

Quick Multipin Series



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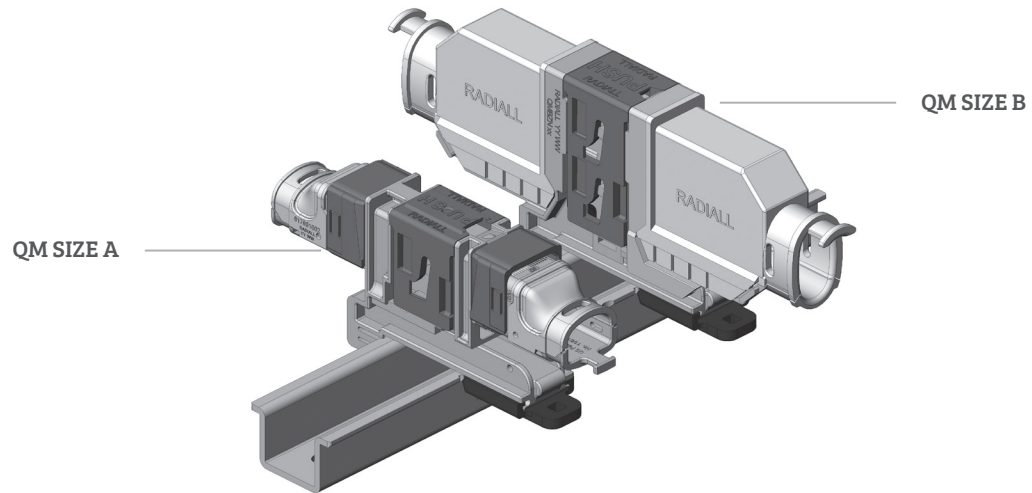
Introduction

A MODULAR AND TOOL LESS CONNECTOR

Radiall QM series connectors are designed for use with in-line disconnect applications on commercial airplanes. QM series offer outstanding electrical performances and are designed with environmental and mechanical characteristics that provide long lasting durability needed for the most severe aerospace applications.

Two connector sizes are available in QM series to optimize disconnect connection in terms of weight and density in an aircraft wiring system:

- QM size A
- QM size B



QM series is developed to provide the following benefits:

- Save time during wiring with a tool less connector
- Save weight with a composite connector
- simplify the wiring design as no panel cut outs are needed

QM size A and size B are mounted on the same range of rails. QM size A will save weight and space when a smaller insert with less contacts can be utilized in the wiring design compared to the QM size B. QM series offer a wide range of inserts that cover all contact technology. It is manufactured under US patent App, No 11/614.642. QM series is available worldwide.

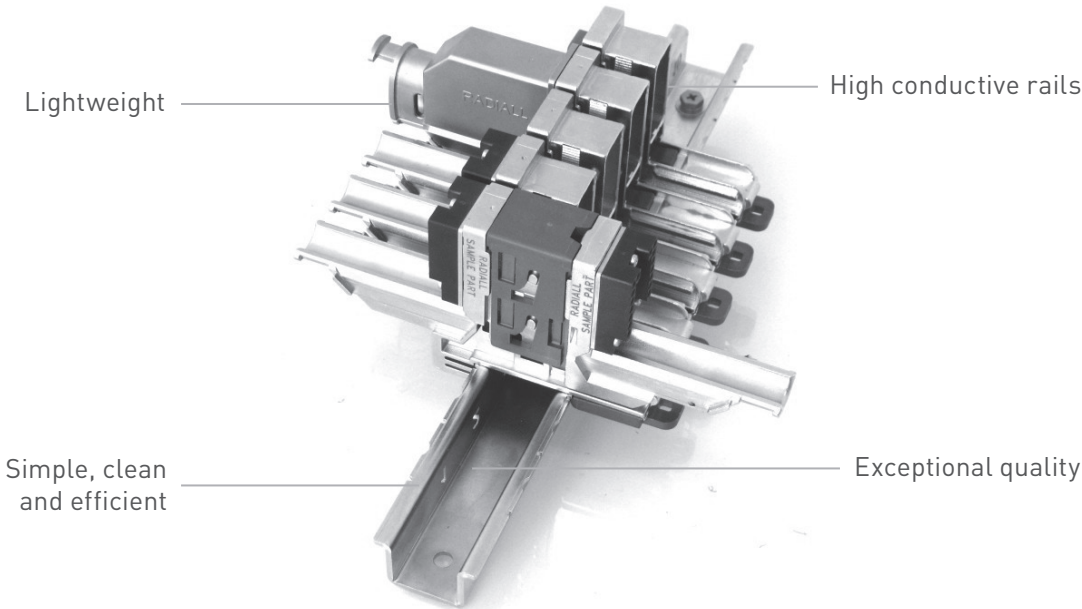
Applications

Interconnect solution for aerospace and harsh environment applications

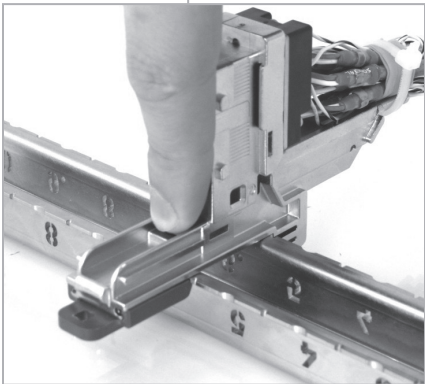


Features & Benefits

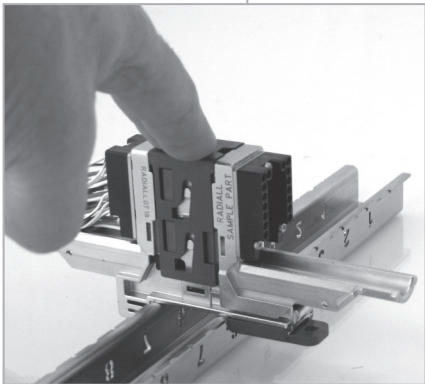
QM SERIES



User friendly - no tools needed



Click to install



Push to lock

Electrical Characteristics

Contacts are per EN3155-76 and EN3155-77. Electrical characteristics conform to SAE AS 39029 (MIL-C-39029 type A).

GROUND BLOCK CONTACT

	Contact with wire size	Max Current Amps
Contact to contact	Contact + AWG20	7.5
Contact to mounting surface	Contact + AWG20	7.5

CONTACTS

Contact size	Wire size	Max Current Amps
22	AWG22	5
	AWG24	3
	AWG26	2
20	AWG20	7.5
	AWG22	5
	AWG24	3
16	AWG16	13
	AWG18	10
	AWG20	7.5
12	AWG12	23
	AWG14	17
	AWG16	13
8	AWG8	46
	AWG10	33
5	AWG8	46 — See note 1
	AWG10	33

Note 1: Size 5 contacts are not part of SAE AS 39029 (MIL-C-39029 type A). They are qualified by Radiall to 46 Amps

EMI SHIELDING EFFECTIVENESS

Frequency (MHz)	Leakage attenuation (dB)
100	65
200	63
300	61
400	59
500	58

DIELECTRIC WITHSTANDING VOLTAGE

EIA 364-20 (MIL-STD-1344 / Method 3001.1) with leakage current < 1m Ω

Level	Environmental inserts Voltage (VRMS)	Non-environmental voltage (VRMS)
Sea level	1500	1500
50 000 feet	800	600
70 000 feet	800	300

INSULATION RESISTANCE

EIA 364-21 (MIL-STD-1344 / Method 3003.1)

Temperature	Insulation resistance
Ambient temperature	> 5000 M Ω
155°C (+347°F)	>200 M Ω

OTHER CHARACTERISTICS

- Shell to shell conductivity < 2.5 m Ω, operating voltage: 400 Vrms or 500 Vdc at sea level
- Voltage stability (ground block): Maximum variation 4mV SAE AS 81714 (MIL-T-81714)
- Magnetic permeability < 2 μ and comparative tracking index = 250 V
- Lightning strike: 3.6kA according to EIA-364, Test procedure 75, Type B Test level 1

Mechanical and Environmental Characteristics

MECHANICAL CHARACTERISTICS

Vibration and Shock

Shell type	Material	Vibration	Shock
		for 5 hours in each of the 3 axis/interruption < 1µs EIA 364-28 (MIL-STD-1344 /Method 2005.1)	three shocks in each axis EIA 364-27 (MIL-STD-1344 /Method 2004.1) condition A
QM Series	Composite	4 positions rail = Acceleration 13,8 Grms 0,2G ² /Hz from 10 to 400HZ and 0,03G ² /hz from 400 to 2000Hz	4 positions rail = Shock amplitude 50G / duration 11ms
		22 positions rails = Acceleration 6,2 Grms 0.04 g ² /Hz from 10 to 400 Hz 0.006 g ² /Hz at 2000 Hz	22 positions rail = Shock amplitude 15G / duration 11ms

Interruption shall not exceed 1µs, they are measured on electrical contacts, between shells and between shell and rail.

Mating/unmating

Shell type	Material	Mating/unmating	Mating force
QM size B	Nickel plated composite	50 cycles	250N max
QM size A			125N max

RETENTION CHARACTERISTICS

Contact retention EIA 364-29 (MIL-STD-1344 / Method 2007.1) on terminated connectors

Contact size	Retention force	Max displacement
Ground block	88N (20lbs)	0.30mm (.012 in.)
22	53.4N (12lbs)	0.38mm (.015 in.)
20	89N (20 lbs)	0.38mm (.015 in.)
16	111.2N (25lbs)	0.38mm (.015 in.)
12	133.45N (30lbs)	0.38mm (.015 in.)
8	133.45N (30lbs)	0.38mm (.015 in.)
5	133.45N (30lbs)	0.38mm (.015 in.)

