



SEACON SEA-MATE Electrical Wet-Pluggable Connectors

SEA-MATE Electrical Wet-Pluggable
Connectors Provide Robust Connectivity
Solutions for Harsh Subsea Environments

SEACON

SEA-MATE Electrical Wet-Pluggable Connectors

Robust Connectivity Solutions for Harsh Subsea Environments



KEY FEATURES

- Second generation U-MATE
- 4 shell sizes (G, K, L, M)
- Up to 37 contacts
- Oil filled option available
- Up to 7,500 psig mated & open face (approx. 16,900ft/5,200m)
- Up to 600 VDC
- Up to 10 amps. 50 amps (for high power version)
- Stainless steel, Glass Reinforced Epoxy (GRE), hypalon rubber, copper alloy
- Typical uses: Diver communications, cameras, lights, Remotely Operated Vehicle (ROV)'s & ship to shore communications

TE Connectivity (TE)'s SEACON SEA-MATE range of underwater electrical wet-pluggable connectors, has many features including fully interchangeable inserts which offers flexibility to the customer with full Pressure Balanced Oil Filled (PBOF) capability. In addition, this connector range has many of the original features as those of the U-MATE series including positive keying and a robust design for harsh subsea environments.

This connector range is manufactured from 316L stainless steel as standard, however other materials are available upon request.

APPLICATION

- Diver Communications
- UWTV
- Lights
- ROV's
- Ship to Shore Communications

SPECIFICATIONS

- **Mated Pressure:** Up to 7,500 psig (5,200m water depth)
- **Open Face Pressure:** Up to 7,500 psig (5,200m water depth)
- **Voltage Rating:** 600 VDC/440 VAC
- **Current Rating:** Up to 10 amps. Up to 50 amps high power version. Dependent on cable conductor size

MATERIALS

- **Bulkhead Body (BCR/FCR/CCR):** 316L Stainless Steel
- **CCP Body:** 316L Stainless Steel c/w Aluminum Bronze NES 833 engaging nut
- **Electrical Contacts:** Brass CZ124 gold plated as per MIL-G-45204
- **O-Ring (BCR/FCR):** Nitrile (formerly known as Buna N)

TESTING

These connectors have gone through in-house qualification testing, including but not limited to the following:

- Dielectric breakdown
- Dry mate-demate lifecycle
- Wet mate-demate lifecycle
- Mated and open face Hydrostatic pressure testing up to 10,000 psi

TE Components . . . TE Technology . . . TE Know-how . . .

AMP | AGASTAT | CII | HARTMAN | KILOVAC | MICRODOT | NANONICS | POLAMCO | Raychem

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SEA-MATE Connectors

Ordering Information

Family Designator

SEA-MATE

Shell Size

- G
- K
- L
- M

Number of Contacts Total

Connector Type

- BCR** Bulkhead Connector Receptacle
- FCR** Flange Connector Receptacle
- CCP** Cable Connector Plug
- CCR** Cable Connector Receptacle
- PSR** Plastic Splashproof Receptacle
- PSP** Plastic Splashproof Plug
- DSR** Dummy Sealing Receptacle
- DSP** Dummy Sealing Plug

Optional

- RA** Right Angle
- M** Cable
- OF** Oil Filled

SMX - X - XXX - XX



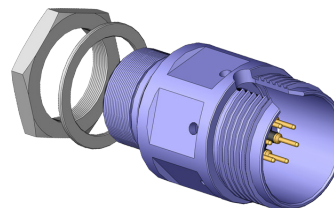
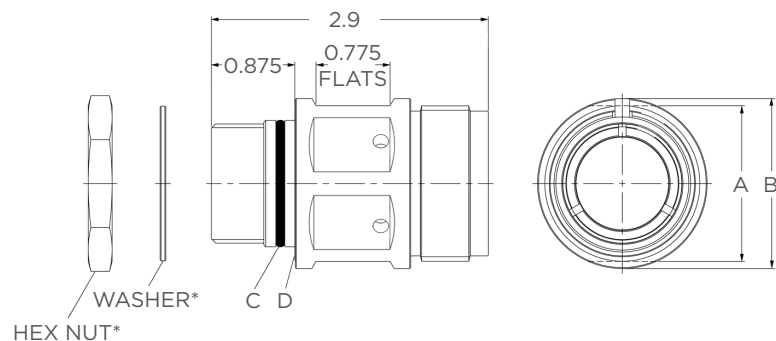
Notes:

- Connectors are designed for installation on 1 atmosphere vessels. For all other applications please contact TE.



SM-BCR

Bulkhead Connector Receptacle



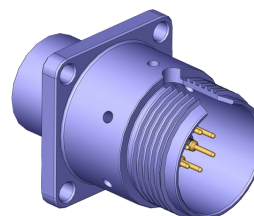
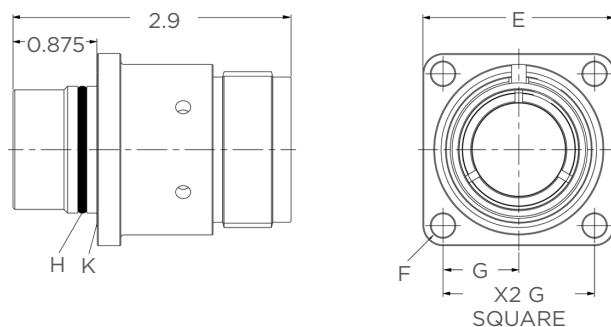
Shell Size	A Hex Flats (In)	B Ø (In)	C O-Ring	D O-Ring	Part Number
G	1.25	1.400	019	024	SMG-X-BCR
K	1.625	1.775	025	029	SMK-X-BCR
L	2.00	2.150	519	032	SML-X-BCR
M	2.375	2.525	134	035	SMM-X-BCR

Notes:

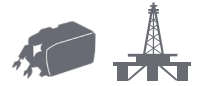
- * Hex Nut and Washer - Utilize on through bore mounting option only.

SM-FCR

Flange Connector Receptacle

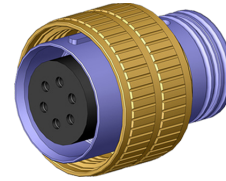
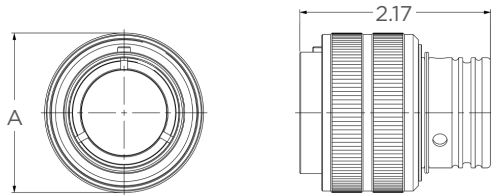


Shell Size	E Square (In)	F Ø (In)	G Length (In)	H O-Ring	K O-Ring	Part Number
G	1.625	0.206	0.635	019	024	SMG-X-FCR
K	2.000	0.245	0.790	025	029	SMK-X-FCR
L	2.375	0.245	0.975	519	032	SML-X-FCR
M	2.750	0.325	1.100	134	035	SMM-X-FCR



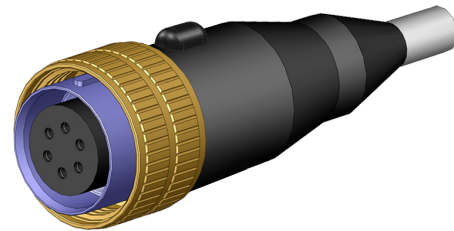
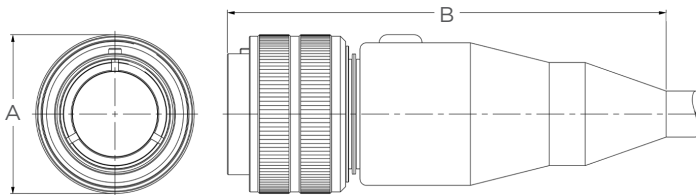
SM-CCP-Attachable

