



# SERIES MMPX PRECISION MICRO MINIATURE SNAP CONNECTORS

## DESCRIPTION

The series MMPX offers smallest dimensions and unique electrical performance up to 65 GHz - including PCB links. The interface is based on MMCX dimensions. An established snap mechanism guarantees quick and reliable matings. The electrical bandwidth from DC to 65 GHz makes MMPX very interesting for a wide range of applications. Especially for EMC critical systems MMPX provides an excellent RF leakage due to the non slotted outer contact.

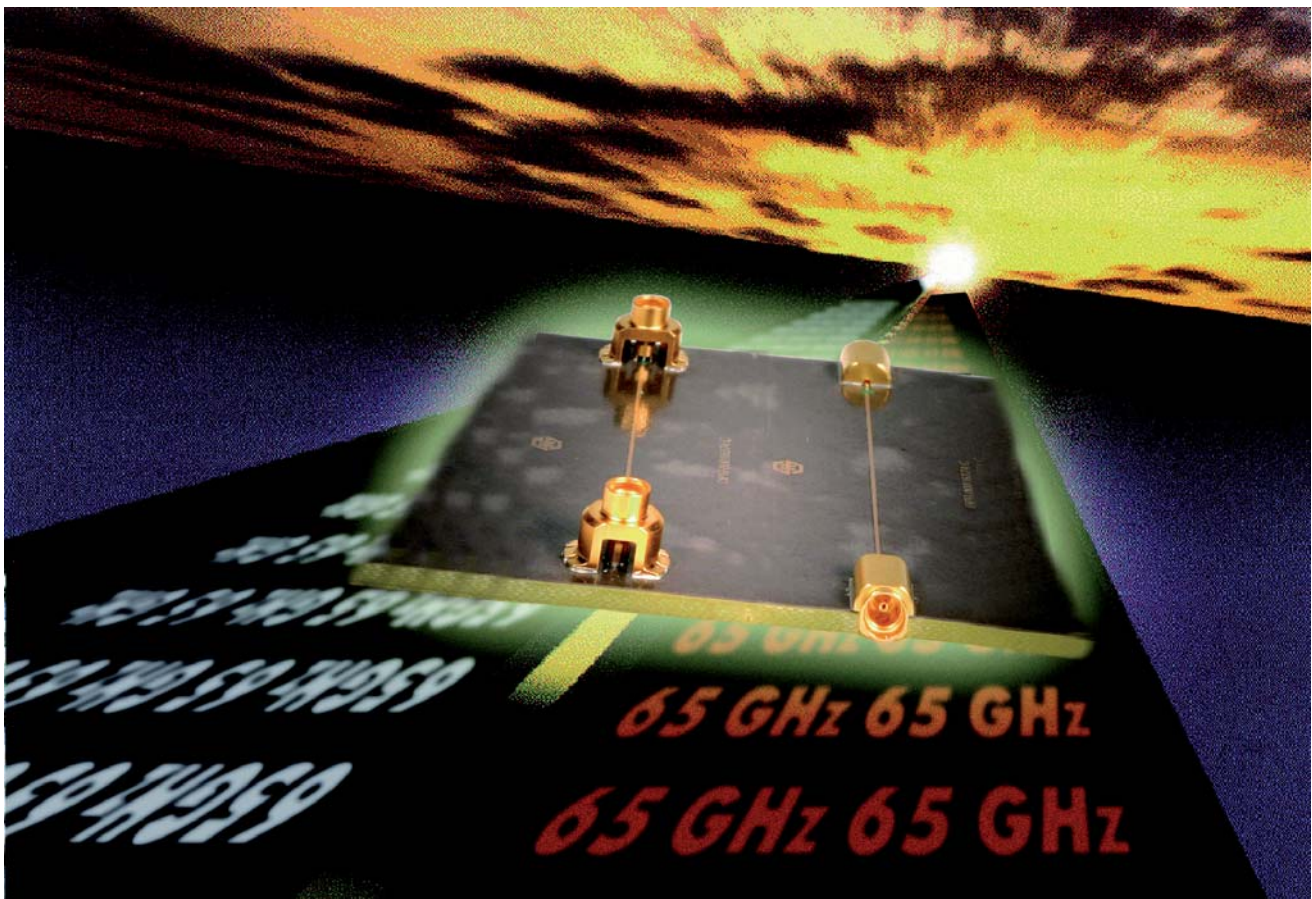
IP rating (interface, mated) IP50

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MMPX



## TECHNICAL DATA

ELECTRICAL DATA	REQUIREMENTS		
Impedance	50 $\Omega$		
Frequency range (for interface only)	DC ... 65 GHz		
Dielectric withstanding voltage (at sea level)	500 V rms, 50 Hz		
Working voltage (at sea level)	$\leq$ 170 V rms, 50 Hz		
Insulation resistance	$\geq$ 1 G $\Omega$		
Contact resistance - centre contact - outer contact	$\leq$ 5 m $\Omega$ $\leq$ 2 m $\Omega$		
Return loss, typical	see table below		
RF leakage typical (MMPX interface only)	DC – 25 GHz 85 dB	25 – 50 GHz 65 dB	50 – 65 GHz 60 dB

