

# RM-F Series

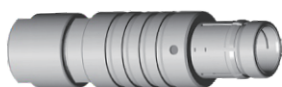
## Metal Waterproof Push Pull Self-locking Connector

- Secure high performance push pull self-locking system
- Sealed up to IP68 and hermetic
- 3 codes alignment key and polarized keying system to avoid cross-interface
- 360° EMC shielded
- High pin density contributing to equipment miniaturization
- Robust and shock resistant designs
- Functional in a wide temperature range from -50°C to +250°C
- Available solder, PCB and right angle PCB contact



# RM-F Series

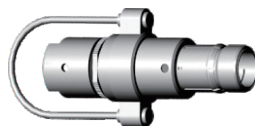
## Plugs



S/SC



SS/SSC



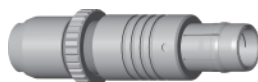
FS7



WSO



SFE/SFU



SV

## Receptacles



D



DEE/DEU



DBP



DBPC



DBPE/DBPU



DBPLE/DBPLU



DBEE/DBEU



FG9



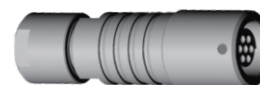
FGX



FGD



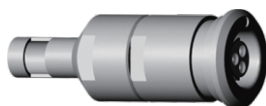
FGS



KE/K



KSE/KS



PGX

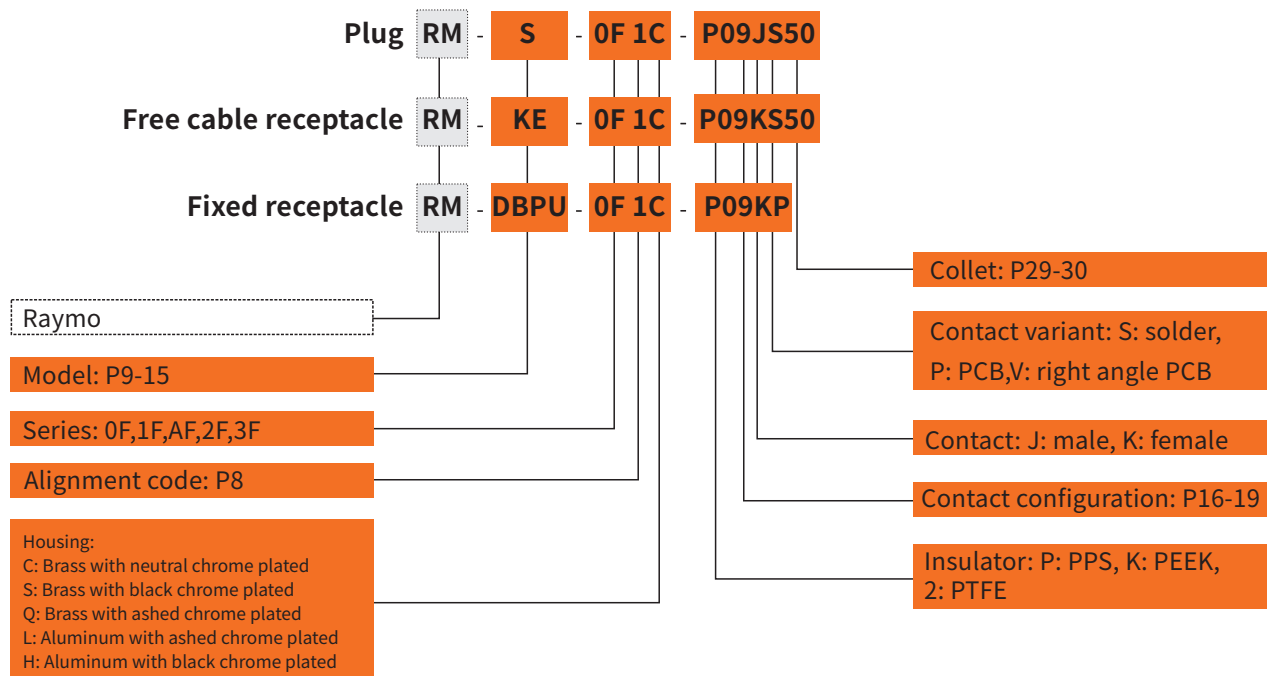


DKBE



DKE

## Part Numbering System



## Part No.Example

### Straight plug with cable collet

RM-S-0F1C-P09S50Z= straight plug, 0F series, code 1, multipole 9 contacts, outer shell in natural chrome-plated brass, PPS insulator, male solder contacts, collet for 4.2-5.2mm diameter cable with a black colour bend relief, IP68.

### Free cable mount receptacle

RM-KE-0F1C-P09KS50= free cable receptacle, 0F series, code 1 multipole 9 contacts, outer shell in natural chrome-plated brass, PPS insulator, female solder contacts, collet for 4.2-5.2 mm diameter cable, IP68.

