

HotShoe Connectors Specification

Features and Benefits

- ❖ Constructed using spring loaded contacts, maintaining a positive force against the mating connector.
- ❖ Low mating force enables rapid and effortless connection for a user-friendly connection system.
- ❖ Rugged and robust, made from highly durable mould materials and designed to withstand a high level of dust, water and chemical agent ingress to IP68 – ensuring continued reliability throughout the product's lifecycle.
- ❖ Tolerant to mating misalignment.
- ❖ Ideal for use in portable equipment where separate battery modules are used, and for data transfer docking stations.

Typical Applications

- ❖ Military radio systems
- ❖ Thermal imaging cameras
- ❖ Hand-held scanners
- ❖ Docking stations
- ❖ Hand-held commercial radios
- ❖ Portable datacoms equipment
- ❖ Powerboat gantry connection system

Specifications

❖ Materials

Mouldings:	High Temperature Plastic, UL94V-0
Seals:	Thermoplastic Elastomer or Nitrile
Contacts:	Brass
Threaded Inserts, Springs:	Stainless Steel
Finish:	Gold

❖ Environmental

Temperature range:	-40°C to +100°C
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❖ Electrical

Current rating:	1A per contact
Voltage rating:	240V DC
Contact resistance:	Male: 10 mΩ max Female: 30 mΩ max
Insulation resistance:	1,000 MΩ min

❖ Mechanical

Durability:	10,000 cycles
Environmental seal:	IP68 at 1.5m for 2 hours

All preferred sizes of this range are held in stock.
Check www.harwin.com for availability.

Mating Profiles

MALE \ FEMALE	FEMALE	
	PC TAIL	SOLDER
PC TAIL	M90-604 M90-605 3.50 15.50 between PCBs	M90-606 3.50 18.50 to PCB
	M90-704	M90-704
SOLDER	M90-706 3.50 20.50 to PCB	M90-606 3.50 23.50
	M90-604 M90-605	M90-706

All dimensions in mm.

HotShoe Connectors

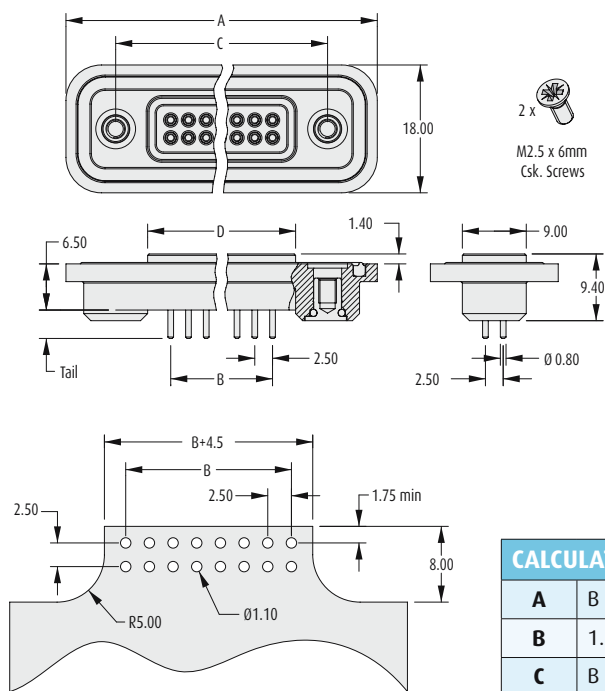
HotShoe

Female Connector

- ❖ Sealed to IP68 at 1.5m.
- ❖ Spring probe design for maintaining a positive force against the mating connector – see page 160.
- ❖ Solder cup Tail suitable for 26 AWG cable.
- ❖ Recommended panel/bulkhead thickness is 1.5mm.