Cable Connector Plug - Attachable



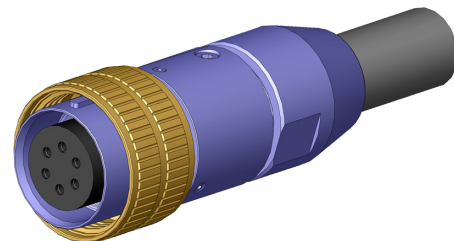
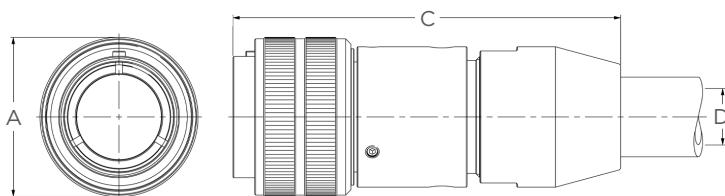
SM-CCP-Cable

Cable Connector Plug - Cable



SM-CCP-Hose

Cable Connector Plug - Hose

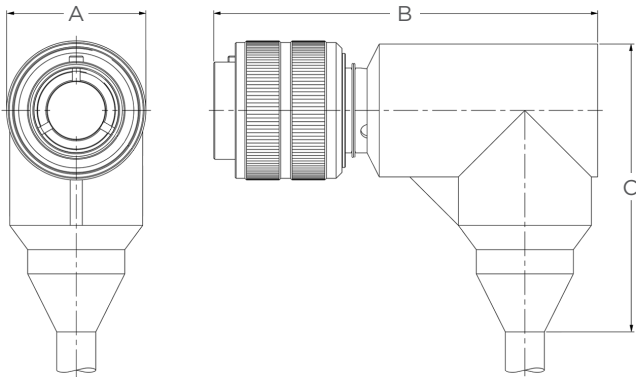


Shell Size	A Ø (In)	B Approx. Length (in)	C Approx. Length (in)	D Hose I.D (In)	Part Number
G	1.435	5.05	4.12	3/8	SMG-X-CCP
K	1.810	4.86	4.44	5/8	SMK-X-CCP
L	2.185	6.97	4.42	3/4	SML-X-CCP
M	2.560	6.34	4.66	1	SMM-X-CCP



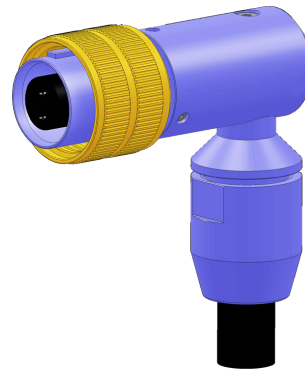
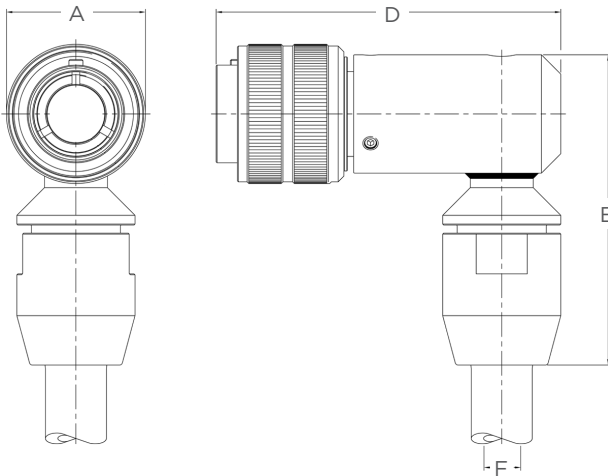
SM-CCP-R/A-Cable

