



IDEAL Cable Tie Catalog Numbering System

IT - 2 - S - MH - C - 0

| IT | 2 | S | MH | C | 0 |
|--|---|---|--|---|--|
| IT = IDEAL Powr-Tie™ Cable Ties | Size Approximate Bundle Diameter for ties | TENSILE Strength M = Miniature (18 lbs.) I = Intermediate (40 lbs.) S = Standard (50 lbs.) LH = Light-Heavy Duty (120 lbs.) H = Heavy Duty (175 lbs.) EH = Extra-Heavy Duty (250 lbs.) | Style = Standard Tie MH = Mounting ID = Identification MB = Mounting Base LPMB = Low Profile Mounting Base MP = Mounting Pad CCL = Cable Clamp | Qty. Per Package L = 50 C = 100 D = 500 M = 1000 | Color 0 = Natural 0̄ = UV Black 8 = Gray 30 = Heat Stabilized Black 35 = Maroon 702 = Halar |

Cable Tie Bag



- Keep your cable ties right where you need them, eliminate loss with this convenient easy-to-use bag that clips securely onto your belt
- Includes a bag for 8 in. cable ties and a bag for 11 in. cable ties, they easily clip together or can be used separately
- Elastic cord quickly and easily cinches to keep ties securely in place

| Description | Cat. No. |
|---------------|---------------|
| Cable Tie Bag | IT-BAG |

Cable Tie Assortment with Cable Tie Bag

- 500 of the most popular sized cable ties packaged with an easy-to-use bag that clips securely onto your belt
- UL Listed Nylon 6/6 cable ties are suitable for use in Air Handling Spaces (Plenums) in accordance with Section 300-22(C) & (D) of the National Electrical Code and Rules 12-010 (3), (4) & (5) and 12-020 of the Canadian Electrical Code, Part 1.

| Description | Cat. No. | |
|---|-----------------|-----------------|
| Cable Tie Assortment | IT-COMBO | |
| IT-COMBO Includes: | Qty. | Cat. No. |
| 7-1/2 in. Natural Air Handling Cable Ties | 300 | IT2S-C |
| 11 in. Natural Air Handling Cable Ties | 200 | IT3S-C |
| Cable Tie Bag | 1 | IT-BAG |



Cable-Tie Installation Tool

- Consistent, positive tension
- Flush cut-off leaves no projections to damage nearby wires or components
- Lightweight economy model for smaller jobs
- Standard and heavy-duty models feature rugged, construction with comfortable, cushioned grips



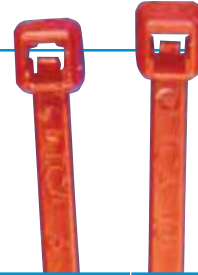
| Description | Cat. No. |
|---|-----------------|
| Economy – use w/intermediate & standard ties* | BCTT-200 |
| Standard – use w/intermediate & standard ties** | 41-990 |
| Heavy-Duty – use w/standard & heavy-duty ties** | 41-995 |

*Color may vary
**Not Shown

Plenum Ties

Halar® Ties

- For use in air handling/plenum environments
- Easily recognized maroon color
- Low smoke density and excellent flammability rating, non-flammable UL 94V-0
- Superior chemical resistance
- 300°F temperature use



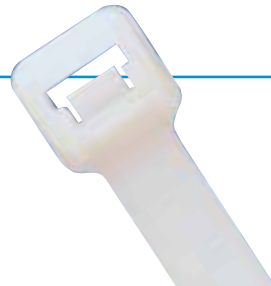
| Description | Length | Width | Thickness | Max. Bundle | Tensile Strength | Qty./Bag | Cat. No. |
|--------------|----------------|----------------|-----------------|--------------|------------------|----------|------------------|
| Maroon Halar | 8.0 in./203mm | .178 in./4.5mm | .053 in./1.35mm | 1/16 - 2 in. | 50 lbs. | 100 | IT2S-C702 |
| Maroon Halar | 11.0 in./279mm | .178 in./4.5mm | .053 in./1.35mm | 1/16 - 3 in. | 50 lbs. | 100 | IT3S-C702 |

Approximate dimensions.

Halar® is a trademark of Ausimont Chemical Co.

UL Listed for Air Handling Ties - Plenum

- UL Listed nylon 6/6 cable ties are suitable for use in Air Handling Spaces (Plenum) in accordance with Section 300-22(C) & (D) of the National Electrical Code and Rules 12-010 (3), (4) and (5) and 12-020 of the Canadian Electrical Code, Part 1



Standard Ties

| Description | Length | Width | Thickness | Max. Bundle | Tensile Strength | Mil-Spec Reference | Qty./Bag | Cat. No. |
|----------------|----------------|-----------------|-----------------|-------------------|------------------|--------------------|----------|-----------------|
| Burgandy Nylon | 7.5 in./190mm | .178 in./4.52mm | .053 in./1.34mm | 1/16 - 1-7/8 in. | 50 lbs. | MS3367-1-9 | 100 | IT2S-C35 |
| Natural Nylon | | | | | | | 100 | IT2S-C |
| Natural Nylon | | | | | | | 1000 | IT2S-M |
| UV Black Nylon | | | | | | | 100 | IT2S-C0 |
| UV Black Nylon | | | | | | | 1000 | IT2S-M0 |
| Burgandy Nylon | 11.2 in./284mm | .178 in./4.52mm | .053 in./1.34mm | 1/16 - 3-1/16 in. | 50 lbs. | MS3367-7-9 | 100 | IT3S-C35 |
| Natural Nylon | | | | | | | 100 | IT3S-C |
| Natural Nylon | | | | | | | 500 | IT3S-D |
| UV Black Nylon | | | | | | | 100 | IT3S-C0 |
| UV Black Nylon | | | | | | | 500 | IT3S-D0 |
| Natural Nylon | 14.5 in./368mm | .178 in./4.52mm | .053 in./1.34mm | 1/16 - 4-1/8 in. | 50 lbs. | MS3367-2-9 | 100 | IT4S-C |
| Natural Nylon | | | | | | | 500 | IT4S-D |
| UV Black Nylon | | | | | | | 100 | IT4S-C0 |
| UV Black Nylon | | | | | | | 500 | IT4S-D0 |

Mounting Ties

| Description | Length | Width | Strap Thickness | Max. Bundle | Tensile Strength | Screw Size | Qty./Bag | Cat. No. |
|----------------|---------------|-----------------|-----------------|------------------|------------------|------------|----------|------------------|
| Natural Nylon | 8.1 in./206mm | .178 in./4.52mm | .053 in./1.35mm | 1/16 - 1-3/4 in. | 50 lbs. | No. 10 | 100 | IT2SMH-C |
| Natural Nylon | | | | | | | 1000 | IT2SMH-M |
| UV Black Nylon | | | | | | | 100 | IT2SMH-C0 |

Definition of "Air Handling Spaces"

Air Handling Spaces - Ducts or plenums used for environmental air and other spaces used for environmental air, such as above hung ceilings or below raised floors. This does not include plenums used for the removal of dust, loose stock or vapor, or ventilation of commercial-type cooking equipment.¹

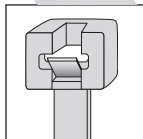
¹UL 1565 CSA C22.2 4th Edition



Powr-Tie™ Cable Ties

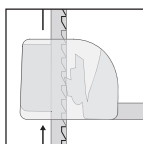
Quality Construction

- One-piece design for added strength
- Superior locking mechanism
- Exceeds industry tensile strength ratings



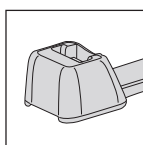
Low Insertion Force

- Tapered thin tip reduces initial friction
- Lowest insertion force with the highest tensile strength
- Reduces installation fatigue



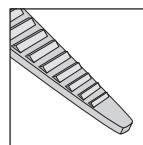
No Burrs or Sharp Edges

- Smooth corners provide added safety
- Rounded edges eliminate insulation damage



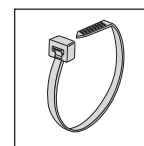
Stepped Tail Gripper

- Tapered tail grip assures positive threading
- Stepped tail allows for easier grabbing and tightening once engaged



Angled Tail

- Provides quicker initial insertion
- Lowers installation costs



Material Selection

■ ROHS Compliant

■ Natural General Purpose 6/6 Nylon

- Suitable for most applications
- Meets UL 94V-2 flammability ratings
- 85°C/185°F working temperature

■ UV Black Nylon 6/6

- Suitable for most applications with continuous or extended exposure to outdoor elements
- Weather-resistant grade, able to endure ultraviolet (UV) light
- Meets UL 94V-2 flammability ratings
- 85°C/185°F working temperature

■ Heat Stabilized Black Nylon 6/6

- Suitable for most applications with continuous or extended exposure to high temperatures
- Meets UL standards for electrical applications
- Meets UL 94V-2 flammability ratings
- 125°C/254°F working temperature

Miniature (18 lb.) Ties Natural & UV Black

| Description | Length | Width | Thickness | Max. Bundle | Tensile Strength | Mil-Spec Reference | Qty./Bag | Cat. No. |
|----------------|---------------|-----------------|-----------------|-------------------|------------------|--------------------|----------|-----------|
| Natural Nylon | 4.0 in./102mm | .094 in./2.39mm | .042 in./1.06mm | 1/16 - 7/8 in. | 18 lbs. | MS3367-4-9 | 100 | IT1M-C |
| Natural Nylon | | | | | | | 1000 | IT1M-M |
| UV Black Nylon | | | | | | 100 | IT1M-CO | |
| Natural Nylon | 6.1 in./154mm | .094 in./2.39mm | .042 in./1.06mm | 1/16 - 1-1/2 in. | 18 lbs. | — | 100 | IT1_5M-C |
| UV Black Nylon | | | | | | | 100 | IT1_5M-CO |
| Natural Nylon | 8.1 in./206mm | .094 in./2.39mm | .042 in./1.06mm | 1/16 - 2-3/16 in. | 18 lbs. | — | 100 | IT2M-C |
| Natural Nylon | | | | | | | 1000 | IT2M-M |
| UV Black Nylon | | | | | | | 100 | IT2M-CO |

*1M, 1_5M & 2M Series



Intermediate (40 lb.) Ties Natural & UV Black

| Description | Length | Width | Thickness | Max. Bundle | Tensile Strength | Mil-Spec Reference | Qty./Bag | Cat. No. |
|----------------|----------------|-----------------|-----------------|-------------------|------------------|--------------------|-----------|-----------|
| Natural Nylon | 5.7 in./145mm | .140 in./3.56mm | .049 in./1.24mm | 1/16 - 1-7/16 in. | 40 lbs. | MS3367-5-9 | 100 | IT1_5I-C |
| Natural Nylon | | | | | | | 1000 | IT1_5I-M |
| UV Black Nylon | | | | | | 100 | IT1_5I-CO | |
| UV Black Nylon | 8.8 in./224mm | .140 in./3.56mm | .049 in./1.24mm | 1/16 - 2-3/8 in. | 40 lbs. | MS3367-5-0 | 1000 | IT1_5I-MO |
| Natural Nylon | | | | | | | 100 | IT2I-C |
| Natural Nylon | | | | | | 1000 | IT2I-M | |
| UV Black Nylon | | | | | | 100 | IT2I-CO | |
| UV Black Nylon | 11.5 in./292mm | .142 in./3.60mm | .055 in./1.40mm | 1/16 - 3-3/8 in. | 40 lbs. | — | 1000 | IT2I-MO |
| Natural Nylon | | | | | | | 100 | IT3I-C |
| UV Black Nylon | 14.5 in./368mm | .142 in./3.60mm | .055 in./1.40mm | 1/16 - 4 in. | 40 lbs. | — | 100 | IT3I-CO |
| Natural Nylon | | | | | | | 100 | IT4I-C |
| UV Black Nylon | 100 | IT4I-CO | | | | | | |

*1_5 & 2I Series



Wire Management

Standard (50 lb.) Ties Natural, UV Black & Heat Stabilized Black

| Description | Length | Width | Thickness | Max. Bundle | Tensile Strength | Mil-Spec Reference | Qty./Bag | Cat. No. |
|-----------------------------|----------------|-----------------|-----------------|-------------------|------------------|--------------------|-----------------|-----------------|
| Natural Nylon | 7.5 in./190mm | .178 in./4.52mm | .053 in./1.34mm | 1/16 - 1-7/8 in. | 50 lbs. | MS3367-1-9 | 100 | IT2S-C |
| Natural Nylon | | | | | | | 1000 | IT2S-M |
| UV Black Nylon | | | | | | MS3367-1-0 | 100 | IT2S-C0 |
| UV Black Nylon | | | | | | | 1000 | IT2S-M0 |
| Heat Stabilized Black Nylon | | | | | | — | 100 | IT2S-C30 |
| Natural Nylon | 11.2 in./284mm | .178 in./4.52mm | .053 in./1.34mm | 1/16 - 3-1/16 in. | 50 lbs. | MS3367-7-9 | 100 | IT3S-C |
| Natural Nylon | | | | | | | 500 | IT3S-D |
| UV Black Nylon | | | | | | MS3367-7-0 | 100 | IT3S-C0 |
| UV Black Nylon | | | | | | | 500 | IT3S-D0 |
| Natural Nylon | | | | | | 14.5 in./368mm | .178 in./4.52mm | .053 in./1.34mm |
| Natural Nylon | 500 | IT4S-D | | | | | | |
| UV Black Nylon | MS3367-2-0 | 100 | IT4S-C0 | | | | | |
| UV Black Nylon | | 500 | IT4S-D0 | | | | | |
| Natural Nylon | 17.0 in./432mm | .190 in./4.82mm | .053 in./1.34mm | 1/16 - 4-3/4 in. | 50 lbs. | | | |
| UV Black Nylon | | | | | | 100 | IT5S-C0 | |

*2S, 3S & 4S Series

UL Listed Nylon 6/6 cable ties are suitable for use in Air Handling Spaces (Plenums) in accordance with Section 300-22(C) & (D) of the National Electrical Code and Rules 12-010 (3), (4) & (5) and 12-020 of the Canadian Electrical Code, Part 1.



