华伦连接器
HuaLun *Connector*

- www.hualun.sh.cn
- www.华伦连接器.com
- www.hualunconnectors.com

BMS series

- Coupling: Bayonet
- Terminal: Crimp

Connector

Receptacle BMS3402

Receptacle BMS3401 **A

Plug BMS3408 G**

Adapter BMS34011

Receptacle BMS3400 PG**

Plug BMS3406 **A

Index

High-tech Enterprise Certificate

Foreign Invested Advanced

Enterprise Credit Rating AAA

Software Copyright

ISO9001, ISO14001, ISO45001

UL for YD series

Profile

- Design according to MIL5015, VG95234, interchangeable with equivalent products.
- Insert: Halogen free & fire resistance thermoplastic UL94V-0; 2-60 pins. More than 50 types.
- Shell size-arrangement:14S, 16S, 16, 18, 20, 22, 24, 28, 32, 36, 40.
- Coupling: bayonet
- Terminal: crimp
- Tools: hand crimp tool-M22520/1-01. Pneumatic crimp tool would be update efficiency and fit for mass crimping.
- Shell Protection degree: IP65/67
- Shock vibration: Class 1B (GB/T21563-2018 Shock and vibration test of rail transit locomotive and rolling stock equipment)
- Technical data qualified to NFF61030（Normes francaises）& GB/T34119-2017（Railway rolling stock-Electrical connectors）.
- Shell color: Black, Army Green
- TÜV certification.

Hualun connectors are appointed by Chinese rail transport, engineering machinery, power electric power, thermoplastic machinery, industrial automation, and robot manufacturing enterprises. as a perennial supporting product.

Technical Data

Environmental

Operating Temperature	Upper limit+125℃ * Lower limit-55℃	
Relative Humidity	40℃±2℃ 93%~95%	
Salty Spray Corrosion	⩾96hours	
Protection Degree	IP65,IP67	(when mated,wired and mounted according to DS)
Shock Vibration	Class 1B (GB/T21563-2018 / IEC61373: 2010)	

Note: * The upper limit temperature is the maximum internal hot spot temperature that occurs in either combination of electrical load and environmental conditions.

Contact current De-rating

Qty of contacts	1~10	11~20	21~30	31~50	51~80
Drop rate%	0	10	20	30	40

Mechanical Features

Type of contacts#	● 16#	⊕ 12#	◓ 8#
retention force (min)	70N	90N	110N
Minimum separation force	0.56N	0.83N	1.39N

The contact crimp is sufficient to match the tensile strength of the cable

Wire Gauge		Tensile Strength
AWG	mm²	N
20	0.5	60
-	0.75	85
18	0.82	90
-	1.0	108
16	1.3	135
-	1.5	150
14	2.1	200
-	2.5	230
12	3.3	275
-	4.0	310
10	5.3	355
-	6.0	360
8	8.4	370
Mechanical Life	⩾500	

Testing Condition

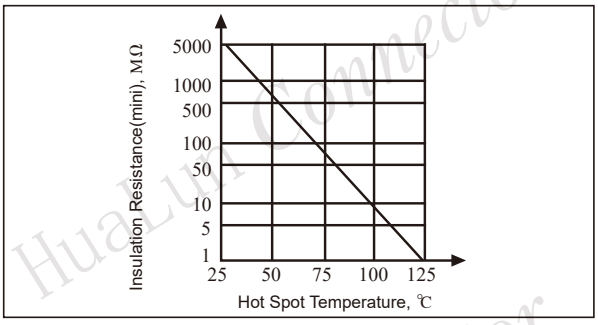
Temperature: 15℃~35℃	Relative Humidity: 20%~80%	Atmospheric Pressure: 73KPa~106KPa

Electric Features

Service rating	Inst.	A	D	E
Rated Voltage	250VDC	700VDC	1250VDC	1750VDC
	200VAC	500VAC	900VAC	1250VAC
Dielectric Withstand Voltage	1000VAC	2000VAC	2800VAC	3500VAC
Mechanical Spacing	-	1.59mm	3.18mm	4.76mm
Creepage Distance	1.59mm	3.18mm	4.76mm	6.35mm
Insulation Resistance	Normal: >5000MΩ, (Dynamic values see tableA)			

Type of contacts#	● 16#	⊕ 12#	◓ 8#
Working Current	13A	23A	46A
Contact Resistance	2.5mΩ	1.3mΩ	0.7mΩ

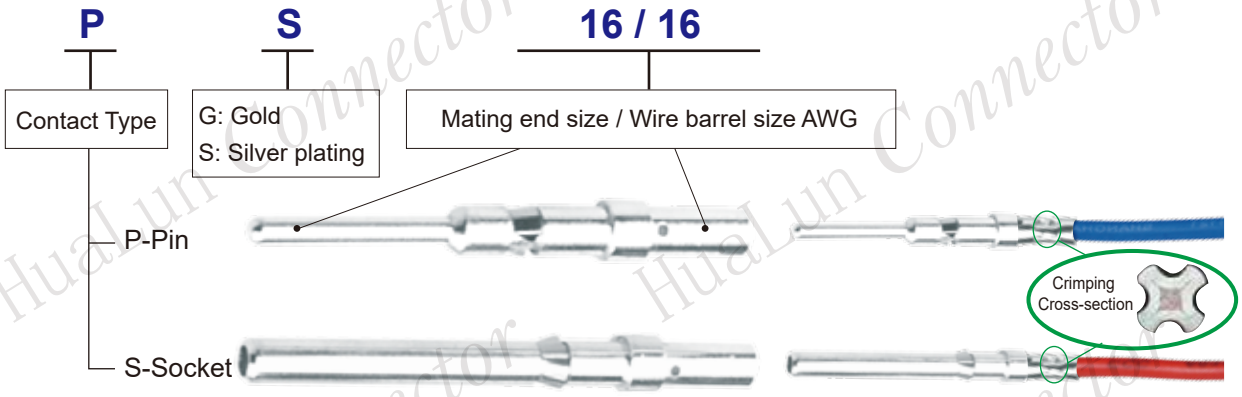
TableA The limit value of insulation resistance varies with temperature



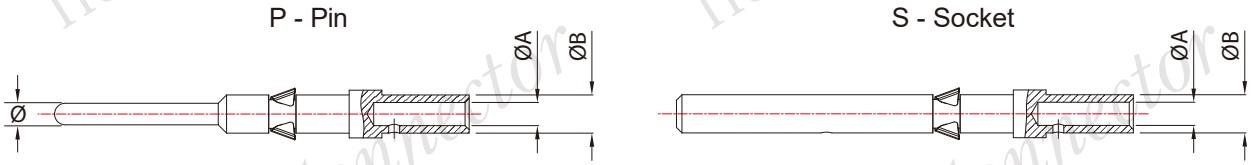
Material of Main Parts

Shell	Material	Aluminum Alloy
	Finish	Electronphoretic Paint; Zinc Passivation
Insert	Material	Halogen free & fire resistance thermoplastic material
	Flame Retardant Grade	UL94V-0
Contacts	Material	Copper Alloy
	Plating	Silver; Gold
Grommet & Bushing		Low Fire Hazard Rubber

Contact Part Number



Example：PS16/20 Order socket, silver plating, mating end size is #16, wire barrel size is 20AWG
SS16/16 Order pin, silver plating, mating end size is #16, wire barrel size is 16AWG



Contact Size & Wire Size

Contact Spec# Size of plug-in end Ømm	Code	Ø A(mm)	Ø B(mm)	Contact Adapter Wire	
				Wire Barrel Size(AWG)	Conductor (the metric system) mm²
● 16# Ø1.588 ±0.025	16S/20	Ø1.10	Ø2.40	20	< 0.50
	16S/16	Ø1.70	Ø2.80	16	< 1.25
	16/20	Ø1.10	Ø2.40	20	< 0.50
	16/18	Ø1.30	Ø2.30	18	< 0.80
	16/16	Ø1.70	Ø2.80	16	< 1.25
	16/14	Ø2.00	Ø3.20	14	<2.00
⊕ 12# Ø2.39 ± 0.03	12/16	Ø1.70	Ø2.80	16	< 1.25
	12/14	Ø2.00	Ø3.20	14	< 2.00
	12/12	Ø2.50	Ø3.80	12	< 3.15
◒ 8# Ø3.61 ± 0.03	8/12	Ø2.50	Ø3.80	12	< 3.15
	8/10	Ø3.50	Ø4.40	10	< 5.50
	8/8	Ø4.50	Ø6.70	8	< 8.00

Note: The length of the pin & socket of type 16S is special (short), and the specifications need to be noted when ordered separately.

Part Number (Explanation)

Receptacle ①

(Panel Mounted)
(No Protective Enclosure)

	①	②	③	④	⑤	⑥
e.g. 1	BMS	34	02	S16~9	N	
e.g. 2	BMS	34	22	P16~9	W	L

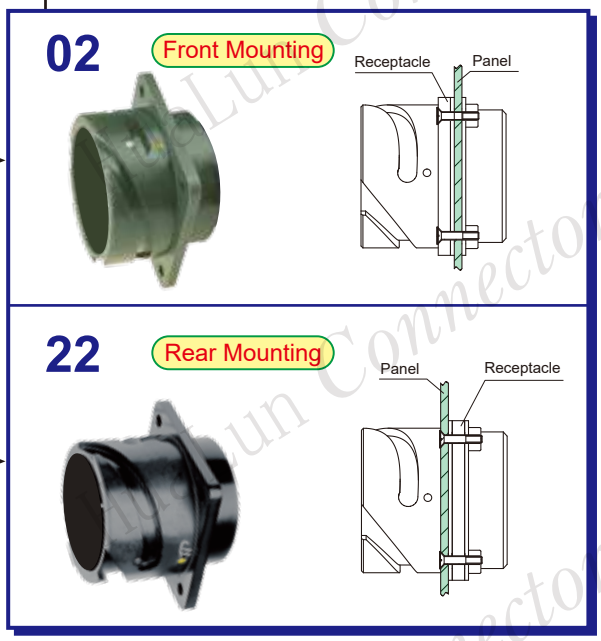
Explanation

■ Shell Size See Page 17

① BMS : Coupling (bayonet)

② 34 : Terminal (crimp)

③ 02 : Front Mounting
22 : Rear Mounting
} panel mounted, No protective enclosure



④ Insert:

S (P) 16 - 9

S: Socket
P: Pin
Shell-size
Arrangement No.