Cable Connector Plug Right Angle - Cable



SM-CCP-R/A-Hose

Cable Connector Plug Right Angle - Hose

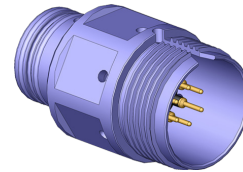
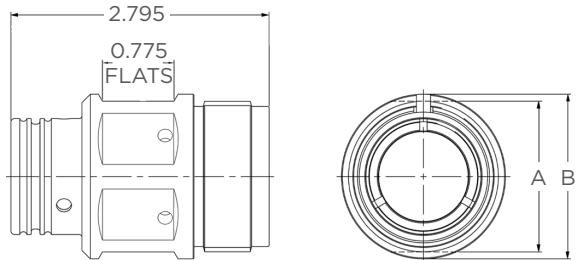


Shell Size	A Ø (In)	B Length (In)	C Approx. Length (In)	D Length (In)	E Approx. Length (In)	F I.D (In)	Part Number
G	1.435	3.95	2.97	3.56	3.20	3/8	SMG-X-CCP-R/A
K	1.810	4.47	3.17	3.85	3.98	5/8	SMK-X-CCP-R/A
L	2.185	4.59	3.99	4.04	4.39	3/4	SML-X-CCP-R/A
M	2.560	4.72	4.87	4.29	4.84	1	SMM-X-CCP-R/A



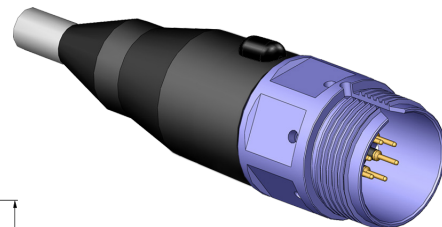
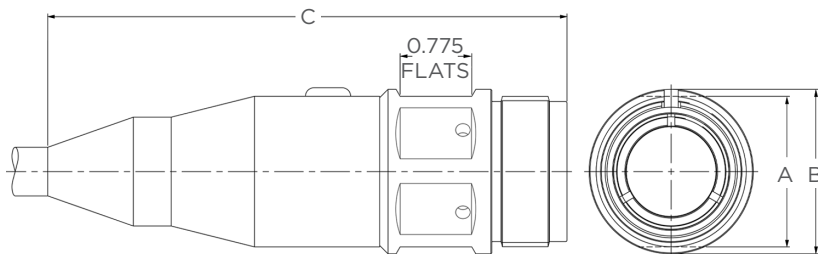
SM-CCR-Attachable

Cable Connector Receptacle - Attachable



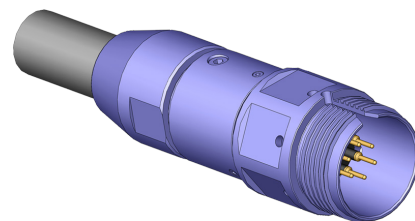
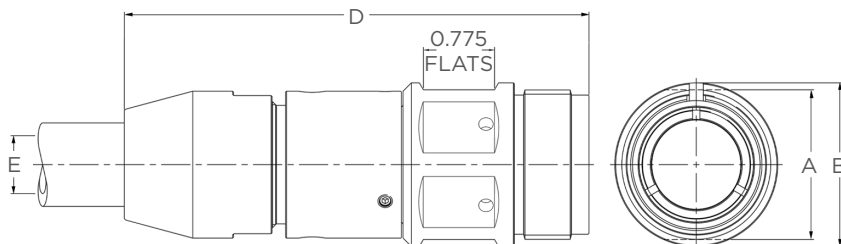
SM-CCR-Cable