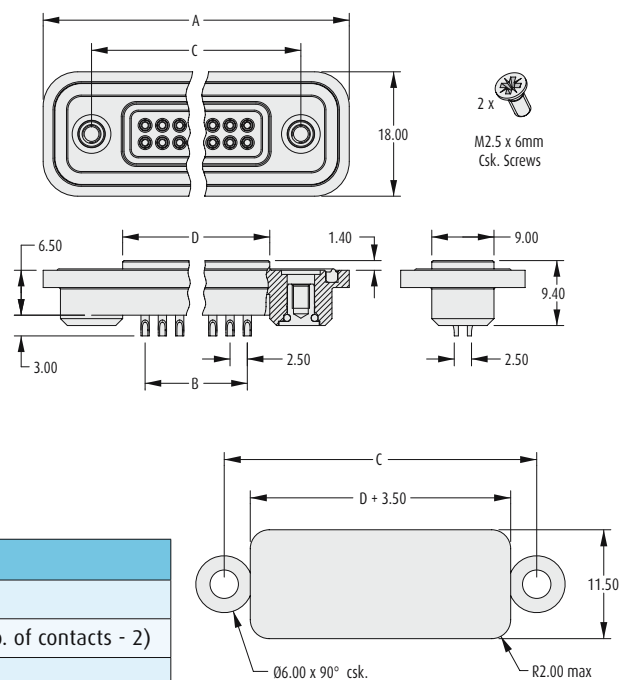


PC TAIL



Recommended PC Board Pattern

SOLDER TAIL



Recommended Panel Cut-out

CALCULATION

A	$B + 29.50$
B	$1.25 \times (\text{Total no. of contacts} - 2)$
C	$B + 15.50$
D	$B + 6.50$

HOW TO ORDER

M90 - 60X XX 45

SERIES CODE

TYPE

604	4mm PC Tail
605	3mm PC Tail
606	Solder Cup Tail

FINISH

45	Gold	PG
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TOTAL NO. OF CONTACTS

08, 12, 16

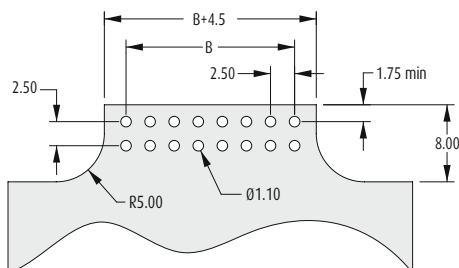
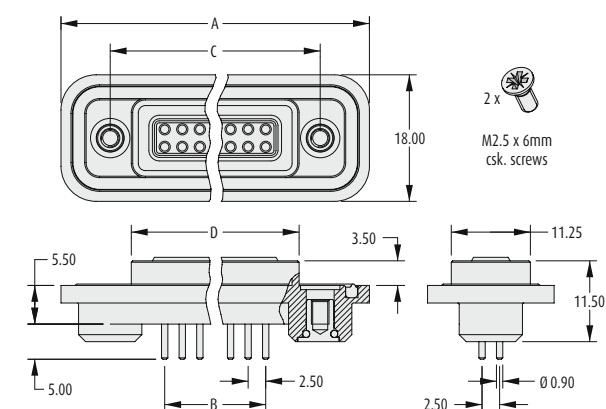
All dimensions in mm.

Male Connector

- ❖ Sealed to IP68 at 1.5m.
- ❖ Designed to mate with a spring probe connector – see page 159.
- ❖ Solder Cup Tail suitable for 26 AWG cable.
- ❖ Recommended panel/bulkhead thickness is 1.5mm.



PC TAIL

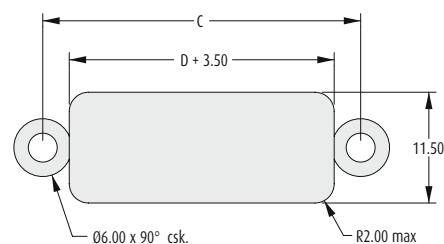
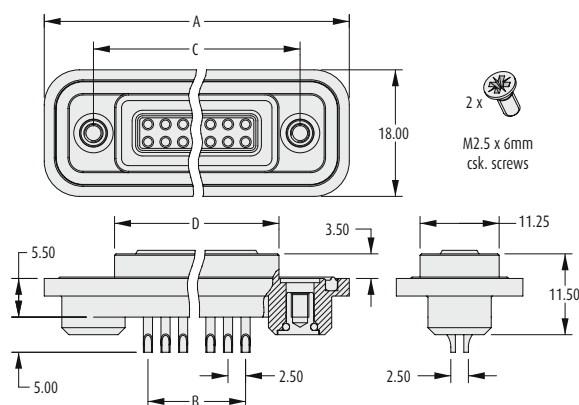


Recommended PC Board Pattern

CALCULATION

A	$B + 29.50$
B	$1.25 \times (\text{Total no. of contacts} - 2)$
C	$B + 15.50$
D	$B + 9.50$

SOLDER TAIL



Recommended Panel Cut-out

HOW TO ORDER

M90 - 70X XX 45

SERIES CODE

TYPE

704	PC Tail
706	Solder Cup Tail

FINISH

45

Gold



TOTAL NO. OF CONTACTS

08, 12, 16

All dimensions in mm.