Insert P/N: See Page 9-15

⑤ Insert Orientation:

N: Cardinal Points; (Default)
W, **X**, **Y**, **Z**, See Page 16

⑥ Shell Color:

- ◆ **H**: Black
- ◆ **L**: Army Green

Part Number (Explanation)

Receptacle ②

(Protective Enclosure)
(Clamp/Gland)

e.g. 1 **BMS 34 20 S16-9 N 16A**

e.g. 2 **BMS 34 00 P16-9 Y 16A L**

① ② ③ ④ ⑤ ⑥ ⑦

■ Shell Size See Page 18~20

Explanation

① **BMS** : **Coupling (bayonet)**

② **34** : **Terminal (crimp)**

③ **00** : **Front Mounting** } Protective Enclosure, Clamp/Gland
20 : **Rear Mounting**

④ **Insert:**

S (P) 16 - 9

S: Socket
P: Pin
Shell-size
Arrangement No.

Insert P/N: See Page 9-15

⑤ **Insert Orientation:**

N: Cardinal Points; (Default)
W, X, Y, Z, See Page 16

⑥ **Outlet Type:**

- ****A** (size) : Cable Clamp (3057+3420)
- **PG**** (size) : PG Nylon Cable Gland Outlet

⑦ **Shell Color:**

- **H**: Black
- **L**: Army Green

Part Number (Explanation)

Receptacle ③ (Free)

e.g. 1 **BMS** **34** **01** **S16-9** **N** **16A**

e.g. 2 **BMS** **34** **01** **P16-9** **Y** **PG13.5** **L**

① ② ③ ④ ⑤ ⑥ ⑦

■ Shell Size See Page 21

Explanation

① **BMS** : **Coupling (bayonet)**

② **34** : **Terminal (crimp)**

③ **01** : **Free Receptacle**

④ **Insert:**

S(P) 16 - 9

S: Socket
P: Pin

Shell-size

Arrangement No.

Insert P/N: See Page 9-15

⑤ **Insert Orientation:**

N: Cardinal Points; (Default)

W, X, Y, Z, See Page 16

⑥ **Outlet Type:**

◆ ****A** (size) : Cable Clamp (3057+3420)

◆ **PG**** (size) : PG Nylon Cable Gland Outlet

⑦ **Shell Color:**

◆ **H**: Black

◆ **L**: Army Green

Part Number (Explanation)

Receptacle ④ (Adapter)

e.g. 1 **BMS** **34** **022** **S16-9P** **N**

e.g. 2 **BMS** **34** **011** **P16-9S** **W** **L**

① ② ③ ④ ⑤ ⑥

Explanation

① **BMS** : **Coupling** (bayonet)

② **34** : **Terminal** (crimp)

③ **022** : **Adapter** (Square flange)
011 : **Adapter** (Round flange)

■ Shell Size See Page 22

④ **Insert:**

S 16 - 9 P

- S: Socket / P: Pin — Shell-size
- Arrangement No.
- P: Pin / S: Socket

Insert P/N: See Page 9-15

⑤ **Insert Orientation:**
N: Cardinal Points; (Default)
W, X, Y, Z, See Page 16

⑥ **Shell Color:**
- ◆ **H**: Black
- ◆ **L**: Army Green

Part Number (Explanation)

Plug

e.g. 1 **BMS** **34** **06** **S16-9** **N** **16A**

e.g. 2 **BMS** **34** **08** **P16-9** **Y** **PG13.5** **L**

① ② ③ ④ ⑤ ⑥ ⑦

■ Shell Size See Page 23~25

Explanation

① **BMS** : **Coupling (bayonet)**

② **34** : **Terminal (crimp)**

③ **06** : **Straight** **08** : **90° Angled** { Protective Enclosure, Clamp/Gland

④ **Insert:**

S (P) 16 - 9

S: Socket
P: Pin
Shell-size
Arrangement No.

Insert P/N: See Page 9-15

⑤ **Insert Orientation:**

N: Cardinal Points; (Default)

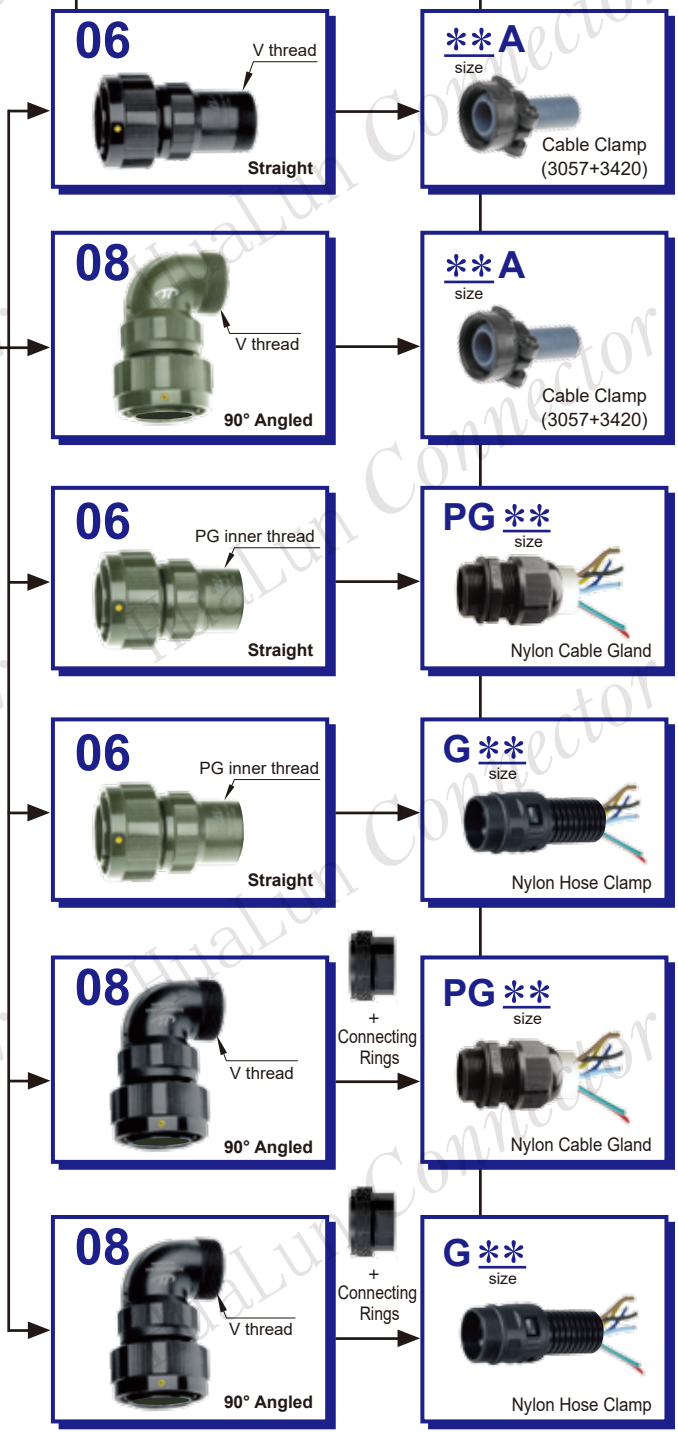
W, X, Y, Z, See Page 16

⑥ **Outlet Type:**

- ****A** (size) : Cable Clamp (3057+3420)
- **PG**** (size) : PG Nylon Cable Gland
- **G**** (size) : G Nylon Hose Clamp

⑦ **Shell Color:**

- **H**: Black
- **L**: Army Green



Shell Size - Arrangement No.

View from mating face

● 16# ⊕ 12#

Shell/Insulator	Size 14S									
P S Shell Size-Arrangement No.	P14S-2	S14S-2	P14S-5	S14S-5	P14S-6	S14S-6	P14S-7	S14S-7	P14S-9	S14S-9
Contact Arrangement	Pin P / S Socket 4 Contact		Pin P / S Socket 5 Contact		Pin P / S Socket 6 Contact		Pin P / S Socket 3 Contact		Pin P / S Socket 2 Contact	
Contact Size×Contact Qty.	16#×4		16#×5		16#×6		16#×3		16#×2	
Service Rating	Inst.		Inst.		Inst.		A		A	

View from mating face

Shell/Insulator	Size 16S							
P S Shell Size-Arrangement No.	P16S-1	S16S-1	P16S-4	S16S-4	P16S-5	S16S-5	P16S-8	S16S-8
Contact Arrangement	Pin P / S Socket 7 Contact		Pin P / S Socket 2 Contact		Pin P / S Socket 3 Contact		Pin P / S Socket 5 Contact	
Contact Size×Contact Qty.	16#×7		16#×2		16#×3		16#×5	
Service Rating	A		D		A		A	

View from mating face

Shell/Insulator	Size 16				Size 18			
P S Shell Size-Arrangement No.	P16-9	S16-9	P16-10	S16-10	P18-11	S18-11	P18-12	S18-12
Contact Arrangement	Pin P / S Socket 4 Contact		Pin P / S Socket 3 Contact		Pin P / S Socket 5 Contact		Pin P / S Socket 6 Contact	
Contact Size×Contact Qty.	16#×2	12#×2	12#×3		12#×5		16#×6	
Service Rating	A		A		A		A	

Shell Size - Arrangement No.

