



Cable Gland

Product Catalogue



Q-FLEX

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- IP67 / 68 (Mated, 1M / 24h)
- Metal / Plastic Versions
- Metric (M8 ~ M40) & PG Thread (PG7 ~ PG29)
- Cable O.D. Range 2.5 ~ 32mm
- Flammability UL 94V-0
- UV Resistant
- Operating Temperature: Up to -20°C ~ 105°C



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IP67 / 68



UL
Recognized



UV
Resistant

PRODUCT SELECTION GUIDE

Circular (Ceres, X-Lok, M)

	Mating Style						Materials	No. of Contacts	Contacts		Operating Voltage (AC/DC)	Nominal Current	Applicable Wires (AWG)	Mating Cycles (Pin Contact)	High Speed		Salt Spray (Connector Mated)
	2 Points Lock	3 Points Lock	Push Lock	Push Pull	Screw Thread	Others			Gold Plated	Silver Plated					Cat. 5e	Cat. 6A	
Ceres Series																	
Mini	•				•		B	2-6	•		250V	2A-5A	26-24	2,000			500h
Standard	•				•		B	2-12	•		250-600V	2A-10A 5A+2A 10A+5A	26-20	2,000			500h
Middle	•	•			•		P	2-18	•	•	250-600V	2A-20A 5A+2A 10A+2A 10A+5A	24-14	2,000			500h
Large	•				•		B	2-22	•	•	250-600V	2A-20A 20A+2A 20A+5A	26-16	2,000			500h
Macro	•						P	31	•		200V	5A	26	2,000			500h
PLD			•				P	2-4	•		250V	5A	26-20	2,000			500h
MAB	•						P	4	•		250V	10A	20	2,000			500h
GBD		•					P	8	•		250V	10A+5A	24-20	2,000			500h
X-LOK Series																	
Mini / LED			•				B	2-33	•		30-630V	0.5A-16A 5A-10A	32-14	1,000	•	•	500h
Standard			•				P	2-8	•		300-600V	10A+5A	26-16	1,000			500h
Middle			•				P	2-12	•	•	300-600V	5A-20A 10A+5A	26-12	1,000			500h
Large			•				B	2-100	•	•	60V (0.5A) 300-600V	0.5A-20A 20A+5A 50A	32-26	1,000			500h
Macro			•				P	4-31	•	•	300-600V	50A+5A	22-8	1,000			500h
M Series																	
M5					•		M	3-4	•		60V	1A	26	1,000			48h
Guided M8 / LED					•	Snap-in	B	2-6	•		30-60V	1.5A-3A 3A+1.5A	24-22	1,000			48h
M8 / LED					•	Snap-in	B	3-13	•		30-60V	0.5A-3A	32-22	1,000			48h
M10.5					•		M	2-5	•		30V	2A	24	1,000			48h
M12 A / LED			•	•			B	3-28	•		30-250V	0.5A-4A	30-22	1,000	•		48h
M12 B / LED			•	•			B	5	•		60V	4A	26-22	1,000			48h
M12 D / LED			•	•			B	4	•		250V	4A	26-22	1,000	•		48h
M12 I			•	•			B	5	•		60V	4A	22	1,000			48h
M12 K / LED			•	•			B	3-5	•		630V	12A, 16A	14	1,000			48h
M12 L / LED			•	•			B	2-5	•		63V	16A	14	1,000			48h
M12 M / LED			•	•			B	3-6	•		630V	8A	16	1,000			48h
M12 S			•	•			B	3-4	•		630V	12A	16	1,000			48h
M12 T			•	•			B	2-4	•		63V	12A	16	1,000			48h
M12 X			•	•			M	8	•		30-60V	0.5A	26	1,000		•	48h
M23					•		M	6	•		600V	28A	14-12	1,000			48h

Remarks:
Materials: P (Plastic), M (Metal), B (Both)
Assemble Style: R0 (Receptacle), RW (Receptacle With Wires), RP (Receptacle With Pigtail), RC (Receptacle With Overmolded Cable), OC (Overmolded With Cables), FI (Field Installable)
Vibration: (1) 10-500 Hz @Amplitude 0.35mm; (2) 10-55Hz @Amplitude 1.52mm
Operation Temperature & IP Rating: R0 (Receptacle), RW (Receptacle With Wires), OC (Overmolded With Cables), FI (Field Installable)

PRODUCT SELECTION GUIDE

Circular (FLOS, Power, RBL, DeepTronica)

	Mating Style						Materials	No. of Contacts	Contacts		Operating Voltage (AC/DC)	Nominal Current	Applicable Wires (AWG)	Mating Cycles (Pin Contact)	Salt Spray (Connector Mated)
	2 Points Lock	3 Points Lock	Push Lock	Push Pull	Screw Thread	Others			Gold Plated	Silver Plated					
FLOS Series															
B				•			M	2-32	•		160-700V	1.5A-25A	28-16	5,000	144h
K				•			M	2-32	•		160-700V	1.5A-25A	28-16	5,000	144h
K (FLOS+)				•			M	2-32	•		160-700V	1.5A-25A	28-16	5,000	1000h
C				•			M	2-19	•		160-700V	1.5A-20A	28-16	3,000	144h
S				•			M	1	•		260-1000V	15A	28-16	3,000	144h
Y				•		Break Away	M	2-26	•		260-1000V	5A-14A	28-16	5,000	96h
P				•			P	2-14	•		200-400V	2A-10A	28-16	2,000	
N				•			M	2-19	•		200-800V	5A-22A	28-16	3,000	144h
Power Series															
PWE					•		P	5-7	•		277V	8A	20-17	500	500h
PWF					•		P	2-4	•		277V	12A	18-15	500	500h
PWG					•		P	4	•		277V	16A	18-14	500	500h
PWC	•	•					P	3	•		277V	20A	14-12	500	500h
PWCU	•	•					P	4 & 12	•		277V	20A+2A	14-12, 24-22	500	500h
PWH		•			•		P	3, 5	•		660V (AC) 1000V (DC)	25A	12	500	500h
PWL		•					P	3	•		300V	30A	14-8	500	500h
PWM		•					P	2	•		600V	50A	9-8	500	720h
PWMU		•					P	2+2, 2+4	•		600V	50A+2A	9-8, 22-20	500	720h
PWN		•					P	2	•		600V	70A	8-6	500	720h
PWNU		•					P	2+2, 2+4	•		600V	70A + 2A	8-6, 22-20	500	720h
PWP		•					P	2 & 3	•		600V	80A	4	500	720h
PWPD		•					P	2+2, 2+4, 3+2, 3+4	•		600V	80A+5A	4, 20	500	720h
PWX		•					P	9 (30A) 14 (30A+5A) 5 (50A) 12 (50A+5A) 4 (80A) 7 (80A+5A)	•		300-600V	30A, 30A+5A 50A, 50A+5A 80A, 80A+5A	22-20, 14-8, 9-8, 4	500	720h
RBL Series															
Middle			With Latch				P	2-9	•		300V	5A-10A 10A+5A	20-16	250	48h
Large			With Latch				P	2-18	•		300V	5A-20A 20A+5A	24-12	250	48h
DeepTronica															
Bathypelagic (4,000 m)				•			B								
Abyssopelagic (6,000 m)				•			B	1-27			200V-1000V	2A-50A	22-8	500-1,000	1000h
Hadopelagic (11,000 m)				•			B								

Remarks:
Materials: P (Plastic), M (Metal), B (Both)
Assemble Style: RO (Receptacle), RW (Receptacle With Wires), RP (Receptacle With Pigtail), RC (Receptacle With Overmolded Cable), OC (Overmolded With Cables), FI (Field Installable)
Vibration: (1) 10-500 Hz @Amplitude 0.35mm; (2) 10-55Hz @Amplitude 1.52mm
Operation Temperature & IP Rating: RO (Receptacle), RW (Receptacle With Wires), OC (Overmolded With Cables), FI (Field Installable)

PRODUCT SELECTION GUIDE

Circular (HS-Lok, NMEA 2000, Mini, Heavy Duty Shielded)

	Mating Style						Materials	No. of Contacts	Contacts		Operating Voltage (AC/DC)	Nominal Current	Applicable Wires (AWG)	Mating Cycles (Pin Contact)	Salt Spray (Connector, Mated)
	2 Points Lock	3 Points Lock	Push Lock	Push Pull	Screw Thread	Others			Gold Plated	Silver Plated					
HS-Lok Series															
Q8				•			B	2-6	•		100V (DC), 300V, 300V (AC) + 100V (DC)	2A 5A 5A+2A	24-20	2,000	500h
NMEA 2000															
Lite (Micro)				•	•		B	5	•		60V	4A	16*1P+20*1P 18*1P+22*1P 22*1P+24*1P	Push Pull 500, Screw Thread 1,000	Metal: 48h Plastic: 1,000h
Heavy (Mini)					•		M	4-5	•		600V	8A	15*1P+18*1P 16*1P+18*1P	1,000	
7/8" Mini															
7/8" Mini					•		M	2, 2+PE, 4, 4+PE, 6	•		600V	8A-13A	16	1,000	48h
Heavy Duty Shielded															
Heavy Duty Shielded					*		M	2-14	•		50-300V	5A-40A	22-8	1,000	48h / 500h