- Insert retention: 400N (90lbs) (EIA 364-35 = MIL-STD-1344 /Method 2010.1)
- Max displacement: 0.30mm (.012 in.)

ENVIRONMENTAL CHARACTERISTICS

Temperature

- Temperature range: -65°C / +155°C
- Temperature life: 1000H at 155°C

OTHER CHARACTERISTICS

- Salt spray: 96 hours (Nickel plating) EIA 364-26 (MIL-STD-1344 / Method 1001.1) test condition A
- Humidity: 10 days with temperature variation from -10°C to +65°C EIA 364-31 Method 4, test condition B (MIL-STD-1344 /Method 1002.2, type II test condition)
- Altitude immersion: 3 cycles at 50 000 feet EIA 364-03 (MIL-STD-1344 /Method 1004.1)
- For more detail please refer to QM product specification

Inserts Selection Table

QM size B connectors will use EPXB inserts range when QM size A connectors will use EPXA inserts.

Only signal and power contacts with an asterisk (*) can be delivered with inserts. All other contacts must be ordered separately (coax, twinax, quadrax and fiber optic contacts).

Series	Insert name	Insert code	Contact Size & Type											Total contacts	
			22*	20*	15 or 16*	16	16	12*	8	8	8	5	5		
			Signal	Power	Power or coax	LuxCis® fiber optic	Power in fiber optic cavity	Power or coax	Power	Quadrax or twinax	BMA	Coax or triax	Power		
EPXA	00	0													0
	1C1	A											1		1
	1P1	B												1	1
	04	C			2				2						4
	09	D		3	6										9
	14	E		14											14
	14M	F	8	3	3										14
	17	G	12	5											17
	20	H	20												20
	F6	J				6									6
EPXB	00	0													0
	C3	A											3		3
	P3	B												3	3
	3Q3	C									3				3
	06	D							6						6
	10Q2	E		8							2				10
	12F6	F				6	6								12
	F12C	G				12									12
	13C1	H		6	4				2				1		13
	13P1	J		6	4				2					1	13
	14	K			14										14
	17	L		14					3						17
	20C1	M		19									1		20
	20P1	N		19										1	20
	22	P		16	6										22
	22V	Q		16	6										22
	25P1	R	24							1					25
	25Q1	S	24								1				25
	28	T	22		6										28
	30	U		30											30
34	W	18	16											34	
40	X	40												40	
48	Y	48												48	
3T3	Z											3		3	

How to Order EPX Insert

EPX	B	E	40	P	A	S
-----	---	---	----	---	---	---

Series

Insert size

- A: insert for QM size A
- B: insert for QM size B

Class

- E: Environmental

Insert name

Refer to table on page 2-10 for inserts arrangement

Insert type

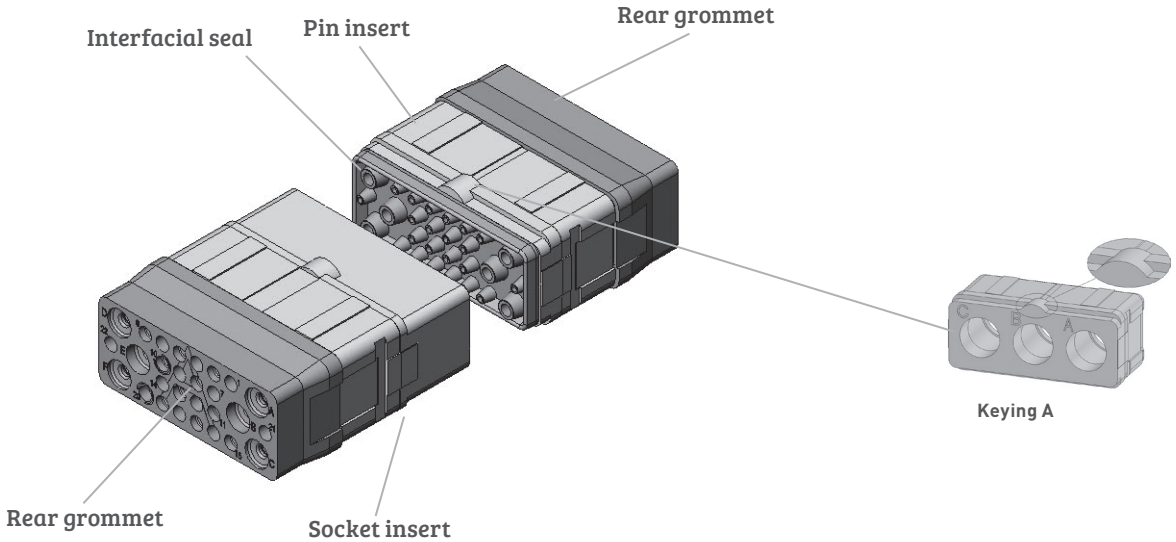
- P: Pin
- S: Socket

Insert keying

- A: insert with keying A

Contact

- Without code:** insert delivered without contact
 - S:** Signal and power crimp contacts are delivered with insert but uninstalled (refer to page 2-8)
- Inserts 00, 1C1, 1P1, F6, C3, P3, 3Q3, 12F6, F12C and 3T3 are not available in S contact version


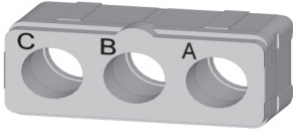
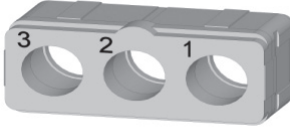
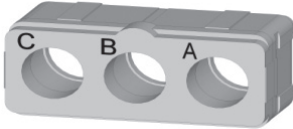
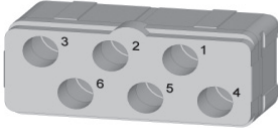
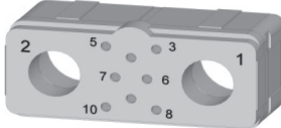

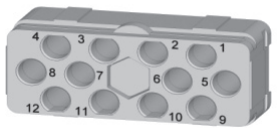
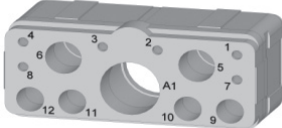
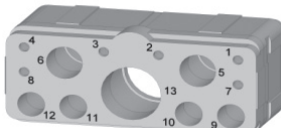
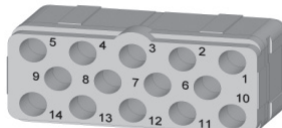
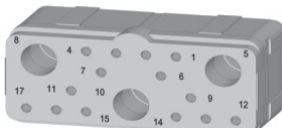
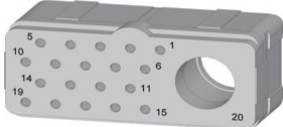
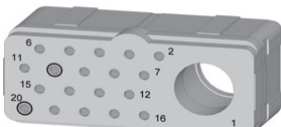
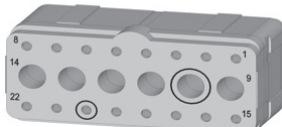
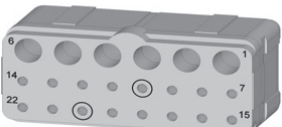


EPXA Inserts Arrangements

<p>Insert name 00 Blank insert (1)</p>	<p>Insert name 1C1 1 x size 5 coax contact</p>	<p>Insert name 1P1 1 x size 5 power contact</p>	<p>Insert name 04 2 x size 15 or 16 contacts 2 x size 12 contacts</p>
<p>Insert name 09 3 x size 20 contacts 6 x size 15 or 16 contacts</p>	<p>Insert name 14 14 x size 20 contacts</p>	<p>Insert name 14M 8 x size 22 contacts 3 x size 20 contacts 3 x size 15 or 16 contacts</p>	<p>Insert name 17 12 x size 22 contacts 5 x size 20 contacts</p>
<p>Insert name 20 20 x size 22 contacts</p>	<p>Insert name F6 6 x size 16 optical LuxCis® termini</p>		

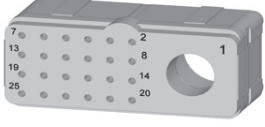
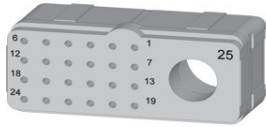
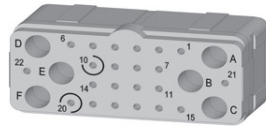
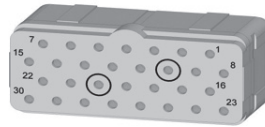
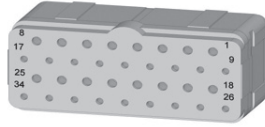
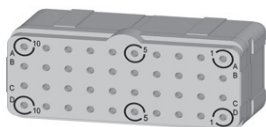
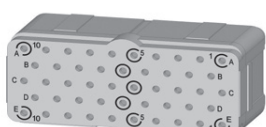
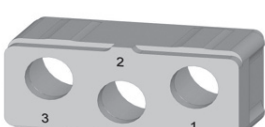
EPXB Inserts Arrangements

Full size inserts arrangements are compliant with EN4644.

			
Insert name 00 Dummy insert	Insert name C3 3 x size 5 contacts	Insert name P3 3 x size 5 power contacts	Insert name 3Q3 3 x size 8 quadrax contacts
			
Insert name 06 6 x size 12 contacts	Insert name 10Q2 8 x size 20 contacts 2 x size 8 quadrax contacts	Insert name 12F6 6 x size 16 Optical LuxCis® termini 6 x size 16 special electrical contacts	Insert name F12C 12 x size 16 Optical LuxCis® termini
			
Insert name 13C1 6 x size 20 contacts 4 x size 15 or 16 contacts 2 x size 12 contacts 1 x size 5 contact	Insert name 13P1 6 x size 20 contacts 4 x size 15 or 16 contacts 2 x size 12 contacts 1 x size 5 power contact	Insert name 14 14 x size 15 or 16 contacts	Insert name 17 14 x size 20 contacts 3 x size 12 contacts
			
Insert name 20C1 19 x size 20 contacts 1 x size 5 contact	Insert name 20P1 19 x size 20 contacts 1 x size 5 power contact	Insert name 22 16 x size 20 contacts 6 x size 15 or 16 contacts	Insert name 22V 16 x size 20 contacts 6 x size 16 contacts

EPXB Inserts Arrangements

Full size inserts arrangements are compliant with EN4644.