Light Heavy-Duty, Heavy-Duty & Extra Heavy-Duty Ties Natural, UV Black & Heat Stabilized Black

| Description | Length | Width | Thickness | Max. Bundle | Tensile Strength | Mil-Spec Reference | Qty./Bag | Cat. No. | |
|----------------|-----------------|-----------------|-----------------|-----------------|------------------|--------------------|-------------|----------|----------|
| Natural Nylon | 8.7/220.9mm | .300 in./7.62mm | .076 in./1.93mm | 2-1/16 in. | 120 lbs. | — | 100 | IT2LH-C | |
| UV Black Nylon | | | | | | | 100 | IT2LH-C0 | |
| Natural Nylon | 15.1 in./384mm | .300 in./7.62mm | .075 in./1.90mm | 3/16-4-1/16 in. | 120 lbs. | MS3367-3-9 | 50 | IT4LH-L | |
| UV Black Nylon | | | | | | | MS3367-3-0 | 50 | IT4LH-L0 |
| Natural Nylon | 17.8 in./451mm | .300 in./7.62mm | .075 in./1.90mm | 3/16-5-1/4 in. | 120 lbs. | — | 50 | IT5LH-L | |
| UV Black Nylon | | | | | | | 50 | IT5LH-L0 | |
| Natural Nylon | 24.2 in./614mm | .300 in./7.62mm | .075 in./1.90mm | 3/16-7 in. | 120 lbs. | — | 50 | IT7LH-L | |
| UV Black Nylon | | | | | | | 50 | IT7LH-L0 | |
| Natural Nylon | 25.3 in./642mm | .340 in./8.64mm | .090 in./2.29mm | 3/16-7-3/16 in. | 175 lbs. | MS3367-10-9 | 50 | IT7H-L | |
| UV Black Nylon | | | | | | | MS3367-10-0 | 50 | IT7H-L0 |
| Natural Nylon | 33.1 in./841mm | .340 in./8.64mm | .090 in./2.29mm | 3/16-9-3/4 in. | 175 lbs. | MS3367-12-9 | 50 | IT10H-L | |
| UV Black Nylon | | | | | | | MS3367-12-0 | 50 | IT10H-L0 |
| Natural Nylon | 37.1 in./942mm | .340 in./8.64mm | .090 in./2.29mm | 3/16-11 in. | 175 lbs. | MS3367-13-9 | 50 | IT11H-L | |
| UV Black Nylon | | | | | | | MS3367-13-0 | 50 | IT11H-L0 |
| Natural Nylon | 47.8 in./1214mm | .340 in./8.64mm | .090 in./2.29mm | 3/8-14-1/2 in. | 175 lbs. | MS3367-16-9 | 50 | IT14H-L | |
| Gray Nylon | | | | | | | MS3367-16-8 | 50 | IT14H-L8 |
| UV Black Nylon | | | | | | | MS3367-16-0 | 50 | IT14H-L0 |
| UV Black Nylon | 22.8 in./579mm | .50 in./12.7mm | .080 in./2.03mm | 3/16-6 in. | 250 lbs. | — | 100 | IT6EH-C0 | |

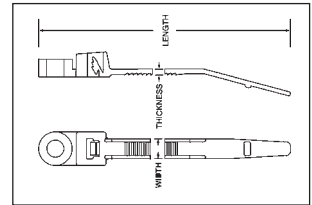
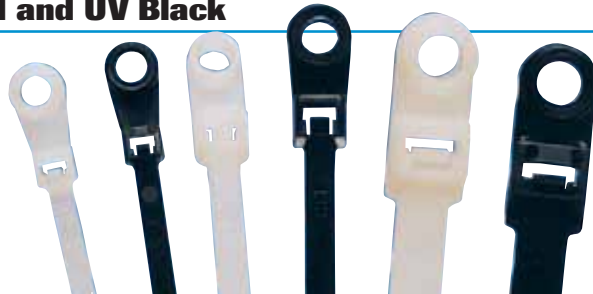
*4LH, 7H, 10H, 11H, 14H Series





Mounting Head Ties Natural and UV Black

- Secures and positions wire bundles, cables, hoses, etc. to panels or other surfaces with one fastener to reduce time and cost
- Allows bundling before and after mounting



| Description | Length | Width | Strap Thickness | Max. Bundle | Tensile Strength | Screw Size | Qty./Bag | Cat. No. |
|----------------|----------------|-----------------|-----------------|-------------------|------------------|------------|----------|--------------------|
| Natural Nylon | 6.0 in./152mm | .140 in./3.55mm | .048 in./1.21mm | 1/16 - 1-1/4 in. | 30 lbs. | No. 8 | 100 | IT1_5IMH-C |
| UV Black Nylon | | | | | | | 100 | IT1_5IMH-C0 |
| Natural Nylon | 8.1 in./206mm | .178 in./4.52mm | .053 in./1.35mm | 1/16 - 1-3/4 in. | 50 lbs. | No. 10 | 100 | IT2SMH-C |
| Natural Nylon | | | | | | | 1000 | IT2SMH-M |
| UV Black Nylon | | | | | | | 100 | IT2SMH-C0 |
| Natural Nylon | 11.8 in./300mm | .189 in./4.80mm | .050 in./1.27mm | 1/16 - 3 in. | 50 lbs. | No. 10 | 100 | IT3SMH-C |
| UV Black Nylon | | | | | | | 100 | IT3SMH-C0 |
| Natural Nylon | 14.5 in./370mm | .189 in./4.80mm | .060 in./1.52mm | 1/16 - 4 in. | 50 lbs. | No. 10 | 100 | IT4SMH-C |
| Natural Nylon | 15.7 in./398mm | .300 in./7.62mm | .075 in./1.90mm | 3/16 - 4-1/16 in. | 120 lbs. | 1/4 in. | 100 | IT4LHMH-C |
| UV Black Nylon | | | | | | | 100 | IT4LHMH-C0 |

*4LH Series; **2S Series

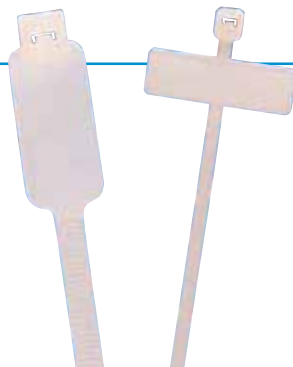
UL Listed Nylon 6/6 cable ties are suitable for use in air handling spaces in accordance with Section 300-22(C) & (D) of the National Electrical Code.



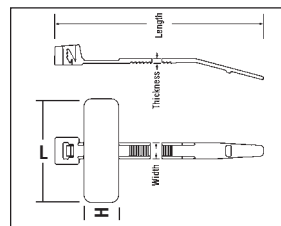
Cable Ties

Identification Ties

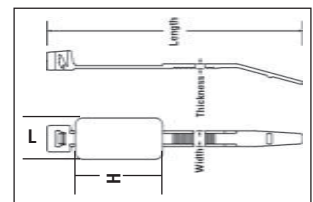
- Write-on surface
- Bundle and identify at the same time



IT1MID-C



IT2SID-C & IT4SID-C

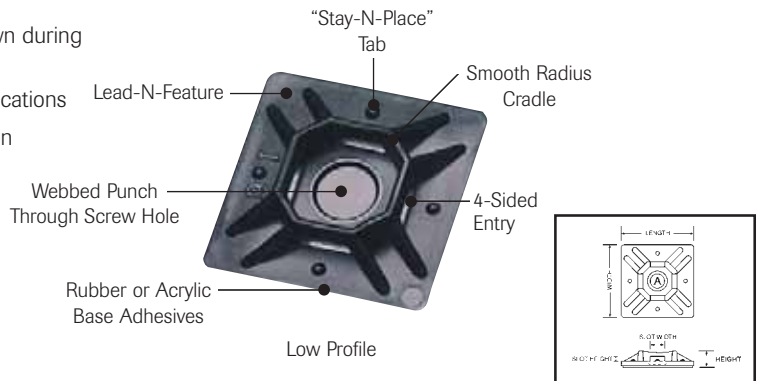


| Description | Length | Width | Thickness | Max. Bundle | Tensile Strength | Pad Size (H X L) | Qty./Bag | Cat. No. |
|---------------|----------------|-----------------|-----------------|------------------|------------------|---------------------|----------|-----------------|
| Natural Nylon | 4.0 in./102mm | .100 in./2.54mm | .044 in./1.12mm | 1/16 - 7/8 in. | 18 lbs. | 5/16 in. x 1 in. | 100 | IT1MID-C |
| Natural Nylon | 7.8 in./200mm | .181 in./4.59mm | .055 in./1.40mm | 1/16 - 1-7/8 in. | 50 lbs. | 1-1/8 in. x 1/2 in. | 100 | IT2SID-C |
| Natural Nylon | 14.1 in./358mm | .187 in./4.75mm | .055 in./1.40mm | 3/8 - 4 in. | 50 lbs. | 1-1/8 in. x 1/2 in. | 100 | IT4SID-C |

Wire Management

Mounting Pads

- Patented stay-in-place tab keeps cable ties from sliding down during vertical applications
- Lead-N-Feature allows easy insertion for hard to reach applications
- Four-sided entry slots save time during placement orientation
- Smooth radius cradle eliminates possible damage to cable while providing stable support
- Webbed punch through screw hole allows maximum adhesive surface area, along with easy insertion of mechanical fasteners
- Low Profile is essential in confined spaces
- UL recognized, rubber adhesive positioning device

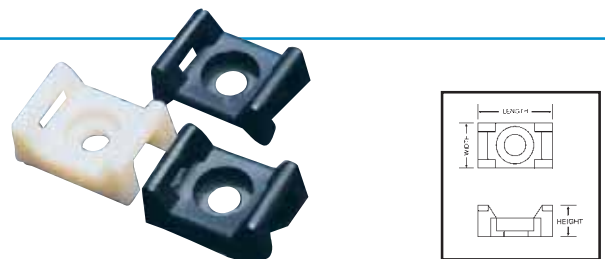


| Description | Width | Height | Slot Height | Slot Width | Screw Size | Qty./Bag | Cat. No. |
|----------------|--------------|---------------|---------------|---------------|------------|----------|--------------------|
| Natural Nylon | .74 in./19mm | .19 in./4.8mm | .05 in./1.2mm | .20 in./5.1mm | No. 4 | 100 | IT750MP-C |
| UV Black Nylon | | | | | | 100 | IT750MP-C0 |
| Natural Nylon | .99 in./25mm | .20 in./5.0mm | .06 in./1.5mm | .20 in./5.1mm | No. 6 | 100 | IT1000MP-C |
| UV Black Nylon | | | | | | 100 | IT1000MP-C0 |



Screw Mounting Bases - Standard

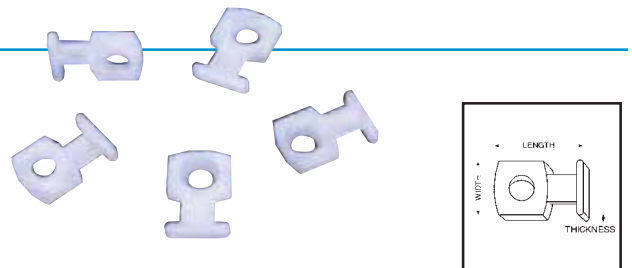
- Deep cradle design provides minimum support for larger bundles and tubing
- Recessed screw hole allows cable ties to easily pass over screw head



| Description | Length | Width | Height | Slot Height | Slot Width | Screw Size | Qty./Bag | Cat. No. |
|----------------------------|---------------|------------------|-----------------|-----------------|-----------------|------------|----------|------------------|
| Screw Mount Natural Nylon | .590 in./15mm | .370 in./9.40mm | .270 in./6.86mm | .062 in./1.59mm | .190 in./4.83mm | No. 6 | 100 | IT1SMB-C |
| Screw Mount UV Black Nylon | | | | | | | 100 | IT1SMB-C0 |
| Screw Mount Natural Nylon | .870 in./22mm | .640 in./16.26mm | .380 in./9.65mm | .125 in./3.18mm | .300 in./7.62mm | 1/4 in. | 100 | IT2SMB-C |
| Screw Mount UV Black Nylon | | | | | | | 100 | IT2SMB-C0 |

Screw Mounting Bases - Low Profile

- Perfect for confined space, control panels or other areas where space is limited



| Description | Length | Width | Height | Slot Height | Slot Width | Screw Size | Qty./Bag | Cat. No. |
|-------------------|---------------|------------------|-----------------|-----------------|-----------------|------------|----------|------------------|
| Low Profile Mount | .750 in./19mm | .500 in./12.70mm | .120 in./3.04mm | .062 in./1.57mm | .180 in./4.57mm | No. 8 | 100 | IT1LPMB-C |



Material Specifications

Nylon 6/6 - General Purpose

General purpose nylon 6/6 features lightweight, high-strength and a wide-temperature range. Even at higher than recommended temperatures or exposure to flame, nylon does not give off toxic or irritating by-products. Nylon 6/6 is hydroscopic and, therefore, absorbs or releases moisture depending on its environment. Moisture level of the material will affect tensile strength, stiffness and elongation of the product.

Nylon 6/6 - UV Stabilized

General purpose nylon 6/6 with increased resistance to ultraviolet light. Carbon black is one of the most effective stabilizers known today. A uniform dispersion of carbon black provides good ultraviolet light resistance without adversely affecting physical properties. The addition of carbon black, or any other ultraviolet light stabilizer, prolongs the useful life of plastic products used outdoors, but it does not totally eliminate the destructive effects of the light.

Halar®

Although weaker than general-purpose nylon 6/6 (about 37%), Halar is resistant to a wide range of chemicals such as concentrated hydrofluoric and sulfuric acids. It is radiation resistant. Halar also withstands high temperatures, ultraviolet light exposure and meets U.L. flammability requirement 94V-0. Its outstanding characteristic is a lower smoke density when burned. This makes Halar more desirable for use in areas where smoke generation is a concern.

Nylon 6/6 - Heat Stabilizer

Used for continuous or extended exposure to high temperatures (up to 250°F). They contain specially formulated heat stabilizers to provide additional thermal endurance to prevent reduction in physical properties and fatigue as a result of high temperatures. Heat stabilized nylon meets the UL standard for electrical applications.

