YM series circular electrical connector

The family of connector has excellent performance on waterproof, anti-corrosion from acid and alkali. Underwater max working depth is 50m. Designed as bayonet coupling or thread coupling, solder contact and springtac socket. Material of shell is stainless steel.

Part number

YM	A	14	T	3	K_1	P_{40}	W

Basic series

Type of shell
- A = Bayonet coupling
- B = Thread coupling

Shell size
- 08, 10, 12, 14, 16, 18, 20, 22, 24

Type of plug and receptacle
- T = Plug
- F = Square flange receptacle
- S = Jam nut hermetic receptacle thru bulkhead

Contact layout
- See below

Contact
- Z_1 = Pin with gold plating
- K_1 = Socket with gold plating
- M_1 = Contact with gold plating (only for thru bulkhead receptacle)

Formation
- D_{40} = Short shell without thread, stainless steel passivated
- P_{40} = Stainless steel passivated with thread

Orientation
- N, W, X, Y, Z
- Omit = N

Performance specification

Operating temperature: -55 ^{o}C ~ +200 ^{o}C
Relative humidity: at 60 ^{o}C, 95%
Environment-resistance: salt spray test 1000 hours
Shell: stainless steel passivated
Insulator: thermosetting material
Contact: cooper-alloy with gold plating
Vibration: at 10 ~ 2000 Hz, acceleration: 196 m/s^2
Shock: acceleration 980 m/s^2
Endurance: ≥ 1000 cycles

Electrical performance

Contact resistance and rated current

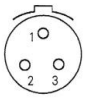
Contact No.	Resistance (mΩ)	Rated current (A)	Inside diameter (mm)
Φ 1.0	5.0	5	Φ 1.3
Φ 1.5	2.5	10	Φ 1.8
Φ 2.0	1.25	20	Φ 2.5
Φ 3.0	0.75	40	Φ 3.4

Rated voltage, Withstanding voltage and Insulation resistance

Operating environment	Rated voltage (V)	Withstanding voltage (V)	Insulation resistance (MΩ)
Normal	500	1500	≥ 5000
Hot and humid	500	1125	≥ 100
Low pressure (1 KPa)	250	300	—

