



Amphenol LTD
MILITARY & AEROSPACE



STINGRAY

Magnetic Connector Series

September 2021

Introducing Stingray 7

THE STINGRAY 7 PRODUCT SERIES IS OPTIMISED FOR BODY-WORN APPLICATIONS

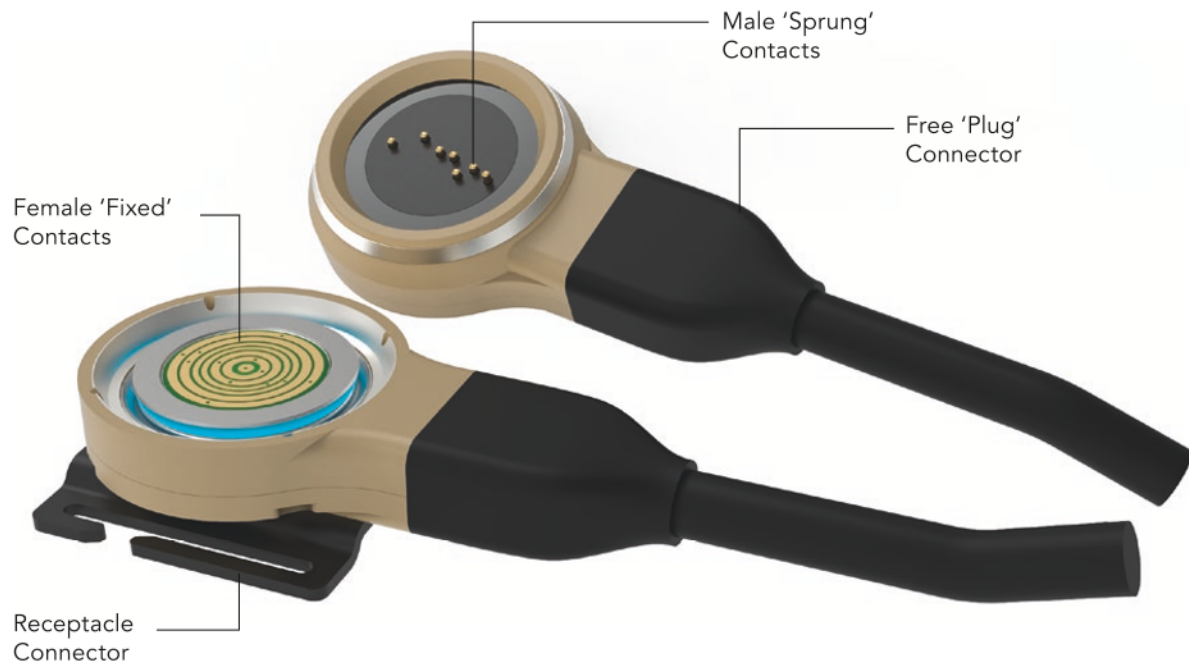
Stingray 7 series offers compact, low profile, metal shelled connectors that withstand exposure to moisture, dust, dirt and chemicals typically encountered by First Responders, Security and Military personnel.

Designed to meet the requirements of DEF-STAN 23-012, the magnetic, non-keyed coupling system has no moving parts and allows the connector to be easily mated without the need for pre-alignment and eliminates the need to operate any mechanical coupling mechanisms.

The magnetic technology allows the connector to quickly disconnect making it ideal for connection between non-tethered equipment, such as helmet to torso, and therefore protects users from potential injury due to cable snagging.

FEATURES	BENEFITS
Quick disconnect in all angles of separation	Ideal for non-tethered equipment and protects users and equipment from damage due to cable snagging
Non-keyed, magnetic 'blind' mating	Does not require pre-alignment when mating, the cable exit angle is infinitely variable and can be set and adjusted by the user
Metal housings with low-impedance shell to shell conductivity	360° EMI Shielding
5A current rating on power contacts	High power performance for battery charging
Modular mounting system including MOLLE loop attachment option	The Mounting System can be changed by the user and the MOLLE loop mounting plate is optimised for mounting on vests and load bearing harnesses
10,000+ mating cycles	Increased connector life before replacement
Either connector gender can be mounted	Provides design flexibility and allows two signals to be co-located
IP68 sealing mated and unmated	High degree of sealing prevents ingress of dust and moisture
First-mate, last-break contact	Allows hot-swapping of equipment and signals (i.e. interface is passive until the connector is fully mated)
Low profile with the cable exit within the height of the connector	Cable runs parallel to the body eliminating loops and preventing snagging
90Ω USB 2.0 Pair	'Plug & Play' USB performance
Optional termination method	Available with solder or IDC termination
Low-profile interface with sprung contacts	Less wear and easy to clean

Stingray Features and Terminology




Both Male and Female connectors can be supplied as mounted receptacle or Free Plug and Stingray 7 features a modular mounting system to enable users to fit either MOLLE or Wall Mount plates.