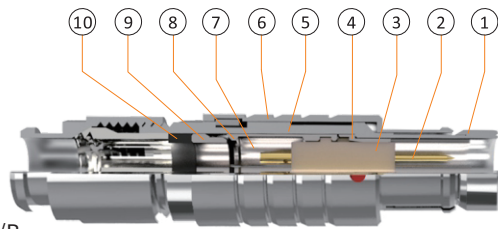
### Fixed receptacle

RM-DBPU-0F1C-P09KP= fixed receptacle, nut fixing, 0F series, code 1, multipole 9 contacts, outer shell in natural chrome-plated brass, PPS insulator, female PCB contacts, IP68.

## Part Section Showing Internal Components

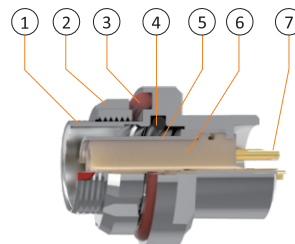
### Cable Mount Plug

- ① Conical Sleeve
- ② Male contact
- ③ Insulator
- ④ Fixed spacer
- ⑤ Latch sleeve
- ⑥ Outer shell
- ⑦ Split insert carrier A/B
- ⑧ Snap spring
- ⑨ EMI ring
- ⑩ O-ring



### Fixed Receptacle

- ① Outer shell
- ② Hexagonal nut
- ③ Outer o-ring
- ④ Inner o-ring
- ⑤ Fixed spacer
- ⑥ Insulator
- ⑦ Female contact



## Technical Characteristics

### Mechanical and Climatical

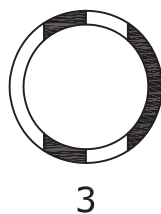
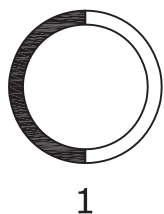
Characteristics	Value	Standard
Endurance	>5000cycles	IEC60512-5test9a
Humidity	Up to 95% at 60°C	
Temperature range	-55°C,+250°C	
Resistance to vibration	10-2000Hz, 15g	IEC 60512-4 test 6d
Shock resistance	100g, 6ms	IEC 60512-4 test 6c
Salt spray corrosion test	>96hrs	IEC 60512-6 test 11f
Protection index (mated)	IP68	IEC 60529
Climatical category	55/175/21	IEC 60068-1

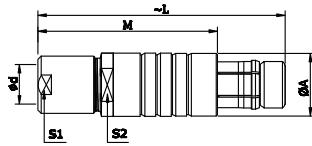
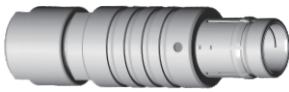
### Electrical

Characteristics		Value	Standard
Shielding efficiency	at 10 MHz	>95 dB	IEC 60619-1-3
	at 1 GHz	>80 dB	IEC 60619-1-3

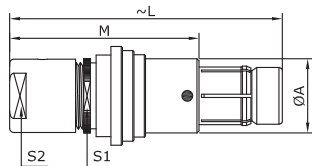
### Code Options

Code 1 is standard, if for other codes, please specify.