Remarks:
Materials: P (Plastic), M (Metal), B (Both)
Assemble Style: R0 (Receptacle), RW (Receptacle With Wires), RP (Receptacle With Pigtail), RC (Receptacle With Overmolded Cable), OC (Overmolded With Cables), FI (Field Installable)
Vibration: (1) 10-500 Hz @Amplitude 0.35mm; (2) 10-55Hz @Amplitude 1.52mm
Operation Temperature & IP Rating: R0 (Receptacle), RW (Receptacle With Wires), OC (Overmolded With Cables), FI (Field Installable)

PRODUCT SELECTION GUIDE

(RO) Receptacle				(FI) Field Installable					OC	UV Resistant	UL 94V-0	Vibration	EMI Option	ROHS 2.0 & REACH	Certifications	IP Rating	Operating Temperature
Solder	PCB 180	PCB 90	RW	Solder	Crimp	Screw In	Push In	IDC									
•				•					•	•	(2)		•	UL2238, UL50e	RO: IP68 (Unmated) OC: IP68 (Mated) FI: IP68 (Mated)	◦ RO: -40°C - 105°C ◦ OC: -40°C - 105°C ◦ FI: -40°C - 105°C	
•	•		•	•		•	•		•		(1)	•	•	NMEA 2000	RO: IP68 (Unmated) RW: IP68 (Unmated) OC: IP68 (Mated)	◦ RO: -40°C - 105°C ◦ RW: -20°C - 85°C ◦ OC: -20°C - 85°C	
•	•					•	•		•	94-HB	(1)	•	•	NMEA 2000	FI: IP67 (Mated)	◦ FI: -40°C - 105°C	
•	•		•	•	•	•			•		(1)		•		RO: IP68 (Unmated) RW: IP68 (Unmated) OC: IP68 (Mated) FI: IP67 (Mated)	◦ RO: -40°C - 105°C ◦ OC: -40°C - 105°C ◦ FI: -40°C - 105°C	
•				•					•	•	94-HB	(1)	•		RO: IP68 (Unmated) OC: IP68 (Mated) FI: IP68 (Mated)	◦ RO: -40°C - 105°C ◦ RW: -20°C - 85°C ◦ OC: -20°C - 85°C ◦ FI: -40°C - 105°C	

PRODUCT SELECTION GUIDE

Other IO (RJ45, USB, D-Sub, SSL, HDMI, DVI)

	Mating Style					Materials	No. of Contacts	Gold Plated	Operating Voltage (AC/DC)	Nominal Current	Applicable Wires (AWG)	Mating Cycles (Pin Contact)	High Speed	
	2 Points Lock	3 Points Lock	Push Lock	Screw Thread	Others								Cat. 5e	Cat. 6A
RJ45 Series														
Middle		•		•		B	8		44-57V (DC)	Max. 1.5A	24	750	•	•
Large / I-Adaptor	•	•		•		P	8		44-57V (DC)	Max. 1.5A	24	750	•	
ODVA	•					P	8		44-57V (DC)	Max. 1.5A	24	750	•	
Self-Closing Cover						P	8		44-57V (DC)	Max. 1.5A		750	•	•
USB Series														
Mini USB Type B				•		P		•	30V	1.5A	28*1P + 28*3C	5,000		
Type A	•			•		B		•	30V	USB 2.0: 1.5A USB 3.2Gen1:	28*1P + 24*2C	1,500		
Type B	•			•		B		•	30V	USB 2.0: 1.5A	28*1P + 24*2C	1,500		
Micro USB Swift						M		•	30V (AC) 5V (DC)	1 & 5 Pin: 1.8A 2, 3 & 4 Pin: 1A		10,000		
Micro USB Swift-MU					Snap-in	P		•	30V (AC) 5V (DC)	1 & 5 Pin: 1.8A 2, 3 & 4 Pin: 1A	28	10,000		
Type C Swift-LP						M		•	30V (DC)	Up To 5A	32*1P + 24*1C + 28*1D	10,000		
Type C Swift-LA					Snap-in	P		•	30V (DC)	Up To 3A	32*1P + 24*1C + 28*1D	10,000		
Type C Swift-GG				•		B		•	30V (DC)	Up To 5A	32*1P + 24*1C + 28*1D	10,000		
Type C Swift-XL			•			P		•	30V (DC)	Up To 3A	32*1P + 24*1C + 28*1D	10,000		
D-SUB Series														
Standard				•	Automated Latch	M	9, 15, 25, 37, 50*	•	125V (DC)	5A	24	500		
High Density				•	Automated Latch	M	15, 26, 44, 62*, 78*	•	125V (DC)	2A	26	500		
SSL Series														
SSL1.1			•			P	2-6	•	100V	3A	22	100		
SSL1.2			•			P	2-4	•	250V	5A	22-18	30		
SSL1.3						P	1	•	500V	5A		10		
SSL2.1						P	2	•	600V	12A		20		
SSL2.3						P	2	•	500V	3A		100		
HDMI Series														
Circular				•		P	19	•	30V (AC)	0.5A	26	500		
Rectangular			•		With Latch	P	19	•	30V (AC)	0.5A	26	500		
Mini-HDMI				•		P	19	•	30V (AC)	0.5A	30	500		
DVI Series														
DDD						M	25	•	40V (AC)	1.5A	28	100		
DDS						M	19	•	40V (AC)	1.5A	28	100		
DID						M	29	•	40V (AC)	1.5A	28	100		
DIS						M	23	•	40V (AC)	1.5A	28	100		

Remarks:
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Assemble Style: RO (Receptacle), RW (Receptacle With Wires), RP (Receptacle With Pigtail), RC (Receptacle With Overmolded Cable), OC (Overmolded With Cables), FI (Field Installable)
Vibration: (1) 10-500 Hz @Amplitude 0.35mm; (2) 10-55Hz @Amplitude 1.52mm
Operation Temperature & IP Rating: RO (Receptacle), RW (Receptacle With Wires), OC (Overmolded With Cables), FI (Field Installable)

PRODUCT SELECTION GUIDE

High Speed			Salt Spray (Connector, Mated)	RO	RW	RP	OC	FI	UV Resistant	UL 94V-0	Vibration	EMI Option	ROHS 2.0 & REACH	Standard / Compliant / Certifications	Operating Temperature & IP Rating
USB 2.0	USB 3.2 Gen1	USB 3.2 Gen2													
			48h	PCB 90 & 180, Jack 90 & 180			•	•	•	•	(2)	•	•	TIA/EIA-568, IEC 60603-7	◦ RO : -40°C - 105°C, IP67 (Unmated)
			48h	PCB180, Jack 90 & 180			•	•	•	•	(2)	•	•	TIA/EIA-568, IEC 60603-7	◦ RP : -20°C - 85°C, IP67 (Unmated) ◦ OC : -20°C - 85°C, IP67P (Mated)
			48h	Jack 180			•	•	•	•	(2)	•	•	TIA/EIA-568, IEC 60603-7	◦ FI : -40°C - 105°C, IP67 (Mated)
			48h	•					•	•	(2)	•	•	TIA/EIA-568, IEC 60603-7	-40°C - 105°C, IP67 (Unmated)
•			48h	•	•					94V-HB	(2)	•	•		◦ RO : -40°C - 105°C, IP67 (Unmated)
•	•		48h	Type 1 & 2, Jack, PCB 180	•		•			•	(2)	•	•		◦ RW : -20°C - 85°C, IP67 (Unmated)
•			48h	Type 1 & 2, Jack, PCB 180	•		•			•	(2)	•	•		◦ OC : -20°C - 85°C, IP67P (Mated) ◦ FI : -40°C - 105°C, IP67 (Mated)
•			48h	•						•	(2)	•	•		-30°C - 80°C, IP67/IP68 (Unmated)
•			48h				•			•	(2)	•	•		-40°C - 80°C, IP67 (Mated)
		•	48h	•						•	(2)	•	•		-40°C - 85°C, IP67 (Unmated)
•	•		48h	•			•			•	(2)	•	•		◦ RO : -40°C - 85°C, IP68 (Unmated)
	•	•	48h	•			•			•	(2)	•	•		◦ OC : -20°C - 85°C, IP67 (Mated)
	•		48h	•			•			•	(2)	•	•		◦ RO : -40°C - 85°C, IP67 (Unmated)
	•		48h	•			•			•	(2)	•	•		◦ OC : -20°C - 85°C, IP67 (Mated)
			8h	Solder, PCB 90& 180			•				(2)	•	•		◦ RO : -40°C - 105°C, IP68 (Unmated)
			8h	Solder, PCB 90& 180			•				(2)	•	•		◦ OC : -20°C - 85°C, IP67P (Mated) ◦ FI : -40°C - 105°C, IP67 (Mated)
				•			•			•	(2)		•	CSA C22.2, UL1977	-40°C - 105°C, Non-IP
				•			•			•	(2)		•	CSA C22.2, UL1977, cUL UL2238+UL50e	-40°C - 105°C, IP68 (Mated)
				•						•	(2)		•	CSA, UL1977	-40°C - 105°C, Non-IP
				•						•	(2)		•	CSA, UL1977	-40°C - 105°C, Non-IP
				•						•	(2)		•		-40°C - 105°C, Non-IP
			48h	•			•			94V-HB	(2)	•	•		◦ RO : -20°C - 85°C, IP67 (Unmated)
			48h	•			•			94V-1	(2)	•	•		◦ OC : -20°C - 85°C, IP67P (Mated)
			48h	•			•			•	(2)	•	•		
			8h	•			•				(2)		•		◦ RO : -40°C - 105°C, IP68 (Unmated)
			8h	•			•				(2)		•		◦ OC : -20°C - 85°C, IP67P (Mated)
			8h	•			•				(2)		•		
			8h	•			•				(2)		•		