Military Cross Reference

| Material | Continuous Operating Temp. | | Tensile AT 73F ASTM D-638 | UL Flame Rating | Radiation Resistance | UV Resistance |
|-----------------------------|----------------------------|------------------|------------------------------|-----------------|----------------------|---------------|
| | Max. | Min. | | | | |
| Nylon 6/6 – General Purpose | 185° F 85° C | -40° F -40° C | 12,000 | 94V-2 | 1 X 10 Rads | Poor |
| Nylon 6/6 – UV Stabilized | 185° F 85° C | -40° F -40° C | 12,000 | 94V-2 | 1 X 10 Rads | Very Good |
| Nylon 6/6 – Heat Stabilized | 220° F 105° C | -40° F -40° C | 12,000 | 94V-2 | 1 X 10 Rads | Very Good |
| Halar® | 284° F 140° C | -50° F -46° F | 7,500 | 94V-0 | 1 X 10 Rads | Excellent |

| Current MIL Std. Part Number* | Cable Tie Part Number |
|-------------------------------|-----------------------|
| MS3367-1-* | IT2S-* |
| MS3367-2-* | IT4S-* |
| MS3367-3-* | IT4LH-* |
| MS3367-4-* | IT1M-* |
| MS3367-5-* | IT1.5I-* |
| MS3367-5-* | IT2L-* |
| MS3367-7-* | IT3S-* |
| MS3367-10-* | IT7H-* |
| MS3367-13-* | IT11H-* |
| MS3367-16-* | IT14H-* |

*Color and package denotation

Material Suitability Chart (10 = most suitable, 1 = least suitable)

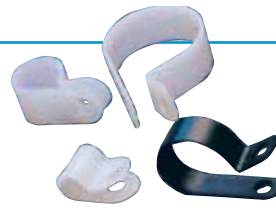
| Design Criteria | Weather Natural 6.6 Nylon | Heat Stabilized Resistant 6.6 Nylon | Black 6.6 Nylon | Halar® |
|------------------------------------|---------------------------|-------------------------------------|-----------------|--------|
| Part # Suffix Material Designation | | -0 | -30 | -702 |
| Loop Tensile Strength | 7 | 7 | 7 | 5 |
| Low Temperature Service | 6 | 6 | 6 | 7 |
| High Temperature Service | 5 | 5 | 6 | 7 |
| Flammability | 6 | 6 | 6 | 9 |
| Ultraviolet Resistance | 1 | 6 | 4 | 9 |
| Radiation Resistance | 3 | 3 | 3 | 9 |
| Overall Chemical Resistance | 6 | 6 | 6 | 10 |
| - Hydrocarbons | 9 | 9 | 9 | 10 |
| - Chlorinated Hydrocarbons | 7 | 7 | 7 | 10 |
| - Acids | 2 | 2 | 2 | 10 |
| - Bases | 7 | 7 | 7 | 10 |
| - Salts | 3 | 3 | 3 | 10 |
| Relative Price | Low | Low | Low | High |

*Halar® is a trademark of Ausimont Chemical Co.

Wire Management

Clamps

- Use to secure wires, cables, pipes, tubing and fiber optics
- Ultraviolet black nylon clamps available for internal and external use
- Use with #10 mounting screw



| Description | Closed Diameter | Center to Center | Width | Thickness | Mounting Hole | Qty./Bag | Cat. No. |
|----------------|-------------------|------------------|---------|-----------------|-----------------|----------|---------------------|
| Natural Nylon | .125 in./3.18mm | .343 in./8.71mm | 3/8 in. | .050 in./1.27mm | .203 in./5.16mm | 100 | IT125CCL-C |
| Natural Nylon | .250 in./6.35mm | .421 in./10.69mm | 3/8 in. | .050 in./1.27mm | .203 in./5.16mm | 100 | IT250CCL-C |
| UV Black Nylon | | | | | | 100 | IT250CCL-C0 |
| Natural Nylon | .375 in./9.52mm | .500 in./12.70mm | 1/2 in. | .060 in./1.52mm | .203 in./5.16mm | 100 | IT375CCL2-C |
| UV Black Nylon | | | | | | 100 | IT375CCL2-C0 |
| Natural Nylon | .500 in./12.70mm | .553 in./14.05mm | 1/2 in. | .060 in./1.52mm | .203 in./5.16mm | 100 | IT500CCL2-C |
| Natural Nylon | .625 in./15.88mm | .625 in./15.88mm | 1/2 in. | .060 in./1.52mm | .203 in./5.16mm | 100 | IT625CCL2-C |
| Natural Nylon | .750 in./19.05mm | .699 in./17.75mm | 1/2 in. | .060 in./1.52mm | .203 in./5.16mm | 100 | IT750CCL2-C |
| Natural Nylon | 1.000 in./25.40mm | .825 in./20.96mm | 1/2 in. | .060 in./1.52mm | .203 in./5.16mm | 100 | IT1000CCL2-C |

Flange-Type Plastic Anchors



- Multi-purpose use in solid materials or hollow walls, will not fall through
- For use with sheet-metal or wood screws
- High-impact plastic construction resists moisture, corrosion and deterioration

| Description | Screw Size | Drill Size (In.) | Quantity | Cat. No. |
|------------------------|------------|------------------|----------|---------------|
| Yellow – 7/8 in. long | 6-8-10 | 3/16 | 100 | 90-041 |
| Red – 1 in. long | 10-12 | 1/4 | 100 | 90-042 |
| White – 1-1/2 in. long | 14-16 | 5/16 | 50 | 90-044 |

Flange-Type Plastic Anchor Kits



- Kits include flange-type anchors, slotted/Phillips head screws and masonry bit
- Convenient plastic storage container

| Contents | Cat. No. |
|---|---------------|
| 100 #6-8-10 x 7/8 in. Flange-type anchors, 100 #8 x 1 in. combo-head, sheet-metal screws & 1-3/16 in. masonry bit (carbide-tipped) | 90-051 |
| 100 #10-12 x 1 in. Flange-type anchors, 100 #10 x 1-1/4 in. combo-combo-head, sheet-metal screws & 1-1/4 in. masonry bit (carbide-tipped) | 90-052 |
| 100 #10-12 x 1 in. Flange-type anchors, 100 #12 x 1 in. combo-head, sheet-metal screws & 1-1/4 in. masonry bit (carbide-tipped) | 90-053 |
| 40 #14-16 x 1-1/2 in. Flange-type anchors, 40 #14 x 1-1/2 in. combo-head, sheet-metal screws 1-5/16 in. masonry bit (carbide-tipped) | 90-054 |
| 100 #10-12 x 1 in. Flange-type anchors, 100 #10 x 1 in. combo-head, sheet-metal screws & 1-1/4 in. masonry bit (carbide-tipped) | 90-055 |

Flexible Tubing*

- Flexible polyethylene cuts easily to desired length
- Splits open for neat “bundling” of wiring jobs
- Snaps shut to create a continuous protective cover

| Description | Qty. | Cat. No. |
|-------------------------|-----------|---------------|
| 3/8 in. Flexible Tubing | 10 ft. | 772240 |
| 3/8 in. Flexible Tubing | 1,200 ft. | 772245 |
| 1/2 in. Flexible Tubing | 1 ft. | 772241 |
| 1/2 in. Flexible Tubing | 900 ft. | 772244 |
| 1 in. Flexible Tubing | 5 ft. | 772242 |
| 1 in. Flexible Tubing | 250 ft. | 772243 |

*Buchanan branded



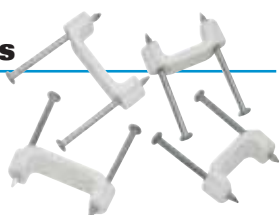
Cable Staples

- Full line of quality insulated and non-insulated staples to fit all cabling applications
- Packaged to answer electrician's need for clean, dry, rust-free staples
- Convenient reclosable containers keep staples organized in the truck and on the job-site



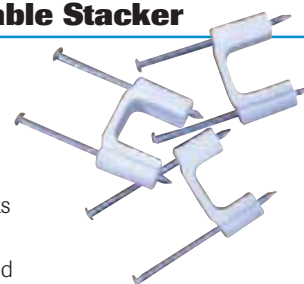
Plastic Insulated Staples

- Use with wider cable such as Romex®, NM and UF
- Smooth plastic saddle prevents damage to cable
- Zinc-plated nails resist rust and corrosion



Plastic Insulated Cable Stacker

- Use with wider cable such as Romex®, NM and UF
- High-grade carbon steel construction
- Smooth plastic saddle prevents damage to cable
- Zinc-plated nails resist rust and corrosion



| Description | Qty./Package | Cat. No. |
|-------------------|---------------|-----------------|
| 1/2 in. Insulated | 50/Bag | BPS2-50 |
| | 100/Bag | BPS2-1 |
| | 225/Jar | BPS2-JRL |
| | 400/Jar | BPS2B-JR |
| | 500/Bag | BPS2-5 |
| | 5,000/Bucket | BPS2-5M |
| | 30,000/Barrel | BPS2-30K |
| 3/4 in. Insulated | 50/Bag | BPS3-50 |
| | 100/Bag | BPS3-1 |
| | 200/Jar | BPS3-JRL |
| | 250/Bag | BPS3-2 |

| Description | Qty./Package | Cat. No. |
|-------------------------|--------------|------------------|
| 1/2 in. 2 Cable Stacker | 50/Bag | BPS2/2-50 |
| 1/2 in. 3 Cable Stacker | 50/Bag | BPS2/3-50 |
| 1/2 in. 4 Cable Stacker | 50/Bag | BPS2/4-50 |

Romex® is a registered trademark of General Cable Co.

Cable Stacker

- Perfect for centering multiple cables on 2 x 4 framing members in compliance with NEC 300.4.(2)
- Use with cable such Romex®, NM and UF

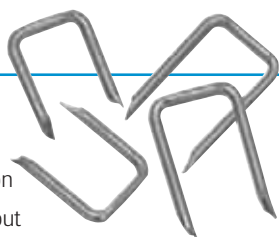


| Description | Qty./Package | Cat. No. |
|---------------|--------------|-------------------|
| Cable Stacker | 15 | BPSTCKR-15 |

Romex® is a registered trademark of General Cable Co.

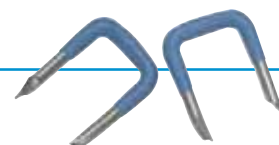
Carbon Steel Staples

- Use with wider cable such as Romex®, NM and UF
- High-grade carbon steel construction
- Sharp-point legs drive straight without splitting wood
- Resist rust and corrosion



Insulated Staples

- Use with wider cable such as Romex®, NM and UF
- High-grade carbon steel with flexible PVC insulation
- Sharp-point legs drive straight without splitting wood
- Resist rust and corrosion



| Description | Qty./Package | Cat. No. |
|----------------------|--------------|----------------|
| 1/2 in. x 1 in. | 100/Box | BCS1-1 |
| | 500/Jar | BCS1-JR |
| | 500/Box | BCS1-5 |
| | 5,000/Bucket | BCS1-5M |
| 9/16 in. x 1-1/4 in. | 100/Box | BCS2-1 |
| | 400/Jar | BCS2-JR |
| | 500/Box | BCS2-5 |
| | 5,000/Bucket | BCS2-5M |

| Description | Qty./Package | Cat. No. |
|----------------------|--------------|------------------|
| 1/2 in. x 1 in. | 125 | BICS1-125 |
| 9/16 in. x 1-1/4 in. | 125 | BICS2-125 |

Romex® is a registered trademark of General Cable Co.

Romex® is a registered trademark of General Cable Co.

Wire Management

Coaxial Cable Straps

- Use with round cable such as CATV/VCR, RG-5, RG-6 and phone cables or with plastic and metal tubing
- Smooth plastic saddle prevents damage to cable
- Zinc-plated nails resist rust and corrosion



| Description | Nail Type | Qty./Package | Cat. No. |
|-------------------|-----------|-----------------|------------------|
| 1/4 in. White | Standard | 25/Clamshell | 772808 |
| | | 100/Clamshell | 772809 |
| | | 250/Jar | BPCXSW-JR |
| 1/4 in. Black | Standard | 25/Clamshell | 772806 |
| | | 100/Clamshell | 772807 |
| | | 250/Jar | BPCXSB-JR |
| | Roofing | 25/Clamshell | 772891 |
| | | 200/Jar | BPCSRB-JR |
| | Masonry | 25/Clamshell | 772890 |
| 200/Jar | | BPCXMBJR | |
| Double 1/4" Black | Standard | 200/Jar | BPDCXSBJR |
| 7/16 in. White | Standard | 50/Bag | BPS4-50 |

Plastic Insulated Service Entrance Straps

- Use with service entrance cable and conduit
- Smooth plastic saddle prevents damage to cable
- Zinc-plated nails resist rust and corrosion



| Description | Qty./Package | Cat. No. |
|----------------------|--------------|------------------|
| #6 SER & 1/2 in. EMT | 50/Bag | BSER6-50 |
| #6 & #8 SEU | 50/Bag | BSEU6-50 |
| #2 SER & 3/4 in. EMT | 25/Bag | BSER2-25 |
| #2 SEU | 25/Bag | BSEU2-25 |
| 4/0 SER | 5/Bag | BSER4/0-5 |
| 4/0 SEU | 5/Bag | BSEU4/0-5 |

Data Cable Staples

- Secures Category 3, 5 and other 4-pair twisted wire
- Blue plastic saddle prevents damage to cable
- Zinc-plated nails resist rust and corrosion



| Description | Nail Type | Qty./Package | Cat. No. |
|-------------|-----------|---------------|-------------------|
| Data Staple | Standard | 25/Clamshell | 772880 |
| | Standard | 250/Jar | BPDATAS-JR |
| | Masonry | 250/Clamshell | 772881 |

Sound Straps

- Use with smaller insulated wire and cord applications such as lamps, thermostats, telephones and sound systems
- Smooth plastic saddle prevents damage to wires
- Zinc-plated nails resist rust and corrosion



| Description | Nail Type | Qty./Package | Cat. No. |
|----------------|-----------|---------------|------------------|
| 3/16 in. White | Standard | 25/Clamshell | 772804 |
| | | 100/Clamshell | 772805 |
| | | 250/Jar | BPLVSW-JR |
| 3/16 in. Black | Standard | 25/Clamshell | 772810 |
| | | 250/Jar | BPLVSB-JR |
| 3/16 in. Tan | Standard | 25/Clamshell | 772881 |
| 3/16 in. White | Masonry | 25/Clamshell | 772813 |

Carbon Steel Service Entrance Staples

- Use with service entrance cable and conduit
- High-grade carbon steel construction
- Sharp-point legs drive straight without splitting wood
- Resist rust and corrosion



| Description | Qty./Package | Cat. No. |
|------------------------|--------------|------------------|
| 1-5/16 in. x 3/4 in. | 100/Box | BMSE150-1 |
| 1-1/2 in. x 1-1/16 in. | 100/Box | BMSE175-1 |

Heat Shrinkable Tubing

Thermo-Shrink® UF Splice Kits

- Direct burial rated
- 14/3 with and without ground thru 8/3 without ground, UF cable range
- Stretcher kit repairs a 7 in. to 10 in. section damaged or destroyed by a trencher
- 600V Maximum, 105°C rating
- Meets the requirements of the 2002 NEC Code 110-14(b) and UL486D



| Description | Cat. No. |
|---|----------|
| UF Splice Kit - 14-8 AWG, Tubing 1.1 in. x 8 in. | 46-400 |
| UF Stretcher Kit* - 14-8 AWG, Tubing 1.1 in. x 18 in. | 46-410 |

*Stretcher kit connector is 11.5 in.