			
<p>Insert name 25P1 24 x size 22 contacts 1 x size 8 power contact</p>	<p>Insert name 25Q1 24 x size 22 contacts 1 x size 8 quadrax contact</p>	<p>Insert name 28 22 x size 22 contacts 6 x size 15 or 16 contacts</p>	<p>Insert name 30 30 x size 20 contacts</p>
			
<p>Insert name 34 18 x size 22 contacts 16 x size 20 contacts</p>	<p>Insert name 40 40 x size 22 contacts</p>	<p>Insert name 48 48 x size 22 contacts</p>	<p>Insert name 3T3 3 x size 8 BMA contact⁽¹⁾</p>

NOTE:

(1) 3T3 pin insert only is available. It is mateable with 3Q3 socket insert

Signal & Power Crimp Contacts

QM series offers a wide range of contacts compliant with EN3155 and SAE AS 39029. This range covers any technology in aerospace application using either cable or printed circuit boards' solutions:

- Signal and power contacts
- High frequency with coax, twinax and triax contacts
- Ethernet links with Quadrax contacts
- Optical links with LuxCis® contacts

Discover our brand new range of signal & power contacts with gold selective plating

Features and benefits :

- Significant reduction of cost of ownership
- Reduced dependence to gold rate fluctuation
- No change in the contact integration process

Specifications:

- Same contact design as full plated version
- Contact interface gold plated with 1.27µm
- For crimp version, no consequence on crimping process
- For PC tail version, use of selective plated contacts has no impact on PCB design
- Product qualification is available upon request

Contact size	Wire size	Type	Part number full plated	Part number selectively plated	Crimping tool	Positioner	Selector	Ins / ext tool	Type of tool	
22	22	Pin	617200	617200100	282281 M22520/2-01	282970 M22520/2-23	4	282522 (M81969/14-01)	Plastic	
	24						3			
	26	Socket	617300	617300100			3			
20	20	Pin	617221	617221100	282281 M22520/2-01	282971 M22520/2-08	7	282522001 (M81969/39-01)	Plastic	
	22						6			
	24	Socket	617320	617320100			5			
16	16	Pin	617240	617240100	282291 M22520/1-01	282972 M22520/1-02	6	282515 (M81969/14-03)	Plastic	
		18	Socket	617340			617340100			5
	20	4								
	Ground block	20	Pin	617221050	n/a	282281 M225520/2-01	282581015 M22520/2-11	7	282886	Metal
			Socket	N/A	n/a					
	for optical electrical insert	16	Pin	617235003 ⁽¹⁾	n/a	282291 M22520/1-01	282581013	6	282515 (M81969/14-03)	Plastic
18		5								
20		4								
12	12	Pin	617250	617250100	282291 M22520/1-01	282972 M22520/1-02	8	282549004 (M81969/14-04)	Plastic	
	14	Socket	617350	617350100			7			
	16						6			
8	8	Pin	617291002 ^(2&3)	n/a	R282600000 M22520/23-01 + Die set R282650000 M22520/23-02	282588	n/a	282549001	Metal	
	10	Socket	617391002 ^(2&3)	n/a						
5	8	Pin	617280 ^(2&4)	n/a	R282600000 M22520/23-01 + Die set R282650000 M22520/23-02	282557020	n/a	282946 (M81969/28-01)	Metal	
		10	Socket	617390 ^(2&4)		n/a				282557021
	12	Pin	617260001 ^(2&4)	n/a	282613	282586003	6			
						16		Socket	617370001 ^(2&4)	n/a

Notes

- (1) Electrical contacts for optical inserts are always pin contacts (hermaphrodite)
 (2) In order to make these contacts environmental, it is necessary to add a sealing boot. Please, contact us for additional information
 (3) These power contacts can be used in power inserts only (25P1 EPXB insert)
 (4) These power contacts can be used in power inserts only (P3, 13P1 and 20P1 EPXB inserts)

Signal & Power Crimp Contacts

Contact size		Wire size	Type	Part number fully plated	Crimping tool	Positioner	Selector	Ins / ext tool	Type of tool
22	reduced crimp barrel	28	Pin	617201(1)	282281 M22520/2-01	282970 M22520/2-23	5	282522 (M81969/14-01)	Plastic
		30	Socket	617301(1)			4		
	oversize crimp barrel	20	Pin	617200200	282281 M22520/2-01	282970 M22520/2-23	5		
		22	Socket	617300200			4		
		24					3		
20	reduced crimp barrel	22	Pin	617224001(1)	282281 M22520/2-01	282971 M22520/2-08	4	282522001 (M81969/39-01)	Plastic
		24	Socket	617324001(1)			3		
		26					3		
	oversize crimp barrel	18	Pin	617221200	282281 M22520/2-01	282971 M22520/2-08	5		
		20	Socket	617320200			5		
		22					4		
		22					4		
16	reduced crimp barrel	20	Pin	617241(1)	282291 M22520/1-01	282972 M22520/1-02	5	282515 (M81969/14-03)	Plastic
		22	Socket	617341(1)			5		
		24					4		
	reduced crimp barrel for optical electrical insert	20	Pin	617235002(1&2)	282291 M22520/1-01	282581013	5		
		22					5		
		24					4		
	oversize crimp barrel	14	Pin	617240200	282291 M22520/1-01	282972 M22520/1-02	6		
		16	Socket	617340200			5		
		18					5		

INSERTS

CONTACTS

CONNECTORS & ACCESSORIES

NOTES:

- (1) When smaller wire sizes are used on contacts with reduced crimp barrel, the wire will not provide sealing to the grommet. If sealing is required, please contact Radiall
- (2) Electrical contacts for optical insertss are always pin contacts (hermaphrodite)

Coaxial Crimp Contacts

Contact size	Cable type	Type	Environmental part number	Non-environmental part number	Ins/ext tool	Type of tool
15-16	RG174-RG179 RG316	Pin	617130		282512	Metal
		Socket	617030			
	RG178	Pin	617131			
		Socket	617031			
	GORE/AXON P812817 FILECA F1703-134 FILOTEX SP132868	Pin	617132			
		Socket	617032			
	RG178 DT	Pin	617133			
		Socket	617033			
	UT .047	Pin	617135			
		Socket	617035			
12	UT.085-RG405	Pin	617160		282549004 (M81969/14-04)	Plastic
		Socket	617060			
5	RG58-RG141	Pin	617101001	617101	282946 (M81969/28-01)	Metal
		Socket	617001001	617001		
	RG142 - RG400	Pin	617102001	617102		
		Socket	617002001	617002		
	RG174-RG316 RG188	Pin	617103001	617103		
		Socket	617003001	617003		
	RG178-RG196	Pin	617104001	617104		
		Socket	617004001	617004		
	RG180	Pin	617105001	617105		
		Socket	617005001	617005		

Twinax and Triax Crimp Contacts

Contact size	Cable type	Type	Environmental part number	Non-environmental part number	Ins/ext tool	Type of tool
12 Triax	ECS0700	Pin	617190010		282549004 (M81969/14-04)	Plastic
		Socket	617090010			
	M17/176-00002	Pin	617190012			
		Socket	617090012			
8 Triax	TENSOLITE	Pin	617165021	617165020	282549001 (M81969/28-03)	Metal
	24473/03159X-2	Socket	617065021	617065020		
		Pin	617165	617165001		
	WHITMOR W26751575	Socket	617065	617065001		
8 Twinax	ABS0386WF24 & TYCO 1726A1424A	Pin	617165011	620165010		
		Socket	617065011	620065010		
5 Triax	M17/176-0002	Pin	617150001	617150	282946 (M81969/28-01)	Metal
		Socket	617050001	617050		
	PAN6421	Pin	617152001	617152		
		Socket	617052001	617052		

Quadrax & BMA Crimp Contacts



QUADRAX CONTACTS

Contact size	Cable type	Type	Environmental part number	Non-environmental part number	Extraction tool in metal
8	Ethernet cable	Pin	617175011	617175012	282549001
	ABS0972 & ABS1503	Socket	617075011	620075010	
	TENSOLITE	Pin	617175051	617175052	
	NF24Q100	Socket	617075051	620075050	
	Tensolite NF26Q100 JSF Y18	Pin	617175053	617175054	
		Socket	617075053	620075021	



BMA CONTACTS

Contact size	Cable type	Connector Type	Environmental part number	Non-environmental part number	Frequency range	Max VSWR	Insertion loss
8	SHF5 - SHF5M ⁽¹⁾	Pin ⁽²⁾	617171011	617171010	DC-18 GHz	1.35	0.13 dB at max frequency (18 GHz)
	RG142	Pin ⁽²⁾	617171021	617171020	DC-12.4 GHz	1.35	0.11 dB at max frequency (12.4 GHz)
	SHF2.4M (1) / UT.085 Harbour SS405 Times Tflex405	Pin ⁽²⁾	617171031	617171030	DC-18 GHz	1.35	0.13 dB at max frequency (18 GHz)
	SHF5 - SHF5M ⁽¹⁾	Socket	617071011	617071010	DC-18 GHz	1.35	0.13 dB at max frequency (18 GHz)
	RG142	Socket	617071021	617071020	DC-12.4 GHz	1.35	0.11 dB at max frequency (12.4 GHz)
	SHF3 ⁽¹⁾	Socket	617071041	617071040	DC-18 GHz	1.35	0.13 dB at max frequency (18 GHz)

Extraction tool 282549001 is used for size 8 BMA contacts.
 Environmental BMA contacts are all provided with sealing boots.