PRODUCT SELECTION GUIDE

Other IO (Fiber, ZConnect, RF)

	Mating Style			Materials	No. of Contacts	Gold Plated	Operating Voltage (AC/DC)	Nominal Current	Applicable Wires (AWG)	Mating Cycles (Pin Contact)	High Speed	
	2 Points Lock	3 Points Lock	Push Lock								Screw Thread	Others
Fiber Optic Series												
LC		•										
SC		•										
ZConnect Series												
FPC / FFC / WTB				Quick Plug	B	40, 36, 20, 18, 12	•	120V	1A		10	
RF Series												
SMA Type					M	1	•	335 Volts RMS At Sea Level		1.13mm, 1.32mm, 1.37mm, RG178	500	
N Type					M	1	•	1,000 Volts RMS At Sea Level		1.13mm, 1.32mm, 1.37mm, RG142, RG178, G58 A/U	500	

Other (Cable Joiner, Cable Gland, Protective Vent, LED)

	Mating Style		Materials	No. of Contacts	Contacts				Operating Voltage (AC/DC)	Nominal Current	Applicable Wires (AWG)	Salt Spray (Connector, Mated)	Receptacle
	Push Lock With Latch	Screw Thread			Gold Plated	Nickel Plated	Thermo plastic	SUS316L					
Cable Joiner Series													
M20		•	P	None, 4	•				10A	22-16			
M32	•		P	None, 4	•				15A-30A	16-10			
FICX I Tube (11)		•	P	2-5		•		450V (Non-UL) 600V (UL)	10A-30A	20-12			
FICX I Tube (12)		•	P	2-5		•		450V (Non-UL) 600V (UL)	8A-20A	18-12			
FICX XI Tube (13)		•	P	2-5		•		450V (Non-UL) 600V (UL)	8A-20A	18-12			
FICX T Tube (T2)		•	P	2-5		•		450V (Non-UL) 600V (UL)	10A-20A	20-12			
Cable Gland Series													
Cable Gland		•	B									•	
Protective Vent													
M6 Plastic		•	P								1,000h	•	
M12 Snap-in		•	P								1,000h	•	
M12 Stainless		•	M				•				1,000h	•	
M12 Plastic		•	P				•				1,000h	•	
M12 Metal		•	M			•					48h	•	
LED Light Guide													
Ø3mm			B					4V				•	
Ø5mm			M					4V				•	

Remarks:
Materials: P (Plastic), M (Metal), B (Both)
Assemble Style: R0 (Receptacle), RW (Receptacle With Wires), RP (Receptacle With Pigtail), RC (Receptacle With Overmolded Cable), OC (Overmolded With Cables), FI (Field Installable)
Vibration: (1) 10-500 Hz @Amplitude 0.35mm; (2) 10-55Hz @Amplitude 1.52mm
Operation Temperature & IP Rating: R0 (Receptacle), RW (Receptacle With Wires), OC (Overmolded With Cables), FI (Field Installable)

PRODUCT SELECTION GUIDE

USB 2.0	High Speed		Salt Spray (Connector, Mated)	RO	RW	RP	OC	FI	UV Resistant	UL 94V-0	Vibration	EMI Option	ROHS 2.0 & REACH	Standard / Compliant / Certifications	Operating Temperature & IP Rating
	USB 3.2 Gen1	USB 3.2 Gen2													
			48h	•				•	•						-40°C - 105°C, IP67 (Mated)
			48h	•				•	•						-40°C - 105°C, IP67 (Mated)
			48h						•				•		-40°C - 110°C, Non-IP
			48h	•								•	•	MIL-C-39012	-40°C - 105°C, IP68 (Unmated)
			48h	•								•	•	MIL-C-39012	-40°C - 105°C, IP68 (Unmated)

Field Installable	UV Resistant	UL 94V-0	Vibration	ROHS 2.0 & REACH	Certifications	IP Rating	Operating Temperature
•	•	94V-2		•		IP67	-40°C - 105°C
•	•	•		•	UL6703A	IP67	-40°C - 105°C
•	•	•		•	CSA, UL2238, UL50e	IP68 (Mated)	-40°C - 105°C
•	•	•		•	CSA, UL2238, UL50e	IP68 (Mated)	-40°C - 105°C
•	•	•		•	CSA, UL2238, UL50e	IP68 (Mated)	-40°C - 105°C
•	•	•		•	CSA, UL2238, UL50e	IP68 (Mated)	-40°C - 105°C
•		94V-0 94V-2	(2)	•		IP67 (Mated) IP68 (Mated)	• RO: -20°C - 105°C • FI: -20°C - 105°C
	•	•		•		IP66, IP68	-40°C - 125°C
	•	•		•		IP68, IP69K	-40°C - 125°C
	•	•		•		IP68, IP69K	-40°C - 125°C
	•	•		•		IP68, IP69K	-40°C - 125°C
	•	•		•		IP68, IP69K	-40°C - 125°C
						IP67	• Red & Green: -30°C - 80°C • Others: -40°C - 80°C
						IP67	• Red & Green: -30°C - 80°C • Others: -40°C - 80°C