Contact layout

14-2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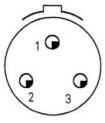
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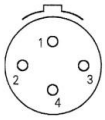
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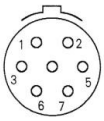
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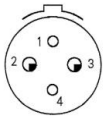
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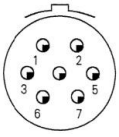
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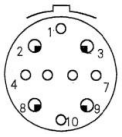
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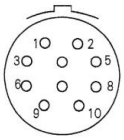
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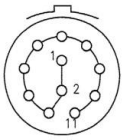
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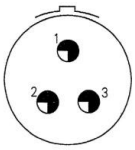
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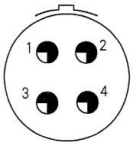
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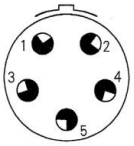
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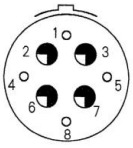
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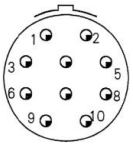
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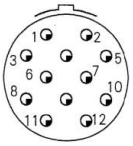
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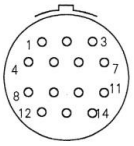
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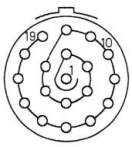
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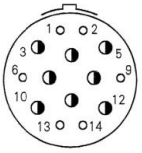
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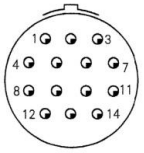
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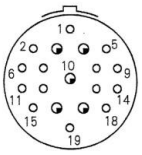
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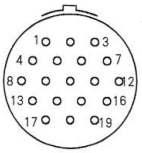
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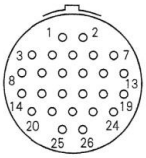
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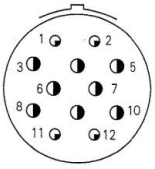
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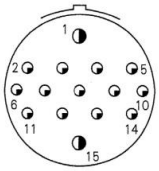
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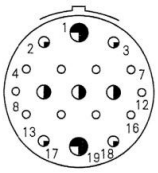
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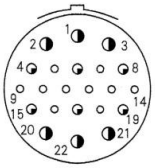
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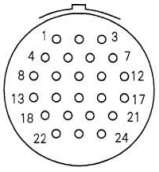
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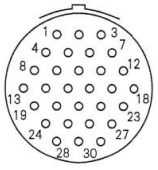
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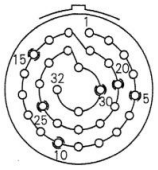
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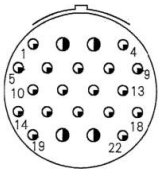
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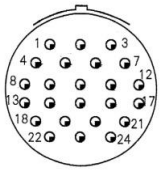
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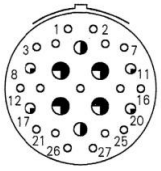
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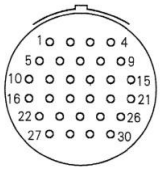
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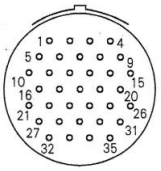
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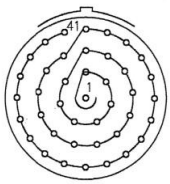
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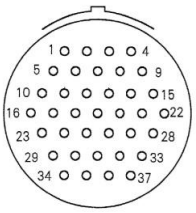
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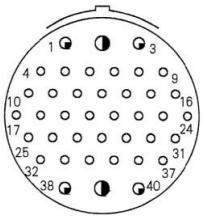
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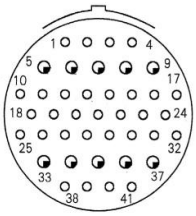
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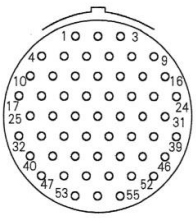
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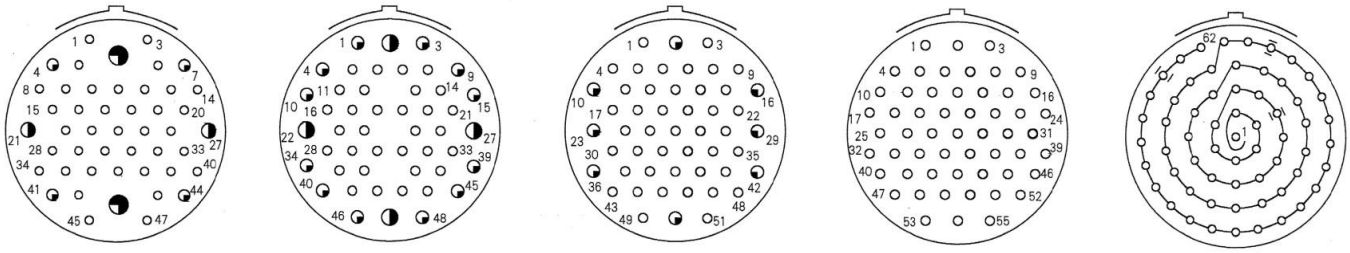

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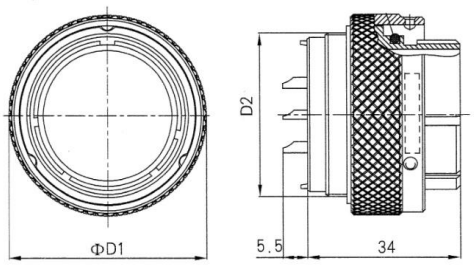
○ Φ1.0 ◔ Φ1.5 ◑ Φ2.0 ◕ Φ3.0

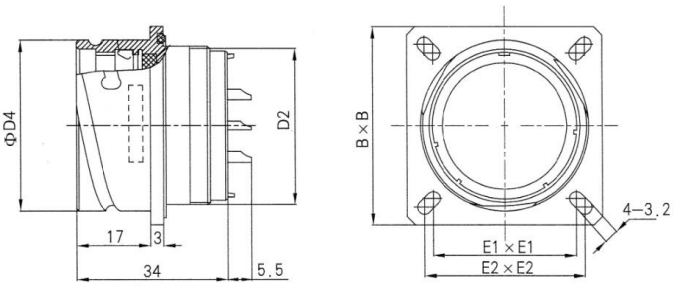
Shell size

Bayonet coupling (YMA)