NOTES:

- (1) The BMA contacts which can accommodate SHF cables requires a wiring done by Radiall .Please contact Radiall for information
- (2) Pin BMA can only be installed in modified EPXB Quadrax insert such as 3T3P. Ex: EPXBE3T3PA

LuxCis® Fiber Optic Contacts

LUXCIS® CONTACTS

The LuxCis® product range is a proven, flexible and always expanding fiber optic interconnect solution offering high speed communication in aerospace and other harsh environments.

OPTICAL PERFORMANCES

	MultiMode (PC) 850 / 1300 nm	SingleMode (UPC) 1310 / 1550 nm
Insertion Loss (IL) Mean (IEC 61300-3-4 Method B)	0.1 dB	0.15 dB
Return Loss (RL) (IEC 61300-3-6)	> 20 dB	> 50 dB

MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

	Standard	Performances
Thermal cycling	SAE AS 13441 method 1003.1	-55°C/+125°C (cable dependant)
Temperature Endurance	TIA/EIA 455-4	1000 h @ 125°C (cable dependant)
Vibration	TIA/EIA 455-11	27 Grms
Shocks	TIA/EIA 455-14	50 G, 11 ms
Durability	TIA / EIA 364-09	500 cycles
Maintenance ageing	SAE AS 13441 method 2002.1	10 cycles
Cable retention Cable retention 1.8 mm diameter 900 µm diameter	SAE AS 13441 method 2009.1	68 N 7 N
Humidity	TIA EIA 455-5	10 cycles / 24 h 90% RH -25°C / +65°C

LUXCIS® CONTACT PART NUMBERING SYSTEM



F725 : LuxCis® series

Ferrule type

- 00**: PC ferrule for SingleMode fiber
- 03**: PC ferrule for 50/125 or 62,5/125 um MultiMode fiber
- 04**: PC ferrule for 100/40 um MultiMode fiber
- 05**: PC ferrule for 200/230 um MultiMode fiber
- 50**: APC ferrule for SingleMode fiber

Cable type and diameter

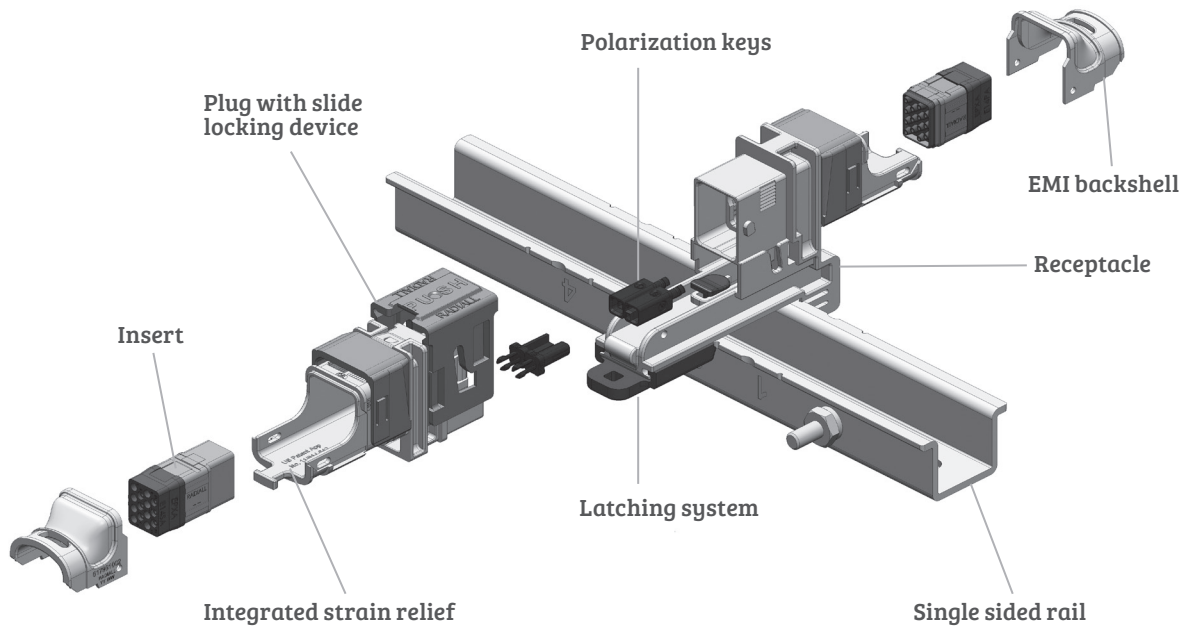
- 118**: 900 µm cable
- 318**: 1.2 mm cable with strengthening members, tight structure
- 419**: 1.6 to 2.2 mm cable, loose structure
- 519**: 1.6 to 2.2 mm cable, tight structure

NOTE:

Radiall can support you with your cable and harness assemblies
Please contact your sales representative