Served Markets & Applications

Applications	Ceres	X-Lok	M series	FLOS & FLOS+	Power	RBL	Deep Tronica	HS-Lok	NMEA 2000	7/8" Mini	Heavy Duty Shielded	RJ45	USB	SSL	HDMI	DVI	Fiber Optics	Zconnect	RF	Cable Joiner	Cable Gland	Vent	LED Light Guide	D-Sub
LED Lighting																								
Architectural Lighting	•	•	•		•	•		•		•		•		•				•		•	•	•		
Outdoor LED Displays	•	•	•	•	•	•				•		•		•				•		•	•	•		
Outdoor Signage	•	•			•	•				•		•		•				•		•	•	•		
Entertainment Lighting & Systems	•	•			•	•		•		•		•		•				•		•	•	•		
Smart City, Street Lighting	•	•			•	•				•		•		•				•		•	•	•		
Tunnel Lighting	•	•	•		•	•				•		•		•				•		•	•	•		
Parking Lighting	•	•			•	•		•		•		•		•				•		•	•	•		
Cruise & Shipyards Lighting	•	•	•		•	•		•	•	•		•		•				•		•	•	•		
High Speed Train & EV Bus	•	•			•	•		•		•	•		•		•			•		•	•	•		
Commercial Lighting	•	•	•		•	•		•		•		•		•				•		•	•	•		
Refrigeration Lighting	•	•	•		•	•		•		•		•		•				•		•	•	•		
Horticulture Lighting	•	•	•		•	•				•		•		•				•		•	•	•		
Warehouse Lighting	•	•			•	•				•		•		•				•		•	•	•		
Emergency Lighting	•	•	•		•	•		•		•		•		•				•		•	•	•		
UV and Sanitary Lighting	•	•	•		•	•		•		•		•		•				•		•	•	•		
Li-Fi	•	•			•	•				•		•		•				•	•	•	•	•		
Hospital Surgical Lighting & Room	•	•	•		•	•		•		•		•		•				•		•	•	•		
ATEX Lighting	•	•			•	•		•				•		•				•		•	•	•		
Underwater / Submerged Lighting	•	•			•	•								•				•					•	
Marine																								
Multi-Function Display	•	•	•	•	•	•			•	•	•	•	•		•	•		•	•			•	•	•
Outboard Motors	•	•	•		•	•			•	•	•	•						•			•			
Bilge Pump	•	•	•		•	•			•	•	•	•						•			•			
Heater	•	•	•		•	•		•	•	•	•	•						•		•	•	•		
HVAC (Heating Ventilation Air Conditioning)	•	•	•		•	•		•	•	•	•	•						•		•	•	•		
Fridge	•	•	•		•	•		•	•	•	•	•						•			•			
Docking System	•	•	•		•	•	•		•	•	•	•						•			•			
Windlass	•	•	•		•	•			•	•	•	•						•			•			
Sensors	•	•	•		•	•			•	•	•	•						•			•			
RADAR	•	•	•		•	•		•	•	•	•	•	•					•	•					
Antenna	•	•	•		•	•		•	•	•	•	•						•	•					
USB Charger	•	•	•		•	•		•	•	•	•	•	•					•		•				
Audio System	•	•	•		•	•		•	•	•	•	•	•					•		•	•	•		
Lighting System	•	•	•		•	•		•	•	•	•	•	•	•				•		•	•	•		•
CCTV	•	•	•		•	•		•	•	•	•	•	•					•			•			
Power Controller	•	•	•		•	•			•	•	•	•						•		•	•	•		•
Autopilot System	•	•	•		•	•			•	•	•	•						•		•	•	•		•
Automatic Identification System	•	•	•		•	•		•	•	•	•	•						•		•	•	•		•
GPS, Beacon & Lifebuoy	•	•	•		•	•		•	•	•	•	•						•		•	•	•		
Sonar / Transducer	•	•	•		•	•			•	•	•	•						•			•			
Fish-Finders	•	•	•		•	•			•	•	•	•						•			•			
Chartplotter	•	•	•		•	•			•	•	•	•						•		•	•	•		•
Sailing Instruments	•	•	•		•	•			•	•	•	•						•		•	•	•		•
Shipyards & Cruise	•	•	•		•	•			•	•	•	•						•			•			•
Drilling Systems							•																	
Seaport							•																	
Submarine							•																	
ROVs							•																	
Marine Renewable Energy							•																	
ROTV							•																	
Buoys							•																	
Underwater Vehicles							•																	
Underwater Equipment							•																	
Diving							•																	
Broadband Wireless Access																								
General Small Cells	•	•	•		•	•		•	•	•	•	•					•	•	•	•	•	•	•	•
RRH (Remote Radio Head)	•	•	•		•	•		•	•	•	•	•					•	•	•	•	•	•	•	•
Wireless Mobile Backhaul	•	•	•		•	•		•	•	•	•	•					•	•	•	•	•	•	•	•
High Capacity Mobile Subscriber Unit	•	•	•		•	•		•	•	•	•	•					•	•	•	•	•	•	•	•
Outdoor Base Station Unit	•	•	•		•	•		•	•	•	•	•					•	•	•	•	•	•	•	•
Outdoor LTE	•	•	•		•	•		•	•	•	•	•					•	•	•	•	•	•	•	•
Outdoor AP	•	•	•		•	•		•	•	•	•	•					•	•	•	•	•	•	•	•
Subscriber Station	•	•	•		•	•		•	•	•	•	•					•	•	•	•	•	•	•	•
Outdoor Wireless Mesh Router	•	•	•		•	•		•	•	•	•	•					•	•	•	•	•	•	•	•
Base Station Power Supply	•	•		•	•	•		•	•	•	•	•					•	•	•	•	•	•	•	•
Communication System																		•						
Outdoor Wireless Mesh Router	•	•			•	•		•	•	•	•	•					•	•	•	•	•	•	•	•

Served Markets & Applications

Applications	Ceres	X-Lok	M series	FLOS & FLOS+	Power	RBL	Deep Tronica	HS-Lok	NMEA 2000	7/8" Mini	Heavy Duty Shielded	RJ45	USB	SSL	HDMI	DVI	Fiber Optics	Zconnect	RF	Cable Joiner	Cable Gland	Vent	LED Light Guide	D-Sub	
Industrial Automation																									
Robotic Arm			•	•				•		•	•							•							
Industrial Server / Network	•	•	•	•	•			•		•	•	•	•		•	•	•	•	•			•	•	•	•
Industrial Forklifts (Truck)	•	•	•	•	•	•		•		•	•	•	•		•	•					•	•			•
AVI (Automatic visual inspection)	•	•	•	•	•			•		•	•							•							
Data Communication System	•	•	•	•	•			•		•	•	•	•		•	•			•	•			•	•	•
Industrial Control Center	•	•	•	•	•			•		•	•	•	•		•	•						•	•	•	•
Packaging Center	•	•	•	•	•			•		•	•							•							
Conveyors	•	•	•	•	•			•		•	•							•							
Sensors			•							•	•							•							
Power Distribution	•	•	•	•	•					•	•							•							
Actuators	•	•	•							•	•							•							
Motor Drives	•	•	•		•	•				•	•							•							
Industrial PC & Displays	•	•	•	•	•			•		•	•	•	•		•	•			•	•			•	•	•
Machine Tools	•	•	•	•	•					•	•							•							
Switches		•	•							•	•	•	•					•							•
Production Equipment	•	•	•	•	•	•				•	•	•	•					•				•	•	•	•
Renewable Energy																									
PV / DC Inverter	•	•	•		•	•				•	•	•						•		•	•	•	•	•	•
Micro Inverter										•	•							•			•	•	•	•	•
CSP & CPV	•	•	•		•	•				•	•							•			•	•	•	•	•
Heliostat	•	•	•		•	•				•	•							•			•	•	•	•	•
PV Trackers	•	•	•		•	•				•	•							•			•	•	•	•	•
PV ICS (Integrated Control Systems)					•	•				•	•	•						•			•		•		•
Portable Energy	•	•	•		•	•		•		•	•	•	•					•							
Communication System	•	•	•	•	•	•				•	•	•	•		•	•	•	•	•		•	•	•	•	•
PDC (Power Distribution Control)	•	•	•	•	•	•				•	•	•						•	•		•	•	•	•	•
Wind Turbine	•	•	•	•	•	•				•	•	•	•					•			•	•	•	•	•
Energy Storage System	•	•	•	•	•	•				•	•	•	•					•			•	•	•	•	•
Tidal Power Generation System	•	•	•	•	•	•				•	•	•						•			•	•	•	•	•
Heavy Equipment																									
Electronic Toll System	•	•	•	•	•	•		•		•	•	•	•		•	•		•	•		•	•	•	•	•
Automotive Diagnostics	•	•	•	•	•	•		•		•	•	•	•	•	•	•		•	•		•	•	•	•	•
Agriculture Electronic Equipment	•	•	•	•	•	•		•		•	•	•	•		•	•		•	•		•	•	•	•	•
Lidar & Radar	•	•	•	•	•					•	•	•	•		•	•		•							
ADAS (Advanced Driver Assistance Systems)	•	•	•	•	•	•		•		•	•	•	•		•	•		•	•		•	•	•	•	•
Telematics & Tracking	•	•	•		•	•		•		•	•	•	•		•	•		•	•	•	•	•	•	•	•
Camera & Monitoring	•	•	•	•	•	•		•		•	•	•	•		•	•		•	•		•	•	•	•	•
Control System	•	•	•	•	•	•		•		•	•	•	•		•	•		•	•		•	•	•	•	•
Display	•	•	•	•	•	•		•		•	•	•	•		•	•		•	•		•	•	•	•	•
GPS System	•	•	•	•	•	•		•		•	•	•	•		•	•		•	•		•	•	•	•	•
Lighting	•	•	•		•	•				•	•			•				•		•					
Measurement Systems	•	•	•	•	•	•		•		•	•	•	•		•	•		•	•		•	•	•	•	•
Sensors		•	•	•	•			•		•	•							•							
Automated Meter Reading																									
Water Meter	•	•	•	•				•				•	•					•	•		•	•	•	•	•
Electricity Meter	•	•	•	•				•				•	•					•	•		•	•	•	•	•
Gas Meter	•	•	•	•				•				•	•					•	•		•	•	•	•	•
Alarm System	•	•	•	•				•				•	•					•	•		•	•	•	•	•
Military Drone	•	•	•	•				•										•	•		•	•	•	•	•
Vehicle Tracking	•	•	•	•				•				•	•					•	•		•	•	•	•	•
Telemetry	•	•	•	•				•				•	•					•	•		•	•	•	•	•
Sewage	•	•	•	•	•	•		•				•	•					•	•		•	•	•	•	•
Rugged IT																									
Telemetry		•	•	•				•				•	•					•	•		•	•	•	•	•
Rugged & Military VR and AR		•	•	•				•					•					•	•		•	•	•	•	•
Rugged Notebook				•								•	•		•	•		•	•						•
Night Vision Goggle			•	•				•										•	•						
Miniature Camera																		•	•						
Rugged Tablet												•	•		•	•		•	•						
Communication Devices				•								•	•		•	•		•	•					•	•

