

Amphenol LTW

- Protection up to IP 68
- EMC / Metal / Plastic
- Metric (M8 ~ M40) & PG Thread (PG7 ~ PG29)
- Cable O.D. 2.5 ~ 32mm
- Flammability UL 94V-0
- UV Resistant
- Simple, fast, reliable and cost-effective installation

CABLE GLAND

A Huge Portfolio
For Industrial



Transparent



New

EMC Cable Gland

Unrivalled InterConnects for Harsh Environments

About ALTW

**3**

Production Sites
(Taiwan, China, Mexico)

**30+**

Market Applications

**90,000+**

Products

Since 1993, Amphenol LTW Technology “ALTW” lives and breathes to create, innovate, design and produce “***unrivaled interconnects for harsh environments***”. With over 300 worldwide patents, not only does ALTW offer the broadest and widest range of rugged interconnects in the industry but also customization with the mission of “Customer Satisfaction First”. Undoubtedly, ALTW is the leader in rugged interconnects, highly recognized for its uncompromising quality, short lead time, fast and tailored service and its very competitive pricing.

Regardless of the challenging environments that your products will be subject to; there is a very good chance that you will find what you are looking for with ALTW.

Unrivaled InterConnects for Harsh Environments

Cable Gland

With its comprehensive, optimally coordinated range of cable glands, Amphenol LTW offers you the right solution for every industry and every application. Our range includes not only standard cable connectors that feature excellent fundamental features such as tightness, strain relief, ease of assembly and longevity, but also solutions for special-purpose applications.

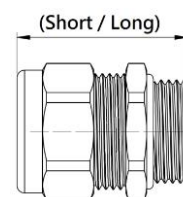
We are adding the EMC Shielding Cable Gland to the portfolio. The EMC cable glands are employed in the case where we safeguard cables for electromagnetic protection. The benefits of EMC cable glands include:

- ❖ Maintains contact to the cable's braid; ensures full shielding to unwanted electromagnetic waves
- ❖ Full contact to end-device's metallic enclosure; guarantees electromagnetic protection and continuous grounding function
- ❖ Provide a certain holding force to prevent the cable from loosening
- ❖ Lighter than products generally made of copper



Overall Physical Dimension:

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
M20 (EMC)	Metal	33.2mm	-	-	-
M25	Plastic	45.0mm	52.1mm	89.0mm	96.0mm
M25 (EMC)	Metal	34.3mm	-	-	-
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	-	-	-