View from mating face

● 16# ⊕ 12# ◔ 8#

Shell/Insulator	Size 18				Size 20			
P S Shell Size-Arrangement No.	P18-19	S18-19	P18-22	S18-22	P20-4	S20-4	P20-7	S20-7
Contact Arrangement	Pin P / S Socket 10 Contact		Pin P / S Socket 3 Contact		Pin P / S Socket 4 Contact		Pin P / S Socket 8 Contact	
Contact Size×Contact Qty.	16#×10		16#×3		12#×4		16#×8	
Service Rating	A		D		D		A,B,G,H = D Other = A	

View from mating face

Shell/Insulator	Size 20					
P S Shell Size-Arrangement No.	P20-15	S20-15	P20-29	S20-29	P20-33	S20-33
Contact Arrangement	Pin P / S Socket 7 Contact		Pin P / S Socket 17 Contact		Pin P / S Socket 11 Contact	
Contact Size×Contact Qty.	12#×7		16#×17		16#×11	
Service Rating	A		A		A	

View from mating face

Shell/Insulator	Size 22					
P S Shell Size-Arrangement No.	P22-2	S22-2	P22-5	S22-5	P22-8	S22-8
Contact Arrangement	Pin P / S Socket 3 Contact		Pin P / S Socket 6 Contact		Pin P / S Socket 2 Contact	
Contact Size×Contact Qty.	8#×3		16#×4	12#×2	12#×2	
Service Rating	D		D		E	

Shell Size - Arrangement No.

View from mating face

● 16# ⊕ 12# ◒ 8#

Shell/Insulator	Size 22					
P S Shell Size-Arrangement No.	P22-14	S22-14	P22-18	S22-18	P22-19	S22-19
Contact Arrangement	Pin P / S Socket 19 Contact		Pin P / S Socket 8 Contact		Pin P / S Socket 14 Contact	
Contact Size×Contact Qty.	16#×19		16#×8		16#×14	
Service Rating	A		C,D,E = A Other = D		A	

View from mating face

Shell/Insulator	Size 22				Size 24	
P S Shell Size-Arrangement No.	P22-20	S22-20	P22-23	S22-23	P24-2	S24-2
Contact Arrangement	Pin P / S Socket 9 Contact		Pin P / S Socket 8 Contact		Pin P / S Socket 7 Contact	
Contact Size×Contact Qty.	16#×19		12#×8		12#×7	
Service Rating	A		H = D Other = A		D	

View from mating face

Shell/Insulator	Size 24					
P S Shell Size-Arrangement No.	P24-5	S24-5	P24-10	S24-10	P24-11	S24-11
Contact Arrangement	Pin P / S Socket 16 Contact		Pin P / S Socket 7 Contact		Pin P / S Socket 9 Contact	
Contact Size×Contact Qty.	16#×16		8#×7		12#×6 8#×3	
Service Rating	A		A		A	

Shell Size - Arrangement No.

View from mating face

● 16# ⊕ 12# ◔ 8#

Shell/Insulator	Size 24		Size 28			
P S Shell Size-Arrangement No.	P24-22	S24-22	P28-11	S28-11	P28-12	S28-12
Contact Arrangement	Pin P / S Socket 4 Contact		Pin P / S Socket 22 Contact		Pin P / S Socket 26 Contact	
Contact Size×Contact Qty.	8#×4		16#×18	12#×4	16#×26	
Service Rating	D		A		A	

View from mating face

Shell/Insulator	Size 28			
P S Shell Size-Arrangement No.	P28-16	S28-16	P28-21	S28-21
Contact Arrangement	Pin P / S Socket 20 Contact		Pin P / S Socket 37 Contact	
Contact Size×Contact Qty.	16#×20		16#×37	
Service Rating	A		A	

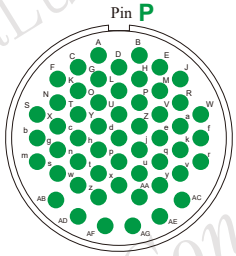
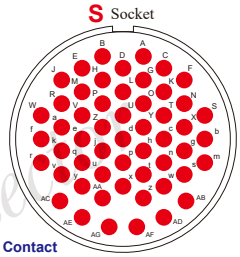
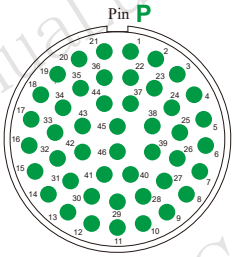
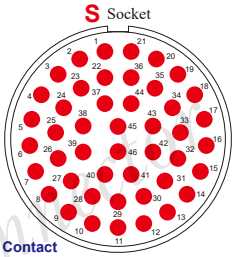
View from mating face

Shell/Insulator	Size 32			
P S Shell Size-Arrangement No.	P32-13	S32-13	P32-A13	S32-A13
Contact Arrangement	Pin P / S Socket 23 Contact		Pin P / S Socket 13 Contact	
Contact Size×Contact Qty.	16#×18	12#×5	12#×13	
Service Rating	D		D	

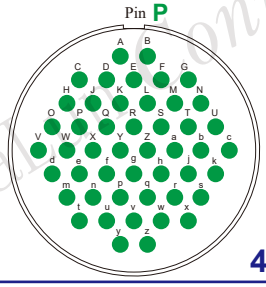
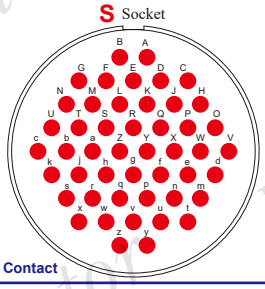
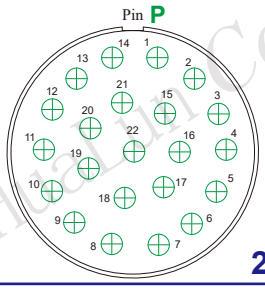
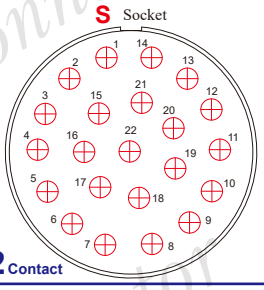
Shell Size - Arrangement No.

View from mating face

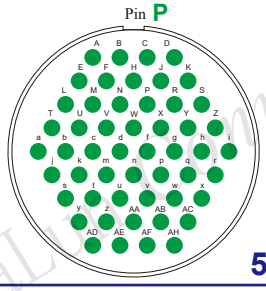
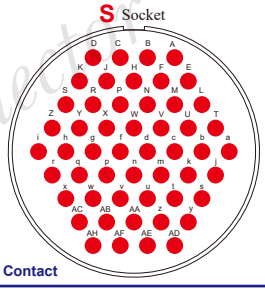
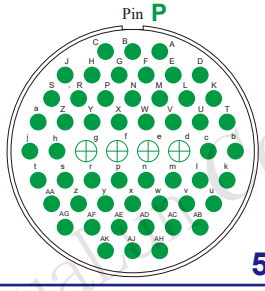
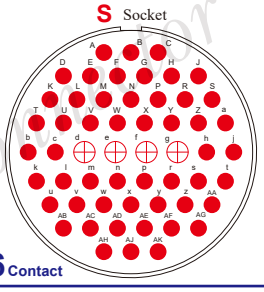
● 16# ⊕ 12#

Shell/Insulator	Size 32			
P S Shell Size-Arrangement No.	P32-22	S32-22	P32-73	S32-73
Contact Arrangement	Pin P	S Socket	Pin P	S Socket
		 54 Contact		 46 Contact
Contact Size×Contact Qty.	16#×54		16#×46	
Service Rating	A		A	

View from mating face

Shell/Insulator	Size 36			
P S Shell Size-Arrangement No.	P36-10	S36-10	P36-A22	S36-A22
Contact Arrangement	Pin P	S Socket	Pin P	S Socket
		 48 Contact		 22 Contact
Contact Size×Contact Qty.	16#×48		12#×22	
Service Rating	A		D	

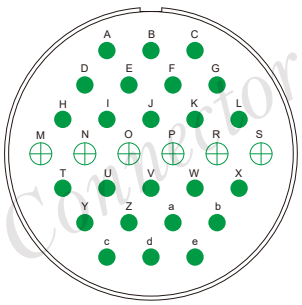
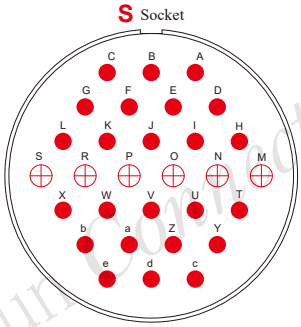
View from mating face

Shell/Insulator	Size 36			
P S Shell Size-Arrangement No.	P36-52	S36-52	P36-66	S36-66
Contact Arrangement	Pin P	S Socket	Pin P	S Socket
		 52 Contact		 56 Contact
Contact Size×Contact Qty.	16#×52		16#×52 12#×4	
Service Rating	A		A	

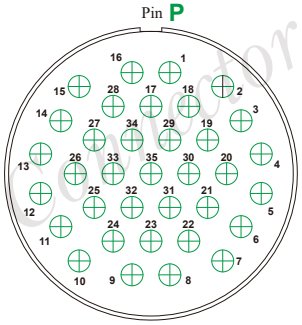
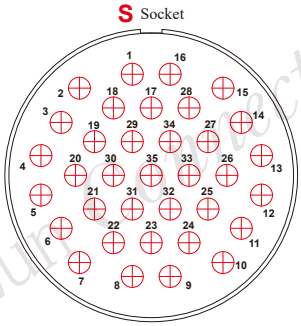
Shell Size - Arrangement No.