QM SERIES

QM Size A Product Overview

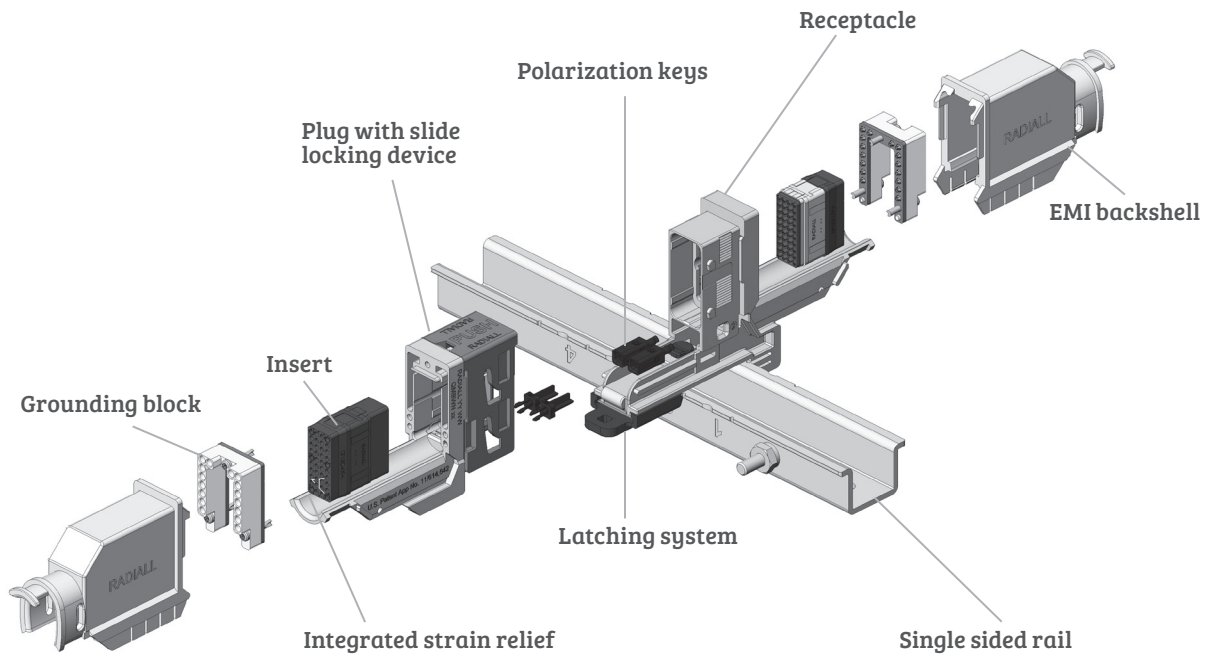


INSERTS

CONTACTS

CONNECTORS & ACCESSORIES

QM Size B Product Overview



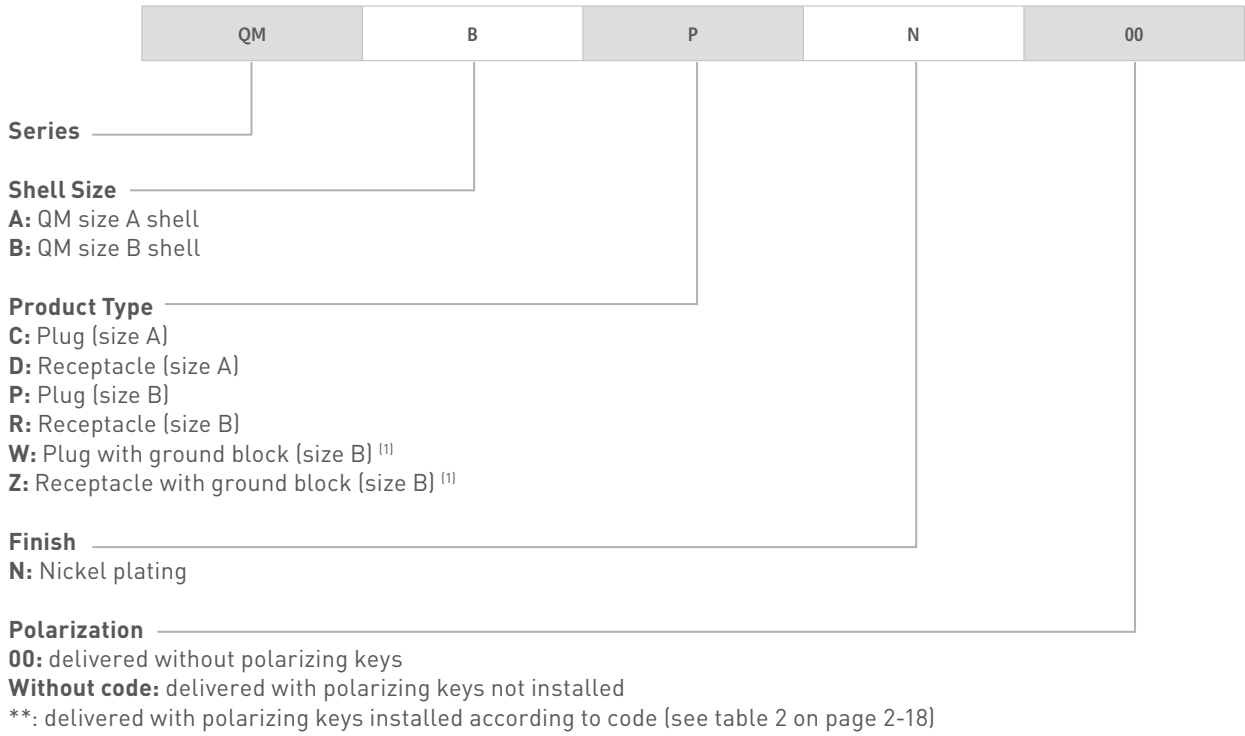
QM SERIES

INSERTS

CONTACTS

CONNECTORS & ACCESSORIES



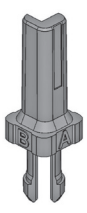
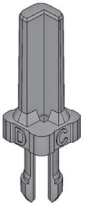
How to Order QM Shell



NOTE:
(1) Shells with ground block are not compatible with EMI backshell

Polarization Code

QM receptacle shell will be delivered with 2 polarization keys and QM plug with 2 polarization posts.

Polarization keys		Polarization posts	
			
View shows A & D	View shows C & B	View shows A & B	View shows C & D

16 possible codings are available

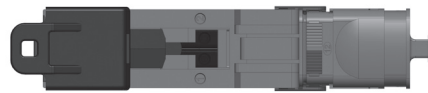
Key position	A	A	A	A	B	B	B	B	C	C	C	C	D	D	D	D
Key position	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D

QM SIZE A CONNECTOR

Tips to read polarization code: polarization code can be read when connector is unmated, underneath the plug and receptacle.



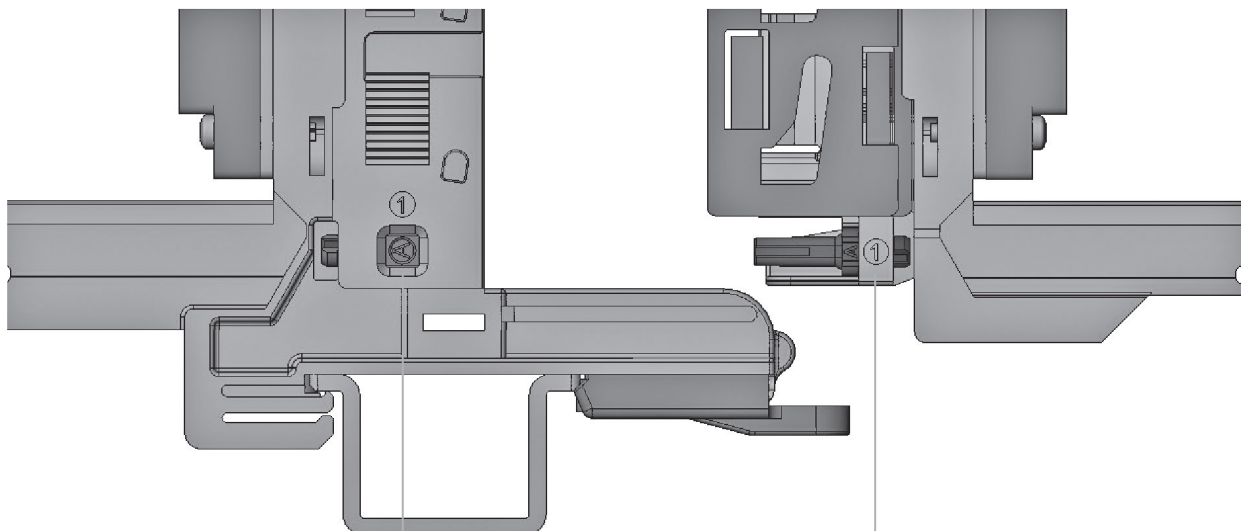
Polarization posts under QM size A plug



Polarization keys under QM size A receptacle

QM SIZE B CONNECTOR

Tips to read polarization code: to be able to read properly the polarization code, you shall be able to read at the same time the part number marked on the connector.