Thermo-Shrink® Al/Cu Splice Kits

- Direct burial rated, underground splice kits
- Heavy-wall heat shrink tubing with adhesive liner provides complete insulation and protection
- Connector can be used for aluminum and/or copper cable
- Meets the requirements of the 2005 NEC Code 110-14(B)
- 600V maximum, 105°C rating



| Description | Cat. No. |
|--|----------|
| Underground Splice Kit – 8 to 2 AWG, Tubing 3/4 in. x 6 in. | 46-401 |
| Underground Splice Kit – 4 AWG to 1/0, Tubing 1.1 in. x 8 in. | 46-402 |
| Underground Splice Kit – 1/0 to 250 KCMIL, Tubing 1-1/2 in. x 12 in. | 46-403 |

Thermo-Shrink® Copper Butt Splice Kits

- UL Listed
- Provides a fully-insulated butt splice
- 600V Maximum, 105°C rating



| Description | Cat. No. |
|-----------------------------------|----------|
| Butt Splice Kit – Copper 14-8 AWG | 46-404 |
| Butt Splice Kit – Copper 8-2 AWG | 46-405 |

Thermo-Shrink® Self-Sealing UF Splice Kit

- Fully waterproof, submersible and re-enterable to make future changes or repairs
- Meets the requirements of the 2002 NEC Code 110-14 (b) and UL486D
- Accommodates 14 to 10 AWG wire range
- 600V Maximum, 105°C rating



| Description | Cat. No. |
|----------------------------|----------|
| Self Sealing UF Splice Kit | 46-411 |

Thermo-Shrink® Torch

- Self-igniting trigger, starts fast and easy
- Fully adjustable regulator valve and air inlet port to achieve the ideal flame setting
- 1 in. wide brass burn-tip accommodates a variety of heat shrink applications
- Heavy duty, stainless steel burn tube, combined with a cast aluminum body with epoxy finish, creates a durable long lasting tool for almost any environment
- 1 - 20 threads screw directly onto 14 oz. and 16 oz. propane gas tanks



| Description | Cat. No. |
|-------------------|----------|
| Heat Shrink Torch | 46-420 |

Thermo-Shrink® Thin-Wall Heat Shrinkable Tubing

- Polyolefin material electrically insulates and protects in-line components, disconnect terminals and splices with its high strength and excellent resilience
- Use to bundle wires for very flexible light-duty harnesses
- Highly flame-retardant and flexible
- Resistant to common fluids and solvents
- Meets UL 224 125°C VW-1 600V
- Material: No PBB's, PBBE's, conforms to ROHS
- 2:1 shrink ratio
- Minimum shrink temperature: 70°C
- Operating temperature: -55°C to +125°C



| Technical Data | | |
|---|-------------|-----------------------|
| Property | Test Method | Typical Data |
| Tensile strength | ASTM D 638 | 14MPa |
| Elongation at break | ASTM D 638 | 600% |
| Elongation after aging at 175°C for 168 hours | UL 224 | 350% |
| Flammability | UL 224 VW-1 | Pass |
| Heat shock (250°C/4 hours) | UL 224 | No cracking |
| Cold bend test (-55°C/4 hours) | UL 224 | No cracking |
| Dielectric strength | ASTM D 150 | 20KV/mm |
| Volume resistance | ASTM D 876 | 10 ¹⁴ Ω.cm |
| Copper corrosion | UL 224 | Pass |
| Chemical resistance | UL 224 | Pass |
| Longitudinal shrinkage | UL 224 | 0±5% |
| Eccentricity | UL 224 | 30% |

| Normal Size (In.) | Expanded I.D. (Min.) | Nominal Recovered I.D. (Max.) | Recovered Wall Thickness +/-10% | Cable Range* | Length | Pkg. Type | Cat. No. |
|-------------------|----------------------|-------------------------------|---------------------------------|--------------|-----------------------------|----------------------|---|
| 3/64 | 0.063"/1.6mm | 0.024"/0.6mm | 0.013"/0.33mm | 22-18 AWG | 4 ft. | Disk | 46-600 |
| 1/16 | 0.079"/2.0mm | 0.031"/0.8mm | 0.014"/0.36mm | 16 AWG | 4 ft. | Disk | 46-601 |
| 3/32 | 0.122"/3.1mm | 0.047"/1.2mm | 0.017"/0.44mm | 14-12 AWG | 4 ft. | Disk | 46-602 |
| 1/8 | 0.146"/3.7mm | 0.063"/1.6mm | 0.017"/0.44mm | 24-20 AWG | 6 in. 4 ft. 1,000 ft. | Bag Disk Spool | 46-310 46-603 46-312 |
| 3/16 | 0.205"/5.2mm | 0.094"/2.4mm | 0.020"/0.50mm | 20-14 AWG | 6 in. 4 ft. 1,000 ft. | Bag Disk Spool | 46-313 46-604 46-315 |
| 1/4 | 0.268"/6.8mm | 0.126"/3.2mm | 0.022"/0.56mm | 14-8 AWG | 6 in. 4 ft. 500 ft. | Bag Disk Spool | 46-316 46-605 46-318 |
| 5/16 | 0.346"/8.8mm | 0.157"/4.0mm | 0.022"/0.56 mm | 10-6 AWG | 4 ft. | Disk | 46-606 |
| 3/8 | 0.421"/10.7mm | 0.185"/4.7mm | 0.022"/0.56mm | 8-4 AWG | 6 in. 4 ft. 200 ft. | Bag Disk Spool | 46-319 46-607 46-321 |
| 1/2 | 0.539"/13.7mm | 0.252"/6.4mm | 0.026"/0.65mm | 4-1 AWG | 6 in. 4 ft. 200 ft. | Bag Disk Spool | 46-322 46-608 46-324 |
| 3/4 | 0.807"/20.5mm | 0.374"/9.5mm | 0.027"/0.69mm | 2-250 MCM | 6 in. 4 ft. 200 ft. | Bag Disk Spool | 46-325 46-609 46-327 |
| 1 | 1.043"/26.5mm | 0.500"/12.7mm | 0.031"/0.80mm | 2/0-500 MCM | 6 in. 4 ft. 100 ft. | Bag Disk Spool | 46-328 46-610 46-330 |

*Reference only - Consult the wire manufacturer's catalog for specific O.D. of wire and insulation.

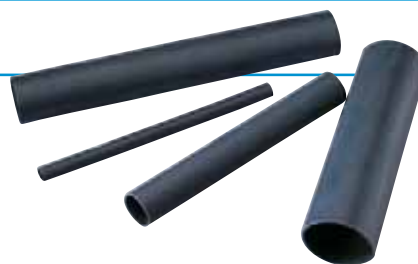


Heat Shrink



Thermo-Shrink® Heavy-Wall Heat Shrinkable Tubing

- TS-46 irradiated cross-linked polyolefin with 3:1 standard shrink ratio
- Adhesive liner provides complete insulation and protection to electrical splices in above-grade, underground or underwater applications
- Maximum flame retardancy
- Meets UL 486D, CSA C22.2 No. 198.2, ANSI C119.1, Western Underground Guides Nos. 2.4, 2.5, MIL-DTL-23053/15, IEEE 383 Vertical Flame Test, ANSI C37.20.2, ICEA S-19-8 and NEMA insulation thickness requirements
- Continuous operating temperature from -55°C to 110°C
- Rated for 600V, 90°C continuous use
- Shrink temperature of 120°C



| Model | Expanded I.D. (Min.) (In.) | Recovered I.D. (Max.) (In.) | Nominal Recovered Wall Thickness (In.) | Cable Range* | Length (In.) | Cat. No. |
|------------|----------------------------|-----------------------------|--|-------------------|--------------|---------------|
| TS-46-400 | .400 | .150 | .060 | 12-6 AWG | 6 | 46-343 |
| | | | | | 9 | 46-344 |
| | | | | | 48 | 46-346 |
| TS-46-750 | .750 | .240 | .090 | 8-1/0 AWG | 6 | 46-347 |
| | | | | | 9 | 46-348 |
| | | | | | 48 | 46-350 |
| TS-46-1100 | 1.100 | .350 | .120 | 2-4/0 AWG | 6 | 46-351 |
| | | | | | 9 | 46-352 |
| | | | | | 48 | 46-354 |
| TS-46-1500 | 1.500 | .470 | .160 | 3/0 AWG-400 KCMIL | 9 | 46-356 |
| | | | | | 12 | 46-357 |
| | | | | | 48 | 46-358 |
| TS-46-2000 | 2.000 | .630 | .160 | 250-750 KCMIL | 9 | 46-369 |
| | | | | | 18 | 46-371 |
| | | | | | 48 | 46-372 |

*Reference only. Consult the wire manufacturer's catalog for specific O.D. of wire and insulation.

| Properties | Heavy Wall |
|--|------------------------------------|
| Shrink Temperatures | 120°C to 250°C (200°C recommended) |
| Continuous Operating Temperature | -55°C to 110°C |
| Tensile Strength (PSI) | 2,100 PSI min. |
| Ultimate Elongation | 600% min. |
| Secant Modulus @ 2% Strain | 25,000 PSI max. |
| Specific Gravity | 1.20 max. |
| Heat Aging, 168 hrs. @ 175°C Tensile Strength Elongation | 500% |
| Heat Shock, 4 hrs. @ 225°C | No cracks, flowing or dripping |
| Flammability | Self-extinguishing |
| Low Temperature Brittle Point | -55°C |
| Volume Resistivity | 10 ¹³ ohm-cm min. |
| Dielectric Strength | 500V/mil (20kV/min.) |
| Corrosive Effect | Non-corrosive |
| Solvent Resistance 24 hrs. Immersion per MIL-DTL-23053 | Good to excellent |
| Water Absorption | 0.5% |
| Fungus Resistance | No growth |
| Longitudinal Change, 3 min. | +1%/-10% |

All values are typical performance data and are not to be used as design data.



Thermo-Shrink® Medium-Wall Heat Shrinkable End Caps

- Creates a watertight seal to protect the ends of power and control cords
- Effectively offers protection against oxidation, ozone, UV radiation, etc.
- Coated with hot melt adhesive to ensure environment seal
- Fits easily over end of cable
- Protect power cables up to 1000V and telecommunication cable
- Recommended for both open air and underground power distribution cables with PVC, lead or XLPE sheaths
- Thermally stabilized cross-linked polyolefin, coated with specially designed hot melt adhesive



| Technical Data | | |
|---------------------------------|-----------------|-----------------------|
| Property | Test Method | Typical Data |
| Operating Temperature | IEC 216 | -55°C to +110°C |
| Tensile Strength | ASTM D 638 | >14 MPa |
| Elongation at break | ASTM D 638 | >400% |
| Density | ASTM D 792 | 1.05g/cm ³ |
| Elongation of break after aging | 150°C, 168 hrs. | >300% |
| Dielectric Strength | IEC 243 | >15KV/mm |
| Volume Resistance | IEC 93 | 10 ¹⁴ Ω.cm |

| Expanded I.D. (Min.) | Recovered I.D. (Max.) | Recovered Wall Thickness +/-10% | Cable Dia. Range* | Length (In.) | Cat. No. |
|----------------------|-----------------------|---------------------------------|--------------------------|--------------|---------------|
| 0.55"/14mm | 0.18"/4.5mm | 0.079"/2.0mm | 0.20"/5mm - 0.47"/12mm | 1.77/45mm | 46-381 |
| 0.98"/25mm | 0.31"/8mm | 0.091"/2.3mm | 0.39"/10mm - 0.71"/18mm | 2.76/70mm | 46-382 |
| 1.38"/35mm | 0.59"/15mm | 0.118"/3.0mm | 0.67"/17mm - 1.18"/30mm | 3.35/85mm | 46-383 |
| 2.95"/75mm | 1.38"/35mm | 0.138"/3.5mm | 1.77"/45mm - 2.76"/70mm | 5.12/130mm | 46-384 |
| 4.72"/120mm | 2.36"/60mm | 0.157"/4.0mm | 2.95"/75mm - 4.33"/110mm | 6.10/155mm | 46-387 |

*Consult the wire manufacturer's catalog for specific O.D. of wire and insulation.