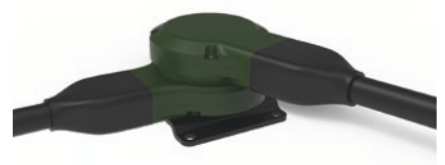


Colour Options

 Desert Sand RZ

 Black RZ

 Olive Drab RW



Please note that the accessories are in development and the designs are still being finalised. This catalogue will be updated to provide dimensional and performance details once the design work is completed.

Part Numbering

CONNECTORS

Series	Gender	Wiring Protocol	Shell Style	Finish	Shell Size	No. of Contacts
WM	X	XXX-	XX	XX	X	X
	M - Male (Sprung contact) F - Female (Fixed PCB)	000 Solder 001 IDC with 28 awg USB 002 IDC with 26 awg USB 003 Reserved	00 - Wall mount 01 - Supplied without mounting feature 02 - Box-mount PCB 04 - MOLLE loop mount 06 - Free connector 07 - Jam-nut mount PCB	RZ - Black RW - Olive-drab RD - Sand	2	7

Please note that equipment mount styles 02, 07 and accessories are in development and the designs are still being finalised. This catalogue will be updated to provide dimensional and performance details once the design work is completed.

ACCESSORIES

PROTECTIVE CAPS

Series	Gender	Style	Finish	Shell Size	Attachment	Eyelet
WM	X	PC	XX	X	X	X
	M F	PC	RD RZ RW	2	0 - None supplied 1 - Nylon cord 2 - Wire rope	0 - None supplied 1 - Small 2 - Large 3 - Crimp ferrule

STOWAGE RECEPTACLES

Series	Gender	Style	Finish	Shell Size
WM	X	SRX	XX	X
	M F	SR0 - Wall Mount SR4 - MOLLE	RZ RW RD	2

PERFORMANCE DATA

ELECTRICAL

Current Rating	5A per contact (5 contacts)
Voltage Rating	8 - 36V
Data Protocol	USB 2.0
Contact Resistance	< 20m Ω
Shell to Shell Continuity	≤4mΩ
Insulation Resistance	100MΩ @ 100VDC
DWV	200VDC

MECHANICAL

Mating Durability	>10,000
Vibration	General Vibration, Method 514.6 Annex E of MIL-STD-810G, Procedure I, Figure 514.6E-1
Shock	Procedure I of Method 516.6, Procedure I of MIL-STD-810G, 40g, 11ms
Separation Force, Axial	43 N
Separation Force, Peel	7 N

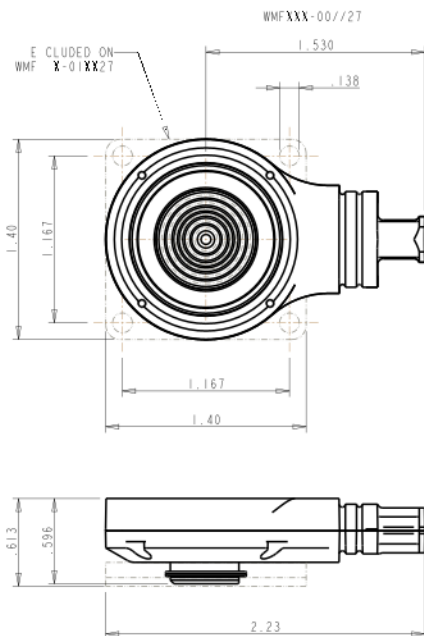
ENVIRONMENTAL

Sealing	IP68, 2 hr at 2m
Operating Temp	-55°C/+85°C
Storage Temp	-55°C/+125°C
RoHS/REACH Compliant	Yes