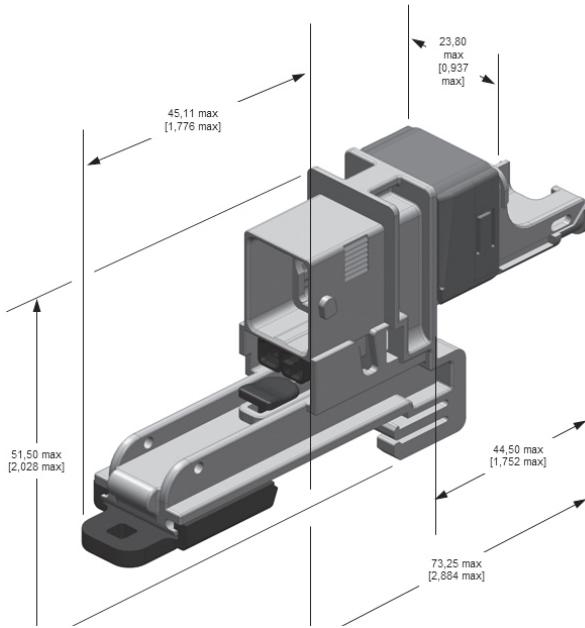


Code on polarization keys

Code on polarization posts

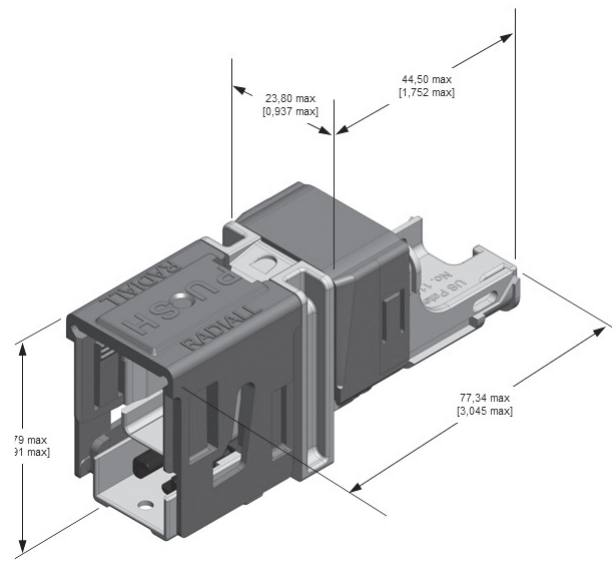
QM Size A Shell Dimensions

Receptacle



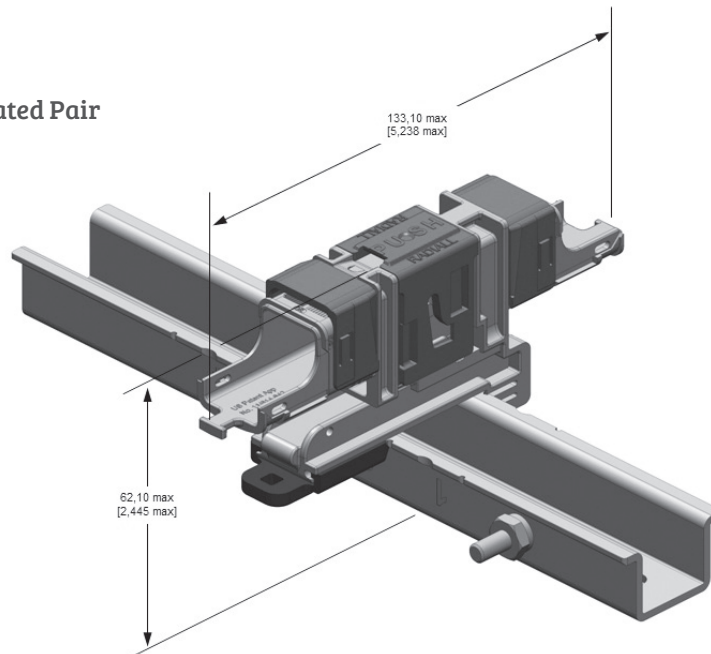
QMADN : 39g

Plug



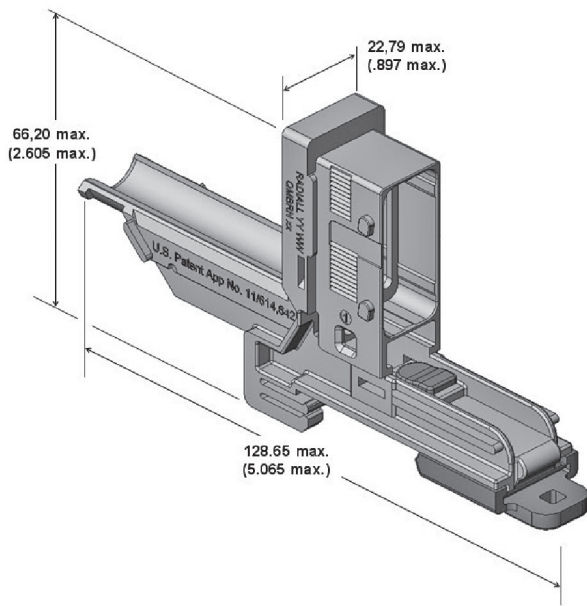
QMACN : 24g

Mated Pair



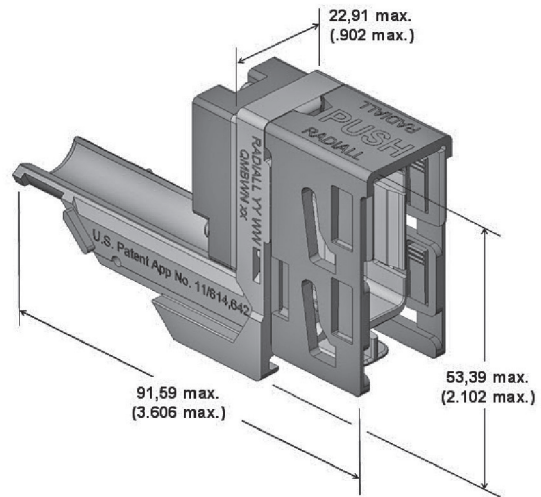
QM size B shell dimensions

Receptacle



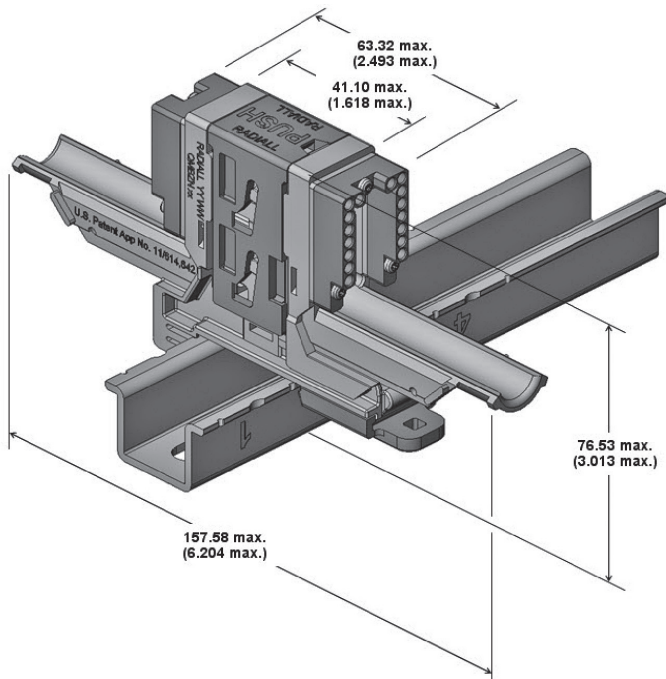
QMBRN: 41g
QMBZN: 48g

Plug



QMBPN: 31g
QMBWN: 38g

Mated Pair



How to Order QM Mounting Device

	QM	U	04S	A	N
--	----	---	-----	---	---

Series _____

Mounting Device _____
L: L-Bracket
U: Single sided rail
H: Double sided rail

Number of connector position _____
Refer to tables on pages 2-26 to 2-30 for number of connector position

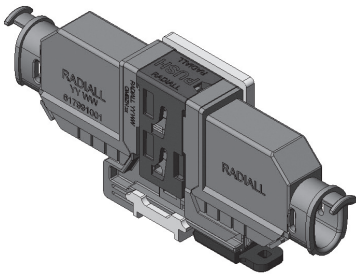
Mounting device material _____
A: Aluminium

Finish _____
N: Nickel

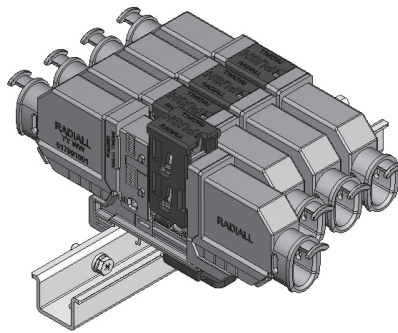
INSERTS

CONTACTS

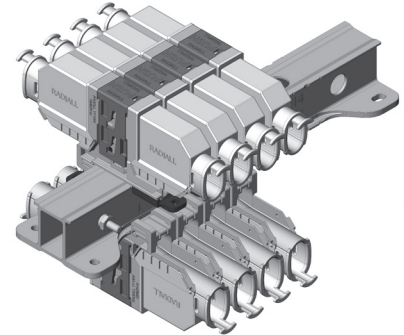
CONNECTORS & ACCESSORIES



L-Bracket



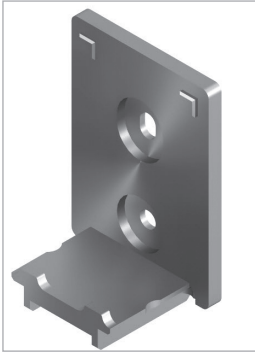
Single sided rail



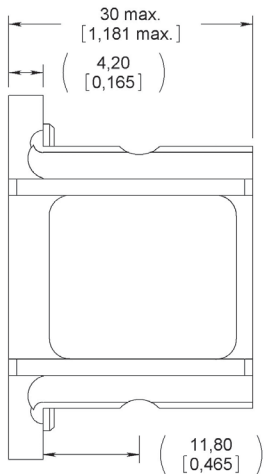
Double sided rail

L-Bracket Dimensions

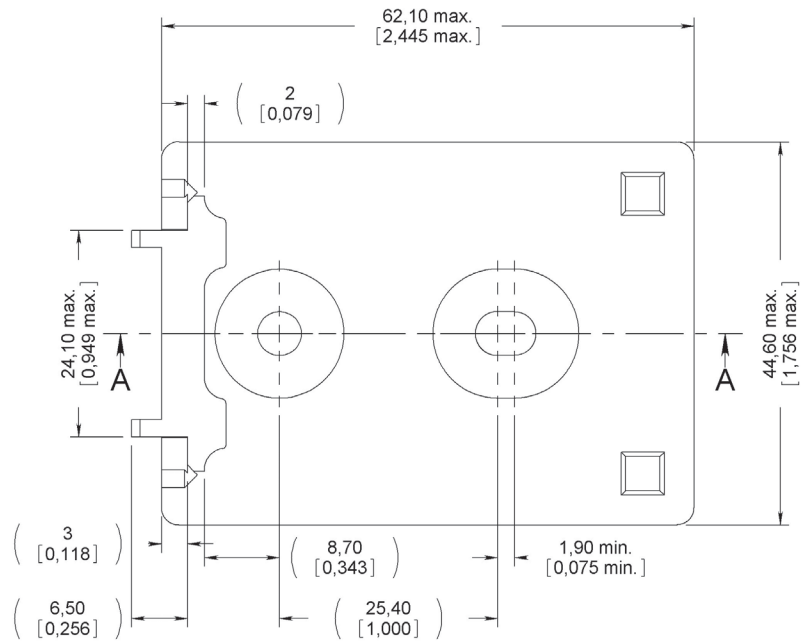
Number of connector position	Length mm (inch)	Weight g (oz)
01	65.60 (2.45)	30 (1.05)