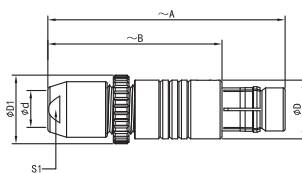
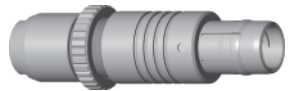



**RM-S/SC** Cable Mount Plug

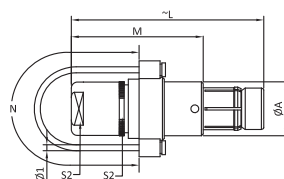
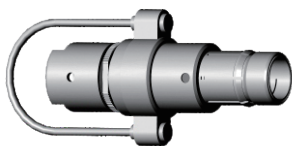
Reference		Dimensions(mm)						
Model	Series	A	M	L	d <sup>max</sup>		S1	S2
					shielded clamp	sealed clamp		
RM-S/SC	0F	9.4	26	37.2	4.7	4.3	8	8
RM-S/SC	1F	12	34	45	6.7	6.2	9	9
RM-S/SC	AF	13	36	46	7.2	6.7	12	11
RM-S/SC	2F	15	36	48	8.7	8.7	13	13


**RM-SS/SSC** Cable Mount Short Plug

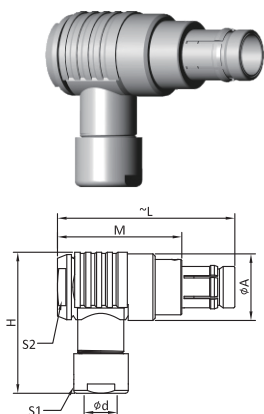
Reference		Dimensions(mm)						
Model	Series	A	L	M	d <sup>max</sup>		S1	S2
					shielded clamp	sealed clamp		
RM-SS/SSC	0F	9	33	23	4.7	4.3	8	7
RM-SS/SSC	1F	12	37	26	6.7	6.2	11	12
RM-SS/SSC	AF	12.3	40	30	7.2	6.7	11.5	12
RM-SS/SSC	2F	15	43	31	8.7	8.7	13	13


**RM-SV** Screw locking tamperproof straight plug

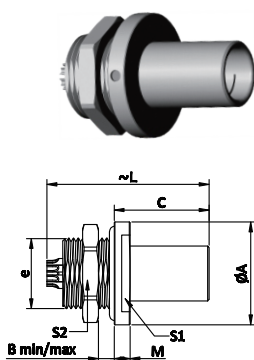
Reference		Dimensions(mm)						
Model	Series	A	B	D	d <sup>max</sup>		S1	D1
					shielded clamp	sealed clamp		
RM-FSV	0F	38	27.9	9.4	4.7	4.3	8	11


**RM-FS7** Cable Mount Plug with lanyard

Reference		Dimensions(mm)							
Model	Series	A	L	M	N	d <sup>max</sup>		S1	S2
						shielded clamp	sealed clamp		
RM-FS7	0F	9	33	23	60	4.7	4.3	8	8
RM-FS7	1F	12	37	26	80	6.7	6.2	11	12
RM-FS7	AF	12.3	40	30	80	7.2	6.7	11.5	12
RM-FS7	2F	15	43	31	100	8.7	8.7	13	13

**RM-F**

**RM-WSO** Elbow Right-angle Cable Mount Plug

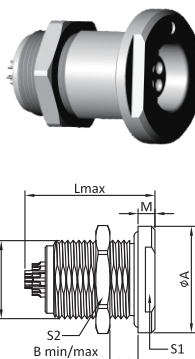
Reference		Dimensions(mm)							
Model	Series	A	L	M	H	d <sup>max</sup>		S1	S2
						shielded clamp	sealed clamp		
RM-WSO	0F	12	33	23	25	4.7	4.3	7	8
RM-WSO	1F	15	38	28.7	31	6.7	6.2	10	11
RM-WSO	AF	17	40	30	33	7.2	6.7	12	12
RM-WSO	2F	19	45	33	37	8.7	8.7	13	14