Served Markets & Applications

Market	Applications	
LED Lighting	- Architectural Lighting - Residential, Medical, and Commercial Lighting - Street, Parking, Park, and Tunnel Lighting - Entertainment and Signage Lighting	- Horticulture, Grow, & Warehouse Lighting - Mass Transportation and Vehicles - Marine Vessel and Submersible Lighting - Appliances and Equipment Lighting
Marine	- Instrumentation & Monitoring: CCTV, Sensors - Power Distribution: Appliances, Charging, HVAC	- Entertainment: Video, Audio, Decorative - Motors: Outboard, Inboard, Pump, Actuator, Trolling
Broadband Wireless Access	- Access Point: LTE, 5G - Cellular and Mobile Station - Wireless Router	- Power Supply and distribution system - Other Communication Equipment
Industrial Automation	Autonomous Robots, Forklifts, Power Tools	
Renewable Energy	- Photo Voltaic (PV), Concentrated Solar Power (CSP) - Power Distribution and Control: Inverter, MLPE, ICS - Device Communication and Tracker	- Wind Turbine and Tidal Power Generation - Energy Storage
Heavy Equipment	- Navigation System: GPS, Ultrasonic - Instrumentation, Control, and Diagnostic Systems - Monitoring: Display, Camera, Imaging	- Safety System: Sensor, ADAS, Telematics & Tracking - Communication and Electronic Toll systems - Power Distribution: Charging, Lighting, Equipment
Autometer	- Metering: Water, Electric, & Gas Meter - Power and Control: Drone, Security Alarm	Monitoring: Sewage, Telemetry, and Vehicle tracking
Test Equipment	- Measuring Device: Air, Humidity, Light, sound, Water, Image, Weight, Height - Detectors: Gas, Fire, Leak, Motion, Heat	- Monitoring: Seismic (earthquake), Climatic - Weighing: Weigh, in-motion
Hybrid Electric Vehicles	- Safety System: Speed, Brake, Throttle, Gear - Power System: Charging, Controller, Battery	
Railway Mass Transit	- Infotainment: Display, sound, Broadcasting, monitor - Communication: Main Controller, In-vehicle Info - Lighting: Interior and Exterior	
Mobile Devices	- Drone Remote Controller - Measurement: Altimeter, Gesture, Piezoelectric, - Handheld: Barcode, Scanner, Portable lamp, GPS	
Transpo	Monitoring: Display ,CCTV, Surveillance Cam	
Medical Equipment	- Patient Care: Electric Beds, Wheelchair Lift & stair, Rehabilitation System, Mobile Carts - Visualization: Display and monitors	- Diagnostic: MRI, CT Scan, Ultrasound, X-ray - Monitoring: ECG, Holter, Blood Pressure, Sugar
Automotive Diagnostics	Automotive Diagnostics	
UAV	Drone: Commercial, Consumer, & Military	
Lifts & Materials Handling	Forklift, Industrial Lift, Material Handling	
Remote Video Response Center	- Monitoring: Display ,CCTV, Dome, IP Camera - Detection: Auto-License Plate Recognition, Alarm - Identification: Face detection, encoders	- Remote Control Devices and Sensors - Peripherals: Junction boxes and cabling system - Lighting: Interior and Exterior
Autonomous	- Navigation & Sensor: Lidar, Ultrasonic, IMU - Imaging: Cameras, Monitors, Infotainment Display	Controller: Inertial Measurement Unit & Navigation System, Central Computer
Communication	- Transmitter and Receiver Equipment - Base Station and Access Point	- High Bandwidth: Multiplexer & demultiplexer - Audio: VoIP, Telephone
Rugged IT	- Telemetry - Military ablet and VR & AR	Communication Equipment

EMC Cable Gland



Amphenol LTW is adding the EMC Shielding to its Cable Gland portfolio. The EMC Cable Gland has remarkable feature of shielding and waterproofing by utilizing a conductive internal spring that directly contacts with the cable's shield, compressing the cable seal, respectively. This main features provide electromagnetic (EMC) protection throughout the cable and the equipment the cable is terminated. The internal spring of EMC cable gland is made of stainless steel which offers reliable spring force, thus, guarantees connectivity. Aside from these main features, it also offers easy installation, customizable entry part as long or short. Perfect for harsh and humid environments to provide waterproofing, moisture-proofing, and salt mist, vapor, and spray resistance.



ESG-20M001

Φ8.0 ~ Φ12.0mm
IP68 protection level
-40°C ~ 160°C



ESG-20M002

Φ10.0 ~ Φ14.0mm
IP68 protection level
-40°C ~ 160°C



ESG-25M002

Φ14.0 ~ Φ17.5mm
IP68 protection level
-40°C ~ 160°C

FEATURES:

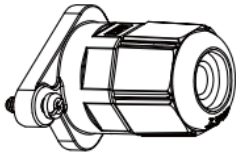
- ✓ Meet IEC 60423, EN 62444
- ✓ Quick mounting and optimum shield connection to guarantee the electrical cable working in standard condition
- ✓ Prefer resistant features against moisture, liquid, corrosion, and dust
- ✓ Dependable connecting and offers excellent sealing function
- ✓ EMC for touch cable braid
- ✓ Can be used for a variety of wire ranges
- ✓ Unique spring design provides 360° contact at the cable shield

MARKETS:

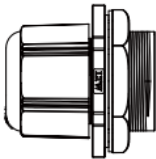
- ✓ Surveillance cameras
- ✓ Lighting display devices
- ✓ Solar PV modules
- ✓ Power supply switches, distribution box, and motors
- ✓ Wireless networking
- ✓ Telecommunications



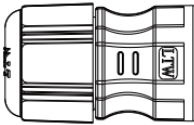
Metal Cable Gland



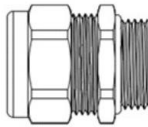
6-32 UNC



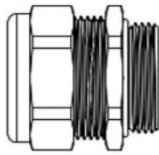
1"-20 UN



13 / 16" - 28 UN



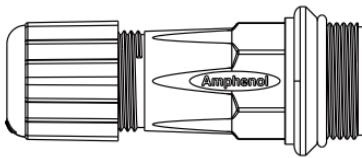
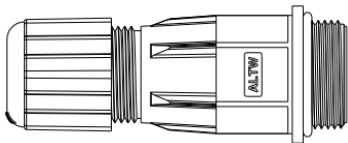
M20*1.5



M25*1.5

	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
Metric Thread	M20*1.5	Minimum Panel Thickness 4.5mm	8.0 ~ 12.0mm	IP68			-	EMC Type	ESG-20M001
			10.0 ~ 14.0mm				-	EMC Type	ESG-20M002
	M25*1.5		14.0 ~ 17.5mm				IP68	-	EMC Type

Plastic Cable Gland

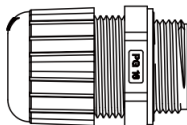


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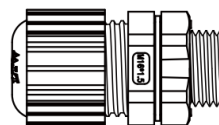
	Receptacle Nut Thread	Maximum Panel Thickness	Recommended Cable O.D.	IP Rating	Flammability	Anti UV	Body	Note	Part Number
Metric Thread	M25	6.2mm	1.5 ~ 2.6mm	IP67	UL94V-0	✓	Long	Feed-Thru	CSL-25M001
			1.5 ~ 2.6mm		UL94V-0	✓	Long	Feed-Thru, Transparent	CSL-25M013
			2.0 ~ 3.2mm		UL94V-0	✓	Long	Feed-Thru	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

Without Strain Relief
Without Screw Nut

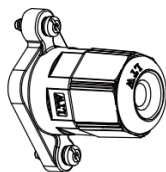


Without Strain Relief
With Screw Nut

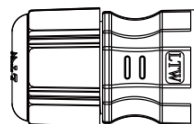


	Receptacle Nut Thread	Maximum Panel Thickness	Recommended Cable O.D.	IP Rating	Flammability	Anti UV	Body	Note	Part Number
PG Thread	PG7	3.0mm	4.5 ~ 6.5mm	IP68	UL94V-2	-	Short		CSG-07G001
	PG9	7.5mm	6.0 ~ 10.0mm	IP68	UL94V-2	-	Short		CSG-09G001
	PG11	6.0mm	6.0 ~ 10.0mm	IP68	UL94V-2	-	Short		CSG-11G001
	PG13.5	6.2mm	10.0 ~ 14.0mm	IP68	UL94V-2	-	Short		CSG-13G001
	PG16	6.0mm	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
Metric Thread	PG29	6.0mm	16.0 ~ 22.0mm 18.0 ~ 25.0mm	IP68	UL94V-2 UL94V-2	-	Short Short		CSG-29G001 CSG-29G003
	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 13.0 ~ 18.0mm	IP68	UL94V-2	-	Short		CSG-25M002
					UL94V-2	-	Long		CSG-25M003
	M32	6.0mm	16.0 ~ 22.0mm	IP68	UL94V-2	-	Long		CSG-32M001
					UL94V-2	-	Short		CSG-32M003
			18.0 ~ 25.0mm	IP68	UL94V-2	-	Long		CSG-32M005
					UL94V-2	-	Short		CSG-32M007
	M40	9.0mm	20.0 ~ 25.0mm	IP68	UL94V-2	-	Short		CSG-40M001
			25.1 ~ 32.0mm		UL94V-2	-	Short		CSG-40M003