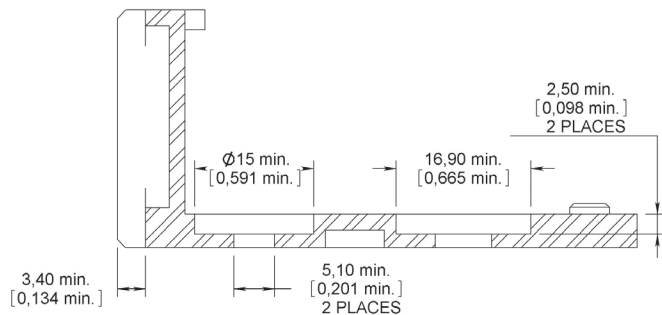
Side view



Top view



Cross section



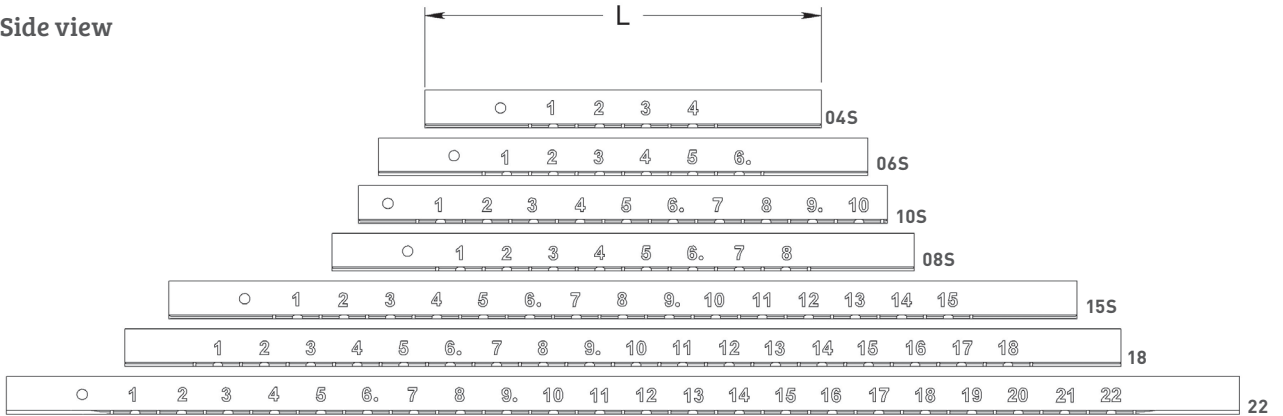
INSERTS

CONTACTS

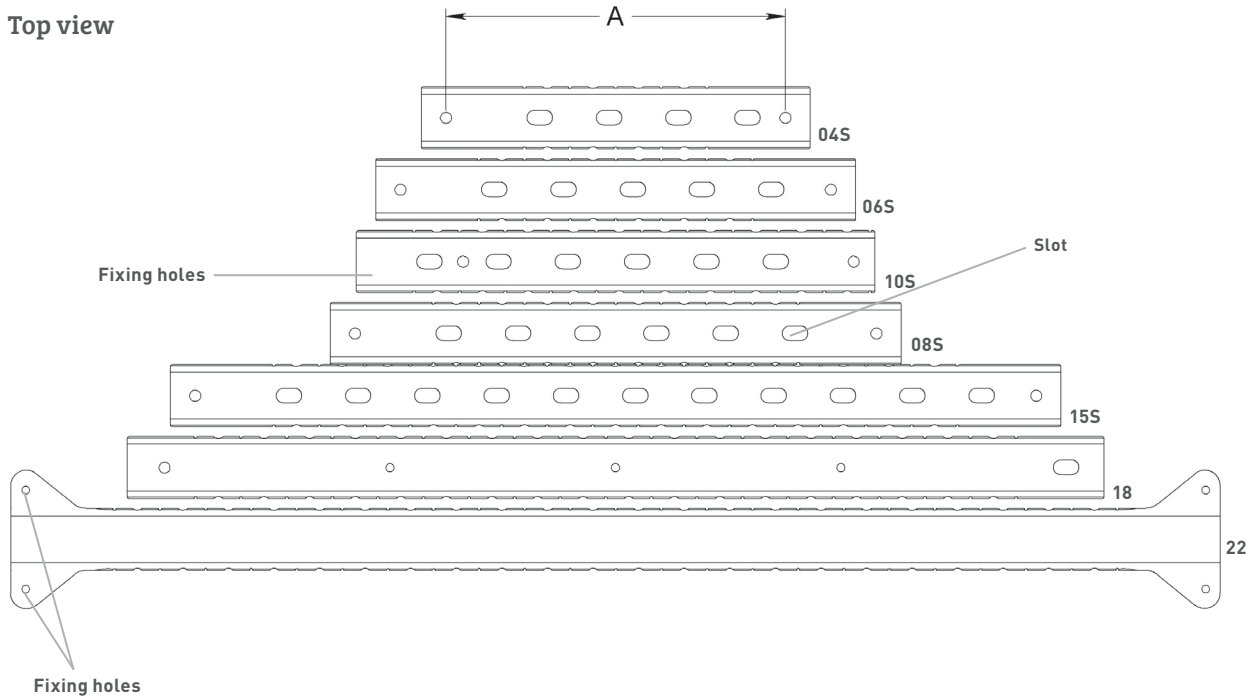
CONNECTORS & ACCESSORIES

Single Sided Rails Range

Side view



Top view



Single Sided Rails Dimensions

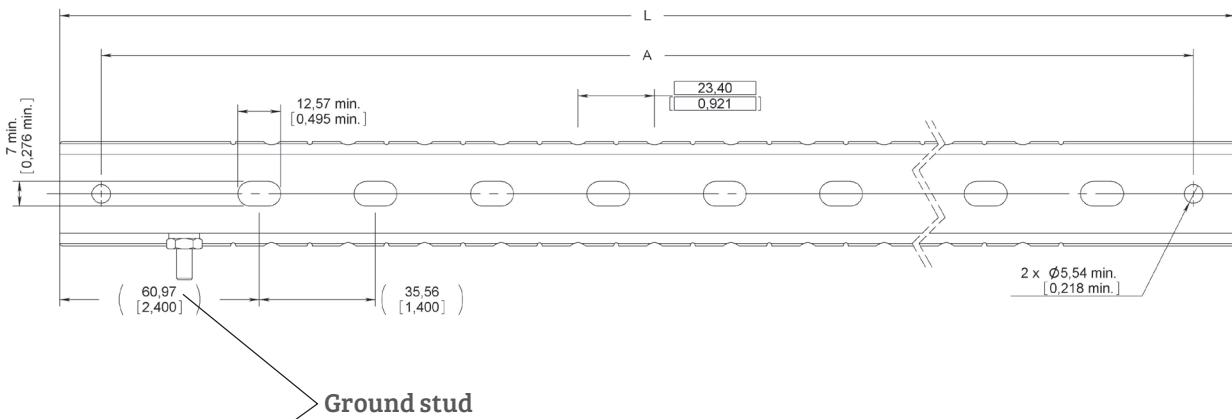
04S, 06S, 08S, 10S & 15S SINGLE SIDED RAIL

These single sided rails are always delivered with slot and ground stud.

SINGLE SIDED RAIL

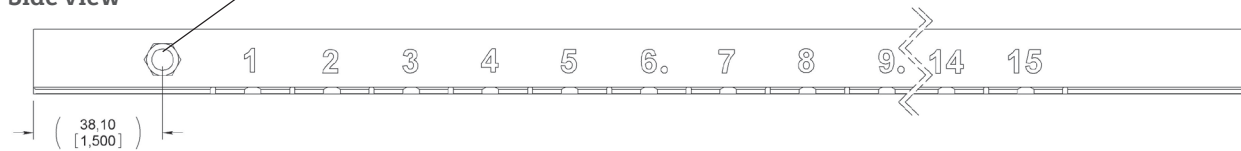
Number of connector position	Length mm (inch)	A distance between fixing holes mm (inch)	Number of slots	Number of ground studs	Weight g (oz)
04S	199.60 [7.86]	175 [6.86]	4	1	85 [3]
06S	246.40 [9.70]	221 [8.70]	5	1	90 [3.20]
08S	293.10 [11.54]	268 [10.54]	6	1	100 [3.53]
10S	266.19 [10.48]	200 [7.895]	6	1	100 [3.53]
15S	457.20 [18]	432 [17]	11	1	220 [7.76]

Top view

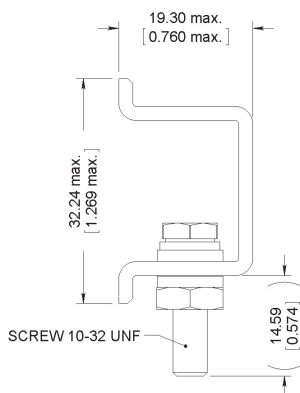


Ground stud

Side view



Cross section

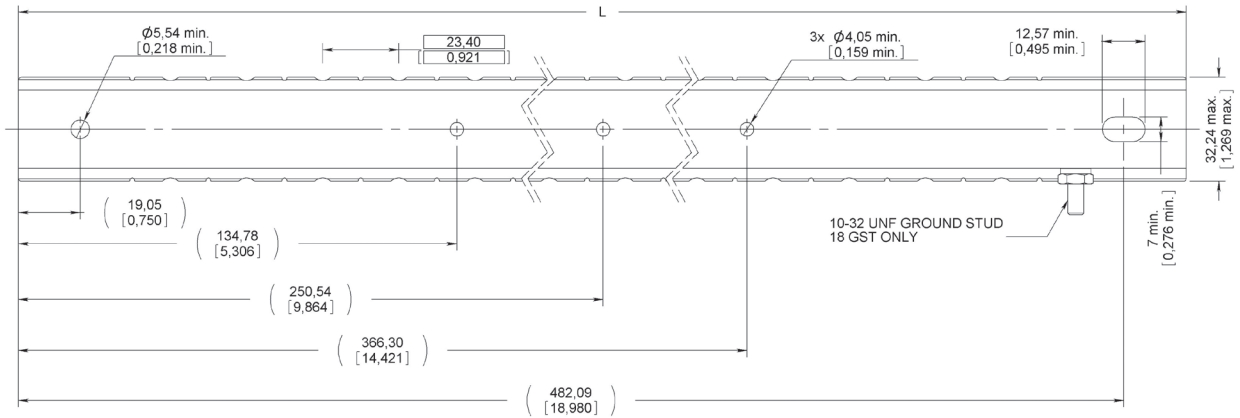


Single Sided Rails Dimensions

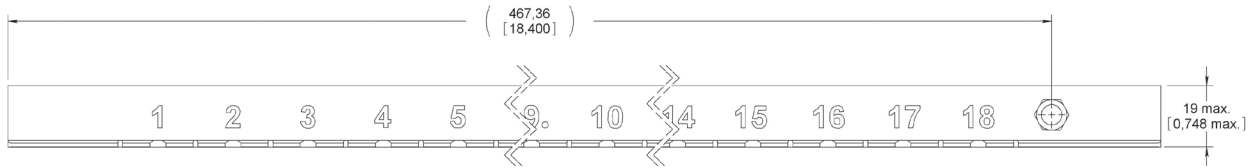
18 SINGLE SIDED RAIL

Number of connector position	Length mm (inch)	Number of slots	Number of ground studs	Weight g (oz)
18	501.40 (19.74)	None	1	170 (6)