Served Markets & Applications

Applications	Ceres	X-Lok	M series	FLOS & FLOS+	Power	RBL	Deep Tronica	HS-Lok	NMEA 2000	7/8" Mini	Heavy Duty Shielded	RJ45	USB	SSL	HDMI	DVI	Fiber Optics	Zconnect	RF	Cable Joiner	Cable Gland	Vent	LED Light Guide	D-Sub
Test Equipments																								
Air Flow Measurement	•	•	•	•	•	•		•		•	•	•	•					•	•			•		
Gas Detectors	•	•	•	•	•	•		•		•	•	•	•					•	•			•		
Precision Surveying	•	•	•	•	•	•		•		•	•	•	•		•	•		•	•			•		•
Earthquake Monitoring	•	•	•	•	•	•		•		•	•	•	•					•	•			•		
Humidity Measurement	•	•	•	•	•	•		•		•	•	•	•					•	•			•		
Leak Detectors	•	•	•	•	•	•		•		•	•	•	•					•	•			•		
Light Measuring	•	•	•	•	•	•		•		•	•	•	•					•	•			•		
Sound Measuring	•	•	•	•	•	•		•		•	•	•	•					•	•			•		
Water Measurement	•	•	•	•	•	•		•		•	•	•	•					•	•			•		
Weighing Devices	•	•	•	•	•	•		•		•	•	•	•					•	•			•		
Weigh Modules	•	•	•	•	•	•		•		•	•	•	•					•	•		•	•		
Heavy-duty Scales	•	•	•	•	•	•		•		•	•	•	•			•	•	•	•			•		•
Floor Scales	•	•	•	•	•	•		•		•	•	•	•		•	•		•	•			•		•
Wet Area Weighing	•	•	•	•	•	•		•		•	•	•	•					•	•			•		
Dosing Systems	•	•	•	•	•	•		•		•	•	•	•					•	•			•		
In-Motion Weighing	•	•	•	•	•	•		•		•	•	•	•					•	•			•		
Borescope	•	•	•	•	•	•		•		•	•	•	•					•	•			•		
Image Measurement	•	•	•	•	•	•		•		•	•	•	•					•	•			•		
Timers / Timer Display	•	•	•	•	•	•		•		•	•	•	•					•	•			•		
Laser Marking System	•	•	•	•	•	•		•		•	•	•	•					•	•			•		
Digital Microscopes	•	•	•	•	•	•		•		•	•	•	•					•	•			•		
Hybrid Electric Vehicles																								
Electric Wheelchair	•	•	•	•	•	•		•		•	•	•	•					•	•			•		
Electrical and Electronic Speed Control	•	•	•	•	•	•		•		•	•	•	•					•	•			•		
Electrical and Electronic Brake System	•	•	•	•	•	•		•		•	•	•	•					•	•			•		
Throttle Controller	•	•	•	•	•	•		•		•	•	•	•					•	•			•		
Battery Module	•	•	•	•	•	•		•		•	•	•	•					•	•			•		
Motor Module	•	•	•	•	•	•		•		•	•	•	•					•	•		•	•		
Gear Shift Module	•	•	•	•	•	•		•		•	•	•	•					•	•			•		
Controller Unit	•	•	•	•	•	•		•		•	•	•	•					•	•			•		
Charge Plug / Inlet	•	•	•	•	•	•		•		•	•	•	•					•	•			•		
Charging Station	•	•	•	•	•	•		•		•	•	•	•					•	•			•		
Home Charge Platform	•	•	•	•	•	•		•		•	•	•	•					•	•			•		
Hoverboard	•	•	•	•	•	•		•		•	•	•	•					•	•			•		
Electric Scooter	•	•	•	•	•	•		•		•	•	•	•					•	•		•	•		
Railway Mass Transit																								
Infotainment Systems	•	•	•	•	•	•		•		•	•	•	•		•	•		•	•		•	•	•	•
In-Vehicle Information System	•	•	•	•	•	•		•		•	•	•	•		•	•		•	•		•	•	•	•
Indication Display	•	•	•	•	•	•		•		•	•	•	•		•	•		•	•			•		•
Navigation/GPS	•	•	•	•	•	•		•		•	•	•	•		•	•		•	•			•		•
HVAC (Heating Ventilation Air Conditioning)	•	•	•	•	•	•		•		•	•	•	•					•	•			•		
Fuel Leakage Detector	•	•	•	•	•	•		•		•	•	•	•					•	•			•		
Broadcasting System	•	•	•	•	•	•		•		•	•	•	•					•	•		•	•		
Vehicle Monitoring	•	•	•	•	•	•		•		•	•	•	•		•	•		•	•			•		•
Cleaning Control	•	•	•	•	•	•		•		•	•	•	•					•	•			•		
Speedometer	•	•	•	•	•	•		•		•	•	•	•					•	•			•		
Interior Lighting	•	•	•	•	•	•		•		•	•	•	•					•	•			•		
Mobile Devices																								
DRC (Drone Remote Controller)	•	•	•	•	•	•		•		•	•	•	•					•	•			•		
Altimeter	•	•	•	•	•	•		•		•	•	•	•					•	•			•		
Barcode Reader	•	•	•	•	•	•		•		•	•	•	•					•	•			•		
GPS Safety Guard	•	•	•	•	•	•		•		•	•	•	•					•	•			•		
Portable Lamp	•	•	•	•	•	•		•		•	•	•	•					•	•			•		
Gesture Measurement	•	•	•	•	•	•		•		•	•	•	•					•	•			•		
Wearables	•	•	•	•	•	•		•		•	•	•	•					•	•			•		

Served Markets & Applications

Applications	Ceres	X-Lok	M series	FLOS & FLOS+	Power	RBL	Deep Tronica	HS-Lok	NMEA 2000	7/8" Mini	Heavy Duty Shielded	RJ45	USB	SSL	HDMI	DVI	Fiber Optics	Zconnect	RF	Cable Joiner	Cable Gland	Vent	LED Light Guide	D-Sub	
Transportation																									
Vehicle Camera	•	•	•	•		•		•					•		•			•			•	•			
Switch			•									•	•					•							•
Dome Vehicle Camera	•	•	•			•												•							
RFID Reader																		•	•						
Bus GPS	•	•	•	•		•		•				•	•		•	•		•	•						
Displayer	•	•	•	•		•												•							
Outdoor Speaker	•	•	•	•		•												•							
Automotive Winches																		•							
Vehicle Charger	•	•	•			•												•							
Wifi Router												•						•							
Fleet Management	•	•	•	•		•												•							
Digital Video Surveillance System	•	•	•	•	•	•				•	•	•						•						•	
Medical Equipment																									
Medical Displays				•	•							•	•		•	•		•				•			•
Mobile Nursing Carts	•	•			•	•		•		•	•							•			•	•			
Non-invasive Devices	•	•		•	•	•		•		•	•	•	•		•	•		•			•	•			•
Electrical Beds	•	•	•		•	•				•	•							•			•	•			
Charges	•	•			•	•				•	•							•			•	•			
Wheelchair Lift	•	•			•	•				•	•							•			•	•			
Wheelchair Stair Lift	•	•			•	•				•	•							•			•	•			
Rehabilitation System	•	•			•	•				•	•							•			•	•			
Automotive Diagnostics																									
Auto Crash Notification	•	•	•	•	•	•		•		•	•	•	•					•	•						•
Vehicle Tracking	•	•	•		•	•		•		•	•		•					•	•				•		
Vehicle Health Alert & Roadside Assistance	•	•	•	•	•	•		•		•	•	•	•					•	•						•
Remote Vehicle Diagnostics	•	•	•	•	•	•		•		•	•	•	•	•	•	•		•	•				•	•	•
UAV																									
Commercial Drone	•	•	•	•	•	•		•		•	•	•	•		•	•		•	•		•	•	•	•	•
Military Drone	•	•	•	•	•	•		•		•	•	•	•		•	•		•	•		•	•	•	•	•
Consumer Drone	•	•	•	•	•	•		•		•	•	•	•		•	•		•	•		•	•	•	•	•
Lifts & Materials Handling																									
Forklift	•	•	•	•	•	•		•		•	•	•	•		•	•		•			•	•	•	•	•
Industrial Lift	•	•	•	•	•	•		•		•	•	•	•		•	•		•			•	•	•	•	•
Materials Handling	•	•	•	•	•	•		•		•	•	•	•		•	•		•			•	•	•	•	•
Remote Video Response Center																									
Encoders	•	•	•	•	•			•		•	•	•	•		•	•		•	•			•	•	•	•
Monitoring Station	•	•	•		•	•				•	•	•	•		•	•		•			•				•
CCTV/Dome/IP Camera	•	•	•	•	•			•		•	•	•	•		•	•		•	•	•	•	•	•	•	•
Remote Control	•	•			•			•				•	•					•			•				•
Junction Box	•	•			•							•	•		•	•		•			•	•			•
Automatic LPRS (License Plate Recognition System)	•	•	•	•	•			•		•	•	•	•		•	•		•	•	•	•	•	•	•	•
Fingerprint ID												•						•							
Alarm System	•	•	•	•	•			•				•	•		•	•		•	•	•	•	•	•	•	•
Sensor			•															•							
Autonomous																									
GPS	•	•	•	•				•		•	•	•	•		•	•		•	•						
Lidar	•	•	•	•				•		•	•	•	•		•	•		•			•	•			
Radar Sensors	•	•	•	•				•		•	•							•	•						
Video Cameras	•	•	•	•				•		•	•		•		•	•		•			•	•			
Central Computer	•	•	•	•				•		•	•	•	•		•	•		•							
Inertial Measurement Unit	•	•	•	•				•		•	•							•							
Inertial Navigation Systems	•	•	•	•				•		•	•							•	•						
Commercial Military																									
Commercial Military				•														•							