RETURN LOSS	FREQUENCY RANGE		
CONNECTOR TYPE	DC – 26.5 GHZ	26.5 – 50 GHZ	50 – 65 GHZ
straight cable plug (male) <sup>1)</sup>	25 dB	17.5 dB	17.5 dB
Right angle cable plug (male) <sup>1)</sup>	25 dB	20 dB	20 dB
Straight cable plug (male), precision interface (air dielectric only) <sup>1)</sup>	25 dB	25 dB	25 dB
Straight PCB jack (female), SMT-version mated with a right angle cable plug	25 dB	15 dB	10 dB <sup>2)</sup>
Edge mount PCB jack (female), SMT-version mated with a straight cable plug	22 dB	20 dB	20 dB

MECHANICAL DATA	REQUIREMENTS
Engagement force	max. 30 N / 6.7 lbs (typical 20 N / 4.4 lbs.)
Disengagement force <sup>3)</sup>	max. 30 N / 6.7 lbs (typical 15 N / 3.3 lbs.)
Centre contact retention force PCB connectors	connector $\geq$ 2 N / 0.4 lbs. assembly $\geq$ 7 N / 1.5 lbs.
Durability (matings)	100

PROCESSING DATA PCB CONNECTORS	REQUIREMENTS	
Adherent to the print - shearing <sup>2)</sup> - pulling (vertical to PCB) <sup>2)</sup>	straight PCB jack 90 N / 20.2 lbs. 50 N / 11.2 lbs. <sup>1)</sup>	edge mount PCB jack 70 N / 15.7 lbs. no standard value available

1) mated with straight cable jack (female)

2) valid for recommended PCB structure only

3) decoupling tool MMPX shall be used (74\_Z-0-0-555)!

ENVIRONMENTAL DATA	REQUIREMENTS
Temperature range	- 65° C ... + 155° C / - 85 °F ... + 311 °F
Thermal shock	assembly - 55° C ... + 85 °C / - 67°F ... + 185°F connector - 65° C ... + 155 °C / - 85°F ... + 311°F
Mechanical shock	100 g / 6 ms - max. interruption < 1 µs
Corrosion	Saltspray test
Vibration	20 g - max. interruption < 1 µs

MATERIAL DATA		
CONNECTOR PARTS	MATERIAL	PLATING
Centre contact	beryllium-copper alloy	gold over nickel
Body	brass	SUCOPRO / gold
Outer contact - female - male	copper-beryllium alloy brass	SUCOPRO/gold
Snap ring, male interface	copper-beryllium alloy	SUCOPRO/gold
Insulators	PTFE	

MATERIAL DATA FOR PCB CONNECTORS		
CONNECTOR PARTS	MATERIAL	PLATING
Centre contacts	copper-beryllium alloy	SUCOPRO/gold
Outer contact	copper-beryllium alloy	SUCOPRO/gold
Body	brass	SUCOPRO/gold
Insulators	PTFE	

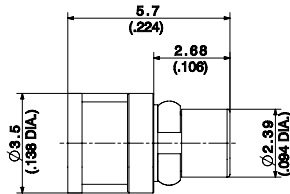
Some connectors may have a specification that differs from the above mentioned data.

**The products are designed and guaranteed to pass the above mentioned test procedures. Any additional or different requirement arising from specific applications or environmental conditions which is not covered by these test procedures is subject to request.**

## CABLE CONNECTORS

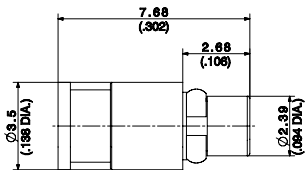
### Straight cable plugs (male)

- > for semi-rigid cables
- > cable entry soldered
- > centre contact soldered
- > decoupling tool 74\_Z-0-0-555 (recommended)
- > phase matched adaptors MMPX/PC1.85 and PC1.85/PC1.85 available on request



HUBER+SUHNER type	Item no.	Cable group (example)	Packaging	Assembly instruction	Notes
11_MMPX-50-2-1/111_NE	84022225	Y3 (EZ 86)	single	0000236402	precision interface, air dielectric only