View from mating face

● 16# ⊕ 12#

Shell/Insulator	Size 40	
P S Shell Size-Arrangement No.	P40-1	S40-1
Contact Arrangement	Pin P 	S Socket  30 Contact
Contact Size×Contact Qty.	16#×24	12#×6
Service Rating	D	

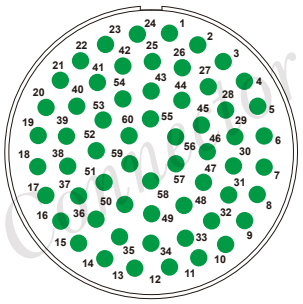
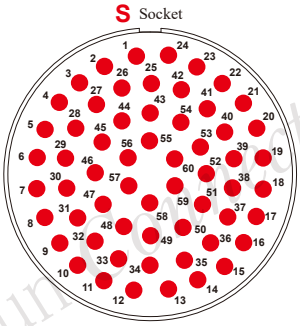
View from mating face

Shell/Insulator	Size 40	
P S Shell Size-Arrangement No.	P40-A35	S40-A35
Contact Arrangement	Pin P 	S Socket  35 Contact
Contact Size×Contact Qty.	12#×35	
Service Rating	D	

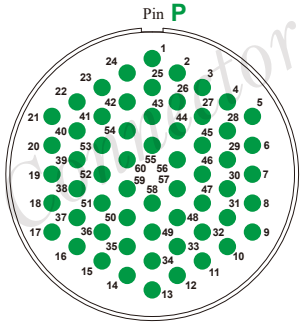
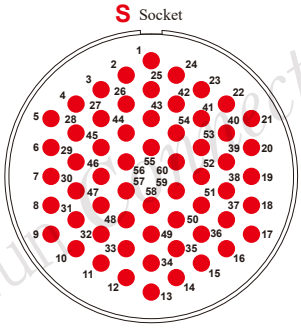
Shell Size - Arrangement No.

View from mating face

● 16#

Shell/Insulator	Size 40	
P S Shell Size-Arrangement No.	P40-A60	S40-A60
Contact Arrangement	Pin P 	S Socket  60 Contact
Contact Size×Contact Qty.	16#×60	
Service Rating	A	

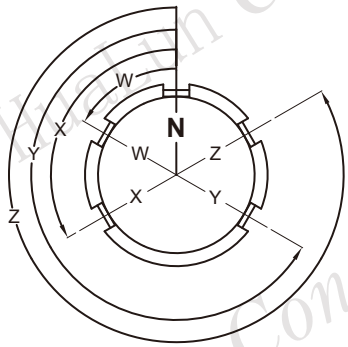
View from mating face

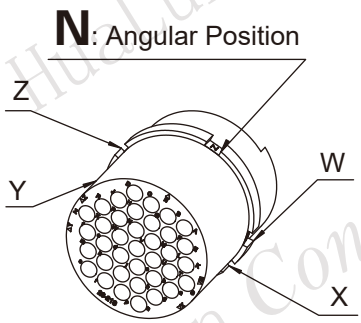
Shell/Insulator	Size 40	
P S Shell Size-Arrangement No.	P40-62	S40-62
Contact Arrangement	Pin P 	S Socket  60 Contact
Contact Size×Contact Qty.	16#×60	
Service Rating	A	

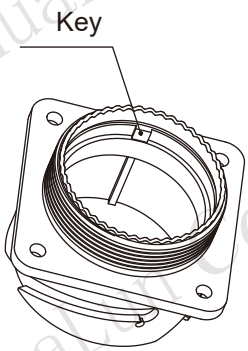
Angular Displacement Of Insert

When more than two connectors with same Insert are applied to a device together, to alternate the inserts to different angulars can prevent mismating.

Front face of pin insert







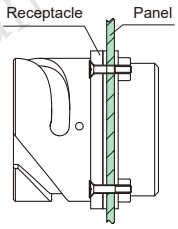
Insert Code	Angular Displacement Of Insert				
	N	W	X	Y	Z
14S-2	0	–	120	240	–
14S-5	0	–	110	–	–
14S-6	0	–	–	–	–
14S-7	0	90	180	270	–
14S-9	0	70	145	215	290
16S-1	0	80	–	–	280
16S-4	0	35	110	250	325
16S-5	0	70	145	215	290
16S-8	0	–	170	265	–
16-9	0	35	110	250	325
16-10	0	90	180	270	–
18-11	0	–	170	265	–
18-12	0	80	–	–	280
18-19	0	–	120	240	–
18-22	0	70	145	215	290
20-4	0	45	110	250	–
20-7	0	80	110	250	280
20-15	0	80	–	–	280
20-29	0	80	–	–	280
20-33	0	–	–	–	–
22-2	0	70	145	215	290
22-5	0	35	110	250	325
22-8	0	35	110	250	325
22-14	0	80	110	250	280
22-18	0	80	110	250	280
22-19	0	80	110	250	280
22-20	0	35	110	250	325
22-23	0	35	–	250	–
24-2	0	80	–	–	280
24-5	0	80	110	250	280
24-10	0	80	–	–	280
24-11	0	35	110	250	325
24-22	0	45	110	250	–
28-11	0	80	110	250	280
28-12	0	90	180	270	–
28-16	0	80	110	250	280
28-21	0	80	110	250	280
32-13	0	80	110	250	280
32-A13	0	65	130	230	295
32-22	0	80	110	250	280
32-73	0	36	–	–	–
36-10	0	80	125	235	280
36-A22	0	80	110	250	280
36-52	0	72	144	216	288
36-66	0	110	250	260	280
40-1	0	65	130	235	300
40-A35	0	70	130	230	290
40-A60	0	80	110	250	280
40-62	0	30	130	220	290

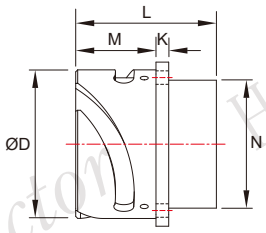
Size of Receptacle

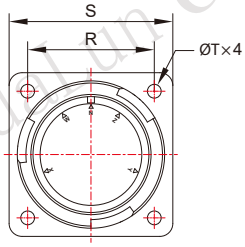
Receptacle ①

(Panel Mounted)
(No Protective Enclosure)

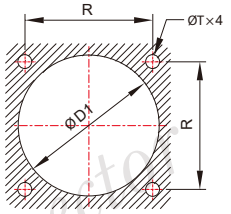
Front Mounting BMS3402





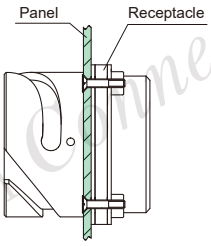


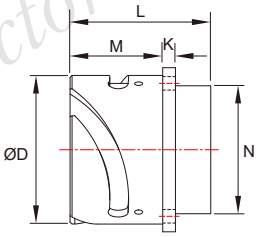
Receptacle Mounting & Mounting Hole

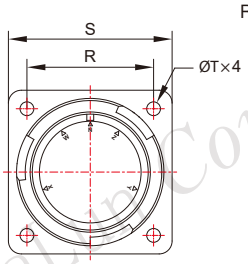


Shell Spec	ØD $^{0}_{-0.15}$	M $^{+0.2}_{0}$	L ±0.3	K ±0.2	ØN max	S ±0.3	R ±0.1	ØT $^{+0.1}_{0}$	ØD1 ±0.2
14S	24.6	14.2	25.7	3.2	19.2	30.0	23.0	3.2	20.0
16S	27.4				22.4	32.5	24.6		23.2
16		20.2	32.5						
18	30.8				25.6	35.0	27.0		26.6
20	34.2				29.0	38.0	29.4		30.0
22	37.4				32.2	41.0	31.8		33.2
24	40.9				35.3	44.5	34.9	3.7	36.3
28	46.7		33.8		41.4	50.8	39.7		42.4
32	53.4	22.2			47.8	57.0	44.5	4.3	48.8
36	59.6				54.1	63.5	49.2		55.0
40	65.5		37.3		59.0	69.9	55.5		60.0

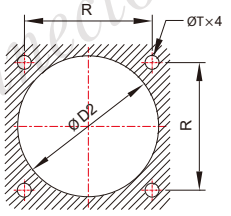
Rear Mounting BMS3422







Receptacle Mounting & Mounting Hole



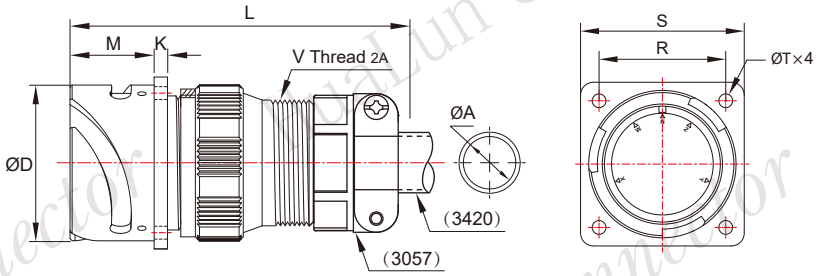
Shell Spec	ØD $^{0}_{-0.15}$	M $^{+0.2}_{0}$	L ±0.3	K ±0.2	ØN max	S ±0.3	R ±0.1	ØT $^{+0.1}_{0}$	ØD2 ±0.2
14S	24.6	18.2	24.7	3.2	19.2	30.0	23.0	3.2	26.0
16S	27.4				22.4	32.5	24.6		28.4
16		23.05	33.8						
18	30.8				25.6	35.0	27.0		32.0
20	34.2				29.0	38.0	29.4		35.5
22	37.4				32.2	41.0	31.8		38.5
24	40.9				35.3	44.5	34.9	3.7	42.0
28	46.7	24.05			41.4	50.8	39.7		48.0
32	53.4				47.8	57.0	44.5	4.3	55.0
36	59.6				54.1	63.5	49.2		61.5
40	65.5		37.3		59.0	69.9	55.5		67.0

