



American  
Electrical, Inc.

Industrial Electrical Accessories

# 'Tight Seal'

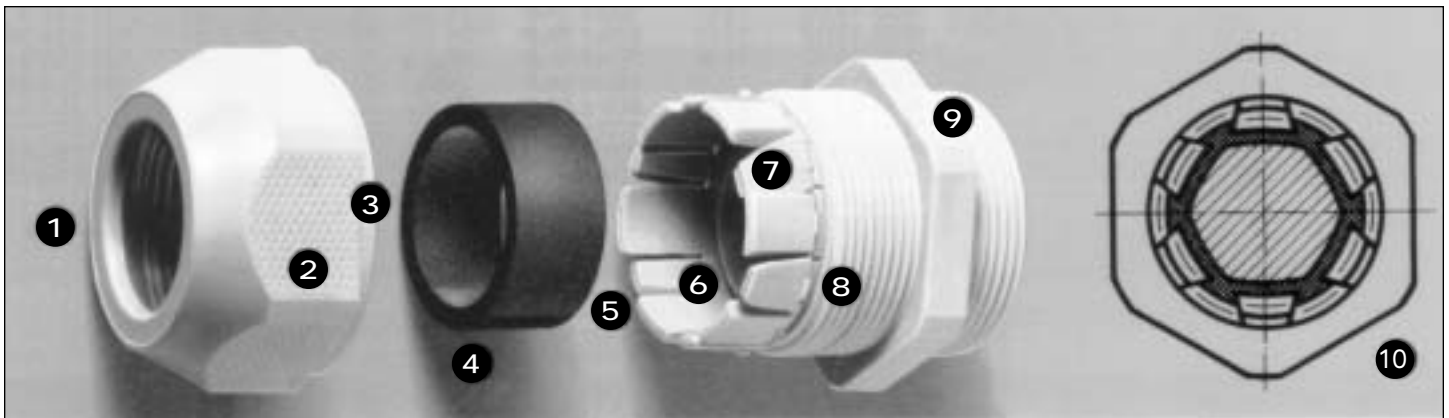
Cable Grips





# 'Tight Seal' IP68 Nylon Cable Grips

by AGRO



## Main Features: Cable Grips

- 1** Wider domed nut which can not be over-tightened.  
The wide dome design allows space for the neoprene seal to form a tight grip on the cable, forming an IP68 barrier. (please refer to Ingress Protection [IP] ratings on the back page.)
- 2** Generous deep flats  
The deep flats allow enough room for the proper wrench to tighten or loosen the cable grip without the wrench coming off.
- 3** Spacer  
A small spacer exists between the domed nut and the locking collet, providing an additional seal when fully tightened.
- 4** Neoprene rubber seal  
This seal grips around the cable to form the IP68 barrier when properly tightened.
- 5** Webs are staggered for better grip  
Webs are designed in an alternating geometry which enhances gripping capability.
- 6** Staggered webs  
The web design is staggered to allow for seal conformity around the cable to maximize the pull out resistance and protection against the elements.
- 7** Sprung webs  
The webs are designed so that they will spring back to their original open position making installation easy while maintaining the seal quality.
- 8** Retention springs for domed nut  
The 'Tight Seal' design allows the domed nut to lock with the collet before any threads are engaged. This guards against misthreads as well as aids in the installation process.
- 9** Sealing lip  
The collet design incorporates a sealing lip which provides for a positive seal against the enclosure.
- 10** Anti-Twist cable locking collet  
The entire design of the 'Tight Seal' product line insures that cables will not twist or turn once locked down.

## Technical Data

Material :  
Polyamide PA 6, self-extinguishing, halogen-free

Seal :  
Neoprene, oil and petroleum resistant

Operating temperature:  
Static: -40°C to 100°C, short-term 120°C  
Dynamic: -30°C to 80°C, short-term 100°C

Weather resistance good

Strain relief:  
Smooth action

Safety Class:  
IP68, waterproof (5 bar)

Patents:  
Europe, USA, Japan

VDE Test Report:  
12 796-9000-4001/A 2 J.

UL test (Underwriters Laboratories Inc.)

Lloyd's Register of Shipping certificate

Germanische Lloyd certificate



# 'Tight Seal'

## IP68 Nylon Cable Grips

### Cable Grips with Lock Nuts

IP68 Nylon Cable Grips	Cable Diameter		WRENCH SIZE	Dimensions			Thread Type												
							PG			NPT			Metric						
	inches	mm		H	L	Size	Part No.		Size	Part No.		Size	Part No.						
	Ø	Ø					mm	mm		mm	gray		black	inch	gray	black	mm	gray	black
	0.10-0.26	2.5-6.5	15	21	8	7	1555.07.06	1545.07.06											
	0.12-0.31	3.0-8.0	19	23	8	9	1555.09.08	1545.09.08	3/8	1555.N0375.08	1545.N0375.08	16x1.5	1555.17.08	1545.17.08					
	0.08-0.28	2.0-7.0	22	22	8	11	1555.11.07	1545.11.07											
	0.16-0.39	4.0-10.0	22	22	8	11	1555.11.10	1545.11.10											
	0.12-0.28	3.0-7.0	24	26	9	13	1555.13.07	1545.13.07	1/2	1555.N0500.07	1545.N0500.07	20x1.5	1555.20.07	1545.20.07					
	0.22-0.47	5.5-12.0	24	26	9	13	1555.13.12	1545.13.12	1/2	1555.N0500.12	1545.N0500.12	20x1.5	1555.20.12	1545.20.12					
	0.20-0.43	5.0-11.0	27	30	10	16	1555.16.11	1545.16.11											
	0.33-0.55	8.5-14.0	27	30	10	16	1555.16.14	1545.16.14											
	0.26-0.55	6.5-14.0	33	35	11	21	1555.21.14	1545.21.14	3/4	1555.N0750.14	1545.N0750.14	25x1.5	1555.25.14	1545.25.14					
	0.43-0.71	11.0-18.0	33	35	11	21	1555.21.18	1545.21.18	3/4	1555.N0750.18	1545.N0750.18	25x1.5	1555.25.18	1545.25.18					
	0.67-0.87	17.0-22.0	42	36	15				1	1555.N1000.22	1545.N1000.22								
	0.67-0.98	17.0-25.0	42	36	11	29	1555.29.25	1545.29.25				32x1.5	1555.32.25	1545.32.25					
	0.87-1.30	22.0-33.0	53	48	15	36	1555.36.33	1545.36.33											
	1.10-1.50	28.0-38.0	60	48	15	42	1555.42.38	1545.42.38											
	1.26-1.73	32.0-44.0	65	48	15	48	1555.48.44	1545.48.44											