1-800-435-0705 for Customer Service

Wire Management

Thermo-Shrink® Heat Shrink Kit

Kit includes:

- Heat Elite Pro Heat Gun
- Eleven sizes of thin-wall heat shrinkable tubing disks (3/64 in. – 1 in.)
- Small deflector
- Premium T®-Cutter Wire Cutter



| Description | Cat. No. |
|---|---------------|
| Kit includes: 46-203, 45-223, 46-941, & 46-600 through 46-610 | 46-007 |

Heat Elite Heat Gun Kit

- Temperature range – 930°F (500°C)
- Two-step switch for heat and air flow adjustments
- Double-insulated power cord
- Ergonomical distribution of weight
- Comfortable non-slip handle for ease of use



| Description | Cat. No. |
|--|---------------|
| Heat Elite Kit - Includes #46-202 Heat Gun, #46-941 Small Deflector, and #46-954 Wide-Slot Adapter | 46-202 |



Heat Elite Pro Heat Gun Kit

- Temperature range – 180°F - 1020°F (100 - 550°C)
- Two-step switch for heat and air flow adjustments
- Double-insulated power cord
- Ergonomical distribution of weight
- Comfortable non-slip handle for ease of use
- Potentiometer for infinitely temperature adjustment



| Description | Cat. No. |
|--|---------------|
| Heat Elite Pro Kit - Includes #46-203 Heat Gun, #46-941 Small Deflector, #46-950 Reduction Adapter and #46-954 Wide-Slot Adapter | 46-203 |



Heat Elite Plus LCD Heat Gun Kit

- Temperature range – 180°F - 1200°F (80 - 650°C)
- Double-insulated power cord
- Ergonomical distribution of weight
- Comfortable non-slip handle for ease of use
- LCD display with memory functions
- Temperature and airflow adjustments
- Stand-by mode to minimize the energy consumption
- Ceramic heating element ensures long-term coil performance



| Description | Cat. No. |
|---|---------------|
| Heat Elite Plus LCD Kit - Includes #46-204 Heat Gun, #46-941 Small Deflector, #46-952 Welding Adapter, #46-953 Solder Reflector Adapter, #46-955 Overlap Welding Adapter, #46-956 Pressure Roller | 46-204 |



Heat Gun Accessories



| Description | Cat. No. |
|---|---------------|
| Small Deflector, 1-1/4 in. diameter (For use with all Heat Elite Heat Guns) | 46-941 |
| Reduction Adapter (For use with 46-203 and 46-204) | 46-950 |
| Glass Protection Adapter (For use with all Heat Elite Heat Guns) | 46-951 |
| Welding Adapter (For use with 46-203 and 46-204) | 46-952 |
| Solder Reflector Adapter (For use with 46-204) | 46-953 |
| Wide-Slot Adapter (For use with all Heat Elite Heat Guns) | 46-954 |
| Overlap Adapter (For use with 46-203 and 46-204) | 46-955 |
| Pressure Roller (For use with 46-204) | 46-956 |



Wire Marker Booklets



- Convenient pocket-size booklets
- Plastic-impregnated cloth construction for long-lasting durability
- Resists abrasion, moisture, dirt and oil
- Perforated 1/4 in. x 1-1/2 in. markers can be separated into half-length sizes
- Non-smear black legend ensures high visibility
- Self-sticking on wire and cable
- For applications above or below ground

Specifications:

Temperature Range: -40°F to 180°F (-40°C to 82°C)
Adhesion: 45 oz./in. width ultimate

Load Centers

- Contains common household legends – bedroom, living room, dryer, water heater, security system, etc.



| Description | Cat. No. |
|---------------------------------|---------------|
| Load Center Wire Marker Booklet | 44-154 |

Legend Assortments*

| Legend | Qty. | Cat. No. |
|---|--|---------------|
| 0-9 | 45 Markers each | 44-101 |
| A-Z +, -, / | 10 Markers each | 44-102 |
| 1-45 | 10 Markers each | 44-103 |
| 46-90 | 10 Markers each | 44-104 |
| 1, 2, 3 | 150 Markers each | 44-105 |
| A, B, C | 150 Markers each | 44-106 |
| A-Z** | 45 Markers each | 44-148 |
| T1, T2, T3 | 150 Markers each | 44-107 |
| L1, L2, L3 | 150 Markers each | 44-108 |
| 1-15 16-90 A-Z +, -, /, 0 | 6 Markers each 4 Markers each 2 Markers each 2 Markers each | 44-109 |
| 1, 2, 3 A, B, C T1, T2, T3 L1, L2, L3 | 45 Markers each 45 Markers each 30 Markers each 30 Markers each | 44-110 |
| +, -, AC, DC POS, NEG, GND NEUT SPARE, BLANK | 45 Markers each 33 Markers each 27 Markers each 21 Markers each | 44-111 |

*Ten pages per booklet with each page bearing the legend assortment indicated. All booklets (except 44-111) contain 450 wire markers and 450 terminal markers. Booklet 44-111 includes 348 wire markers and 348 terminal markers.

**Booklet 44-148 contains 26 pages, one page of 45 markers per letter, 1170 total markers.

Write-On Marker Booklets*

- Use for developing personal identification systems
- Surface accepts pen, pencil or rubber stamp



| Marker Size* (In.) | Markers per page | Pages per book | Cat. No. |
|--------------------|------------------|----------------|---------------|
| 1 x 2-1/2 | 6 | 10 | 44-151 |
| 1 x 5 | 3 | 10 | 44-152 |

*Write-on area for 2-1/2 in. markers is 3/4 in. x 1 in. Write-on area for 5 in. markers is 1 in. x 1 in. Adhesion: .25 oz./in. width ultimate

Wire Management

Write-On Marker Cards

- Use for developing personal identification systems
- Cloth write-on surface
- Accepts most writing instruments



| Marker Size (In.) | Markers per card | Cat. No. |
|-------------------|------------------|----------|
| 5/8 x 1-1/2 | 14 | 44-753 |

Marking Pens



- Fast-drying, permanent ink will not smear
- Use on write-on marker cards and write-on cable-tie marker plates
- Color-coded in red or black

| Description | Cat. No. |
|-------------------------|----------|
| Marking Pen w/black ink | 41-697 |
| Marking Pen w/red ink | 41-698 |

Wire Marker Cards

- Use for positive identification and keying of wires, terminal blocks, etc.
- Convenient pocket-size cards
- Bold, easy-to-read black characters
- Self-sticking on wire and cable
- Polyester film over laminate/cloth construction for long-term durability
- Resists abrasion, moisture, dirt and oil
- Individual markers measure approximately 1/4 in. x 1-1/2 in.

Specifications:

Temperature Range: -40°F to 180°F (-40°C to 82°C); Adhesion: 45 oz./in. width ultimate

| Legend | Markers per legend | Markers per card | Cat. No. |
|----------------|--------------------|------------------|----------|
| 0-9 (Repeated) | 3 | 30 | 43-953 |

Wire Marker Dispenser



- Convenient pocket-size case holds 10 wire marker rolls
- Dispenser tab holds tapes firmly in place – allows removal of proper tape length without waste
- Flip top for easy access and refill
- Built-in hook for hanging from belt or tool pouch
- High-quality adhesive and 3 mil. thickness provide long-lasting, low-profile application
- Each plastic reel holds Tyvek® tape

Specifications:

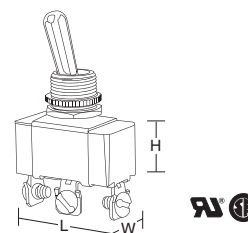
Temperature Range: -40°F to 180°F (-40°C to 82°C)
Adhesion: 25 oz./in. width ultimate

| Description | Cat. No. |
|---|----------|
| Dispenser w/0 through 9 legend rolls | 42-301 |
| Refill pack with 1 each of 0-9 legend rolls | 42-399 |



Standard and Heavy-Duty Toggle Switches

- Great for power tool and motor control switch applications
- Rugged long-wearing solid brass/nickel-plated bushings
- 1/2 in. diameter mounting hole
- Dielectric Strength: 1500V
- Mechanical Life: 100,000 cycles
- Operating Temperature: 32°F to 185°F (0°C to 85°C)
- DC Rating: Factory tested 100,000 cycles to 21 Amp 14.8 VDC
- Bulk packaging of 100 available upon request






| Product | Description | Poles | Circuitry | Termination Style | No. of Terminals | Rating | | | Dimensions (L" x W" x H") | Cat. No. |
|-----------|-------------------------------------|-------|------------------|-------------------|------------------|--------------|--------------|----------------|---------------------------|-----------|
| | | | | | | Amps 125 VAC | Amps 277 VAC | HP 125-250 VAC | | |
| | Toggle Switch with On-Off Faceplate | SPST | On-Off | Screw | 2 | 20 | 10 | 3/4 | 1.13 x .57 x .61 | 774011 |
| | | | | Spade | | | | | | 774011BK† |
| | Toggle Switch | | "O" Ring & Screw | 774008 | | | | | | |
| | | | (On)-Off | 774008BK† | | | | | | |
| | | | Screw | 774010 | | | | | | |
| | | | Screw | 774093 | | | | | | |
| | | | Screw | 774088 | | | | | | |
| 774088BK† | | | | | | | | | | |
| | Toggle Switch w/boot | SPST | On-Off | Wire leads w/boot | 2 | 20 | 20 | 1-1/2 | 1.18 x .68 x .75 | 774111 |
| | | | | | | | | | | 774111BK† |
| | Toggle Switch | SPDT | On-On | Screw | 3 | 20 | 10 | 3/4 | 1.13 x .57 x .61 | 774012 |
| | Toggle Switch | SPDT | On-On | Spade | 3 | 20 | 10 | 3/4 | 1.13 x .57 x .61 | 774100 |
| | Toggle Switch | SPDT | On-Off-On | Screw | 3 | 20 | 10 | 3/4 | 1.13 x .57 x .61 | 774013 |
| | Toggle Switch | SPDT | On-Off-On | Spade | 3 | 20 | 10 | 3/4 | 1.13 x .57 x .61 | 774013BK† |
| | Toggle Switch | SPDT | On-Off-(On) | Screw | 3 | 20 | 10 | 3/4 | 1.13 x .57 x .61 | 774027 |
| | Toggle Switch | SPDT | (On)-Off-(On) | Screw | 3 | 20 | 10 | 3/4 | 1.13 x .57 x .61 | 774094 |
| | Heavy-Duty Toggle Switch | DPST | On-Off | Screw | 4 | 20 | 10 | 1-1/2 | 1.30 x .76 x .80 | 774009 |
| | Heavy-Duty Toggle Switch | DPST | On-Off | Screw | 4 | 20 | 10 | 1-1/2 | 1.30 x .76 x .80 | 774014 |
| | Heavy-Duty Toggle Switch | DPST | On-Off | Spade | 4 | 20 | 10 | 1-1/2 | 1.30 x .76 x .80 | 774014BK† |
| | Heavy-Duty Toggle Switch | DPST | (On)-Off | Screw | 4 | 20 | 10 | 1-1/2 | 1.30 x .76 x .80 | 774005 |
| | Heavy-Duty Toggle Switch | DPST | On-(Off) | Screw | 4 | 20 | 10 | 1-1/2 | 1.30 x .76 x .80 | 774005BK† |
| | Heavy-Duty Toggle Switch | DPST | On-(Off) | Screw | 4 | 20 | 10 | 1-1/2 | 1.30 x .76 x .80 | 774103 |
| | Heavy-Duty Toggle Switch | DPST | On-(Off) | Screw | 4 | 20 | 10 | 1-1/2 | 1.30 x .76 x .80 | 774105 |

() denotes momentary action

†Bulk Package of 100

Wire Management

Standard and Heavy-Duty Toggle Switches

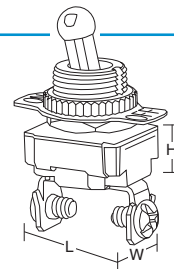
| Product | Description | Poles | Circuitry | Termination Style | No. of Terminals | Rating | | | Dimensions (L" × W" × H") | Cat. No. |
|---|--------------------------|-------|---------------|-------------------|------------------|--------------|--------------|----------------|----------------------------|-----------------------------------|
| | | | | | | Amps 125 VAC | Amps 277 VAC | HP 125-250 VAC | | |
|  | Heavy-Duty Toggle Switch | DPDT | On-On | Screw | 6 | 20 | 10 | 1-1/2 | 1.30 × .76 × .80 | 774015 774015BK† |
| | Heavy-Duty Toggle Switch | DPDT | On-On | Spade | 6 | 20 | 10 | 1-1/2 | 1.30 × .76 × .80 | 774091 774091BK† |
| | Heavy-Duty Toggle Switch | DPDT | (On)-On | Screw | 6 | 20 | 10 | 1-1/2 | 1.30 × .76 × .80 | 774028 774028BK† |
| | Heavy-Duty Toggle Switch | DPDT | On-Off-On | Screw | 6 | 20 | 10 | 1-1/2 | 1.30 × .76 × .80 | 774016 774016BK† |
| | Heavy-Duty Toggle Switch | DPDT | On-Off-On | Spade | 6 | 20 | 10 | 1-1/2 | 1.30 × .76 × .80 | 774003 774003BK† |
| | Heavy-Duty Toggle Switch | DPDT | (On)-Off-On | Screw | 6 | 20 | 10 | 1-1/2 | 1.30 × .76 × .80 | 774104 |
| | Heavy-Duty Toggle Switch | DPDT | (On)-Off-(On) | Screw | 6 | 20 | 10 | 1-1/2 | 1.30 × .76 × .80 | 774000 |
| | Heavy-Duty Toggle Switch | DPDT | (On)-Off-(On) | Spade | 6 | 20 | 10 | 1-1/2 | 1.30 × .76 × .80 | 774115 774115BK† |
|  | Toggle Switch | 3PST | On-Off | Screw | 6 | 15 | 10* | 3/4 | 1.31 × 1.09 × .80 | 774106 |
|  | Toggle Switch | 3PDT | On-On | Screw | 9 | 15 | 10* | 3/4 | 1.31 × 1.09 × .80 | 774089 774089BK† |
| | Toggle Switch | 3PDT | On-Off-On | Screw | 9 | 15 | 10* | 3/4 | 1.31 × 1.09 × .80 | 774092 |
|  | Toggle Switch | 4PST | On-Off | Screw | 8 | 15 | 10* | 3/4 | 1.31 × 1.44 × .80 | 774108 |
|  | Toggle Switch | 4PDT | On-On | Screw | 12 | 15 | 10* | 3/4 | 1.31 × 1.44 × .80 | 774109 |
| | Toggle Switch | 4PDT | On-Off-On | Screw | 12 | 15 | 10* | 3/4 | 1.31 × 1.44 × .80 | 774110 |



*250VAC, Dielectric strength: 1000V () denotes momentary action †Bulk Package of 100



Medium and Light-Duty Toggle Switches

- Great for household appliances and equipment
- Bat toggle switch, 774007, is ideal for battery-powered equipment including trimmers and lawn mowers
- Wire leads are #18 AWG, 6 in. stripped wire
- 1/2 in. diameter mounting hole
- Bulk packaging available upon request



| Product | Description | Poles | Circuitry | Termination Style | No. of Terminals | Rating | Dimensions (L" × W" × H") | Cat. No. |
|--|----------------------------------|-------|----------------|-------------------|------------------|---|---------------------------|---------------------|
|  | Bat Toggle with On-Off Faceplate | SPST | On-Off | Screw | 2 | 6 Amps 120 VAC, 3 Amps 240 VAC | .69 × .55 × .34 | 774017 774017BK† |
| | Bat Toggle with On-Off Faceplate | SPST | On-Off | Wire Leads | 2 | 4 Amps 250VAC/DC, 8 Amps 125VAC/DC, 10 Amps 125 VAC, 1/2 HP 125 VAC | .98 × .64 × .62 | 774018 |
| | Bat Toggle* | SPST | On-Term Ground | Spade | 1 | 21 Amps 14 VDC | .69 × .55 × .34 | 774007 |
|  | Short Ball Toggle Switch | SPST | On-Off | Screw | 2 | 6 Amps 120 VAC, 3 Amps 240 VAC | .69 × .55 × .34 | 774001 |
| | Short Ball Toggle Switch | SPST | On-Off | Wire Leads | 2 | 6 Amps 125 VAC, 3 Amps 250 VAC | .89 × .47 × .55 | 774002 774002BK† |