Cable Connector Receptacle - Cable

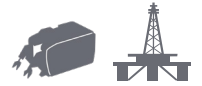


SM-CCR-Hose

Cable Connector Receptacle - Hose

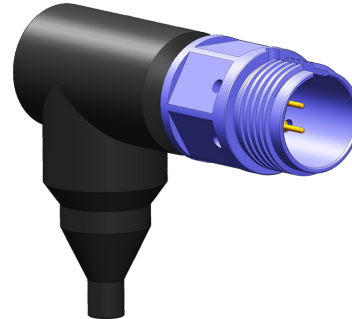
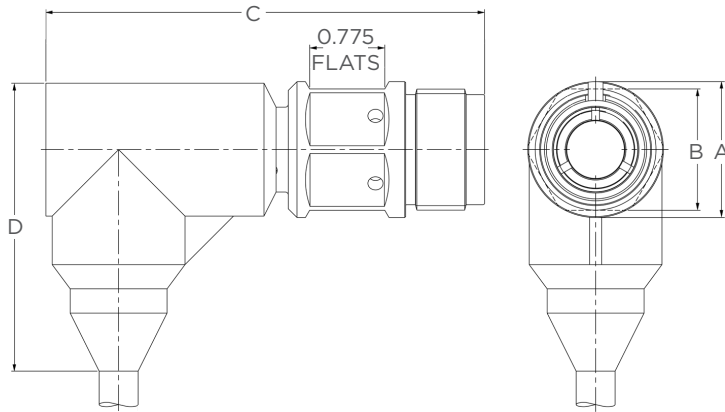


Shell Size	A Hex Flats (In)	B Ø (In)	C Approx. Length (In)	D Approx. Length (in)	E Hose I.D (In)	Part Number
G	1.25	1.400	5.62	4.75	3/8	SMG-X-CCR
K	1.625	1.775	5.43	5.06	5/8	SMK-X-CCR
L	2.00	2.150	7.60	5.05	3/4	SML-X-CCR
M	2.375	2.525	6.90	5.29	1	SMM-X-CCR



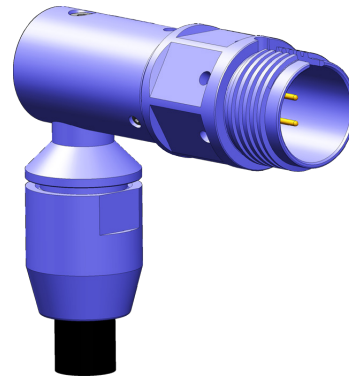
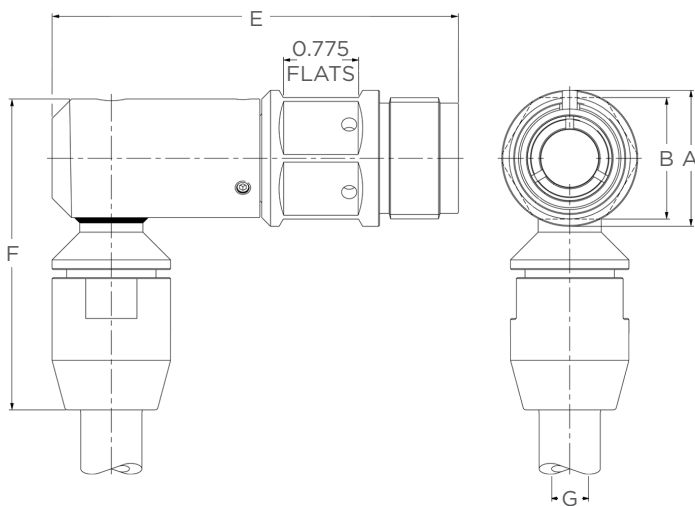
SM-CCR-R/A-Cable

Cable Connector Receptacle Right Angle - Cable



SM-CCR-R/A-Hose

Cable Connector Receptacle Right Angle - Hose



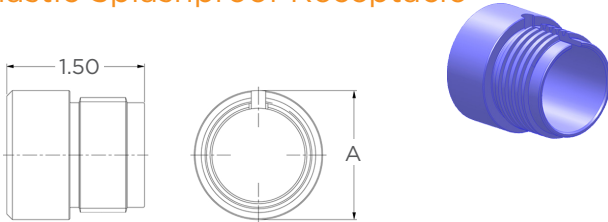
Shell Size	A Ø (In)	B Hex Flats (In)	C Approx. Length (In)	D Approx. Length (In)	E Length (In)	F Approx. Length (In)	G Hose I.D (In)	Part Number
G	1.400	1.25	4.53	2.97	4.19	3.20	3/8	SMG-X-CCR-R/A
K	1.775	1.625	5.03	3.17	4.48	3.98	5/8	SMK-X-CCR-R/A
L	2.150	2.00	5.15	3.99	4.67	4.39	3/4	SML-X-CCR-R/A
M	2.525	2.375	5.28	4.87	4.91	4.84	1	SMM-X-CCR-R/A