Size of Receptacle

Receptacle ②

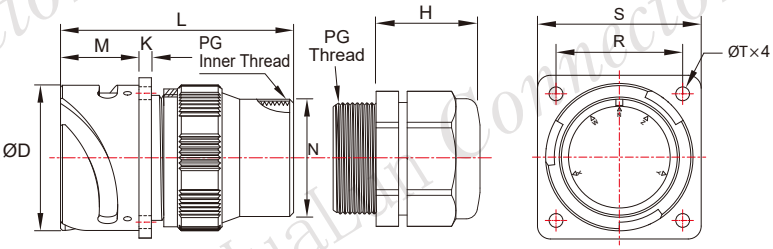
(Protective Enclosure)
(Clamp/Gland)

Front Mounting BMS3400 Insulator 4 5 **A



Shell Spec	ØD $^{0}_{-0.15}$	V Thread 2A	Cable Clamp (3057)+(3420)	OD of Cable(mm)	ØA max	L	M $^{+0.2}_{0}$	K ±0.2	S ±0.3	R ±0.1	ØT $^{+0.1}_{0}$
14S	24.6	3/4-20UNEF	14A	Ø 5-7	7.92	75~77	14.2	3.2	30.0	23.0	3.2
16S	27.4	7/8-20UNEF	16A	Ø 8-11	11.1	81~83	20.2		32.5	24.6	
16											
18	30.8	1-20UNEF	18A	Ø 11-14	14.3	83~85			35.0	27.0	
20	34.2	1 3/16-18UNEF	20A	Ø 14-16	16.2				38.0	29.4	
22	37.4		22A						41.0	31.8	
24	40.9	1 7/16-18UNEF	24A	Ø 16-19	19.1	86~88			44.5	34.9	3.7
28	46.7		28A						50.8	39.7	
32	53.4	1 3/4-18UNS	32A	Ø 19-23	23.8	88~91			57.0	44.5	4.3
36	59.6	2-18UNS	36A	Ø 24-31	31.7	90~92			63.5	49.2	
40	65.5	2 1/4-16UN	40A	Ø 31-34	35.0	103~105			69.9	55.5	

Front Mounting BMS3400 Insulator 4 5 PG**



Shell Spec	ØD $^{0}_{-0.15}$	PG Inner Thread	OD of Cable(mm)	ØN max	L ±0.3	M $^{+0.2}_{0}$	K ±0.2	H	S ±0.3	R ±0.1	ØT $^{+0.1}_{0}$
14S	24.6	PG9	Ø 4-8	19.2	52.7	14.2	3.2	22.0	30.0	23.0	3.2
16S	27.4	PG13.5	Ø 6-12	24.6	57.5	20.2		27.0	32.5	24.6	
16											
18	30.8	PG16	Ø 8.5-14	27.6	58.0			28.0	35.0	27.0	
20	34.2	PG21	Ø 12.5-18	33.6				31.0	38.0	29.4	
22	37.4								41.0	31.8	
24	40.9	PG25	Ø 14-20	37.6				33.0	44.5	34.9	3.7
28	46.7								50.8	39.7	
32	53.4	PG29	Ø 18-25	42.0				37.0	57.0	44.5	4.3
36	59.6	PG36	Ø 24-32	51.2				48.0	63.5	49.2	
40	65.5								69.9	55.5	

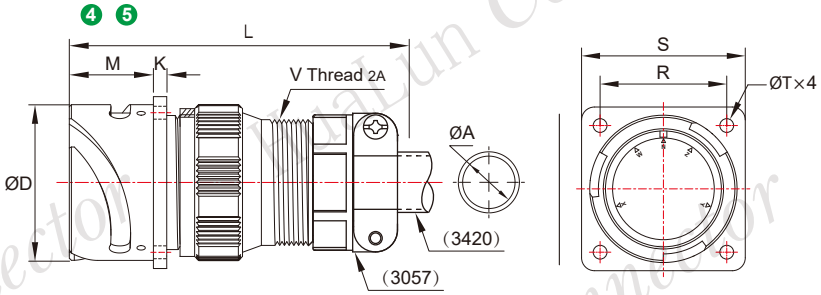
Size of Receptacle

Receptacle ②

(Protective Enclosure)
(Clamp/Gland)

Rear Mounting BMS3420 Insulator **A

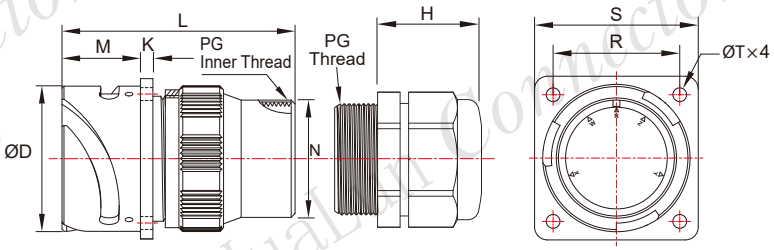
4 5



Shell Spec	ØD $^{0}_{-0.15}$	V Thread 2A	Cable Clamp (3057)+(3420)	OD of Cable(mm)	ØA max	L	M $^{+0.2}_{0}$	K ±0.2	S ±0.3	R ±0.1	ØT $^{+0.1}_{0}$
14S	24.6	3/4-20UNEF	14A	Ø 5-7	7.92	75~77	18.2	3.2	30.0	23.0	3.2
16S	27.4	7/8-20UNEF	16A	Ø 8-11	11.1				32.5	24.6	
16						81~83	23.05				
18	30.8	1-20UNEF	18A	Ø 11-14	14.3				35.0	27.0	
20	34.2	1 3/16-18UNEF	20A	Ø 14-16	16.2	83~85			38.0	29.4	
22	37.4		22A						41.0	31.8	
24	40.9	1 7/16-18UNEF	24A	Ø 16-19	19.1	86~88			44.5	34.9	3.7
28	46.7		28A				24.05		50.8	39.7	
32	53.4	1 3/4-18UNS	32A	Ø 19-23	23.8	88~91			57.0	44.5	4.3
36	59.6	2-18UNS	36A	Ø 24-31	31.7	90~92			63.5	49.2	
40	65.5	2 1/4-16UN	40A	Ø 31-34	35.0	103~105			69.9	55.5	

Rear Mounting BMS3420 Insulator PG**

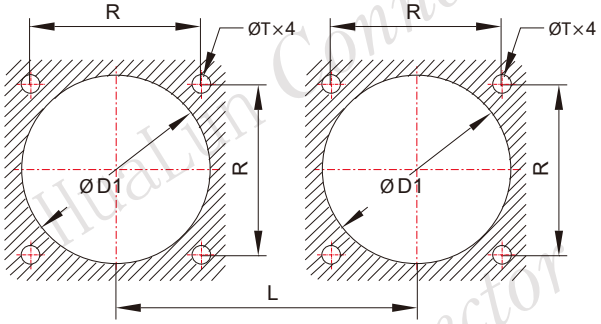
4 5



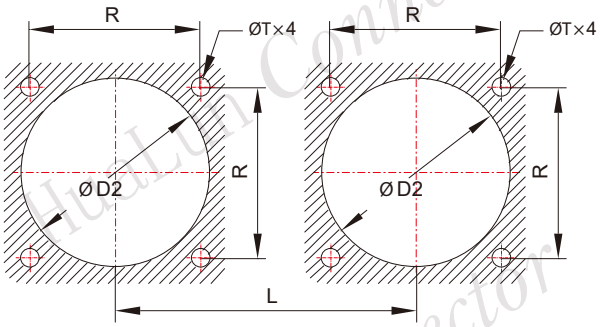
Shell Spec	ØD $^{0}_{-0.15}$	PG Inner Thread	OD of Cable(mm)	ØN max	L ±0.3	M $^{+0.2}_{0}$	K ±0.2	H	S ±0.3	R ±0.1	ØT $^{+0.1}_{0}$
14S	24.6	PG9	Ø 4-8	19.2	52.7	18.2	3.2	22.0	30.0	23.0	3.2
16S	27.4	PG13.5	Ø 6-12	24.6				27.0	32.5	24.6	
16					57.5	23.05					
18	30.8	PG16	Ø 8.5-14	27.6	58.0			28.0	35.0	27.0	
20	34.2	PG21	Ø 12.5-18	33.6				31.0	38.0	29.4	
22	37.4								41.0	31.8	
24	40.9	PG25	Ø 14-20	37.6				33.0	44.5	34.9	3.7
28	46.7								50.8	39.7	
32	53.4	PG29	Ø 18-25	42.0		24.05		37.0	57.0	44.5	4.3
36	59.6	PG36	Ø 24-32	51.2				48.0	63.5	49.2	
40	65.5								69.9	55.5	

Receptacle Mounting & Mounting Hole

Front Mounting



Rear Mounting

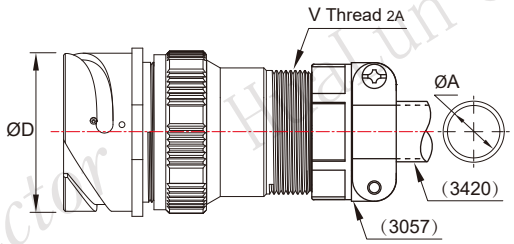


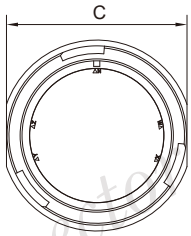
Shell Spec	ØT $^{+0.1}_{0}$	ØD1 ±0.2	ØD2 ±0.2	R ±0.1	L	Screw Spec
14S	3.2	20.0	26.0	23.0	33.0	M3 × 10
16S		23.2	28.4	24.6	34.4	
16						
18		26.6	32.0	27.0	38.3	
20		30.0	35.5	29.4	41.7	
22	3.7	33.2	38.5	31.8	45.2	
24		36.3	42.0	34.9	48.7	
28	4.3	42.4	48.0	39.7	55.5	M4 × 12
32		48.8	55.0	44.5	62.4	
36		55.0	61.5	49.2	69.0	
40		60.0	67.0	55.5	75.0	

Size of Receptacle

Receptacle ③ (Free)