**RM-SFE/SFU** Fixed Sealed Panel Mount Plug

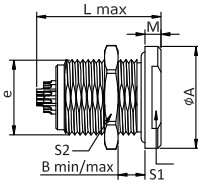
Reference		Dimensions(mm)							
Model	Series	A	B	C	e	L	M	S1	S2
RM-SFE/SFU	0F	13	0/2.5	13.0	M9*0.5	21	3.0	11	11
RM-SFE/SFU	1F	17	0/5.0	14.0	M12*1.0	26	3.0	14	14
RM-SFE/SFU	AF	19	0/4.0	13.7	M14*1.0	26.5	3.7	17	14
RM-SFE/SFU	2F	22	0/7.5	15.0	M16*1.0	28	3.0	19	19


**RM-D** Panel Mount Receptacle

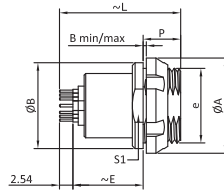
Reference		Dimensions(mm)						
Model	Series	A	B	e	L	M	S2	
RM-D	0F	11	0/9	M9*0.5	18.9	1.5	11	
RM-D	1F	14	0/8	M12*1.0	23.9	1.5	14	
RM-D	AF	16	0/10	M14*1.0	23.3	2	17	
RM-D	2F	19	0/11	M15*1.0	25.8	2.2	17	


**RM-DEE** Hermetic Panel Mount Receptacle, Nut fixing

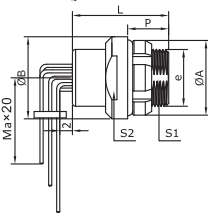
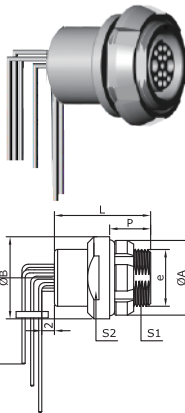
Reference		Dimensions(mm)						
Model	Series	A	B	e	L	M	S1	S2
RM-DEE	0F	14	8/10	M9*0.5	20	2.5	11	11
RM-DEE	1F	18	0/12	M14*1.0	23.9	3.0	14	17
RM-DEE	AF	19	0/12	M14*1.0	23.3	3.0	15	17
RM-DEE	2F	20	0/13	M16*1.0	25.8	4.0	17	19


**RM-DEU** Sealed Panel Mount Receptacle, Nut fixing

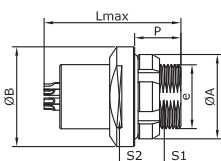
Reference		Dimensions(mm)						
Model	Series	A	B	e	L	M	S1	S2
RM-DEU	0F	14	8/10	M9*0.5	20	2.5	11	11
RM-DEU	1F	18	0/12	M14*1.0	23.9	3.0	14	17
RM-DEU	AF	19	0/12	M14*1.0	23.3	3.0	15	17
RM-DEU	2F	20	0/13	M16*1.0	25.8	4.0	17	19


**RM-DBP** Fixed Panel Mount Receptacle

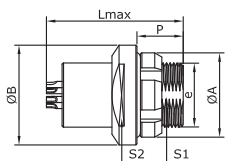
Reference		Dimensions(mm)						
Model	Series	A	B	P	E	e	L	S1
RM-DBP	0F	12	0/3.5	6.5	10	M9*0.5	20	10
RM-DBP	1F	15	0/4.0	8.0	12	M12*1.0	23	-
RM-DBP	AF	18	0/3.0	7.0	13	M14*1.0	23	-
RM-DBP	2F	16	0/5.0	9.0	11.5	M15*1.0	26	-