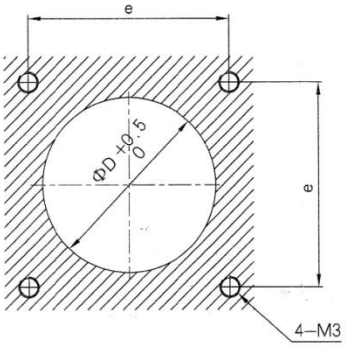
Plug



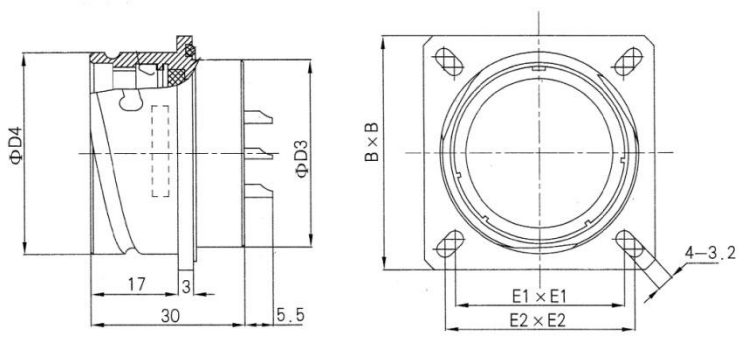
Receptacle (P_{40})



Hole dimensions on receptacle panel



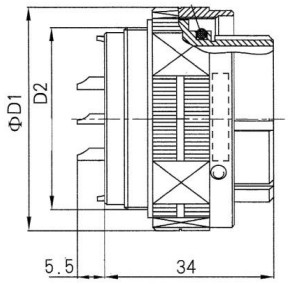
Receptacle (D_{40})



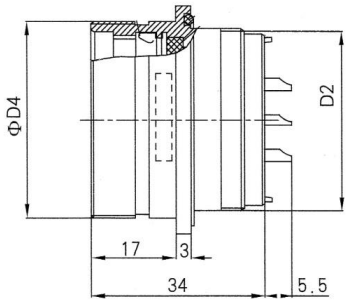
Shell size	D1	D2	D3	D4	B	E1	E2	d	e
14	22.0	M14 × 1	14.0	16.8	25.0	18.0	19.0	14.5	18.0 ~ 19.0
18	26.0	M18 × 1	18.0	20.8	27.5	21.0	22.0	18.5	21.0 ~ 22.0
22	30.0	M22 × 1	22.0	24.8	30.0	23.0	24.5	22.5	23.0 ~ 24.5
24	32.0	M24 × 1	24.0	26.8	33.0	25.0	27.0	24.5	25.0 ~ 27.0
27	35.0	M27 × 1	27.0	29.8	36.0	27.0	30.0	27.5	27.0 ~ 30.0
30	38.0	M30 × 1	30.0	32.8	39.0	29.0	32.0	30.5	29.0 ~ 32.0
33	41.0	M33 × 1	33.0	35.8	42.0	31.0	34.5	33.5	31.0 ~ 34.5
36	44.0	M36 × 1	36.0	38.8	45.0	33.0	37.0	36.5	33.0 ~ 37.0
39	47.0	M39 × 1	39.0	41.8	48.0	35.5	39.0	39.5	35.5 ~ 39.0

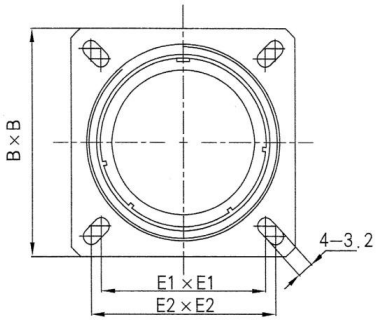
Thread coupling (YMB)

Plug

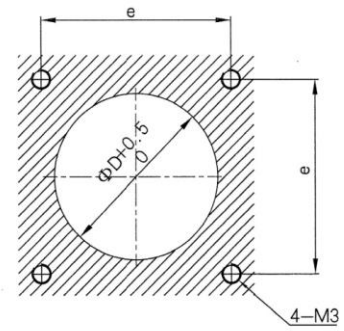


Receptacle (P_{40})