Dust/Shipping Caps

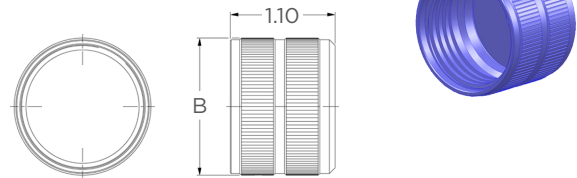
SM-PSR

Plastic Splashproof Receptacle



SM-PSP

Plastic Splashproof Plug

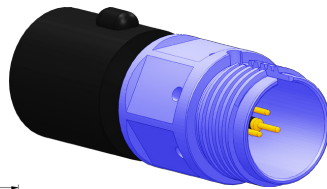


Shell Size	A Ø (In)	B Ø (In)	Part Number
G	1.400	1.435	SMG-X-PSR/PSP
K	1.775	1.810	SMK-X-PSR/PSP
L	2.150	2.185	SML-X-PSR/PSP
M	2.525	2.560	SMM-X-PSR/PSP

Dummy Connectors

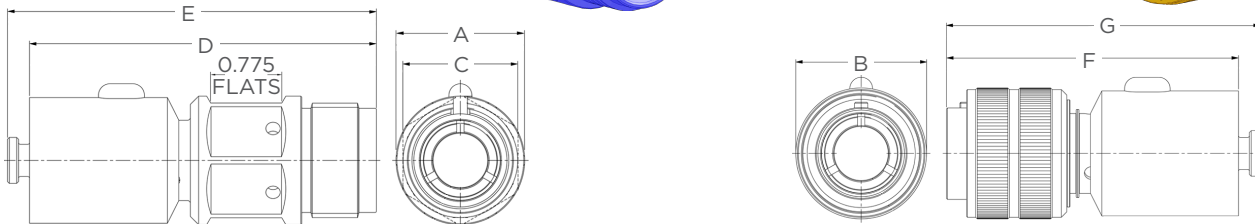
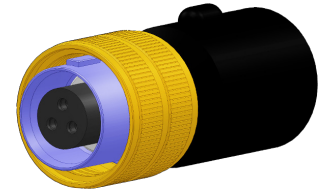
SM-DSR

Dummy Sealing Receptacle



SM-DSP

Dummy Sealing Plug

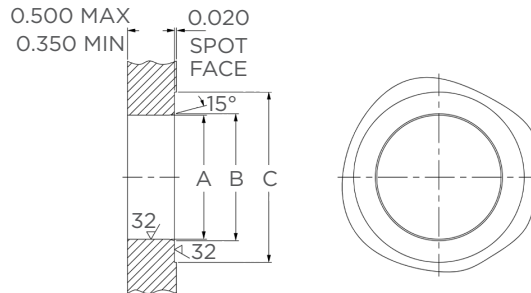


Shell Size	A Ø (In)	B Ø (In)	C Hex Flats (in)	D Length (In)	E Length (In)	F Length (In)	G Length (In)	Part Number
G	1.400	1.435	1.25	3.78	4.02	3.20	3.44	SMG-X-DSR/DSP
K	1.775	1.810	1.625	3.78	4.02	3.22	3.46	SMK-X-DSR/DSP
L	2.150	2.185	2.00	4.28	4.52	3.72	3.96	SML-X-DSR/DSP
M	2.525	2.560	2.375	4.28	4.52	3.72	3.96	SMM-X-DSR/DSP