**RM-DBPC** Panel Mount Receptacle, in elbow 90° pcb type

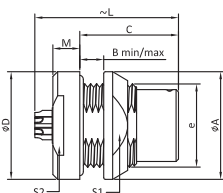
Reference		Dimensions(mm)						
Model	Series	A	B	e	L	P	S1	S2
RM-DBPC	0F	12	14	M9*0.5	19.2	6.5	8.2	11
RM-DBPC	1F	18	18	M14*1.0	24.8	8	12.5	15
RM-DBPC	AF	18	19	M14*1.0	23.1	7	12	15
RM-DBPC	2F	20.8	21	M16*1.0	24.2	8	14.3	16


**RM-DBPE** Hermetic Panel Mount Receptacle

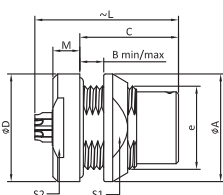
Reference		Dimensions(mm)						
Model	Series	A	B	e	L	P	S1	S2
RM-DBPE	0F	12	14	M9*0.5	19.2	6.5	8.2	11
RM-DBPE	1F	18	18	M14*1.0	24.8	8	12.5	15
RM-DBPE	AF	18	19	M14*1.0	23.1	7	12	15
RM-DBPE	2F	20.8	21	M14*1.0	24.2	8	14.3	16


**RM-DBPU** Sealed Panel Mount Receptacle

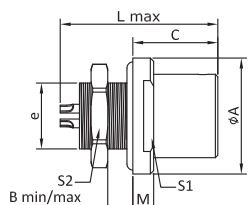
Reference		Dimensions(mm)							
Model	Series	A	B	e	L	P	S1	S2	
RM-DBPU	0F	12	14	M9*0.5	19.2	6.5	8.2	11	
RM-DBPU	1F	18	18	M14*1.0	24.8	8	12.5	15	
RM-DBPU	AF	18	19	M14*1.0	23.1	7	12	15	
RM-DBPU	2F	20.8	21	M16*1.0	24.2	8	14.3	16	


**RM-DBPLE** Fixed Front Hermetic Mount Receptacle

Reference		Dimensions(mm)									
Model	Series	A	B	C	e	L	D	M	S1	S2	
RM-DBPLE	0F	13	0/4.5	10	M10*0.5	17	14	3.5	11	11	
RM-DBPLE	1F	28	0/5.0	17.5	M14*1.0	24	18	4.5	15	15	
RM-DBPLE	AF	20	0/5.5	16.5	M15*1.0	23	19	4.5	17	15	
RM-DBPLE	2F	20	0/6.5	17	M16*1.0	27	22	5.0	17	17	

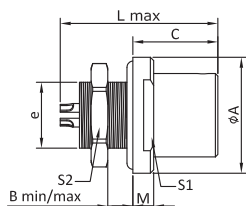

**RM-DBPLU** Fixed Sealed Front Mount Receptacle

Reference		Dimensions(mm)									
Model	Series	A	B	C	e	L	D	M	S1	S2	
RM-DBPLU	0F	13	0/4.5	10	M10*0.5	17	14	3.5	11	11	
RM-DBPLU	1F	28	0/5.0	17.5	M14*1.0	24	18	4.5	15	15	
RM-DBPLU	AF	20	0/5.5	16.5	M15*1.0	23	19	4.5	17	15	
RM-DBPLU	2F	20	0/6.5	17	M16*1.0	27	22	5.0	17	17	

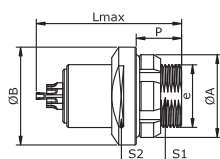

**RM-DBEE** Front Hermetic Panel Mount Receptacle

Reference		Dimensions(mm)								
Model	Series	A	B	C	e	L	M	S1	S2	
RM-DBEE	0F	13.9	0/3.5	10.0	M9*0.5	20	2.5	11	11	
RM-DBEE	1F	17.8	0/4.0	13.0	M14*1.0	23.9	3.0	14	17	
RM-DBEE	AF	19	0/4.0	12.0	M14*1.0	23.3	3.0	15	14	
RM-DBEE	2F	21.8	0/3.5	15.0	M16*1.0	25.8	3.0	17	19	