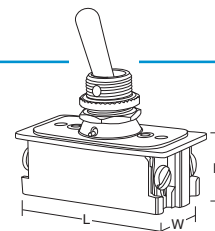



†Bulk Package of 100

*DC rating not CSA or RU listed

Extra Heavy-Duty AC/DC Toggle Switches

- The switch that can handle your heavy-duty requirements
- Quick-make/quick-break type switches are ideal for DC voltage applications
- Perfect for industrial motor control, with its sturdy metal construction and stiff actuation force, it will withstand the abuses of virtually any application
- Bulk packaging of 100 available upon request



| Product | Description | Poles | Circuitry | Termination Style | No. of Terminals | Rating | | | Dimensions (L" × W" × H") | Cat. No. |
|---|--------------------------|-------|-----------|-------------------|------------------|-----------|-----------|-------------|---------------------------|---------------------|
| | | | | | | Amps 125V | Amps 250V | HP 125-250V | | |
|  | Heavy-Duty Toggle Switch | SPST | On-Off | Screw | 2 | 16 | 8 | 1 | 1.75 × .84 × .76 | 774095 774095BK† |
| | Heavy-Duty Toggle Switch | DPST | On-Off | Screw | 4 | 16 | 8 | 1 | 1.75 × .84 × .76 | 774096 |
| | Heavy-Duty Toggle Switch | DPST | On-Off | Screw | 4 | 20 | 10 | 1-1/2 | 2.09 × 1.00 × .90 | 774097 |







†Bulk Package of 100

Wire Management

Toggle Switch Accessories

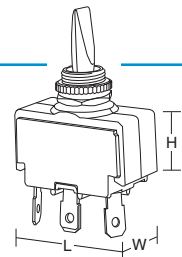
- These neoprene covers are great for outdoor and other environmentally tough conditions. They screw onto toggle switches to protect switches from moisture, dust and dirt.
- Nickel indicator plate fits easily on most toggle switches to identify the On-Off positions





| Product | Description | Mounting | Dimensions | Qty./Card | Cat. No. |
|---|----------------------------------|--------------------|-------------------------------------|-----------|-----------|
|  | Toggle Switch Cover | 15/32 - 32 NS-2B | .93 Height x .62 Base Dia. | 2 | 774020 |
| | | | | 100 | 774020BK† |
|  | Push Button Switch Cover (Clear) | 3/8 - 27 NS-2B | .59 Height x .60 Base Dia. x .34 ID | 2 | 774117 |
|  | Push Button Switch Cover (Gray) | 15/32 - 32 NS-2B | .72 Height x .62 Base Dia. x .42 ID | 2 | 774087 |
|  | Indicator Plate | 15/32 in. Diameter | 1.03 x .62 Hole Diameter | 10 | 774099 |

†Bulk Package of 100

Double Insulated Plastic Toggle Switches

- Great for outdoor, marine/recreational equipment, automotive and weather resistant applications
- Double-insulated with an internal "O" ring design for moisture and dust resistance
- 1/2 in. diameter mounting hole
- Bulk packaging available upon request



| Product | Description | Poles | Circuitry | Termination Style | No. of Terminals | Rating | | Dimensions (L" x W" x H") | Cat. No. |
|---|---|-------|---------------|-------------------|------------------|--------------|--------------|---------------------------|-----------|
| | | | | | | Amps 125 VAC | Amps 250 VAC | | |
|  | Double Insulated, Plastic Toggle Switch | SPST | On-Off | Screw | 2 | 20 | 10 | 1.37 x .76 x .94 | 774019 |
|  | Double Insulated, Plastic Toggle Switch | SPST | On-Off | Spade | 2 | 20 | 10 | 1.37 x .76 x .94 | 774098 |
|  | Double Insulated, Plastic Toggle Switch | SPDT | (On)-Off-(On) | Spade | 3 | 20 | 10 | 1.37 x .76 x .94 | 774004 |
| | | | | | | | | | 774004BK† |
|  | Double Insulated, Plastic Toggle Switch | DPDT | (On)-Off-(On) | Spade | 6 | 20 | 10 | 1.37 x .76 x .94 | 774006 |

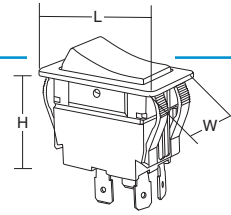
cRU[®]us[®] †Bulk Package of 100






() Denotes momentary action



Full-Size Rocker Switches

- For commercial appliances, industrial controls, automotive and marine applications
- Moisture- and dust-resistant
- Suitable for low-voltage DC applications
- Recommended .830 in. x 1.450 in. mounting hole, .125 in. panel thickness
- Operating temperature: 32°F to 185°F (0°C to 85°C)
- Bulk packaging available upon request



| Product | Description | Poles | Circuitry | Termination Style | No. of Terminals | Rating | | | Dimensions (L" x W" x H") | Cat. No. |
|---|--------------------------------|-------|---------------|-------------------|------------------|--------------|--------------|----------------|---------------------------|------------------|
| | | | | | | Amps 125 VAC | Amps 277 VAC | HP 110-250 VAC | | |
|  | Black Rocker Switch | SPST | On-Off | Spade | 2 | 20 | 15 | 2 | 1.70 x .97 x 1.09 | 774045 |
| | | | | | | | | | | 774045BK† |
|  | Black Rocker Switch | DPST | (On)-Off | Spade | 4 | 20 | 15 | 2 | 1.70 x .97 x 1.09 | 774120 |
| | Black Rocker Switch | DPST | On-(Off) | Spade | 4 | 20 | 15 | 2 | 1.70 x .97 x 1.09 | 774121 |
|  | Black Rocker Switch | DPDT | On-On | Spade | 6 | 20 | 15 | 2 | 1.70 x .97 x 1.09 | 774050 |
| | Black Rocker Switch | DPDT | (On)-On | Spade | 6 | 20 | 15 | 2 | 1.70 x .97 x 1.09 | 774122 |
| | Black Rocker Switch | DPDT | On-Off-On | Spade | 6 | 20 | 15 | 2 | 1.70 x .97 x 1.09 | 774040 |
| | | | | | | | | | | 774040BK† |
| | Black Rocker Switch | DPDT | (On)-Off-On | Spade | 6 | 20 | 15 | 2 | 1.70 x .97 x 1.09 | 774123 |
|  | Black Rocker Switch*** | DPDT | (On)-Off-(On) | Spade | 6 | 15 | 10* | 3/4** | 1.70 x .97 x 1.09 | 774054 |
| | | | | | | | | | | 774054BK† |
|  | Red Lighted Rocker*** Switch | DPST | On-Off | Spade | 4 | 15 | 10* | 3/4** | 1.70 x .97 x 1.09 | 774056 |
| | Amber Lighted Rocker*** Switch | DPST | On-Off | Spade | 4 | 15 | 10* | 3/4** | 1.70 x .97 x 1.09 | 774055 |

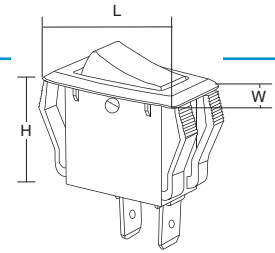








 () Denotes momentary action *Amps 250 VAC **HP 125-250VAC †Bulk package of 100

Wire Management

Appliance Rocker Switches

- Great for home appliances, computer equipment, automotive and industrial controls
- Appliance Rockers fit standard .55 in. x 1.12 in. panel cut outs
- Miniature Rockers fit .520 in. x .776 in. panel cut outs
- Plain and lighted versions available
- Operating temperature: 32°F to 185°F (0°C to 85°C)
- Bulk packaging of 100 available upon request



| Product | Description | Rocker | Poles | Circuitry | Termination Style | No. of Terminals | Ratings | Dimensions (L" x W" x H") | Cat. No. |
|---|---------------------------|--|-------|-----------|-------------------|------------------|---|---------------------------|---------------------|
|  | Appliance Rocker Switch | Black | SPST | On-Off | Spade | 2 | 16 Amp 1/3 HP 125 VAC, 10 Amp 1/2 HP 250 VAC | 1.24 x 68 x .77 | 774038 |
| | | | SPDT | On-On | Spade | 3 | | | 774049 |
| | | | SPDT | On-Off-On | Spade | 3 | | | 774049BK† 774059 |
|  | Appliance Rocker Switch | Red Lighted | SPST | On-Off | Spade | 3* | 16 Amp 1/3 HP 125 VAC, 10 Amp 1/2 HP 250 VAC | 1.24 x 68 x .77 | 774039 |
|  | Appliance Rocker Switch** | Visi-Red, Printed On-Off Vertical | SPST | On-Off | Spade | 2 | 16 Amp 125 VAC, 10 Amp 250 VAC, 3/4 HP 125-250 VAC | 1.24 x 68 x .72 | 774047 |
|  | Appliance Rocker Switch** | Visi-Red | SPST | On-Off | Spade | 2 | 16 Amp 125 VAC, 10 Amp 250 VAC, 3/4 HP 125-250VAC | 1.24 x 68 x .72 | 774052 |
|  | Miniature Rocker Switch | Red Lighted | SPST | On-Off | Spade | 3* | 16 Amp 1/3 HP 125 VAC, 10 Amp 1/2 HP 250 VAC | .83 x .59 x .50 | 774048 |

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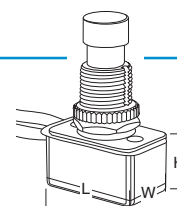
†Bulk Package of 100

*3rd terminal to power lighted rocker

Rocker Switches

Push-Button Switches

- Great for household appliances, lamps and motor controls
- Available in normally open, normally closed and standard On-Off circuitry
- Wire leads are #18 AWG, 6 in. stripped wire
- 1/2 in. diameter mounting hole
- Bulk packaging of 100 available upon request



| Product | Description | Actuator | Poles | Circuitry | Termination Style | No. of Terminals | Ratings | Dimensions (L" × W" × H") | Cat. No. |
|---------|---|---------------|---------|-----------|-------------------|------------------|---|---------------------------|---------------|
| | Miniature Push-Button Switch* | Black Plastic | SPST | On-Off | Wire Lead | 2 | 6 Amp 125VAC, 1 Amp 250VAC, 10 Amp 14VDC | .66 × .53 × .32 | 774082 |
| | Round Body Push-Button Switch** | Black Plastic | SPST NO | (On)-Off | Screw | 2 | 3/4 Amp 125VAC/DC, 1/4 Amp 250VAC/DC | .66 Dia. × 1.89 | 774083 |
| | Round Body Push-Button Switch** | Black Plastic | SPST NC | On-(Off) | Screw | 2 | 3/4 Amp 125VAC/DC, 1/4 Amp 250VAC/DC | .66 Dia. × 1.89 | 774084 |
| | Momentary Contact Push-Button Switch | Black Plastic | SPST NO | (On)-Off | Screw | 2 | 6 Amp 120VAC, 3 Amp 240VAC | .88 × .54 × .35 | 774022 |
| | Momentary Contact Push-Button Switch | Red Plastic | SPST NC | On-(Off) | Screw | 2 | 3 Amps 120VAC, 1.5 Amp 240VAC | .88 × .54 × .35 | 774023 |
| | Maintained Contact Push-Button Switch | Black Plastic | SPST | On-Off | Wire Leads | 2 | 8 Amp 125VAC/DC, 4 Amp 250VAC/DC, 10 Amp 125VAC, 1/3 HP 125VAC | .98 × .64 × .62 | 774021 |
| | Maintained Contact Push-Button Switch* | Nickel Plated | SPST | On-Off | Wire Leads | 2 | 6 Amp 125VAC, 3 Amp 250VAC | .97 × .80 × .36 | 774024 |
| | Maintained Contact Push-Button Switch* | Brass Plated | SPST | On-Off | Wire Leads | 2 | 6 Amp 125VAC, 3 Amp 250VAC | .97 × .80 × .36 | 774025 |
| | Maintained Contact Push-Button Switch** | Nickel Plated | SPST | On-Off | Screw | 2 | 6 Amp 125VAC/DC, 3 Amp 250VAC/DC | 1.18 × .52 × .54 | 774080 |
| | Maintained Contact Push-Button Switch** | Nickel Plated | SPST | On-Off | Screw | 2 | 15 Amp 125VAC, 10 Amp 250VAC | .92 × .66 × .46 | 774081 |
| | Momentary Contact Push-Button Switch** | Nickel Plated | SPST NO | (On)-Off | Screw | 2 | 15 Amp 125VAC, 10 Amp 250VAC | 1.38 × .58 × .60 | 774085 |
| | Momentary Contact Push-Button Switch** | Nickel Plated | SPST NC | On-(Off) | Screw | 2 | 15 Amp 125VAC, 10 Amp 250VAC | 1.38 × .58 × .60 | 774086 |

** * †Bulk Package of 100

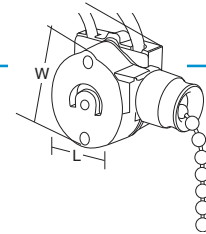
() Denotes momentary action

Push-Button Switches

Wire Management

Lever and Pull Chain Switches

- Use for ceiling fixtures, lamps and fans
- Wire leads are #18 AWG, 6 in. stripped wire
- Push in connectors for #18 AWG wire
- 13/32 in. diameter mounting hole
- Bulk packaging of 100 available upon request

