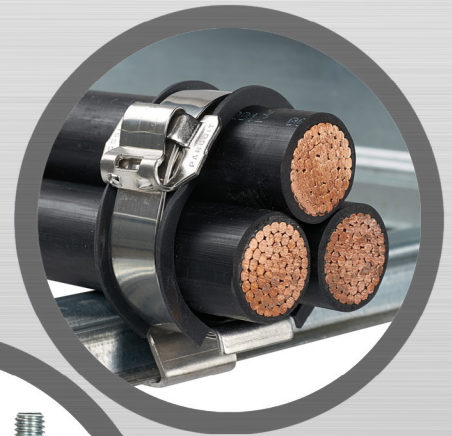
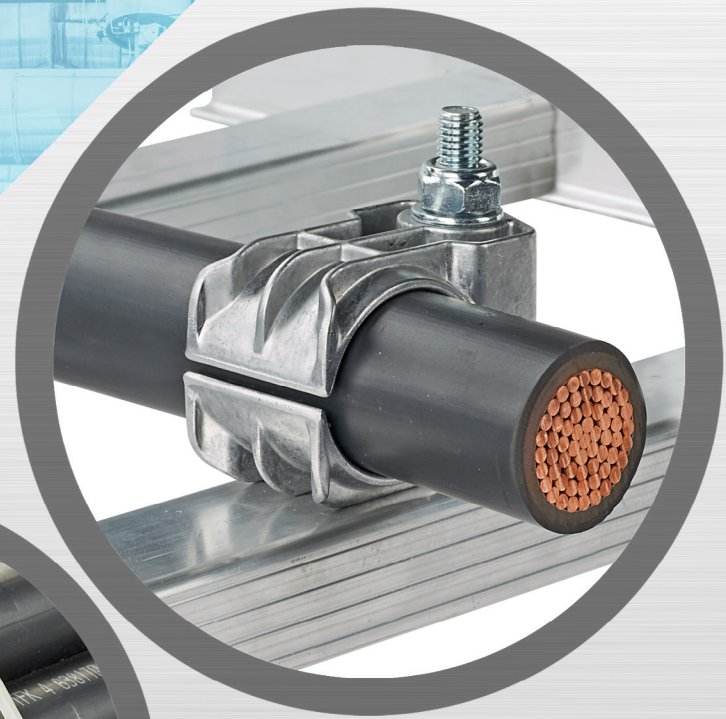


PANDUIT®

Cable Cleats for Short Circuit Protection



Discover the perfect fit for your cable containment needs with Panduit comprehensive range of cable cleat solutions. Designed to secure cables in the event of a short circuit fault, our cable cleats prioritize safety and minimize disruption and damage to personnel and property.

Engineered for easy installation in various applications and harsh environments, our cleats offer unmatched reliability and safety. Choose Panduit for on-the-job productivity and peace of mind, knowing you have the right product for your specific requirements.

REDUCE PROJECT COSTS AND INSTALLATION TIME



Simple and intuitive design
leads to increased productivity



Tested to IEC 61914, the latest and
most globally recognized cable cleat
testing standard



Compatible with a variety of
ladder racks and cables



Collaborative and consultative approach
to cable cleat specification, supported
by a team



Industry-unique mounting
brackets and installation tool



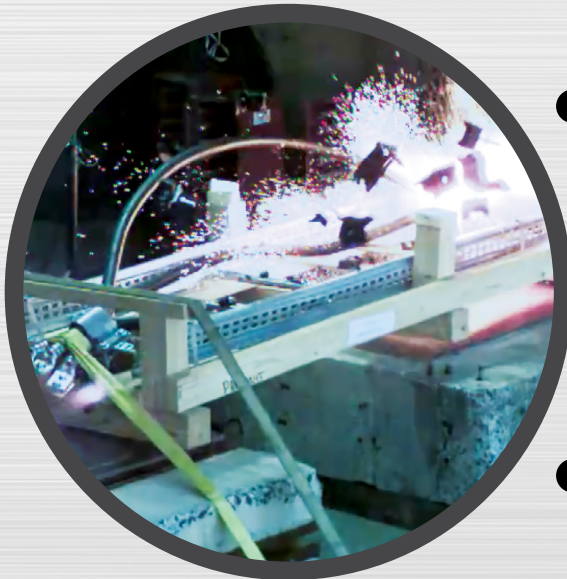
Applications:

Oil and Gas, Petrochemical, Shipbuilding, Rail,
Utilities, Renewable Energy, and Data Centers

EC 61914 is the most comprehensive and globally accepted cable cleat testing standard.