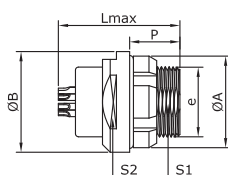



**RM-DBEU** Sealed Front Panel Mount Receptacle


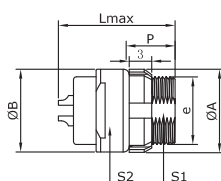
Reference		Dimensions(mm)							
Model	Series	A	B	C	e	L	M	S1	S2
RM-DBEU	0F	13.9	0/3.5	10.0	M9*0.5	20	2.5	11	11
RM-DBEU	1F	17.8	0/4.0	13.0	M14*1.0	23.9	3.0	14	17
RM-DBEU	AF	19	0/4.0	12.0	M14*1.0	23.3	3.0	15	14
RM-DBEU	2F	21.8	0/3.5	16.0	M16*1.0	25.8	3.0	17	19


**RM-FG9** Sealed Panel Mount Receptacle


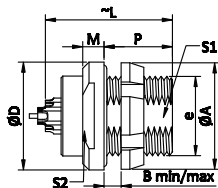
Reference		Dimensions(mm)						
Model	Series	A	B	e	L	P	S1	S2
RM-FG9	0F	12	14	M9*0.5	19.2	6.5	8.0	11
RM-FG9	1F	18	18	M14*1.0	24.8	8	12.5	15
RM-FG9	AF	18	19	M14*1.0	23.1	7	12	15


**RM-FGX** Sealed Panel Mount Receptacle only for 0F series


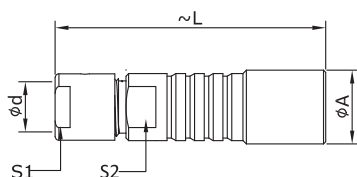
Reference		Dimensions(mm)						
Model	Series	A	B	e	L	P	S1	S2
RM-FGX	0F	12	13	M9*0.5	15.7	6.5	8.2	11
RM-FGX	1F	18	19	M14*1.0	21	6.5	12.5	15


**RM-FGD** Panel Mount Receptacle, nut fixing


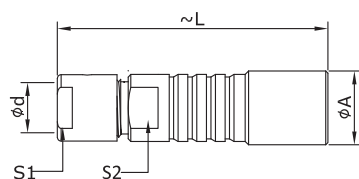
Reference		Dimensions(mm)						
Model	Series	A	B	e	L	M	S1	S2
RM-FGD	0F	12	12	M9*0.5	15.7	6.5	8.2	11

**RM-F**

**RM-FGS** Back panel fixed receptacle, waterproof

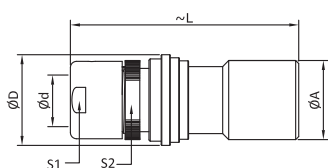
Reference		Dimensions(mm)									
Model	Series	A	B	e	D	L	P	M	S1	S2	
RM-FGS	AF	18	0/8	M14*0.5	19	23.1	12	3.7	12	15	


**RM-KE** Sealed Cable Mount Receptacle

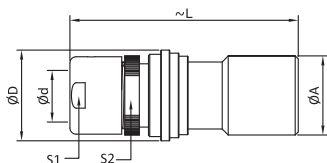
Reference		Dimensions(mm)					
Model	Series	A	L	d max		S1	S2
				shielded clamp	sealed clamp		
RM-KE	0F	10	36	4.7	4.3	7	7
RM-KE	1F	13	43	6.7	6.2	10	10
RM-KE	AF	13.5	45	7.2	6.7	12	11
RM-KE	2F	16	48	8.7	8.7	13	12