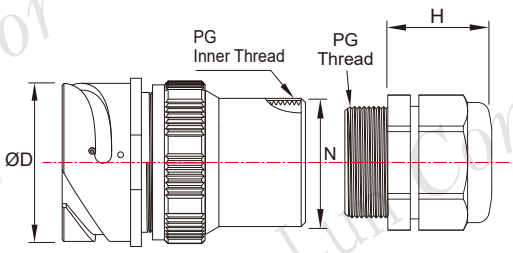
Free BMS3401 Insulator **A
4 5

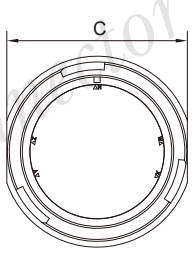




Shell Spec	ØD $^{0}_{-0.15}$	V Thread 2A	Cable Clamp (3057)+(3420)	OD of Cable(mm)	ØA max	C
14S	24.6	3/4-20UNEF	14A	Ø 5-7	7.92	25.2
16S	27.4	7/8-20UNEF	16A	Ø 8-11	11.1	28.8
16						
18	30.8	1-20UNEF	18A	Ø 11-14	14.3	31.5
20	34.2	1 3/16-18UNEF	20A	Ø 14-16	16.2	34.6
22	37.4		22A			38.0
24	40.9	1 7/16-18UNEF	24A	Ø 16-19	19.1	41.5
28	46.7		28A			47.0
32	53.4	1 3/4-18UNS	32A	Ø 19-23	23.8	53.7
36	59.6	2-18UNS	36A	Ø 24-31	31.7	60.2
40	65.5	2 1/4-16UN	40A	Ø 31-34	35.0	66.2

Free BMS3401 Insulator PG**
4 5



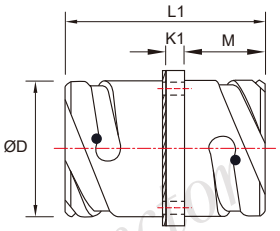


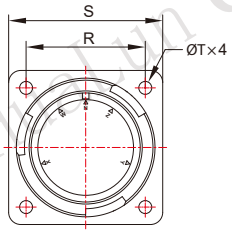
Shell Spec	ØD $^{0}_{-0.15}$	PG Inner Thread	OD of Cable(mm)	ØN max	H	C
14S	24.6	PG9	Ø 4-8	19.2	22.0	25.2
16S	27.4	PG13.5	Ø 6-12	24.6	27.0	28.8
16						
18	30.8	PG16	Ø 8.5-14	27.6	28.0	31.5
20	34.2	PG21	Ø 12.5-18	33.6	31.0	34.6
22	37.4					38.0
24	40.9	PG25	Ø 14-20	37.6	33.0	41.5
28	46.7					47.0
32	53.4	PG29	Ø 18-25	42.0	37.0	53.7
36	59.6	PG36	Ø 24-32	51.2	48.0	60.2
40	65.5					66.2

Size of Receptacle

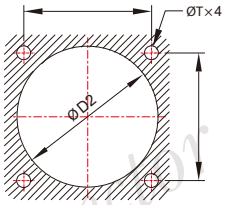
Receptacle ④ (Adapter)

Adapter BMS34022 (Square flange)



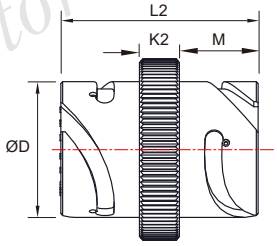


Receptacle Mounting & Mounting Hole



Shell Spec	ØD $^{0}_{-0.15}$	L1 ±0.7	K1 ±0.2	M $^{+0.2}_{0}$	S ±0.3	R ±0.1	ØT $^{+0.1}_{0}$	ØD2 ±0.2
14S	24.6	37.5	3.2	14.20	30.0	23.0	3.2	26.0
16S	27.4				32.5	24.6		28.4
16		51.4		19.0				
18	30.8		4.0		35.0	27.0		32.0
20	34.2				38.0	29.4		35.5
22	37.4				41.0	31.8		38.5
24	40.9			20.6	44.5	34.9	3.7	42.0
28	46.7				50.8	39.7		48.0
32	53.4			22.2	57.0	44.5	4.3	55.0
36	59.6				63.5	49.2		61.5
40	65.5				69.9	55.5		67.0

Adapter BMS34011 (Round flange)



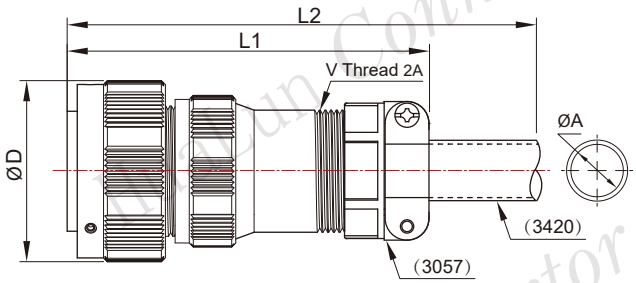
Shell Spec	ØD $^{0}_{-0.15}$	L2 ±0.7	K2 ±0.2	M $^{+0.2}_{0}$
14S	24.6	39.4	11.0	14.20
16S	27.4			
16		49.0		19.0
18	30.8			
20	34.2			
22	37.4			
24	40.9	52.2		20.6
28	46.7			
32	53.4	55.4		22.2
36	59.6			
40	65.5			

Size of Plug

Plug

BMS3406 Insulator **A (Cable Clamp)

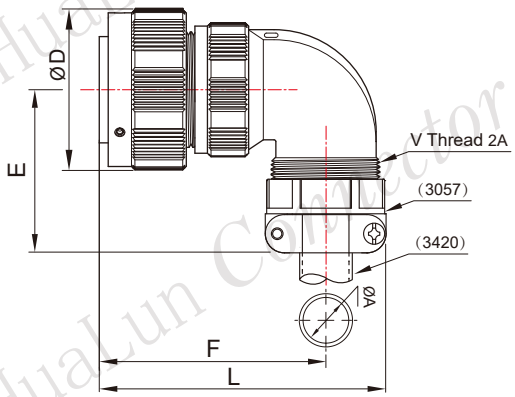
4 5



Shell Spec	ØD $^{0}_{-0.15}$	V Thread 2A	Cable Clamp (3057) + (3420)	OD of Cable(mm)	ØA max	L1 max	L2 max
14S	29.2	3/4-20UNEF	14A	Ø 5-7	7.92	82	115
16S	32.0	7/8-20UNEF	16A	Ø 8-11	11.1	87	118
16							
18	36.5	1-20UNEF	18A	Ø 11-14	14.3		
20	39.9	1 3/16-18UNEF	20A	Ø 14-16	16.2	89	
22	43.1		22A			92	121
24	46.6	1 7/16-18UNEF	24A	Ø 16-19	19.1	95	124
28	53.4		28A				
32	60.1	1 3/4-18UNS	32A	Ø 19-23	23.8	96	
36	66.3	2-18UNS	36A	Ø 24-31	31.7	100	127
40	72.4	2 1/4-16UN	40A	Ø 31-34	35.0	112	

BMS3408 Insulator **A (Cable Clamp)

4 5



Shell Spec	ØD $^{0}_{-0.15}$	V Thread 2A	Cable Clamp (3057) + (3420)	OD of Cable(mm)	ØA max	E max	F max	L max
14S	29.2	3/4-20UNEF	14A	Ø 5-7	7.92	40.0	47.0	70.0
16S	32.0	7/8-20UNEF	16A	Ø 8-11	11.1	40.8	59.5	72.5
16								
18	36.5	1-20UNEF	18A	Ø 11-14	14.3	41.7	60.4	75.5
20	39.9	1 3/16-18UNEF	20A	Ø 14-16	16.2	42.6	61.8	79.0
22	43.1		22A			44.0		80.5
24	46.6	1 7/16-18UNEF	24A	Ø 16-19	19.1	54.6	68.4	89.5
28	53.4		28A					
32	60.1	1 3/4-18UNS	32A	Ø 19-23	23.8	58.5	72.9	98.6
36	66.3	2-18UNS	36A	Ø 24-31	31.7	62.0	73.9	102.0
40	72.4	2 1/4-16UN	40A	Ø 31-34	35.0	79.0	76.9	108.7

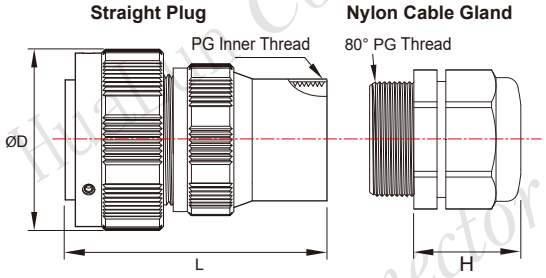
Size of Plug

Plug

BMS3406 Insulator PG** (Nylon Cable Gland)

4 5

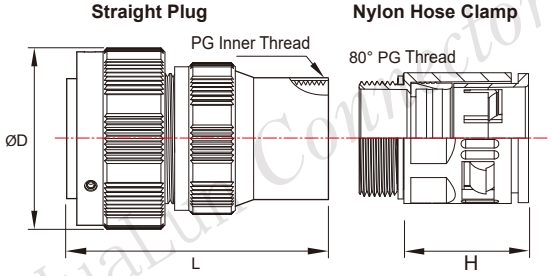
IP67



Shell Spec	ØD $^{0}_{-0.15}$	PG Inner Thread	OD of Cable(mm)	L	H
14S	29.2	PG9	Ø 4-8	50	22.0
16S	32.0	PG13.5	Ø 6-12		27.0
16				60	
18	36.5	PG16	Ø 8.5-14		28.0
20	39.9	PG21	Ø 12.5-18		31.0
22	43.1				
24	46.6	PG25	Ø 14-20	65	33.0
28	53.4				
32	60.1	PG29	Ø 18-25		37.0
36	66.3	PG36	Ø 24-32	80	48.0
40	72.4				