Markets / Applications



Renewable Energy

- Communication System
- CSP & CPV
- DC Inverter
- Energy Storage System
- Heliostat
- PDC (Power Distribution Control)
- Micro Inverter
- PV Inverter
- PV Trackers
- Tidal Power Generation System
- Wind Turbine
- PV ICS (Integrated Control Systems)



Heavy Equipment

- Display
- Electronic Toll System
- Lighting
- Measurement Systems
- Telematics & Tracking
- Control System
- Camera & Monitoring
- Agriculture Electronic Equipment
- ADAS (Advanced Driver Assistance Systems)
- GPS System



Broadband Wireless Access

- Base Station Power Supply
- General Small Cells
- High Capacity Mobile Subscriber Unit
- Outdoor AP
- Outdoor Base Station Unit
- Wireless Mobile Backhaul
- Outdoor LTE
- Outdoor Repeater
- Outdoor Wireless Mesh Router
- RRH (Remote Radio Head)
- Subscriber Station



Marine

- Audio System
- Bilge Pump
- Docking System
- Heater
- Windlass
- Lighting System
- Outboard & Trolling Motors
- Power Controller
- HVAC (Heating Ventilation Air Conditioning)



Remote Video Response Center

- Alarm System
- CCTV / Dome / IP Camera
- Monitoring Station
- Junction Box
- Remote Control
- Automatic LPRS (License Plate Recognition System)



Autonomous

- Video Cameras
- Inertial Measurement Unit
- Inertial Navigation Systems
- Lidar



Rugged IT

- Rugged & Military VR and AR
- Telemetry



Test Equipment

- Weigh Modules
- Weighing Devices



Railway Mass Transit

- Broadcasting Systems
- In-Vehicle Information
- Infotainment Systems



Industrial Automation

- Industrial Forklifts

Markets / Applications



LED

- Architectural Lighting
- Commercial Lighting
- Cruise & Shipyards Lighting
- Emergency Lighting
- Entertainment Lighting & Systems
- Smart City, Street Lighting

- Li-Fi
- Outdoor LED Displays
- Outdoor Signage
- Parking Lighting
- Refrigeration Lighting
- Tunnel Lighting

- Horticulture Lighting
- Hospital Surgical Lighting & Room
- UV and Sanitary Lighting
- Warehouse Lighting
- High Speed Train & EV Bus



Hybrid Electric Vehicles

- Battery Module
- Motor Module



Transportation

- Vehicle Camera



Medical Equipment

- Charges
- Electrical Beds
- Mobile Nursing Carts
- Non-invasive Devices
- Rehabilitation System
- Wheelchair Lift
- Wheelchair Stair Lift



Lifts & Materials Handling

- Forklift
- Industrial Lift
- Materials Handling



UAV

- Commercial Drone
- Military Drone
- Consumer Drone

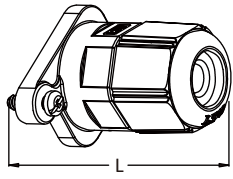


Automated Meter Reading

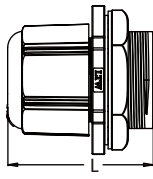
- Electricity Meter
- Gas Meter
- Sewage
- Telemetry
- Water Meter
- Alarm System
- Military Drone
- Vehicle Tracking

Metal Cable Gland Silver Color

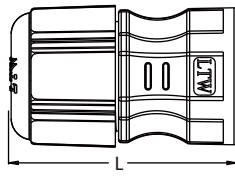
Physical Dimension



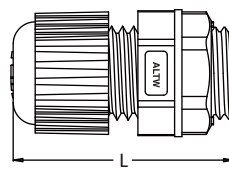
6-32 UNC



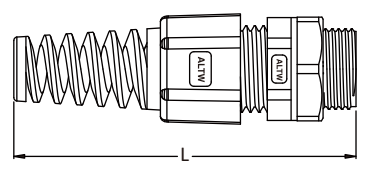
1"-20 UN



13 / 16" -28UN

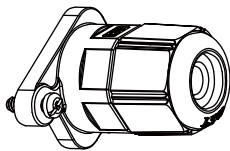


Without Strain Relief

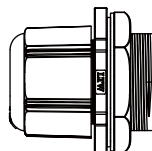


With Strain Relief

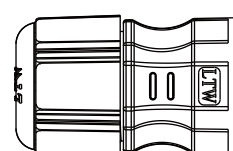
Size	Material	Dimension (Without Strain Relief)		Dimension (With Strain Relief)	
		Short	Long	Short	Long
PG7	Plastic	-	30.0mm	-	60.0mm
PG9	Plastic	-	45.0mm	-	78.0mm
PG11	Plastic	-	48.3mm	-	79.1mm
PG13.5	Plastic	-	49.6mm	-	86.8mm
PG16	Plastic	45.0mm	49.6mm	81.6mm	86.8mm
PG29	Plastic	-	52.5mm	-	-
M8	Plastic	22.0mm	-	-	-
M12	Plastic	30.0mm	42.2mm	-	60.0mm
M16	Plastic	40.0mm	45.0mm	75.3mm	78.0mm
M20	Plastic	36.7mm	43.7mm	79.6mm	86.8mm
M25	Plastic	45.0mm	52.1mm	89.0mm	96.0mm
M32	Plastic	47.5mm	52.5mm	-	-
M40	Plastic	-	60.0mm	-	-
1"-20 UNF	Metal	35.0mm	-	-	-
6-32 UNC	Metal / Plastic	40.0mm	-	-	-
13/16"-28 UN	Metal / Plastic	42.0mm	-	-	-



6-32 UNC

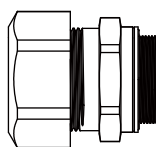


1"-20 UN



13 / 16" -28UN

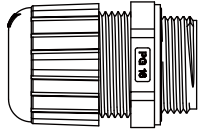
	Receptacle Nut Thread	Maximum Panel Thickness	Recommended Cable O.D.	IP Rating	Anti UV	Body	Screw Nut	Note	Part Number
Unified Thread	6-32 UNC	-	5.5 ~ 7.0mm	IP67	✓	Short	✓	Square Flange Type	CSF-D14003
			7.8 ~ 9.3mm				✓	Square Flange Type	CSF-D14004
	1"-20 UNF	5.0mm	5.5 ~ 7.0mm	IP68			✓	CSG-20E001	
			7.8 ~ 9.3mm				✓	CSG-20E002	
	13/16"-28UN	-	5.5 ~ 7.0mm	IP67			-	Clamp Type	CSG-CSP004
			7.8 ~ 9.3mm				-	Clamp Type	CSG-CSP005



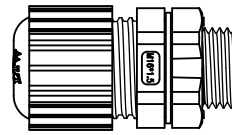
	Receptacle Nut Thread	Maximum Panel Thickness	Recommended Cable O.D.	IP Rating	Anti UV	Body	Screw Nut	
Metric Thread	M28	-	9.5 ~ 10.5mm	IP68	✓	Short	-	Upon Request*

Plastic Cable Gland

Black Color

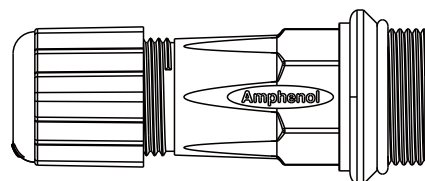
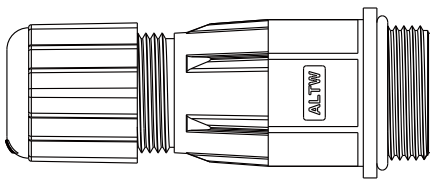