**RM-K** Cable Mount Receptacle

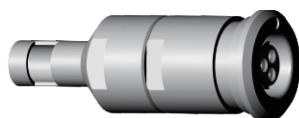
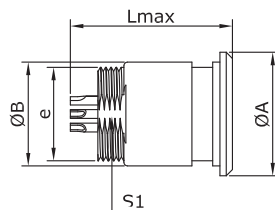
Reference		Dimensions(mm)					
Model	Series	A	L	d max		S1	S2
				shielded clamp	sealed clamp		
RM-K	0F	10	36	4.7	4.3	7	7
RM-K	1F	13	43	6.7	6.2	10	10
RM-K	AF	13.5	45	7.2	6.7	12	11
RM-K	2F	16	48	8.7	8.7	13	12


**RM-KSE** Short Sealed Cable Mount Receptacle

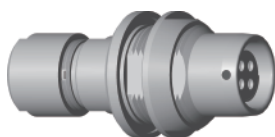
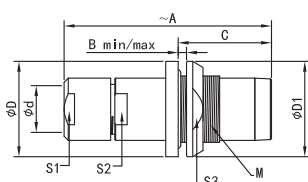
Reference		Dimensions(mm)						
Model	Series	A	L	M	d max	S1	S2	
RM-KSE	0F	10	32	23	3.8	8	8	
RM-KSE	1F	13	37	26	6.0	11	12	
RM-KSE	AF	13.5	36	30	6.2	11.5	12	
RM-KSE	2F	16	45	31	8.0	13	13	


**RM-KS** Short Cable Mount Receptacle


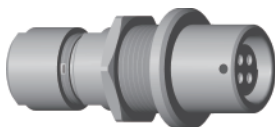
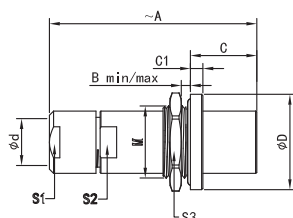
Reference		Dimensions(mm)					
Model	Series	A	L	M	d max	S1	S2
RM-KS	0F	10	32	23	3.8	8	8
RM-KS	1F	13	37	26	6.0	11	12
RM-KS	AF	13.5	36	30	6.2	11.5	12
RM-KS	2F	16	45	31	8.0	13	13


**RM-PGX** Cable Mount Receptacle only used by overmoulding


Reference		Dimensions(mm)				
Model	Series	A	B	e	L	S1
RM-PGX	0F	12	10	M9*0.5	15.5	8.2
RM-PGX	1F	16	14	M12*0.6	24.8	9.0
RM-PGX	AF	16	14	M12*0.6	23.1	10
RM-PGX	2F	18	16	M14*0.6	24.2	12


**RM-DKBE** Panel Mounted Cable Receptacles


Reference		Dimensions(mm)										
Model	Series	A	B	C	D	d max		D1	M	S1	S2	S3
						shielded clamp	sealed clamp					
RM-DKBE	0F	35	0/3.5	16	16	4.7	4.3	16	12*1	7	7	13
RM-DKBE	1F	43	0/4.0	19	19	6.7	6.2	20	15*1	10	10	17
RM-DKBE	AF	46	0/4.0	21	21	7.2	6.7	20	16*1	12	11	17
RM-DKBE	2F	50	0/5.0	23	23	8.7	8.7	23	18*1	12	13	20


**RM-DKE** Panel Mounted Cable Receptacles


Reference		Dimensions(mm)										
Model	Series	A	B	C	C1	D	d max		M	S1	S2	S3
							shielded clamp	sealed clamp				
RM-DKE	2F	50	0/8	16	3	22	8.7	8.7	16*1	12	13	19

## Insulator Configuration

RM-F

		Code	Ohm( $\Omega$ )	Contact diameter	Contact No.	Contact max. diameter	Insert max. diameter	Voltage standing-wave ratio VSWR(F=GHz)	Test voltage(kv/rms)	Curent rate(A)
0F		250	50	0.9	50	0.95	2.95	1.09 +0.11f	3.0	6
		275	75	0.7	75	1.05	3.95	1.02 +0.25f	2.4	3
1F		250	50	1.6	50	1.35	3.95	1.01 +0.23f	3.0	12
		275	75	1.3	75	1.05	3.95	1.02 +0.08f	2.4	10
2F		250	50	2.0	50	1.75	5.95	1.01 +0.95f	3.0	15
		275	75	1.6	75	1.35	5.95	1.02 +0.03f	1.5	12