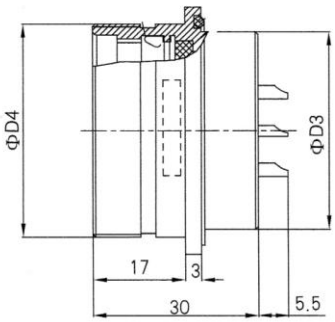


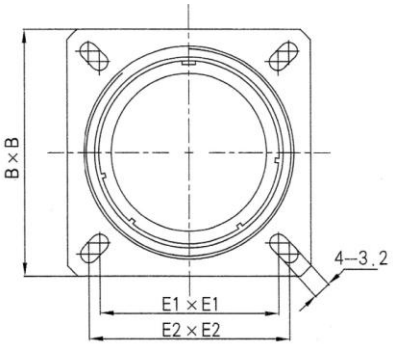


Hole dimensions on receptacle panel



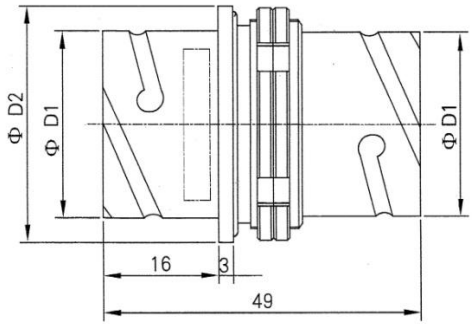
Receptacle (D_{40})

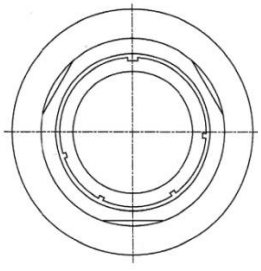




Shell size	D1	D2	D3	D4	B	E1	E2	d	e
14	25.0	M14 × 1	14.0	19.1	25.0	18.0	19.0	14.5	18.0 ~ 19.0
18	29.4	M18 × 1	18.0	22.3	27.5	21.0	22.0	18.5	21.0 ~ 22.0
22	32.4	M22 × 1	22.0	25.4	30.0	23.0	24.5	22.5	23.0 ~ 24.5
24	35.6	M24 × 1	24.0	30.2	33.0	25.0	27.0	24.5	25.0 ~ 27.0
27	38.6	M27 × 1	27.0	31.8	36.0	27.0	30.0	27.5	27.0 ~ 30.0
30	41.7	M30 × 1	30.0	34.8	39.0	29.0	32.0	30.5	29.0 ~ 32.0
33	44.8	M33 × 1	33.0	38.1	42.0	31.0	34.5	33.5	31.0 ~ 34.5
36	48.1	M36 × 1	36.0	41.2	45.0	33.0	37.0	36.5	33.0 ~ 37.0
39	51.0	M39 × 1	39.0	44.5	48.0	35.5	39.0	39.5	35.5 ~ 39.0

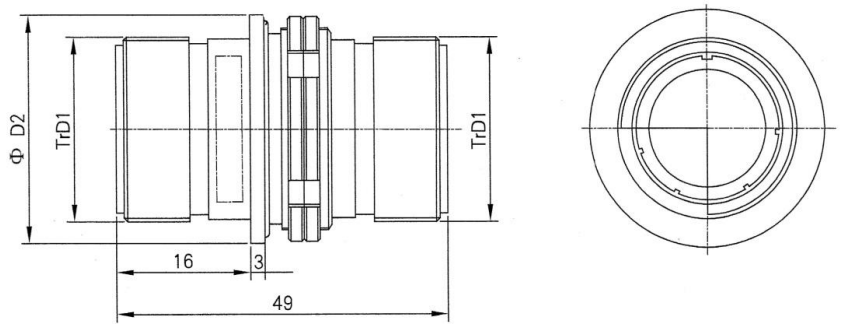
Bayonet coupling receptacle thru bulkhead





Shell size	D1	D2
14	16.8	30.0
18	20.8	34.0
22	24.8	38.0
24	26.8	40.0
27	29.8	43.0
30	32.8	46.0
33	35.8	49.0
36	38.8	52.0
39	41.8	55.0

Thread coupling receptacle thru bulkhead



Shell size	D1	D2
14	20	32.0
18	24	37.0
22	28	40.0
24	30	43.0
27	34	46.0
30	36	49.0
33	40	52.0
36	42	55.0
39	46	58.0