Without Strain Relief / Without Screw Nut



Without Strain Relief / With Screw Nut

	Receptacle Nut Thread	Maximum Panel Thickness	Recommended Cable O.D.	IP Rating	Flammability	Anti UV	Body	Screw Nut	Note	Part Number	
PG Thread	PG7	3.0mm	4.5 ~ 6.5mm	IP68	UL94V-2	-	Short	✓		CSG-07G001	
	PG9	7.5mm	6.0 ~ 10.0mm	IP68	UL94V-2	-	Short	✓		CSG-09G001	
	PG11	6.0mm	6.0 ~ 10.0mm	IP68	UL94V-2	-	Short	✓		CSG-11G001	
	PG13.5	6.2mm	10.0 ~ 14.0mm	IP68	UL94V-2	-	Short	✓		CSG-13G001	
	PG16	6.0mm	6.0mm	10.0 ~ 14.0mm	IP68	UL94V-2	-	Long	✓		CSG-16G001
			4.5mm	5.5 ~ 7.6mm		UL94V-2	-	Short	-	For RJ Cable Use	CSG-16G005
			4.5mm	10.0 ~ 14.0mm		UL94V-2	-	Short	-		CSG-16G006
			6.0mm	4.5 ~ 6.5mm		UL94V-2	-	Long	-	For RJ Cable Use	CSG-16G010
	PG29	6.0mm	16.0 ~ 22.0mm	IP68	UL94V-2	-	Short	✓		CSG-29G001	
18.0 ~ 25.0mm			UL94V-2		-	Short	✓		CSG-29G003		
Metric Thread	M8	-	2.5 ~ 3.0mm	IP68	UL94V-2	-	Short	-		CSG-08M001	
	M12	3.0mm	4.5 ~ 6.5mm	IP68	UL94V-2	-	Long	✓		CSG-12M001	
					UL94V-0	✓	Short	✓		CSG-12M005	
					UL94V-0	✓	Long	✓		CSG-12M006	
	M16	7.5mm	6.0 ~ 10.0mm	IP68	UL94V-2	-	Long	✓		CSG-16M001	
					UL94V-0	✓	Long	✓		CSG-16M002	
					UL94V-2	-	Short	-		CSG-16M004	
	M20	6.2mm	10.0 ~ 14.0mm	IP68	UL94V-2	-	Long	✓		CSG-20M001	
					UL94V-2	-	Short	-		CSG-20M002	
	M25	6.2mm	10.0 ~ 12.4mm	IP68	UL94V-2	-	Short	-		CSG-25M002	
			13.0 ~ 18.0mm		UL94V-2	-	Long	✓		CSG-25M003	
	M32	6.0mm	16.0 ~ 22.0mm	IP68	UL94V-2	-	Long	✓		CSG-32M001	
					UL94V-2	-	Short	-		CSG-32M003	
				IP68	UL94V-2	-	Long	✓		CSG-32M005	
	UL94V-2	-	Short		-		CSG-32M007				
M40	9.0mm	20.0 ~ 25.0mm	IP68	UL94V-2	-	Short	✓		CSG-40M001		
		24.0 ~ 32.0mm		UL94V-2	-	Short	✓		CSG-40M003		

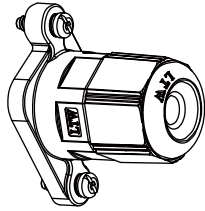


Transparent

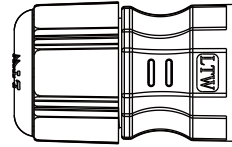
	Receptacle Nut Thread	Maximum Panel Thickness	Recommended Cable O.D.	IP Rating	Flammability	Anti UV	Body	Screw Nut	Note	Part Number
Metric Thread	M25	6.2mm	1.5 ~ 2.6mm	IP67	UL94V-0	✓	Long	-	Feed-Thru	CSL-25M001
			1.5 ~ 2.6mm		UL94V-0	✓	Long	-	Feed-Thru, Transparent	CSL-25M013
			2.0 ~ 3.2mm		UL94V-0	✓	Long	-	Feed-Thru	CSL-25M003
			2.0 ~ 3.2mm		UL94V-0	✓	Long	-	Feed-Thru, Transparent	CSL-25M015
			1.8 ~ 2.8mm		UL94V-0	✓	Long	-	Feed-Thru, For 2 Cables	CSL-25M005
			1.8 ~ 2.8mm		UL94V-0	✓	Long	-	Feed-Thru, For 2 Cables, Transparent	CSL-25M017
			5.0 ~ 7.0mm		UL94V-0	✓	Long	-	Feed-Thru	CSL-25M007
			5.0 ~ 7.0mm		UL94V-0	✓	Long	-	Feed-Thru, Transparent	CSL-25M019
			6.5 ~ 9.0mm		UL94V-0	✓	Long	-	Feed-Thru	CSL-25M009
			6.5 ~ 9.0mm		UL94V-0	✓	Long	-	Feed-Thru, Transparent	CSL-25M021
			10.0 ~ 12.4mm		UL94V-0	✓	Long	-	Insert	CSL-25M011
			10.0 ~ 12.4mm		UL94V-0	✓	Long	-	Insert, Transparent	CSL-25M023

Plastic Cable Gland

Black Color



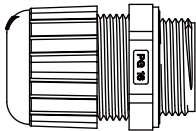
6-32 UNC



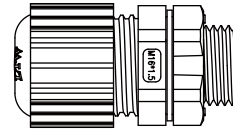
13 / 16" -28UN

	Receptacle Nut Thread	Maximum Panel Thickness	Recommended Cable O.D.	IP Rating	Flammability	Anti UV	Body	Screw Nut	Note	Part Number
Unified Thread	6-32 UNC	-	5.0 ~ 7.0mm	IP67	UL94V-0	✓	Short	✓	Square Flange Type	CSF-D14001
			7.8 ~ 9.3mm		UL94V-0			✓	Square Flange Type	CSF-D14002
	13/16"-28UN	-	5.0 ~ 6.5mm	IP67	UL94V-0			-	Clamp Type	CSG-CSP001
			8.0 ~ 9.5mm		UL94V-0			-	Clamp Type	CSG-CSP002
			6.5 ~ 8.0mm		UL94V-0			-	Clamp Type	CSG-CSP003
					UL94V-0			-	Clamp Type	CSG-CSP003

Gray Color



Without Strain Relief / Without Screw Nut

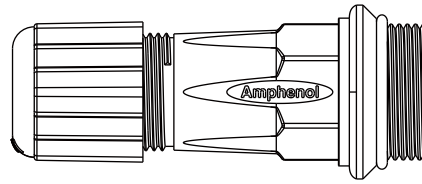
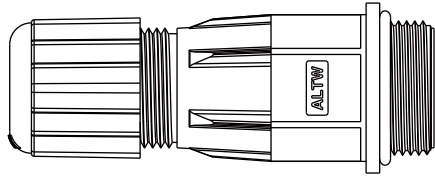


Without Strain Relief / With Screw Nut

	Receptacle Nut Thread	Maximum Panel Thickness	Recommended Cable O.D.	IP Rating	Flammability	Anti UV	Body	Screw Nut	Note	Part Number
PG Thread	PG7	3.0mm	4.5 ~ 6.5mm	IP68	UL94V-2	-	Short	✓		CSG-07G002
					UL94V-2	-	Short	✓	For Knock Hole	CSG-07G005
	PG9	7.5mm	6.0 ~ 10.0mm	IP68	UL94V-2	-	Short	✓		CSG-09G002
					UL94V-2	-	Short	✓	For Knock Hole	CSG-09G005
	PG11	6.0mm	6.0 ~ 10.0mm	IP68	UL94V-2	-	Short	✓		CSG-11G002
	PG13.5	6.2mm	10.0 ~ 14.0mm	IP68	UL94V-2	-	Short	✓		CSG-13G002
	PG16	6.0mm	10.0 ~ 14.0mm	IP68	UL94V-2	-	Long	✓		CSG-16G002
		4.5mm			UL94V-2	-	Short	-		CSG-16G007
PG29	6.0mm	16.0 ~ 22.0mm	IP68	UL94V-2	-	Short	✓		CSG-29G002	
				18.0 ~ 25.0mm	UL94V-2	-	Short	✓		CSG-29G004
Metric Thread	M8	-	2.5 ~ 3.0mm	IP68	UL94V-2	-	Short	-		CSG-08M002
	M12	3.0mm	4.5 ~ 6.5mm	IP68	UL94V-2	-	Long	✓		CSG-12M002
	M16	7.5mm	6.0 ~ 10.0mm	IP68	UL94V-2	-	Long	✓		CSG-16M003
					UL94V-2	-	Short	-		CSG-16M005
	M20	6.2mm	10.0 ~ 14.0mm	IP68	UL94V-2	-	Long	✓		CSG-20M003
					UL94V-2	-	Short	-		CSG-20M004
	M25	6.2mm	13.0 ~ 18.0mm	IP68	UL94V-2	-	Long	✓		CSG-25M001
					UL94V-2	-	Short	-		CSG-25M004
	M32	6.0mm	16.0 ~ 22.0mm	IP68	UL94V-2	-	Long	✓		CSG-32M002
					UL94V-2	-	Short	-		CSG-32M004
IP68				UL94V-2	-	Long	✓		CSG-32M006	
				UL94V-2	-	Short	-		CSG-32M008	
M40	9.0mm	20.0 ~ 25.0mm	IP68	UL94V-2	-	Short	✓		CSG-40M002	
		24.0 ~ 32.0mm		UL94V-2	-	Short	✓		CSG-40M004	