Cable Mount Connectors

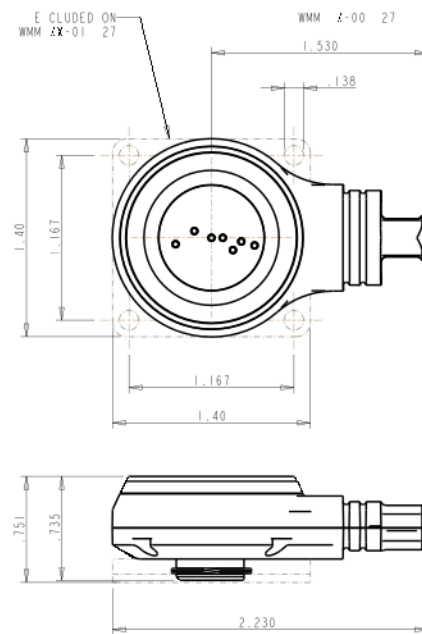
WALL MOUNT MALE

WMF00X-XXRX27



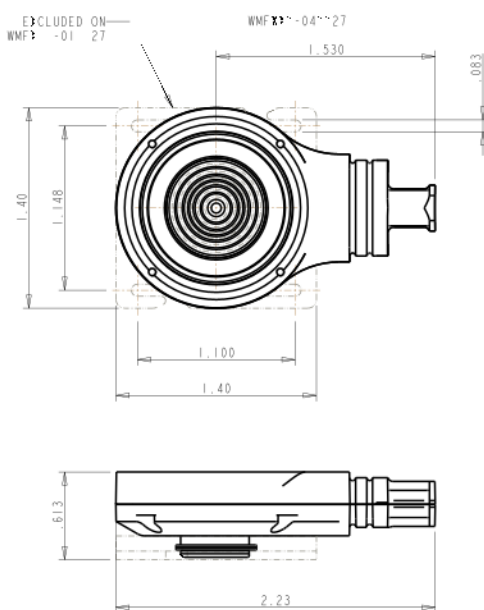
WALL MOUNT FEMALE

WMM00X-XXRX27



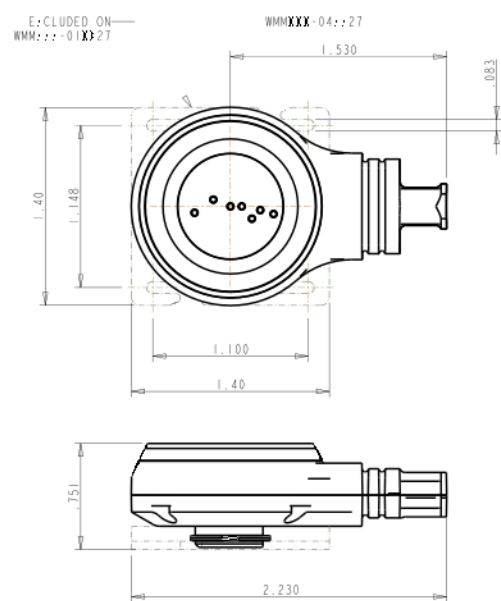
MOLLE LOOP MALE

WMF04X-XXRX27



MOLLE LOOP FEMALE

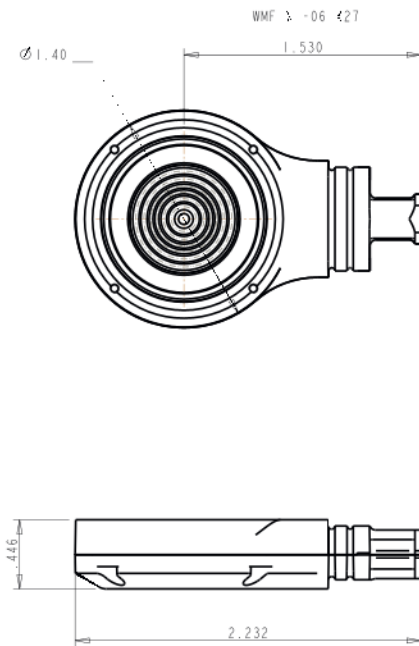
WMM04 X-XXRX27



Cable Mount Connectors

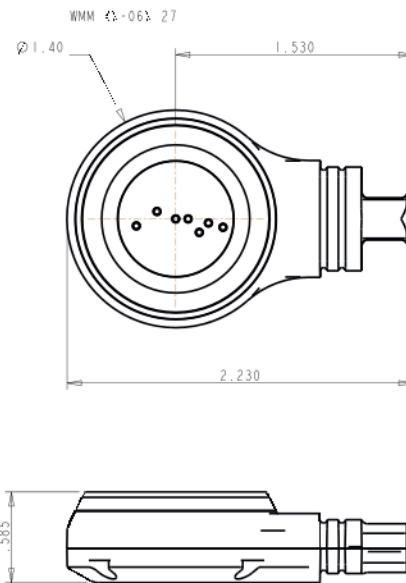
FREE MALE

WMM06X-XXRX27



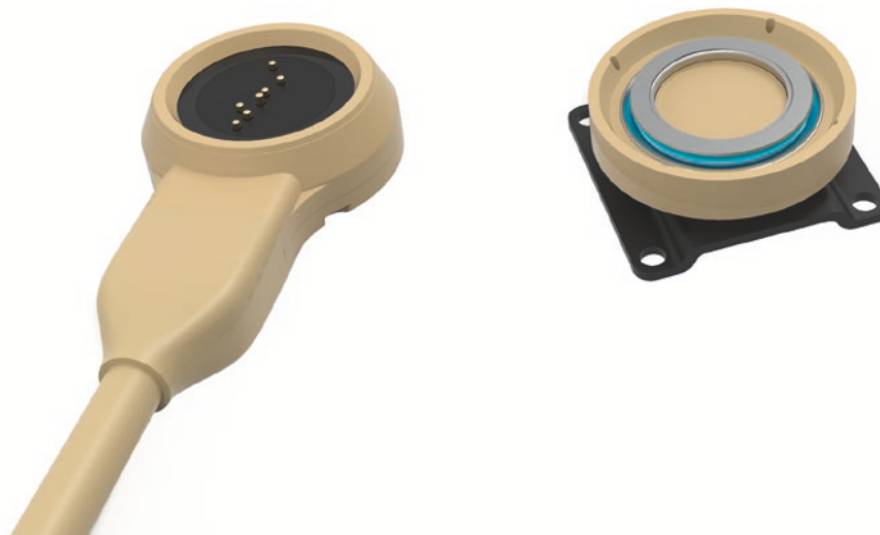
FREE FEMALE

WMF06X-XXRX27



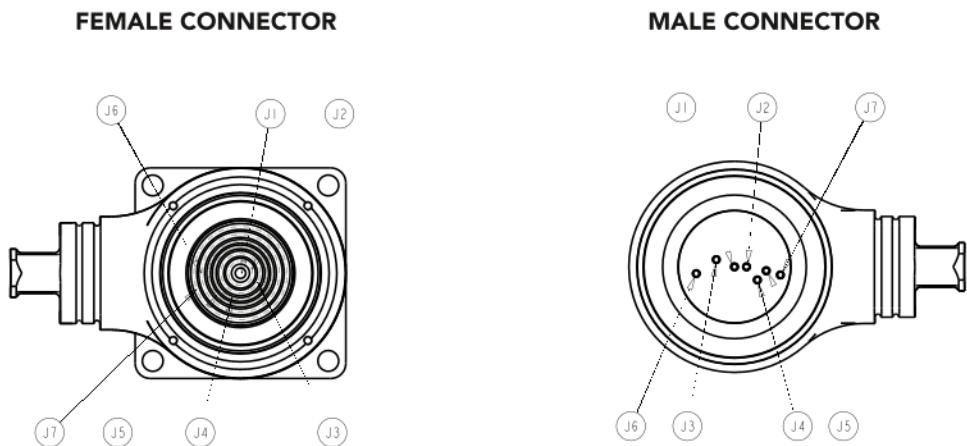
ACCESSORIES

Stingray 7 can also be supplied as an overmoulded cable harness and a range of accessories is also available

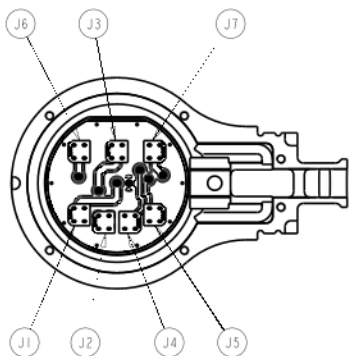


Termination Details

CONTACT POSITIONS (FRONT FACE OF CONNECTOR SHOWN)



TERMINAL POSITIONS (COMMON TO BOTH MALE AND FEMALE CONNECTORS)



Contact Terminal	J1	J2	J3	J4	J5	J6	J7
Signal Type	5A Power/Signal		Data USB 2.0 or Signal		5A Power/Signal		
Insulation Diameter	0.055" / 1.4mm MAX						
Conductor Size - 001	22 AWG		28 AWG		22 AWG		
Conductor Size - 002			26 AWG				

Amphenol LTD has made very effort to ensure that the information contained in this catalogue is accurate at time of publication. Specifications or information stated in this publication are subject to change without notice.

Unless formally agreed Amphenol LTD maintains proprietary control of these products and future derivatives.

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