BMS3406 Insulator G** (Nylon Hose Clamp)

4 5



Shell Spec	ØD $^{0}_{-0.15}$	PG Inner Thread	OD of Cable(mm)	L	Nylon Hose Clamp Code
14S	29.2	PG9	Ø 4-8	50	G9
16S	32.0	PG13.5	Ø 6-12		G13.5
16				60	
18	36.5	PG16	Ø 8.5-14		G16
20	39.9	PG21	Ø 12.5-18		G21
22	43.1				
24	46.6	PG25	Ø 14-20	65	G25
28	53.4				
32	60.1	PG29	Ø 18-25		G29
36	66.3	PG36	Ø 24-32	80	G36
40	72.4				

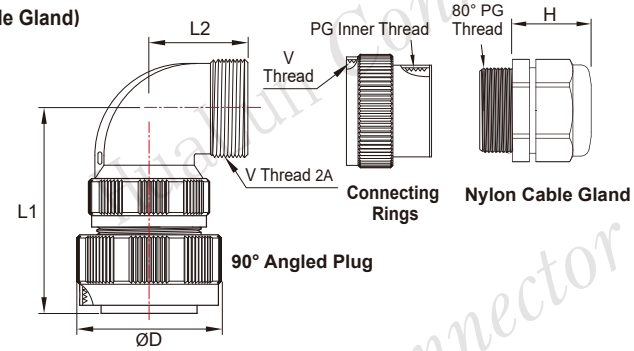
Size of Plug

Plug

BMS3408 Insulator PG** (Nylon Cable Gland)

4 5

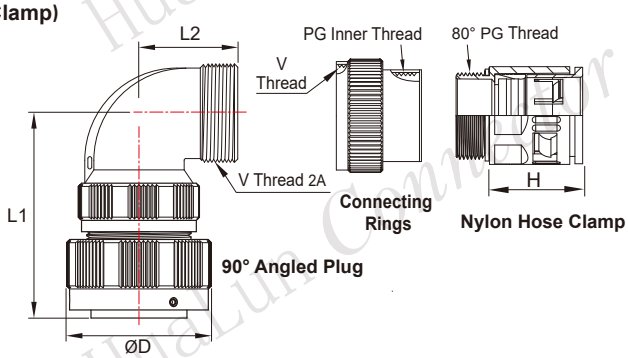
IP67



Shell Spec	ØD $^{0}_{-0.15}$	L1 ±0.2	L2 ±0.2	V Thread 2A	PG Inner Thread	OD of Cable(mm)	H
14S	29.2	47	30	3/4-20UNEF	PG9	Ø 4-8	22.0
16S	32.0	48		7/8-20UNEF	PG13.5	Ø 6-12	27.0
16		57					
18	36.5	58	35	1-20UNEF	PG16	Ø 8.5-14	28.0
20	39.9	61		$1^{3}/_{16}$-18UNEF	PG21	Ø 12.5-18	31.0
22	43.1						
24	46.6	66	40	$1^{7}/_{16}$-18UNEF	PG25	Ø 14-20	33.0
28	53.4						
32	60.1	72	45	$1^{3}/_{4}$-18UNS	PG29	Ø 18-25	37.0
36	66.3	75	50	2-18UNS	PG36	Ø 24-32	48.0
40	72.4	78	55	$2^{1}/_{4}$-16UN			

BMS3408 Insulator G** (Nylon Hose Clamp)

4 5



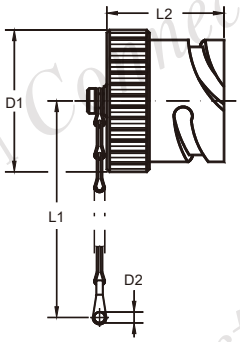
Shell Spec	ØD $^{0}_{-0.15}$	L1 ±0.2	L2 ±0.2	V Thread 2A	PG Inner Thread	OD of Cable(mm)	Nylon Hose Clamp Code
14S	29.2	47	30	3/4-20UNEF	PG9	Ø 4-8	G9
16S	32.0	48		7/8-20UNEF	PG13.5	Ø 6-12	G13.5
16		57					
18	36.5	58	35	1-20UNEF	PG16	Ø 8.5-14	G16
20	39.9	61		$1^{3}/_{16}$-18UNEF	PG21	Ø 12.5-18	G21
22	43.1						
24	46.6	66	40	$1^{7}/_{16}$-18UNEF	PG25	Ø 14-20	G25
28	53.4						
32	60.1	72	45	$1^{3}/_{4}$-18UNS	PG29	Ø 18-25	G29
36	66.3	75	50	2-18UNS	PG36	Ø 24-32	G36
40	72.4	78	55	$2^{1}/_{4}$-16UN			

Protection Cap-Parts To Be Ordered Separately

Plug Protection Cap

Dust Cap Code	Application
BMS25042-14	Shell 14 Plug
BMS25042-16	Shell 16 Plug
BMS25042-18	Shell 18 Plug
BMS25042-20	Shell 20 Plug
BMS25042-22	Shell 22 Plug
BMS25042-24	Shell 24 Plug
BMS25042-28	Shell 28 Plug
BMS25042-32	Shell 32 Plug
BMS25042-36	Shell 36 Plug
BMS25042-40	Shell 40 Plug

Size of Cap



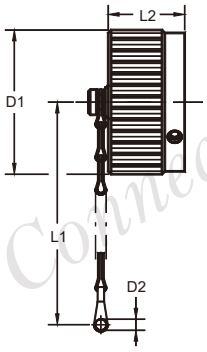
Unit: mm

Shell Spec	D1 Max	D2 $^{+0.6}_{-0}$	L1 Max	L2 Max
14S	27.5	4.3	100	29
16S	30.0			
16			115	37
18	33.5			
20	37.0	4.7	130	
22	40.0			
24	43.5			
28	49.5		190	
32	56.0	5.5		
36	62.5			
40	73.5			

Receptacle Protection Cap

Dust Cap Code	Application
BMS25043-14	Shell 14 Receptacle
BMS25043-16	Shell 16 Receptacle
BMS25043-18	Shell 18 Receptacle
BMS25043-20	Shell 20 Receptacle
BMS25043-22	Shell 22 Receptacle
BMS25043-24	Shell 24 Receptacle
BMS25043-28	Shell 28 Receptacle
BMS25043-32	Shell 32 Receptacle
BMS25043-36	Shell 36 Receptacle
BMS25043-40	Shell 40 Receptacle

Size of Cap



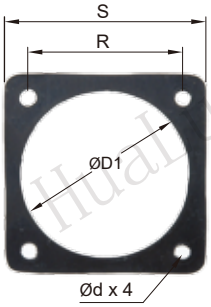
Unit: mm

Shell Spec	D1 Max	D2 $^{+0.6}_{-0}$	L1 Max	L2 Max
14S	30.5	4.3	90	20
16S	33.0			
16			100	25
18	37.5			
20	41.0		115	
22	44.0			
24	47.5			
28	54.5		160	
32	61.0	5.5		
36	67.5			
40	73.5			

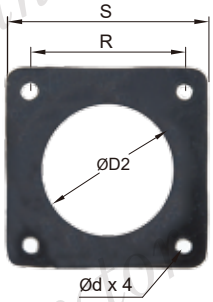
Mounting Plate & Gasket

Rubber Sealing Gasket Size

Rear Mounting

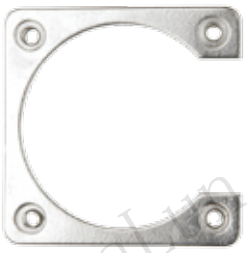


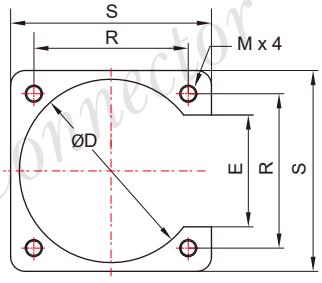
Front Mounting

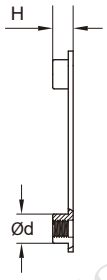


Shell Size	Rear Mounting ØD1	R ±0.1	S ±0.3	Ød +0.1 0	Front Mounting ØD2
14S	24.9	23.0	28.6	3.5	22.1
16S、16	28.2	24.6	32.5		25.3
18	30.9	27.0	35.0		28.4
20	34.3	29.4	38.0		31.6
22	37.7	31.8	41.3		34.8
24	41.2	34.9	44.5	3.7	38
28	46.8	39.7	50.8		44.3
32	53.4	44.5	57.2	4.5	50.7
36	59.6	49.2	63.5		57
40	65.5	55.5	69.9	5.0	61.9