Lock Nuts Provided with Cable Grips

IP68 Nylon Strain Relief Cable Grips	Cable Diameter		WRENCH SIZE	Dimensions			Thread Type												
							PG			NPT			Metric						
	inches	mm		H	L	Size	Part No.		Size	Part No.		Size	Part No.						
	Ø	Ø					mm	mm		mm	gray		black	inch	gray	black	mm	gray	black
	0.10-0.26	2.5-6.5	15	54	8	7	1576.07.06	1546.07.06											
	0.12-0.31	3.0-8.0	19	64	8	9	1576.09.08	1546.09.08	3/8	1576.N0375.08	1546.N0375.08	16x1.5	1576.17.08	1546.17.08					
	0.08-0.28	2.0-7.0	22	77	8	11	1576.11.07	1546.11.07											
	0.16-0.39	4.0-10.0	22	77	8	11	1576.11.10	1546.11.10											
	0.12-0.28	3.0-7.0	24	88	9	13	1576.13.07	1546.13.07	1/2	1576.N0500.07	1546.N0500.07	20x1.5	1576.20.07	1546.20.07					
	0.22-0.47	5.5-12.0	24	88	9	13	1576.13.12	1546.13.12	1/2	1576.N0500.12	1546.N0500.12	20x1.5	1576.20.12	1546.20.12					
	0.20-0.43	5.0-11.0	27	102	10	16	1576.16.11	1546.16.11											
	0.33-0.55	8.5-14.0	27	102	10	16	1576.16.14	1546.16.14											

Lock Nuts Provided with Cable Grips



American Electrical, Inc.  
 425 Southlake Blvd.  
 Suite 9-B  
 Richmond, VA 23236

Telephone: (804) 379 - 2899  
 FAX: (804) 379 - 8935

# Ingress Protection (IP) Ratings

## List of Protection Classes

### IP Protection Classes to DIN 40 050 Sheet 1

Up to 1000 VAC and 1500 VDC (UTE standard C 200 10)

## IP ratings consist of a two digit number explained below:

The two digits correspond to the description by DIN 40 050 sheet 1, IEC 144 and 525 as well as UTE C 200 10.

### 1st Digit Degree of Protection Against Touching and Foreign Matter

#### IP Specifications

- 0 No protection.
- 1 Protection against penetration by solid foreign matters larger than 50 mm (accidental touching by hand).
- 2 Protection against penetration by solid foreign matters larger than 12 mm (touching with fingers).
- 3 Protection against penetration by solid foreign matters larger than 2.5 mm (touching with tools, wires larger than 2.5 mm).
- 4 Protection against solid foreign matters larger than 1 mm (touching with tools, wires larger than 1 mm).
- 5 Complete protection from being touched. Protection from harmful dust deposits - dust penetration is not completely prevented.
- 6 Complete protection from being touched. Protection against penetration by dust.

### 2nd Digit Degree of Protection Against Water

#### IP Specifications

- 0 No protection.
- 1 Protection against vertically dripping water.
- 2 Protection against drip water falling at an angle of up to 15 degrees.
- 3 Protection against spray water falling at an angle of up to 60 degrees.
- 4 Protection against spray water from all directions.
- 5 Protection against water jets from all directions.
- 6 Protection against temporary flooding, e.g., by rough sea.
- 7 Protection when submersed in water at specified pressure and unspecified duration.
- 8 Protection when submersed in water at elevated pressure and unspecified time.

## Use and Application of Nylon Cable Grips

1. The use of synthetic - Cable Grips is almost unlimited within the electrical and electronics industry. Installations where cables must be led safely through a wall of an enclosure will be specified with cable grips. Synthetic Cable grips are specified to:
  - **Secure the cable** to the enclosure's wall to provide excellent pull-out resistance.
  - **Seal and protect** the inside of the enclosure from the unwanted affects of the environment. These contaminants may be water, gas, chemical vapors, or fumes.
  - **Reduce material cost** due to use of lighter, less expensive materials, as well as, eliminating the need for running conduit.
2. Some of the typical applications using cable grips are:
  - Machinery
  - Process equipment engineering
  - Apparatus and appliance construction
  - Aircraft and automotive engineering
  - Locomotive engineering
  - Elevator engineering
  - Plant engineering
  - Chemical and pharmaceutical industries
  - Refineries
  - Nuclear research institutions
  - Process automation and process engineering
  - Indoor and outdoor electrical installations
  - Switchgear and distribution construction
  - equipment for military purposes
  - municipal and utility type applications, such as power, electricity and gas works



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