- First choice alternative
- Special order alternative

**Insulator Configuration**

		Code	Contact No.	ØA(MM)	Solder contact	PCB straight contact	PCB elbow contact	Test voltage(contact-shell)kV/AC-rms	Test voltage(contact-contact)kV/AC-rms	Rated current /A
0F		P02	2	0.9	●	●	●	1.30	1.05	9.2
		P03	3	0.9	●	●	●	1.20	0.90	8.2
		P04	4	0.7	●	●	●	0.85	0.70	5.5
		P05	5	0.7	●	●	●	1.00	0.70	5.2
		P07	7	0.5	●	●	●	0.80	0.70	2.0
		P09	9	0.5	●	●	●	0.60	0.50	1.7
1F		P02	2	1.3	●	●	●	1.50	1.35	13.0
		P03	3	1.3	●	●	●	1.30	1.55	12.0
		P04	4	0.9	●	●	●	1.35	1.45	7.0
		P05	5	0.9	●	●	●	1.25	1.15	6.8
		P06	6	0.7	●	●	●	1.05	1.20	5.2
		P07	7	0.7	●	●	●	0.95	1.05	5.0
		P08	8	0.7	●	●	●	0.95	1.15	3.8
		P10	10	0.5	●	●	●	0.90	1.50	2.5
		P12	12	0.5	●	●	●	0.80	1.20	2.0
		P14	14	0.5	●	●	●	0.80	1.20	2.0
	P16	16	0.5	●	●	●	0.80	1.25	1.5	

● First choice alternative  
○ Special order alternative

## Insulator Configuration

RM-F

			Code	Contact No.	ØA(MM)	Solder contact	PCB straight contact	PCB elbow contact	Test voltage(contact -shell) k/v AC-rms	Test voltage(contact -contact)k/v AC-rms	Rated current /A
AF			P10	10	0.7	●	●	●	1.40	1.50	4.5
			P12	12	0.7	●	●	●	1.40	1.50	3.0
			P15	2 13	1.3 0.5	●	●	●	1.50 1.20	1.35 0.90	12.0 2.5
			P19	19	0.5	●	●	●	1.20	0.90	2.5
2F			P02	2	1.6	●	●	●	1.80	2.20	20.0
			P03	3	1.6	●	●	●	1.60	2.00	18.0
			P04	4	1.3	●	●	●	1.80	2.20	12.0
			P06	6	0.9	●	●	●	1.70	2.00	6.5
			P08	8	0.9	●	●	●	1.50	1.50	6.2
			P09	1 8	1.3 0.9	● ●	● ●	● ●	2.40 1.40	2.20 1.50	12.0 6.0
			P11	11	0.9	●	●	●	1.40	1.50	5.8
			P16	16	0.7	●	●	●	1.00	1.50	4.0

- First choice alternative
- Special order alternative

			Code	Contact No.	ØA(MM)	Solder contact	PCB straight contact	PCB elbow contact	Test voltage(contact -shell) k/v AC-rms	Test voltage(contact -contact)k/v AC-rms	Rated current /A
2F			P19	19	0.7	●	●	●	0.80	1.20	3.5
			P26	26	0.5	●	○	○	0.75	1.10	1.0
3F			P04	4	2.0	●	○	○	1.8	2.60	20.0
			P07	1	2.0	●	○	○	2.0	3.00	25.0
			P07	6	1.3	●	○	○	1.5	2.00	7.0
			P37	27	0.5	●	○	○	0.75	1.00	1.0
P37			10	0.7	●	○	○	0.75	1.10	2.2	

- First choice alternative
- Special order alternative