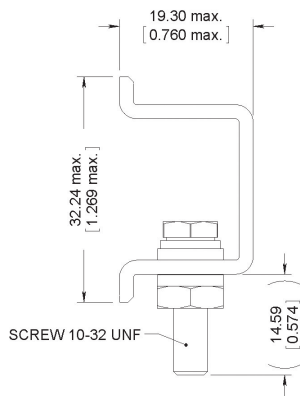
Top view 18



Side view 18



Cross section

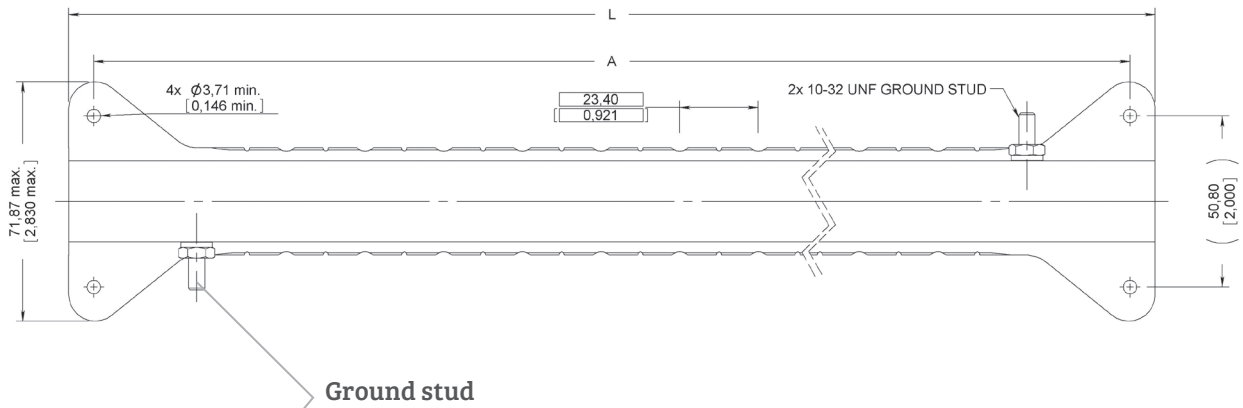


Single Sided Rails Dimensions

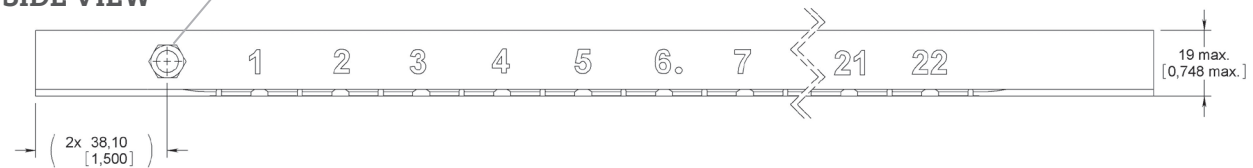
22 SINGLE SIDED RAIL

Number of connector position	Length mm (inch)	A distance between fixing holes mm (inch)	Number of slots	Number of ground studs	Weight g (oz)
22	620.80 [24.44]	606 [23.85]	none	2	230 [8.11]

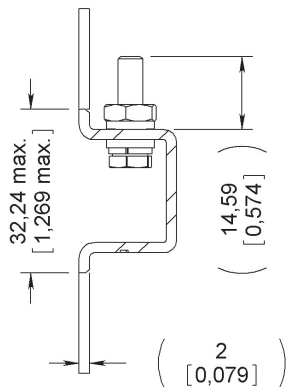
TOP VIEW



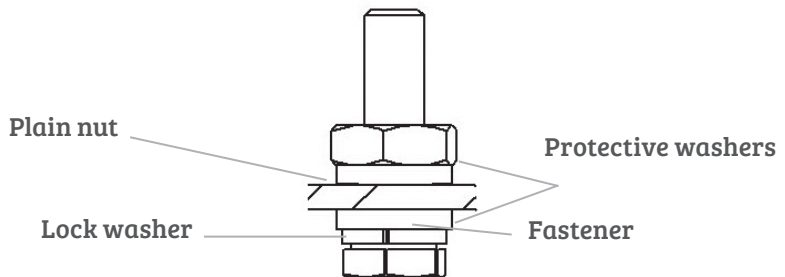
SIDE VIEW



CROSS SECTION



GROUND STUD STACK-UP DETAIL



QM SERIES

INSERTS

CONTACTS

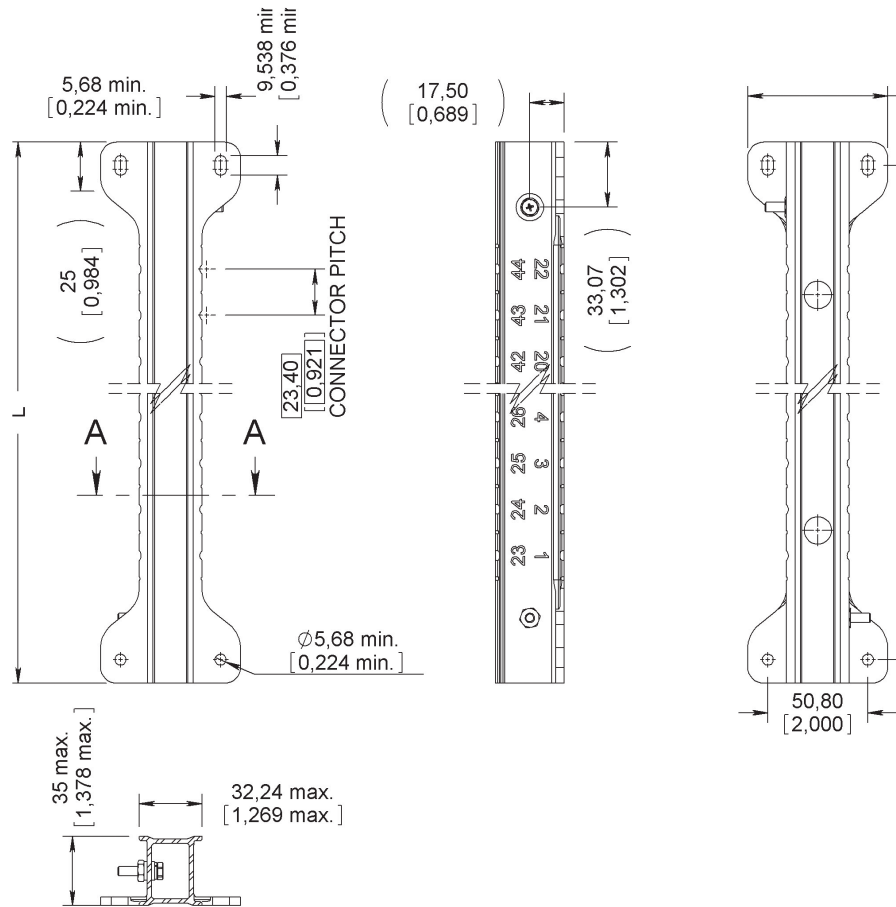
CONNECTORS & ACCESSORIES

Double Sided Rails Dimensions

DOUBLE SIDED RAILS

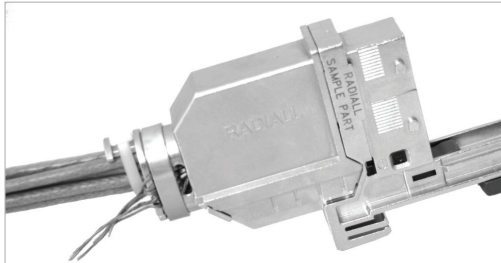
Connector pitch is 23.40 mm on every double sided rail models.

Number of connector position	Length mm (inch)	A distance between fixing holes mm (inch)	Number of ground studs	Weight g (oz)
14	270 (10.63)	246 (9.69)	2	263 (9.27)
16	293 (11.55)	269 (10.61)	2	279 (9.84)
18	317 (12.47)	292 (11.53)	2	298 (10.51)
20	340 (13.39)	316 (12.45)	2	313 (11.04)
22	363 (14.31)	340 (13.37)	2	332 (11.71)
24	387 (15.23)	363 (14.29)	2	351 (12.38)
26	410 (16.15)	386 (15.21)	2	370 (13.05)
28	434 (17.07)	410 (16.13)	2	388 (13.68)
30	457 (18)	433 (17.06)	2	405 (14.28)
32	480 (18.92)	457 (17.98)	2	424 (14.95)
34	504 (19.84)	480 (18.90)	2	443 (15.62)
36	527 (20.76)	503 (19.82)	2	462 (16.29)
38	551 (21.68)	527 (20.74)	2	481 (16.96)
40	574 (22.60)	550 (21.66)	2	499 (17.60)
42	597 (23.52)	574 (22.58)	2	519 (18.30)
44	620 (24.44)	597 (23.21)	2	540 (19.04)



Accessories

QM connectors can be equipped with backshells to provide complete shielding. Backshells are compatible with plug and receptacle side. They provide EMI-RFI shielding specially needed in aircrafts with a composite architecture. Made of composite and easy to install as they require no specific tools, they help in combining cost saving and high performances.




Backshell	Part number	Description
	617 991 001	QM size B EMI backshell
	617 924 015	QM size A EMI backshell

INSERTS

CONTACTS

CONNECTORS & ACCESSORIES

Spare Parts and Tools

	Part number	Description
	617 954 041	Dust cap for QM size B plug
	617 954 042	Dust cap for QM size B receptacle
	617 954 055	Dust cap for QM size A plug and receptacle
	617 980 024	Polarization key pin
	617 980 025	Polarization key socket
	282 668 001	Pliers for polarizing post and key
	282 521 004	Right angle insert extraction tool
	F780 855 000	Hexagonal key 5/64 inch(2mm)/flats for sleeve holder removal
	282 521 005	Insert extraction tool for EPXA insert
	282 521 002	Insert extraction tool for EPXB insert
	617 954 020	Plastic box to protect wired inserts during handling
	282 515	Plastic insert extraction tool for LuxCis® termini (MIL M81 969/14-03)



Our most
important
connection
is with you.™

It's not just a slogan. It's a statement of our earnest desire to put you at the forefront of all our business practices. As part of Radiall's mission to be available and accessible, we make it a priority to have local offices around the globe ready and able to assist you – wherever you are, whenever you need us.

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[EPXBE20P1PA](#) [EPXBE20C1SA](#) [EPXBE48SA](#) [EPXBE25P1SA](#) [EPXBE20P1SA](#) [EPXBEC3SA](#) [EPXBEF12CSA](#)
[EPXBE13P1PA](#) [EPXBE25Q1PA](#) [EPXBE25P1PA](#)