6-32 UNC



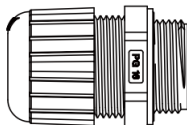
13 / 16" - 28 UN



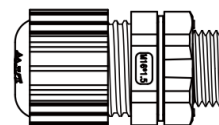
	Receptacle Nut Thread	Recommended Cable O.D.	IP Rating	Flammability	Anti UV	Body	Screw Nut	Note	Part Number
Unified Thread	6-32 UNC	5.0 ~ 7.0mm	IP67	UL94V-0	✓	Short	✓	Square Flange Type	CSF-D14001
		7.8 ~ 9.3mm		UL94V-0			✓	Square Flange Type	CSF-D14002
	13/16"-28UN	5.0 ~ 6.5mm	IP67	UL94V-0			-	Clamp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

Plastic Cable Gland: Gray Color

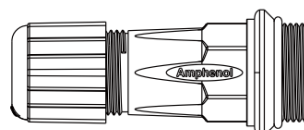
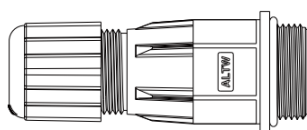
Without Strain Relief
Without Screw Nut



Without Strain Relief
With Screw Nut



	Receptacle Nut Thread	Maximum Panel Thickness	Recommended Cable O.D.	IP Rating	Flammability	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
18.0 ~ 25.0mm			IP68	UL94V-2	Long	✓		CSG-32M006	
				UL94V-2	Short	-		CSG-32M008	
M40	9.0mm	20.0 ~ 25.0mm	IP68	UL94V-2	Short	✓		CSG-40M002	
		25.1 ~ 32.0mm		UL94V-2	Short	✓		CSG-40M004	

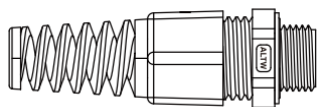


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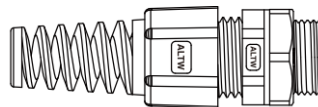
	Receptacle Nut Thread	Maximum Panel Thickness	Recommended Cable O.D.	IP Rating	Flammability	Anti UV	Body	Note	Part Number
Metric Thread	M25	6.2mm	1.5 ~ 2.6mm	IP67	UL94V-0	✓	Long	Feed-Thru	CSL-25M002
			1.5 ~ 2.6mm		UL94V-0	✓	Long	Feed-Thru, Transparent	CSL-25M014*
			2.0 ~ 3.2mm		UL94V-0	✓	Long	Feed-Thru	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

Plastic Cable Gland



With Strain Relief / Without Screw Nut



With Strain Relief / With Screw Nut

	Color	Receptacle Nut Thread	Maximum Panel Thickness	Recommended Cable O.D.	IP Rating	Flammability	Body	Screw Nut	Part Number
PG Thread	Black	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 4.5mm	10.0 ~ 14.0mm	IP68	UL94V-2 UL94V-2	Long Short	✓ -	CSG-16G003 CSG-16G008
	Gray	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	Short	✓	CSG-13G004
		PG16	6.0mm 4.5mm	10.0 ~ 14.0mm	IP68	UL94V-2 UL94V-2	Long Short	✓ -	CSG-16G004 CSG-16G009
Metric Thread	Black	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
	Gray	M25	6.2mm	13.0 ~ 18.0mm	IP68	UL94V-2 UL94V-2	Long Short	✓ -	CSG-25M005 CSG-25M007
		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 UL94V-2	Long Short	✓ -	CSG-25M006 CSG-25M008



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Contact Us

Luc Kan | Sales & Marketing

Email: luc@ltw-tech.com

Customer Service

Email: sales@ltw-tech.com

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