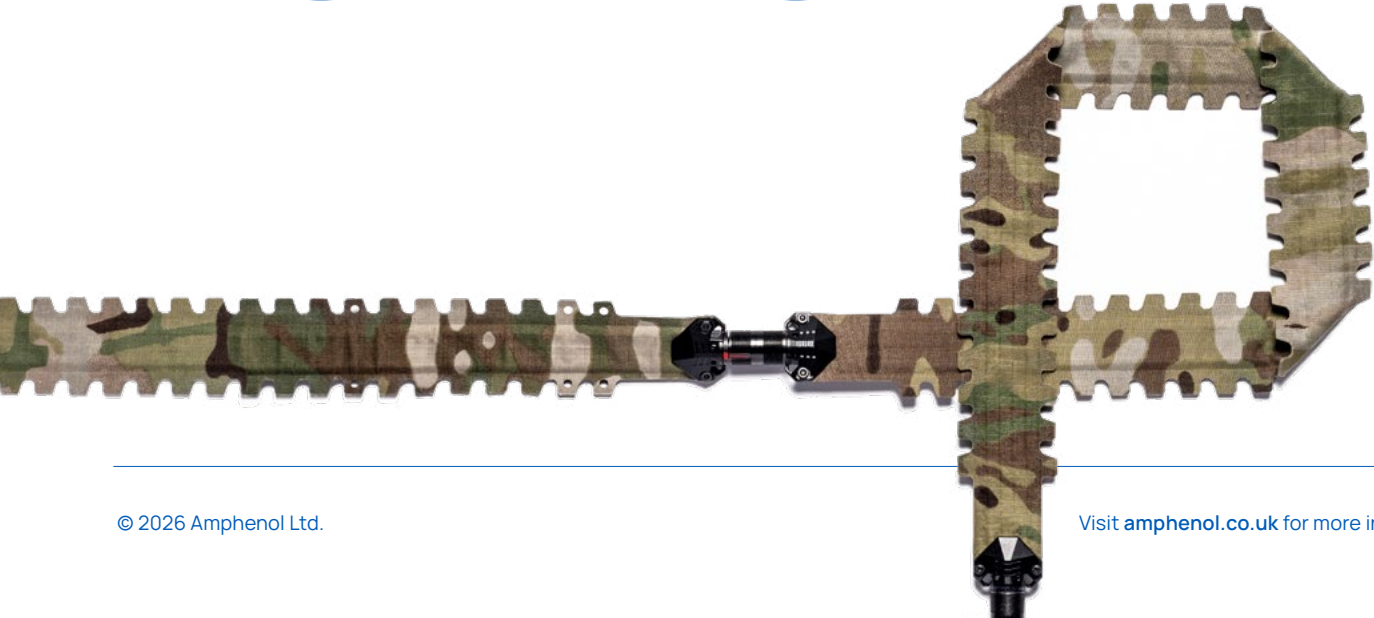
Molliflex can be fed through MOLLE vest's PALS webbing vertically for a more permanent attachment.



It can also be attached in-line by pushing the teeth underneath the webbing.



Using a mixture of these you can make a fully connected MOLLE vest without risk of snagging or dangling cables.



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Building on its military origins, Molliflex's future applications are poised to revolutionize numerous industries by replacing traditional cabling with a flat, durable, and flexible e-Textile alternative.

This technology's ability to withstand over two million folds/bends makes it ideal for dynamic environments like robotics and automation, where it can provide power and data to moving parts without the risk of failure. Its lightweight and slim profile will also be transformative for wearable technology and medical devices, enabling more comfortable and less obtrusive products. Furthermore, the significant weight and space savings could make it a game-changer for automotive and aerospace sectors, where efficiency and performance are paramount.

The scope of this e-textile is astounding, and the breadth of opportunity spans across all defence, commercial and industrial applications. Please discuss with us how Molliflex can enhance your designs.



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DEFENCE & AEROSPACE

itl *intelligent*
textiles
limited

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