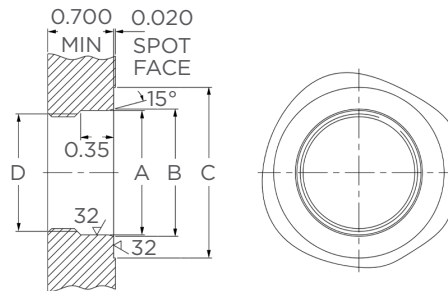


Interface Details

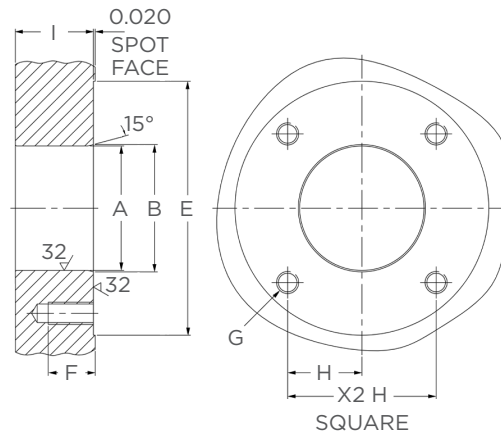
Bulkhead Connector Receptacle
Through Bore Mounting Option
Utilizing Back Nut and Washer



Bulkhead Connector Receptacle
Threaded Mounting Option



Flange Connector Receptacle
Threaded Mounting Option



Shell Size	A Ø (In)	B Ø (In)	C Spot Face Ø (In)	D Thread	E Spot Face Ø (In)	F Depth (In)	G Thread (In)	H Length (In)	I Min. Length (In)
G	0.947 0.949	0.978	1.440	7/8-16 UN 2B	2.20	0.30	M5x0.8p	0.635	0.630
K	1.322 1.324	1.353	1.815	1 1/4-16 UN 2B	2.70	0.48	M6x1.0p	0.790	0.830
L	1.697 1.699	1.728	2.190	1 5/8-16 UN 2B	3.25	0.48	M6x1.0p	0.975	0.830
M	2.072 2.074	2.107	2.565	2-16 UN 2B	3.71	0.64	M8x1.25p	1.100	0.990



Contact Configurations

BCR Face View Only* - Not to Scale

G



SMG-2
2#16

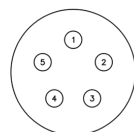


SMG-3
3#16

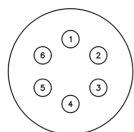


SMG-4
4#16

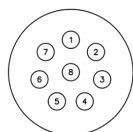
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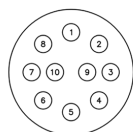
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5#16



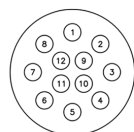
SMK-6
6#16



SMK-8
8#16

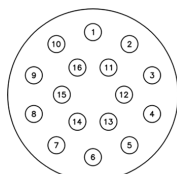


SMK-10
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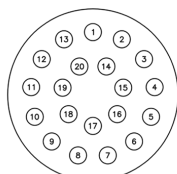


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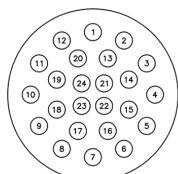
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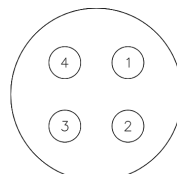
SML-16
16#16



SML-20
20#16

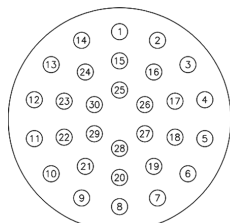


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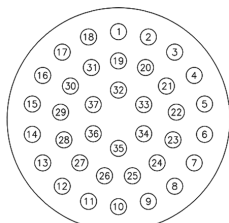


SML-4-HP**
4#8

M



SMM-30
30#16



SMM-37
37#16

Notes:

- * For CCP face view contact configurations available please contact TE.
- ** High power version.

LET'S CONNECT

We make it easy to connect with our experts and are ready to provide all the support you need. Just call your local support number or visit www.te.com/industrial to chat with a Product Information Specialist.

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Consult TE for the latest dimensions and design specifications.

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