Mounting Plate(Metal) Order Code, Size





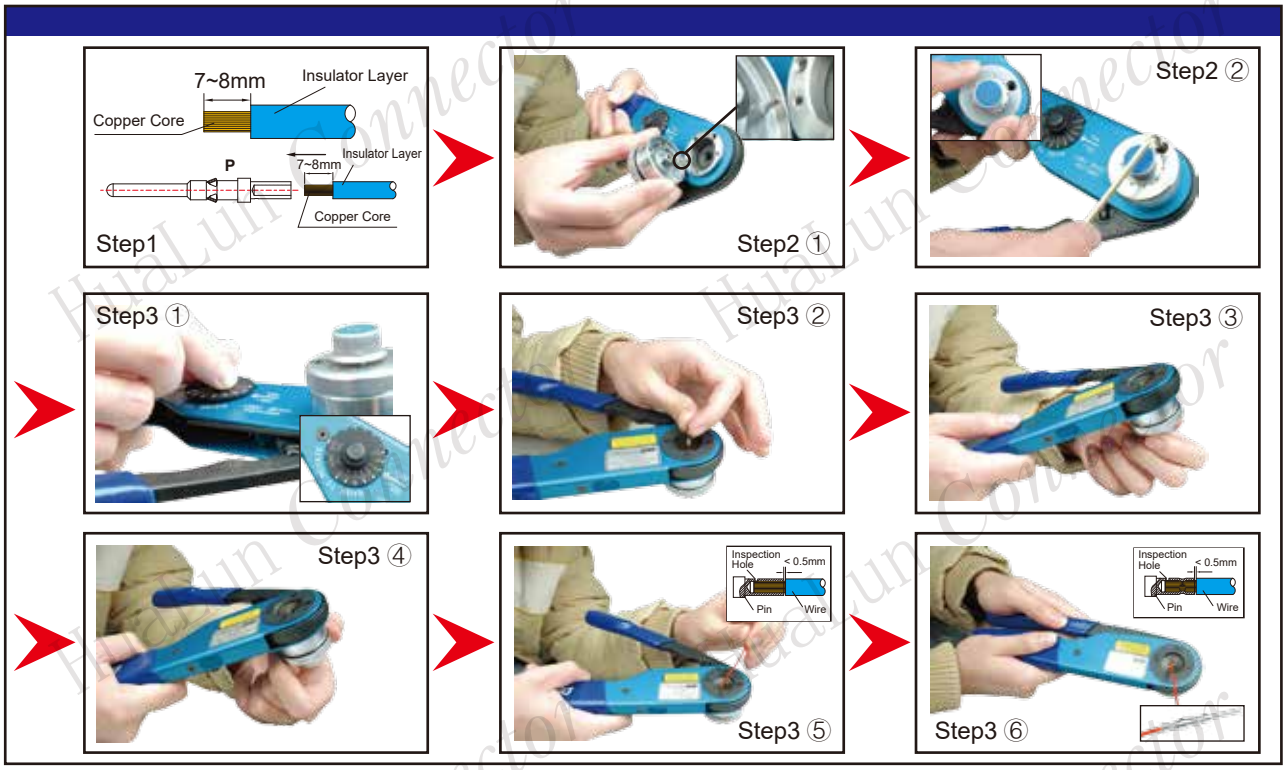


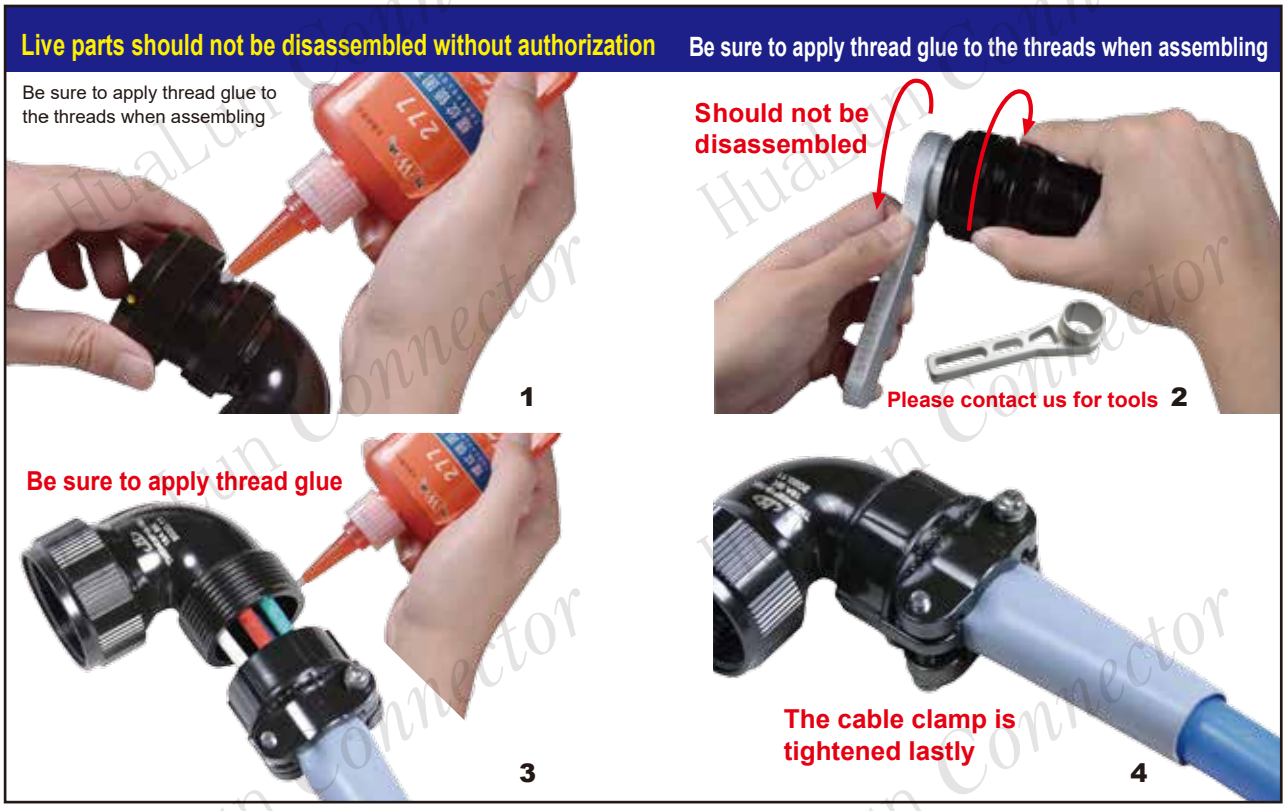
Especially Recommended

Mounting Plate & Gasket

Code	Shell Size	R ±0.1	S ±0.3	ØD	E	H	Ød +0.1 0	Thread M	Screw Spec
SG14	14S	23.0	30.0	24.9	15.8	2.6	6.3	M3	M3 x 10
SG16	16S、16	24.6	32.3	28.2	17.9				
SG18	18	27.0	34.6	30.9	20.2				
SG20	20	29.4	38.5	34.3	22.5				
SG22	22	31.8	40.8	37.7	23.5				
SG24	24	34.9	44.8	41.2	25.9				
SG28	28	39.7	51.2	46.8	29.1				
SG32	32	44.5	59.1	53.4	30.7	3.0	8.0	M4	M4 x 12
SG36	36	49.2	63.9	59.6	35.5				
SG40	40	55.5	74.7	65.5	38.6				

Assemble Parts





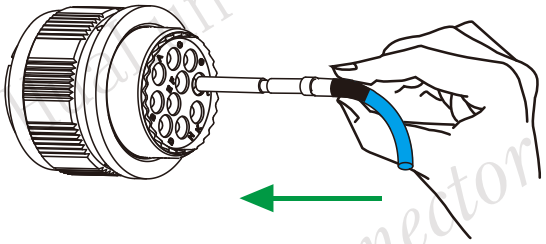
Instructions for connector use and storage

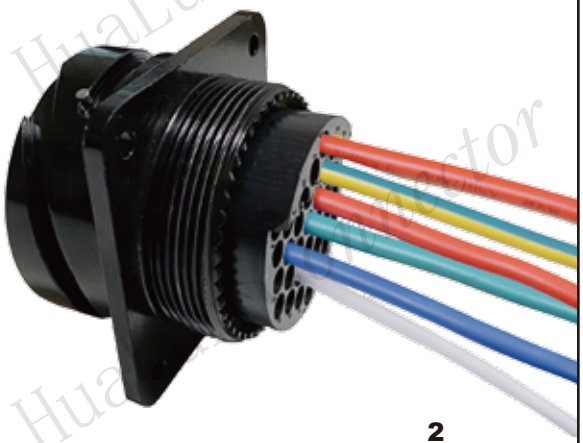
- It is wrong to insert into or take out an electric connector which has been electrified.
- Dust cap must be applied after a plug and receptacle are separated.
- The warehouse environment where the connectors are stored, the temperature is 5-35°C, relative humidity <80%, should be clean, ventilated, dry and free of corrosive media.

Crimp, Insertion & Extraction

Insertion

1 Push pins directly into the insert





2

Extraction

1

Access from the front face

2

3

Extract from the backend

Front loose

Tools

Hand Crimp Tool

Tool Order No.	M22520/1-01		M22520/23-01
Applicable Contact	● 16#	⊕ 12#	◒ 8#
Applicable Locator	D1612		D8

Hand Crimp Tool
M22520/1-01
M22520/23-01

Locator
D1612
D8

Figure (1)

Pneumatic Crimp Tool

Pneumatic crimp tool would be update efficiency and fit for mass crimping.

Please contact us for an order

Figure (2)

Extraction Tool

Tool Order No.	ET16	ET12	ET8
Applicable Contact	● 16#	⊕ 12#	◒ 8#

Figure (3)

Figure (4)

Special Tool for Plug

Order No.	TS14	TS16	TS18	TS20	TS22	TS24	TS28	TS32	TS36	TS40
Shell Size	14S	16S、16	18	20	22	24	28	32	36	40

SHANGHAI HUALUN INSTRUMENTS & ELECTRONICS CO., LTD.
上 海 华 伦 仪 表 电 子 有 限 公 司

SALES & MARKETING DEPARTMENT
市场销售部

地址：上海天目西路218号嘉里不夜城2座3409室
ADD：Rm3409, Tower2, Kerry Everbright City, West Tianmu Rd218, Shanghai
邮编(P.C.)：200070
电话(TEL)：86-21-63178300 63178586 63177566
传真(FAX)：86-21-63178083
电邮(E-MAIL)：sales@hualun.sh.cn
sales@hualunconnector.com
网址(WEB)：www.hualun.sh.cn
www.华伦连接器.com
www.hualunconnector.com
www.hualunconnectors.com

FACTORY & HEADQUARTERS
工厂本部

地址：上海千阳路271号（金江工业园）1、3号厂房
ADD：Factory building 1 & 3,Jinjiang Industrial Park, Qianyang Rd271, Shanghai
邮编(P.C.)：200333