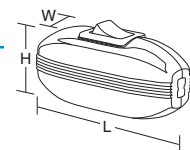


| Product | Description | Pull-Chain Color | Poles | Circuitry | Termination Type | Circuit | Rating | | | Dimensions (L" x W" x H") | Cat. No. |
|---------|-------------------------|------------------|-------|-------------------------|------------------|----------------|--------------|--------------|-------------|---------------------------|-----------|
| | | | | | | | Amps 125 VAC | Amps 250 VAC | Amps 125 VL | | |
| | All-Angle Lever Switch* | Nickel | SPST | On-Off | Wire Leads | 2 Pos - 2 Wire | 6 | 3 | — | 1.50 x 1.28 x .50 | 774035 |
| | Pull Chain | Nickel | SPST | On-Off | Wire Leads | 2 Pos - 2 Wire | 6 | 3 | 3 | .92 x .88 x .67 | 774031 |
| | Pull Chain | Brass | SPST | On-Off | Wire Leads | 2 Pos - 2 Wire | 6 | 3 | 3 | .92 x .88 x .67 | 774032 |
| | 2-Speed Pull Chain* | Brass | SPDT | Off-On-On | Push-In | 3 Pos - 3 Wire | 6 | 3 | 6 | 1.43 x 1.25 x .73 | 774033 |
| | 3-Speed Pull Chain* | Brass | SPTT | Off-On-On-On | Push-In | 4 Pos - 4 Wire | 6 | 3 | — | 1.43 x 1.25 x .73 | 774034 |
| | 3-Speed Pull Chain | Brass | SPTT | Off-On(A)-On(B)-On(A+B) | Wire Leads | 4 Pos - 3 Wire | 6 | 3 | — | .87 x 1.05 x .65 | 774037 |
| | | | | | | | | | | | 774037BK† |



Cord Switches

- Place your lighting controls in a convenient location with a lamp cord toggle switch
- Available in brown or ivory
- Bulk packaging available upon request



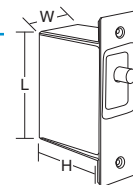
| Product | Description | Color | Poles | Circuitry | Termination Style | Ratings | Dimensions (L" x W" x H") | Cat. No. |
|---------|--------------------|-------|-------|-----------|-------------------|---|---------------------------|---------------------|
| | Cord Switch | Ivory | SPST | On-Off | Pass Thru | 6 Amp 125VAC, 3 Amp 250VAC, 3 Amp 125VT | 1.38 x .62 x .73 | 774072 774072BK† |
| | Cord Switch | Brown | SPST | On-Off | Pass Thru | 6 Amp 125VAC, 3 Amp 250VAC, 3 Amp 125VT | 1.38 x .62 x .73 | 774071 774071BK† |
| | Cord Toggle Switch | Ivory | SPST | On-Off | Pass Thru | 10 Amp 125VAC, 5 Amp 250VAC | 2.50 x .83 x 1.28 | 774074 774074BK† |
| | Cord Toggle Switch | Brown | SPST | On-Off | Pass Thru | 10 Amp 125VAC, 6 Amp 250VAC | 2.50 x .83 x 1.28 | 774073 |

†Bulk Package of 100

Chain/Cord Switches

Door and Slide Switches

- Standard slide switch fits 9/16 in. x 7/8 in. opening
- Door switches are great for closets, turning the light on when the door is open and off when it is closed
- Door switch kit comes with metal box, cover plate and mounting hardware

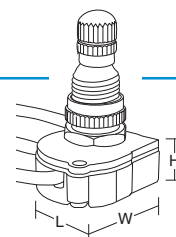


| Product | Description | Color | Poles | Circuitry | Termination Style | Ratings | Dimensions (L" x W" x H") | Cat. No. |
|---------|-------------------------|--------------|-------|-------------------|-------------------|-----------------------------|---------------------------|-------------------------------------|
| | Slide Switch | Black Slide | SPST | On-Off | Solder Terminals | 10 Amp 125VAC, 5 Amp 250VAC | 1.38 x .44 x .30 | 774051 |
| | AC/DC Door Switch Kit | White Button | SPST | Normally On-(Off) | Wire Leads | 10 Amp 1/3 HP 125/250VAC | 1.25 x 2.75 x 2.0 | 774026K 774026KBK† |
| | Door Replacement Switch | White Button | SPST | Normally On-(Off) | Wire Leads | 10 Amp 1/3 HP 125/250VAC | 1.17 x .69 x .98 | 774026 774026BK† |

() Denotes momentary action †Bulk package of 25

Rotary Switches

- Rotary switches are perfect for household appliances, ceiling fixtures and lamps
- Single or three-position switches available
- #18 AWG, 6 in. stripped wire leads
- Bulk packaging available upon request



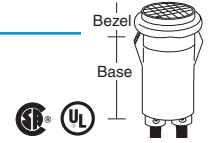
| Product | Description | Color | Poles | Circuitry | Termination Style | Ratings | Dimensions (L" x W" x H") | Cat. No. |
|---------|---------------------|---------------|-------|-------------------------|-------------------|------------------------------|-------------------------------|------------------------------------|
| | Rotary Switch | Black Plastic | SPST | On-Off | Wire Leads | 3 Amp 125VAC, 1.5 Amp 250VAC | .60 Dia x .730 overall height | 774063B 774063BK† |
| | Rotary Switch | Brass Plated | SPST | On-Off | Wire Leads | 6 Amp 125VAC, 3 Amp 250VAC | .97 x .80 x .39 | 774061 |
| | 3-Way Rotary Switch | Brass Plated | SPTT | Off-On(A)-On(B)-On(A+B) | Wire Leads | 6 Amp 125VAC, 3 Amp 250VAC | .86 x 1.03 x .34 | 774062 |
| | Rotary Switch | Black Plastic | SPST | On-Off | Wire Leads | 6 Amp 125VAC, 3 Amp 250VAC | .89 x .79 x .31 | 774069 |

†Bulk Package of 100

Wire Management

Flush Indicator Lights

- Nylon body with flush transparent polycarbonate lens and stainless steel bezel, 94V-2 flammability rating
- 6 in. wire leads, 1/2 in. mounting diameter
- Lamp voltage is AC/DC
- Operating Temperature: Nylon Body: 140°C
Polycarbonate lens: 135°C



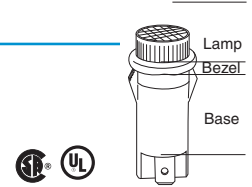
| Product | Description | Lens Color | Lamp Voltage | Watts | Amp Rating | Average Life (hrs) | Lamp Type | Termination Style | Height (Base" x Bezel") | Cat. No. |
|---------|-----------------------|------------|--------------|-------|------------|--------------------|--------------|-------------------|-------------------------|----------------------|
| | Flush Indicator Light | Red | 14V | 1.2 | .08 | 50,000 | Incandescent | 6" Wire Leads | .91 x .10 | 775121* |
| | Flush Indicator Light | Red | 28V | 1.2 | .04 | 25,000 | Incandescent | 6" Wire Leads | .91 x .10 | 776121* |
| | Flush Indicator Light | Red | 125V | 1/3 | 2mA Max. | 25,000 | Neon | 6" Wire Leads | .91 x .10 | 777121* 777121BK† |
| | Flush Indicator Light | Green | 125V | 1/3 | 2mA Max. | 15,000 | Neon | 6" Wire Leads | .91 x .10 | 777221* 777221BK† |
| | Flush Indicator Light | Amber | 125V | 1/3 | 2mA Max. | 25,000 | Neon | 6" Wire Leads | .91 x .10 | 777321* 777321BK† |

*VDE certified

†Bulk Package of 100

Raised Indicator Lights

- Nylon body with raised transparent polycarbonate lens and stainless steel bezel, 94V-2 flammability rating
- 1/2 in. mounting diameter
- Lamp voltage is AC/DC
- Operating Temperature: Nylon Body: 140°C
Polycarbonate lens: 135°C



| Product | Description | Lens Color | Lamp Voltage | Watts | Amp Rating | Average Life (hrs) | Lamp Type | Termination Style | Height (Base" x Bezel") | Cat. No. |
|------------------------|------------------------|------------------------|--------------|-------|------------|--------------------|--------------|-------------------|-------------------------|---------------------------------|
| | Raised Indicator Light | Red | 14V | 1.2 | .08 | 50,000 | Incandescent | 6" Wire Leads | .91 x .10 x .20 | 775111* |
| | Raised Indicator Light | Red | 28V | 1.2 | .04 | 25,000 | Incandescent | 6" Wire Leads | .91 x .10 x .20 | 776111* |
| | Raised Indicator Light | Green | 28V | 1.2 | .04 | 25,000 | Incandescent | 6" Wire Leads | .91 x .10 x .20 | 776211* |
| | Raised Indicator Light | Amber | 28V | 1.2 | .04 | 25,000 | Incandescent | 6" Wire Leads | .91 x .10 x .20 | 776311* 777111* 777111BK† |
| | Raised Indicator Light | Red | 125V | 1/3 | 2mA Max. | 25,000 | Neon | 6" Wire Leads | .91 x .10 x .20 | 777211* 777211BK† |
| | Raised Indicator Light | Green | 125V | 1/3 | 2mA Max. | 15,000 | Neon | 6" Wire Leads | .91 x .10 x .20 | 777311* |
| | Raised Indicator Light | Blue | 125V | 1/3 | 2mA Max. | 25,000 | Neon | 6" Wire Leads | .91 x .10 x .20 | 777411* |
| | Raised Indicator Light | Clear | 125V | 1/3 | 2mA Max. | 25,000 | Neon | 6" Wire Leads | .91 x .10 x .20 | 777511* |
| | Raised Indicator Light | Red | 250V | 1/2 | 2mA Max. | 25,000 | Neon | 6" Wire Leads | .91 x .10 x .20 | 778111* |
| | Raised Indicator Light | Green | 250V | 1/2 | 2mA Max. | 15,000 | Neon | 6" Wire Leads | .91 x .10 x .20 | 778211* |
| | | Raised Indicator Light | Green | 28V | 1.2 | .04 | 25,000 | Incandescent | .187" Spade | 1.09 x .10 x .20 |
| Raised Indicator Light | | Red | 28V | 1.2 | .04 | 25,000 | Incandescent | .187" Spade | 1.09 x .10 x .20 | 776112 776112BK† |
| Raised Indicator Light | | Amber | 28V | 1.2 | .04 | 25,000 | Incandescent | .187" Spade | 1.09 x .10 x .20 | 776312BK† |
| Raised Indicator Light | | Red | 125V | 1/3 | 2mA Max. | 25,000 | Neon | .187" Spade | 1.09 x .10 x .20 | 777112 776112BK† |
| Raised Indicator Light | | Green | 125V | 1/3 | 2mA Max. | 15,000 | Neon | .187" Spade | 1.09 x .10 x .20 | 777212 777212BK† |
| Raised Indicator Light | | Amber | 125V | 1/3 | 2mA Max. | 25,000 | Neon | .187" Spade | 1.09 x .10 x .20 | 777312BK† |

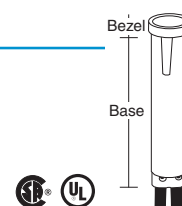
*VDE certified


†Bulk Package of 100



Miniature Indicator Lights

- Nylon body with flush transparent polycarbonate lens
- 6 in. wire leads
- 5/16 in. mounting diameter
- Lamp voltage is AC/DC
- Bulk packaging available upon request



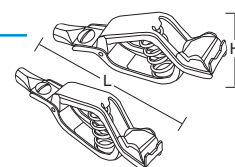
| Product | Description | Lens Color | Lamp Voltage | Watts | Amp Rating | Average Life (hrs) | Lamp Type | Termination Style | Height (Base" x Bezel") | Cat. No. |
|---|---------------------------|------------|--------------|-------|------------|--------------------|-----------|-------------------|-------------------------|-----------------------------------|
|  | Miniature Indicator Light | Red | 125V | 1/3 | 2mA Max. | 25,000 | Neon | 6 in. Wire Leads | 1.43 x .13 | 777131 |
| | Miniature Indicator Light | Green | 125V | 1/3 | 2mA Max. | 15,000 | Neon | 6 in. Wire Leads | 1.43 x .13 | 777231 |
| | Miniature Indicator Light | Amber | 125V | 1/3 | 2mA Max. | 25,000 | Neon | 6 in. Wire Leads | 1.43 x .13 | 777331 777331BK† |






Indicator Light Part No. System

| Series | Voltage | Color | Mounting Diameter Lens Style | Terminators |
|--------|----------|-----------|---------------------------------|----------------------|
| 77 | 5 - 14V | 1 - Red | 1 - 1/2 in. Raised | 1 - 6 in. Wire Leads |
| | 6 - 28V | 2 - Green | 2 - 1/2 in. Flush | 2 - .187 in. Spade |
| | 7 - 125V | 3 - Amber | 3 - 5/16 in. Flush | — |
| | 8 - 250V | 4 - Blue | — | — |
| | — | 5 - Clear | — | — |

Battery Clips

- Great for testing and many other electrical applications
- Insulated grips are color-coded for positive (red) and negative (black) identification
- For screw and/or crimp connections



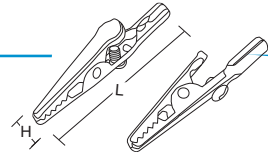
| Product | Description | Amps | Dimensions (L" x H") | Jaw Opening | Wire Diameter | Qty. | Cat. No. |
|---|--------------------------------|------|----------------------|-------------|---------------|---------------|----------------|
|  | Miniature General Purpose Clip | 5 | 1-17/32 x 15/32 | 5/16 in. | 9/64 in. | 2 | 770218L |
|  | General Purpose Clip | 10 | 2 x 5/8 | 1/2 in. | 3/16 in. | 1 Red/1 Black | 170207L |
|  | Test and Battery Clip | 20 | 2-1/2 x 5/8 | 5/8 in. | 3/16 in. | 1 Red/1 Black | 170208L |
| | Test and Battery Clip | 30 | 2-1/2 x 5/8 | 5/8 in. | 3/16 in. | 1 Red/1 Black | 170209L |
|  | Copper Test & Battery Clips* | 40 | 2-7/16 x 11/16 | 5/8 in. | 3/16 in. | 2 | 770217L |
| | Copper Test & Battery Clips* | 75 | 3 x 15/16 | 3/4 in. | 9/32 in. | 2 | 770216L |
| | Copper Test & Battery Clips* | 100 | 4-7/64 x 19/16 | 1-1/16 in. | 11/30 in. | 2 | 770215L |
|  | Insulated Grips for 770217L | — | 3-1/2 x 3/4 ID | — | — | 1 Red/1 Black | 770223L |
| | Insulated Grips for 770216L | — | 3-7/8 x 11/64 ID | — | — | 1 Red/1 Black | 770219L |
| | Insulated Grips for 770215L | — | 5 x 1-13/32 ID | — | — | 1 Red/1 Black | 770221L |