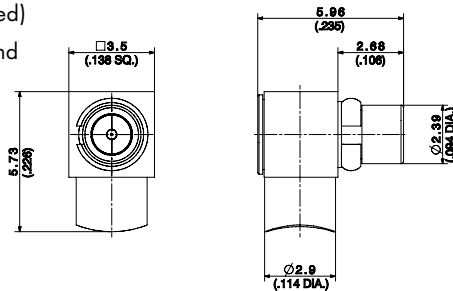
- > for semi-rigid, semi-flexible and flexible cables
- > cable entry soldered
- > centre contact plugged
- > decoupling tool 74\_Z-0-0-555 (recommended)
- > phase matched adaptors MMPX/PC1.85 and PC1.85/PC1.85 available on request



HUBER+SUHNER type	Item no.	Cable group (example)	Packaging	Assembly instruction	Notes
11_MMPX-50-2-2/111_NE	84022228	Y3, Y11 (EZ 86)	single	0000236450	

### Right angle cable plugs (male)

- > for semi-rigid, semi-flexible and flexible cables
- > cable entry soldered
- > centre contact plugged
- > decoupling tool 74\_Z-0-0-555 (recommended)
- > phase matched adaptors MMPX/PC1.85 and PC1.85/PC1.85 available on request

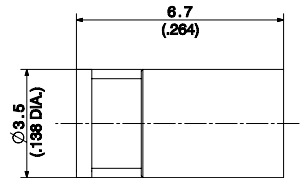


HUBER+SUHNER type	Item no.	Cable group (example)	Packaging	Assembly instruction	Notes
16_MMPX-50-2-1/111_NE	84022227	Y3, Y11 (EZ 86)	single	0000236453	

## Straight cable jacks (female)

### > for semi-rigid, semi-flexible and flexible cables

- > cable entry soldered
- > centre contact soldered
- > decoupling tool 74\_Z-0-0-555 (recommended)
- > phase matched adaptors MMPX/PC1.85 and PC1.85/PC1.85 available on request



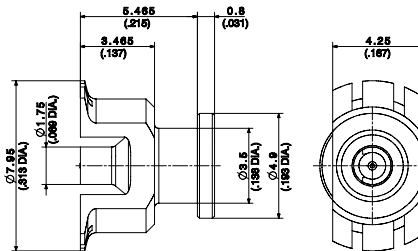
MMPX

HUBER+SUHNER type	Item no.	Cable group (example)	Packaging	Assembly instruction	Notes
21_MMPX-50-2-1/111_NE	84022226	Y3, Y11 (EZ 86)	single	0000236433	

## PCB CONNECTORS

### Straight PCB jacks (female)

- > surface mount type SMT
- > decoupling tool 74\_Z-0-0-555 (recommended)
- > phase matched adaptors MMPX/PC1.85 and PC1.85/PC1.85 available on request

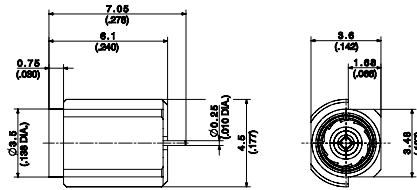


HUBER+SUHNER type	Item no.	Packaging	PCB Layout*	Notes
82_MMPX-550-0-1/111_NM	84009130	Tape		Blister tape containing 10 pcs.
82_MMPX-550-0-1/111_NM	84009131	tape and reel		Blister tape containing 750 pcs.

\* PCB layouts on request. Please contact our affiliate or agent in your country.

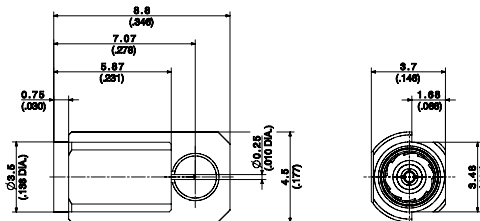
## Straight PCB jacks (female), edge-mount

- > surface mount type SMT
- > decoupling tool 74\_Z-0-0-555 (recommended)
- > phase matched adaptors MMPX/PC1.85 and PC1.85/PC1.85 available on request



HUBER+SUHNER type	Item no.	Packaging	PCB Layout*	Notes
92_MMPX-S50-0-1/111_NM	84009138	Tape		Blister tape containing 10 pcs.
92_MMPX-S50-0-1/111_NM	84009140	tape and reel		Blister tape containing 500 pcs.

- > surface mount type SMT
- > extra shielded for EMF sensitive applications
- > decoupling tool 74\_Z-0-0-555 (recommended)
- > phase matched adaptors MMPX/PC1.85 and PC1.85/PC1.85 available on request



HUBER+SUHNER type	Item no.	Packaging	PCB Layout*	Notes
92_MMPX-S50-0-2/111_NE	84016110	single		

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