Plastic Cable Gland

Gray Color

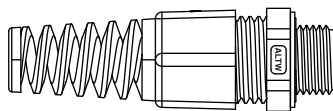


Transparent

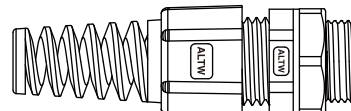
	Receptacle Nut Thread	Maximum Panel Thickness	Recommended Cable O.D.	IP Rating	Flammability	Anti UV	Body	Screw Nut	Note	Part Number
Metric Thread	M25	6.2mm	1.5 ~ 2.6mm	IP67	UL94V-0	✓	Long	-	Feed-Thru	CSL-25M002*
			1.5 ~ 2.6mm		UL94V-0	✓	Long	-	Feed-Thru, Transparent	CSL-25M014
			2.0 ~ 3.2mm		UL94V-0	✓	Long	-	Feed-Thru	CSL-25M004*
			2.0 ~ 3.2mm		UL94V-0	✓	Long	-	Feed-Thru, Transparent	CSL-25M016
			1.8 ~ 2.8mm		UL94V-0	✓	Long	-	Feed-Thru, For 2 Cables	CSL-25M006*
			1.8 ~ 2.8mm		UL94V-0	✓	Long	-	Feed-Thru, For 2 Cables, Transparent	CSL-25M018
			5.0 ~ 7.0mm		UL94V-0	✓	Long	-	Feed-Thru	CSL-25M008*
			5.0 ~ 7.0mm		UL94V-0	✓	Long	-	Feed-Thru, Transparent	CSL-25M020
			6.5 ~ 9.0mm		UL94V-0	✓	Long	-	Feed-Thru	CSL-25M010*
			6.5 ~ 9.0mm		UL94V-0	✓	Long	-	Feed-Thru, Transparent	CSL-25M022
			10.0 ~ 12.4mm		UL94V-0	✓	Long	-	Insert	CSL-25M012*
			10.0 ~ 12.4mm		UL94V-0	✓	Long	-	Insert, Transparent	CSL-25M024

*Upon Request

Black Color With Strain Relief



With Strain Relief / Without Screw Nut

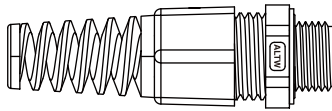


With Strain Relief / With Screw Nut

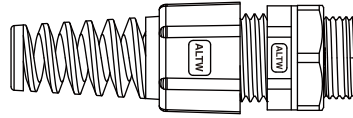
	Receptacle Nut Thread	Maximum Panel Thickness	Recommended Cable O.D.	IP Rating	Flammability	Anti UV	Body	Screw Nut	Part Number
PG Thread	PG7	3.0mm	4.5 ~ 6.5mm	IP68	UL94V-2	-	Short	✓	CSG-07G003
	PG9	7.5mm	6.0 ~ 10.0mm	IP68	UL94V-2	-	Short	✓	CSG-09G003
	PG11	6.0mm	6.0 ~ 10.0mm	IP68	UL94V-2	-	Short	✓	CSG-11G003
	PG13.5	6.2mm	10.0 ~ 14.0mm	IP68	UL94V-2	-	Short	✓	CSG-13G003
	PG16	6.0mm	10.0 ~ 14.0mm	IP68	UL94V-2	-	Long	✓	CSG-16G003
4.5mm		UL94V-2			-	Short	-	CSG-16G008	
Metric Thread	M12	3.0mm	4.5 ~ 6.5mm	IP68	UL94V-2	-	Long	✓	CSG-12M003
	M16	7.5mm	6.0 ~ 10.0mm	IP68	UL94V-2	-	Long	✓	CSG-16M006
					UL94V-2	-	Short	-	CSG-16M008
	M20	6.2mm	10.0 ~ 14.0mm	IP68	UL94V-2	-	Long	✓	CSG-20M005
					UL94V-2	-	Short	-	CSG-20M007
	M25	6.2mm	13.0 ~ 18.0mm	IP68	UL94V-2	-	Long	✓	CSG-25M005
UL94V-2					-	Short	-	CSG-25M007	

Plastic Cable Gland

Gray Color With Strain Relief



With Strain Relief / Without Screw Nut



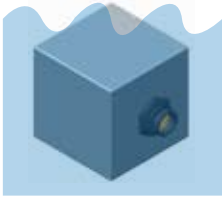
With Strain Relief / With Screw Nut

	Receptacle Nut Thread	Maximum Panel Thickness	Recommended Cable O.D.	IP Rating	Flammability	Anti UV	Body	Screw Nut	Part Number
PG Thread	PG7	3.0mm	4.5 ~ 6.5mm	IP68	UL94V-2	-	Short	✓	CSG-07G004
	PG9	7.5mm	6.0 ~ 10.0mm	IP68	UL94V-2	-	Short	✓	CSG-09G004
	PG11	6.0mm	6.0 ~ 10.0mm	IP68	UL94V-2	-	Short	✓	CSG-11G004
	PG13.5	6.2mm	10.0 ~ 14.0mm	IP68	UL94V-2	-	Long	✓	CSG-13G004
		4.5mm			UL94V-2	-	Short	-	CSG-16G009
Metric Thread	M12	3.0mm	4.5 ~ 6.5mm	IP68	UL94V-2	-	Long	✓	CSG-12M004
	M16	7.5mm	6.0 ~ 10.0mm	IP68	UL94V-2	-	Long	✓	CSG-16M007
					UL94V-2	-	Short	-	CSG-16M009
	M20	6.2mm	10.0 ~ 14.0mm	IP68	UL94V-2	-	Long	✓	CSG-20M006
					UL94V-2	-	Short	-	CSG-20M008
	M25	6.2mm	13.0 ~ 18.0mm	IP68	UL94V-2	-	Long	✓	CSG-25M006
					UL94V-2	-	Short	-	CSG-25M008

Ingress Protection (IP) Rating Guide

Waterproof Definition

Unmated Waterproof



Standalone waterproof or waterproof is assured even without its counterpart. The water will not go through the inner portion of the exposed connector as it is entirely sealed.

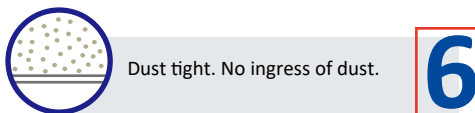
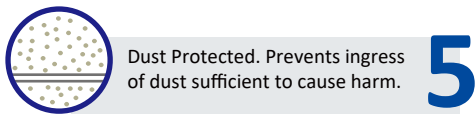
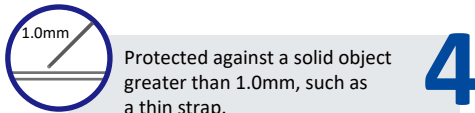
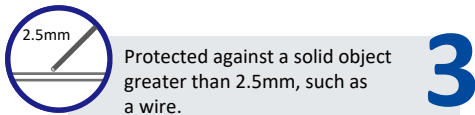
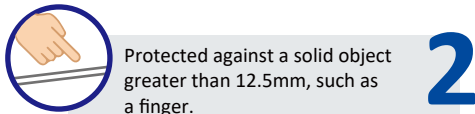
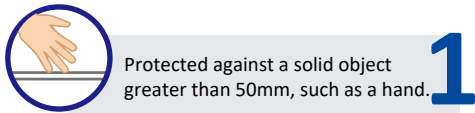
Mated Waterproof



Waterproof is only assured when mated and locked tightly to its counterpart.

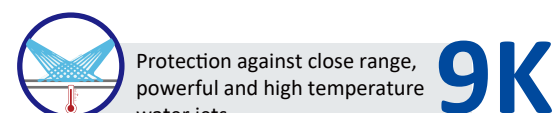
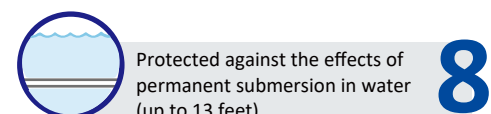
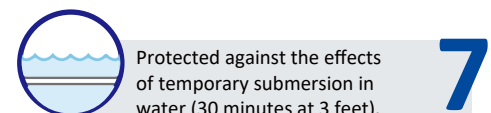
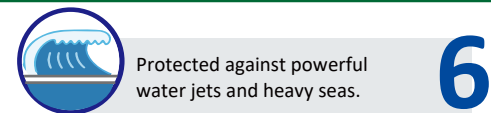
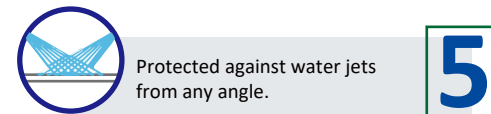
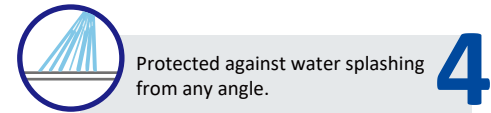
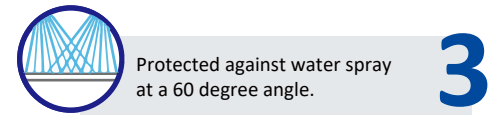
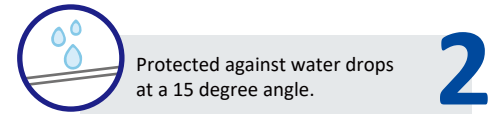
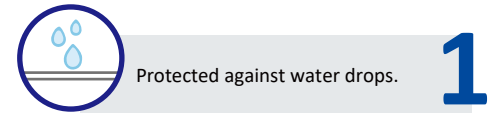
1st Digit - SOLIDS

Degree of protection against solid objects



2nd Digit - LIQUIDS

Degree of protection against water



Example:



IP 65

Protected against water jets from any angle.

Dust tight. No ingress of dust.

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