*Insulators sold separately

Wire Management

Alligator Clips

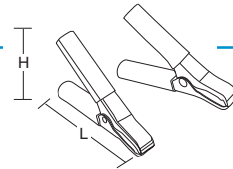
- Great for temporary connections, testing wires and troubleshooting projects
- Spring-loaded, grab-tight jaws make these clips quick and easy-to-use
- For screw and/or crimp connections




| Product | Description | Amps | Dimensions (L × H) | Jaw Opening | Wire Gauge | Qty. | Cat. No. |
|---|------------------|------|----------------------|-------------|------------|---------------|----------------|
|  | Non-Insulated | — | 2 in. × 7/16 in. | 5/16 in. | #22 - #14 | 4 | 770200L |
|  | Insulated Barrel | — | 2-1/2 in. × 7/16 in. | 5/16 in. | #22 - #14 | 1 Red/1 Black | 770204L |
|  | Fully Insulated | — | 2-1/2 in. × 7/16 in. | 5/16 in. | #22 - #14 | 1 Red/1 Black | 770205L |

Plier-Type Battery Clamps

- Great for battery charging and test equipment
- Insulated grips are color-coded for positive (red) and negative (black) identification
- For crimp or solder connections



| Product | Description | Amps | Dimensions (L" × H") | Jaw Opening | Wire Dia. | Qty. | Cat. No. |
|---|---------------------------------|------|----------------------|-------------|-----------|---------------|----------------|
|  | Plier-Type Battery Clip, Steel | 50 | 2-7/8 in. x 2 in. | 1-1/8 in. | 9/32 in. | 1 Red/1 Black | 770213L |
| | Plier-Type Battery Clip, Copper | 75 | 2-7/8 in. x 2 in. | 1-1/8 in. | 9/32 in. | 1 Red/1 Black | 770212L |
| | Plier-Type Battery Clip, Copper | 400 | 6 in. x 4-1/2 in. | 1-9/16 in. | 9/16 in. | 1 Red/1 Black | 770225L |

How to Select Resurfacer Grade

Small Motor and Pocket Resurfacers

Grade code letters designate the following grade combinations:

- A** Medium/Finish **G** Coarse/Medium
- B** Coarse/Finish **H** Medium/Polish
- D** Finish/Polish

All Other Resurfacers

Resurfacers for commutators and copper-alloy slip rings are made in five grades:

- X** Extra coarse—very fast cutting, for “hogging” off excessive copper
- C** Coarse—fast cutting
- M** Medium—for general use, high mica, small ridges and burns
- F** Finish—for use after the three grades above, for periodic application and for removing small burns and ridges immediately after their appearance
- P** Polish—very fine grade (220 aggregate grain) for burnish finish

For all resurfacers, specify grade by adding the appropriate letter as a suffix to the catalog number. (Example: 80-475M for medium grade.)

How to Select Resurfacer Size

Size is always written length x width x thickness (working face area x depth of stone). For handle types, the handle is mounted parallel to the first dimension. Always use a resurfacer with the largest face possible (length x width). Thickness should be governed by clearance around commutator or ring.

Commutator Resurfacers

The resurfacer should have a width of approximately 3/4 the length of the commutator bar and as long as will conveniently go between the brush riggings. For periodic application, three or four sizes are generally sufficient. After determining approximate dimensions, select nearest standard size and type.

Slip Ring Resurfacers

When space permits, use a resurfacer about 1 in. wider than the face width of the ring. Length should be at least three times greater than the longest flat spot to bridge over and ensure a true ring.

Small Motor-Type Resurfacer

- Different grades of stone on each end

- 10 in. handle

- For use on small fractional horsepower motors

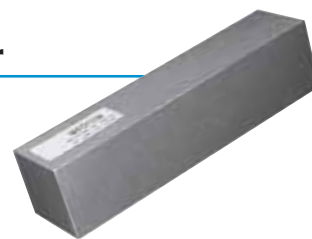


| Size (In.) | Grades | Cat. No. |
|-----------------|---------|----------------|
| 3/4 x 1/2 x 3/8 | A, B, D | 80-012* |

*Add grade letter suffix to Cat. No. Please allow 2-3 weeks for delivery.

Tool-Type Resurfacer

- For use in lathe-turning device
- Two resurfacers required for each grinder



| Sizes (In.) | Grades | Cat. No. |
|-------------------|---------|----------------|
| 3/4 x 3/4 x 3 | C, M, F | 80-504* |
| 1 x 1-1/2 x 6-1/2 | | 80-454* |
| 1 x 2 x 8 | | 80-461* |
| 2 x 2 x 8 | | 80-475* |

*Add grade letter suffix to Cat. No. Please allow 2-3 weeks for delivery.

Pencil-Type Resurfacer

- For use on fans, signal motors, auto generators, locomotive headlight motors and other fractional horsepower motors



| Size (In.) | Grades | Cat. No. |
|---------------|------------|----------------|
| 5/8 x 3/8 x 6 | C, M, F, P | 80-075* |

*Add grade letter suffix to Cat. No. Please allow 2-3 weeks for delivery.

Tramway-Handle Resurfacer

- Handle shaped to ensure secure grip
- 10-1/2 in. handle permanently mounted at 45° angle



| Sizes (In.) | Grades | Cat. No. |
|---------------|---------|----------------|
| 2 x 1-1/2 x 2 | C, M, F | 80-255* |
| 2 x 2 x 2 | | 80-265* |

*Add grade letter suffix to Cat. No. Please allow 2-3 weeks for delivery.

Wire Management

Powr-Polish™ Flexible Abrasive

- Fine-grain, non-dusting abrasive held together by a flexible bond
- Serves as both commutator cleaner and burnisher
- Removes dirt and grease—imparts super-finished surface
- Non-conductive and non-loading



| Sizes (In.) | Cat. No. |
|---------------|----------|
| 3/8 x 1/2 x 5 | 82-001 |
| 3/8 x 3/4 x 5 | 82-002 |
| 5/8 x 1 x 5 | 82-003 |
| 1 x 2 x 5 | 82-004 |
| 1 x 4 x 5 | 82-005 |
| 1/8 x 1 x 5 | 82-006 |

Please allow 2-3 weeks for delivery.

Brush Seater and Commutator Cleaner



- Gentle acting abrasive for seating carbon brushes and cleaning commutators and slip rings
- Soft, loosely bound grain produces a scouring effect when held against commutator
- Will not remove or scratch copper
- Self-cleaning
- Available in soft(S), medium(M) and hard(H) grades

| Sizes (In.) | Grades | Cat. No. |
|---------------------|---------|----------|
| 1/4 x 1/4 x 4-3/4 | M, H | 23-001* |
| 1/2 x 1/4 x 4-3/4 | M, H | 23-002* |
| 3/8 x 3/8 x 4-3/4 | M, H | 23-003* |
| 1/2 x 3/8 x 4-3/4 | M | 23-004* |
| 1/2 x 1/2 x 4-3/4 | M | 23-005* |
| 5/8 x 1/2 x 4-3/4 | M | 23-006* |
| 3/4 x 1/2 x 4-3/4 | S, M, H | 23-007* |
| 1-1/8 x 5/8 x 4-3/4 | S, M, H | 23-008* |
| 1/2 x 1 x 4-3/4 | S, M | 23-027* |
| 1 x 1 x 4-3/4 | — | 23-035S |
| 2 x 1 x 4-3/4 | — | 23-036S |
| 3 x 2 x 4 | — | 23-039S |
| 3 x 2 x 6 | — | 23-041S |
| 3 x 2 x 8 | — | 23-042S |

*Add grade letter suffix to Cat. No.
Please allow 2-3 weeks for delivery.

Commutator Smoothie® Resurfacing Tool

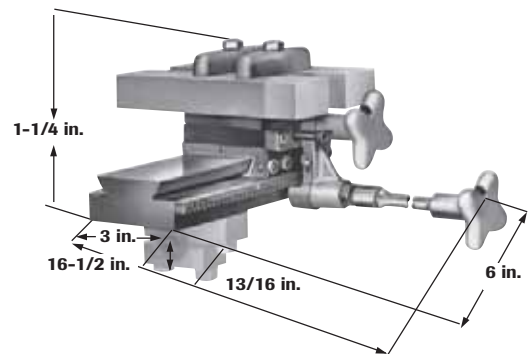


- Designed to smooth commutators of auto generators, starting motors and other similar equipment
- 8-1/2 in. plastic handle with a 5/16 in. x 7/8 in. x 11/16 in. resurfacer on each end
- Features one polish-grade and one finish-grade resurfacer
- Bent handle reaches into any motor frame
- Non-conductive for user safety

| Description | Cat. No. |
|---------------------------------------|----------|
| Commutator Smoothie® Resurfacing Tool | 80-033 |

Please allow 2-3 weeks for delivery.

Midget Precision Grinder



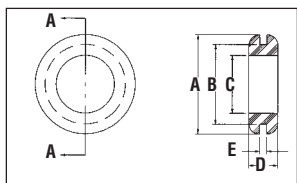
- Right-angle rack and pinion allows for operation in small areas
- 6 in. base — recommended for commutator widths up to 9-1/4 in. (includes extra 1 in. travel obtained by setting resurfacers at slight angle)
- Includes convenient carrying case
- Two tool-type resurfacers required — 80-454 recommended

| Description | Cat. No. |
|--------------------------|----------|
| Midget Precision Grinder | 24-033 |

Order tool-type resurfacers and brush arm supports separately.

Grommets*

- Installs instantly! Flexible PVC grommets side slotted 1/16 in. for quick installation
- Snap into holes in electrical boxes, sheet metal, auto firewalls and more
- Prevents steel and other sharp edge chafing of wire insulation or cording
- Black, PVC, flexible, 60 durometer

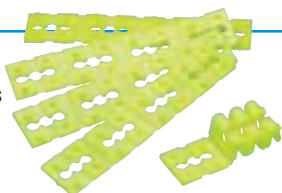


| Description | A | B | C | D | E | Qty. | Cat. No. |
|---------------|-------|-----|-----|-----|------|-------|----------|
| 1/4" Grommets | 9/16 | .37 | 1/4 | .28 | 3/32 | 6 | 774114 |
| 1/4" Grommets | 9/16 | .37 | 1/4 | .28 | 3/32 | 25 | 774116 |
| 1/4" Grommets | 9/16 | .37 | 1/4 | .28 | 3/32 | 1,000 | 774114BK |
| 3/8" Grommets | 43/64 | .49 | 3/8 | .28 | 1/16 | 5 | 774138 |
| 3/8" Grommets | 43/64 | .49 | 3/8 | .28 | 1/16 | 25 | 774137 |
| 1/2" Grommets | 55/64 | .69 | 1/2 | .25 | 1/16 | 4 | 774112 |
| 1/2" Grommets | 55/64 | .69 | 1/2 | .25 | 1/16 | 25 | 774113 |
| 3/4" Grommets | 15/64 | 1.0 | 3/4 | .31 | 1/16 | 3 | 774134 |
| 3/4" Grommets | 15/64 | 1.0 | 3/4 | .31 | 1/16 | 25 | 774136 |

*Buchanan branded

Spacer Shims*

- Eliminates the need to cut plate screws for "GFCI" decorator devices when installing on tile, marble, etc.
- Supports loose outlets
- Prevents broken face plates
- Snaps over #6, #8, #10 screws
- Also works as a shim

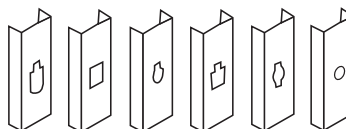
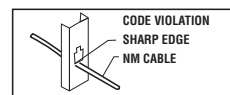
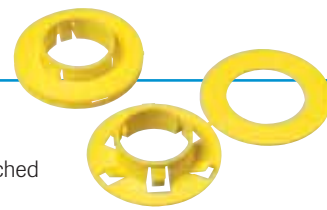


| Description | Qty. | Cat. No. |
|-------------|------|----------|
| Caterpillar | 5 | 772450 |
| Caterpillar | 25 | 172451 |
| Caterpillar | 500 | 772451 |

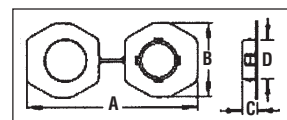
*Buchanan branded

Universal Metal Stud Bushings

- Non-metallic stud bushing fits all hole configurations you are likely to encounter in pre-punched steel studs
- Long pulls of cable slide smoothly through the bushing, make a difficult job easier
- Protects wire without falling out of the hole

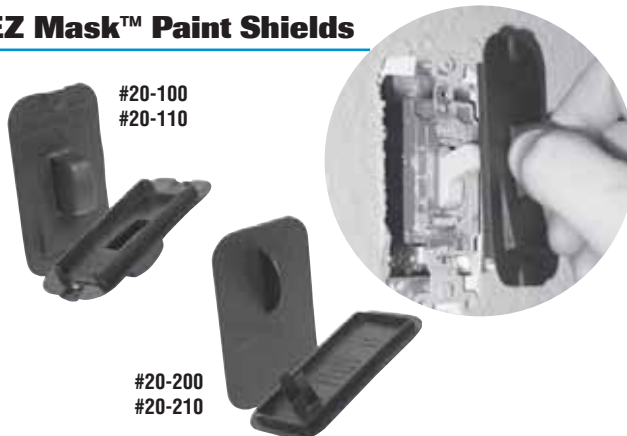


Common hole configurations in metal studs.



| Description | A | B | C | D | Qty. | Cat. No. |
|--------------|-------|------|------|------|------|----------|
| Stud Bushing | 5.670 | 2.50 | .505 | 1.30 | 25 | 772271 |

EZ Mask™ Paint Shields



- Reusable cover saves masking time and clean up
- Snap-on to protect from paint drips and overspray
- Works in side-by-side (multi-gang) applications
- Protects entire device when rolling, brushing or spraying

Shields are intended to cover most standard outlets, GFCI outlets, standard switches and decorator switches to protect them from paint.



| Description | Qty. | Cat. No. |
|------------------------|------|----------|
| Switch Paint Cover | 10 | 20-110 |
| Switch Paint Cover | 100 | 20-100 |
| Receptacle Paint Cover | 10 | 20-210 |
| Receptacle Paint Cover | 100 | 20-200 |