It provides requirements for:

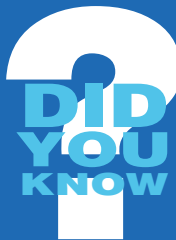
- Temperature rating
- Adequate resistance to flame propagation
- Lateral load testing
- Axial load testing
- Impact resistance
- UV resistance
- Resistance to electromechanical forces
- Corrosion resistance



During a short circuit fault, maximum electromechanical stress between conductors occurs at or before 0.005 second

Typical circuit breakers and other protection devices trip and interrupt a fault between 0.06 to 0.1 second

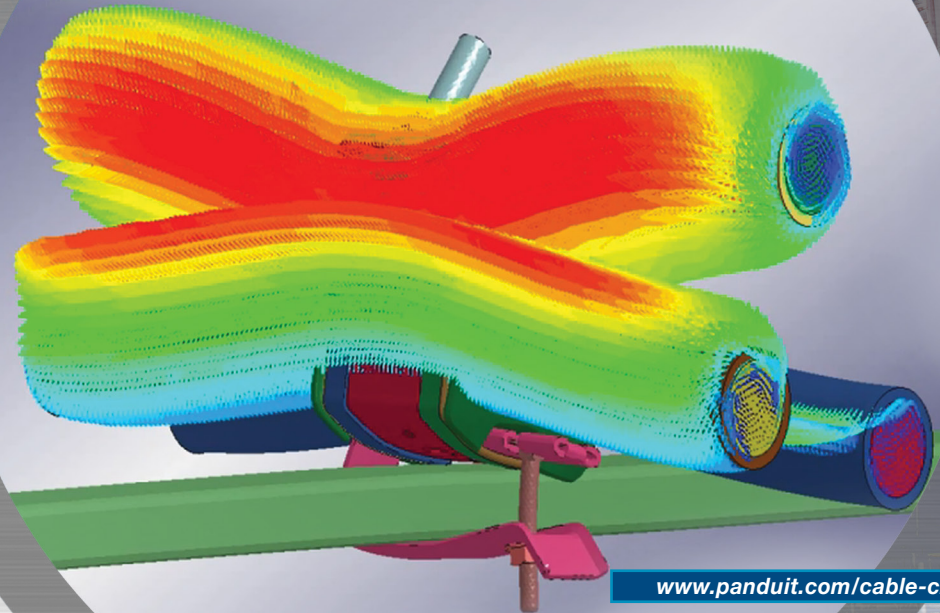
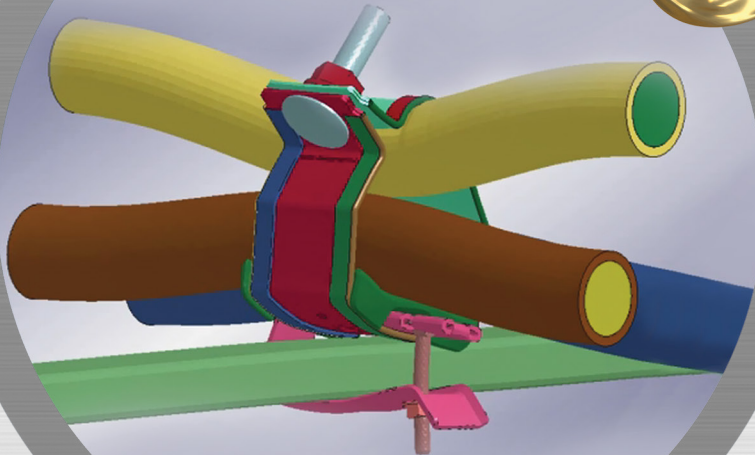
Cable cleats perform their function within those first 0.005 second (i.e. at peak kA) before a circuit breaker trips and interrupts a fault



...the **NEC 392.20(C)** doesn't specify how to protect against excessive cable movement due short circuit, however IEC 61914 provides testing methodology to ensure compliance to the NEC requirements.

Research & Development: We have created a state-of-the-art ANSYS award-winning program that simulates the material composition of our cable cleats and the electromechanical forces present in a short circuit fault, preparing our cable cleats for testing to IEC 61914 standards.

The cleats are then subjected to a live short circuit fault at a testing laboratory to validate compliance with this standard. The simulation program is a powerful tool that helps us select the most appropriate materials for our cleats, so they perform to their tested kA rating during a short circuit fault.



Selecting the right Cable Cleat has never been so easy

Prevent damages resulting from a short circuit fault by specifying and installing Panduit Cable Cleats

SELECT cable layout

INPUT peak short circuit current

INPUT cable diameter

Access the desktop Cable Cleat web application here:

www.panduit.com/en/support/tools1/cable-cleat-kalculator-web-application.html

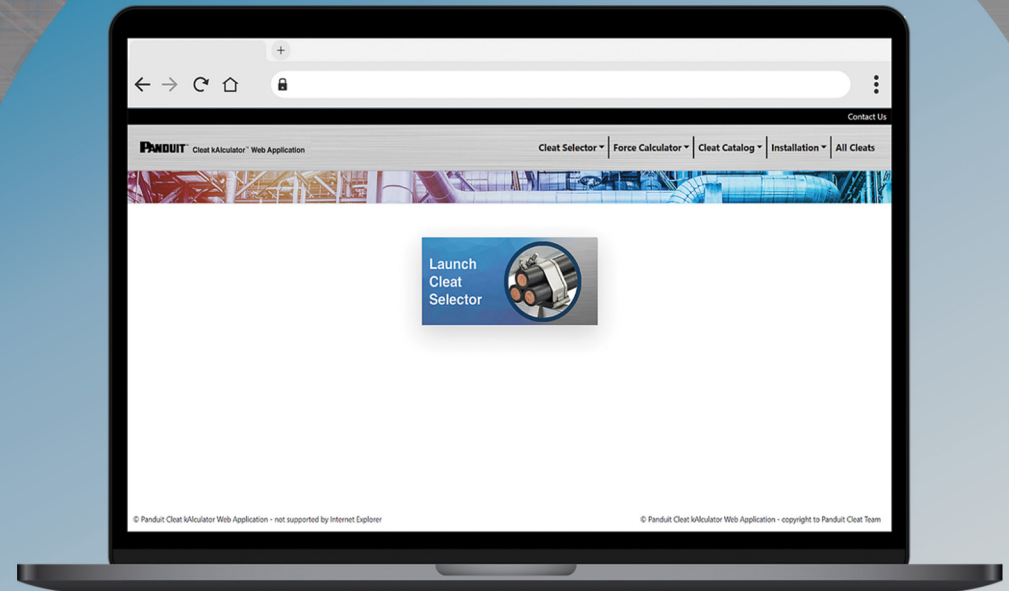


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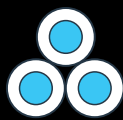
Panduit Solutions For Electrical

And Networking Installations30-31

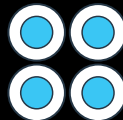
Cable Layout Legend



Flat



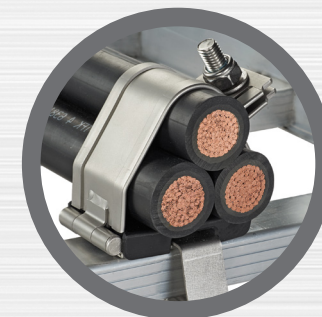
Trefoil



Quad



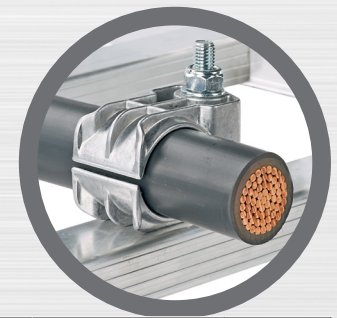
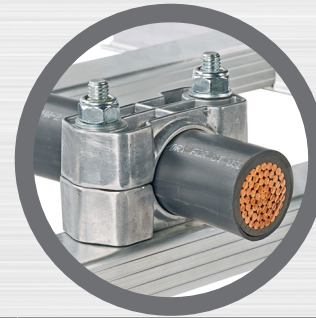
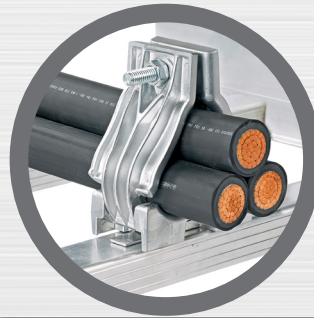
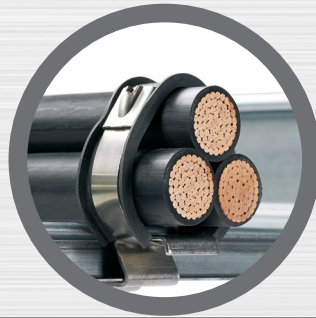
Multicore



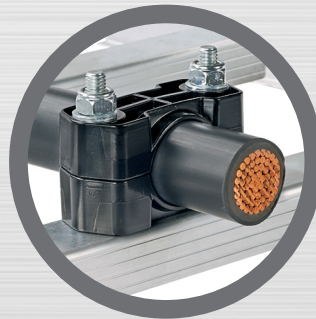
Product	Trefoil Cleat	
Material	Stainless Steel	
Parts	12 Parts	
Diameter Ranges	20 - 25 mm	50 - 57 mm
	23 - 28 mm	54 - 61 mm
	26 - 32 mm	58 - 65 mm
	30 - 36 mm	62 - 69 mm
	34 - 40 mm	
	38 - 44 mm	
	42 - 48 mm	
	46 - 52 mm	



PANDUIT CLEAT OVERVIEW



Product	Buckle Strap Cleat	Locking Strap Cleat	Trefoil Cleat		Two-Hole Cleat	One-Hole Cleat	
Material	Stainless Steel	Stainless Steel	Aluminum		Aluminum	Aluminum	
Parts	6 Parts	13 Parts	14 Parts		7 Parts	10 Parts	
Diameter Ranges	12 - 45 mm 45 - 70 mm 70 - 95 mm 95 - 120 mm 120 - 150 mm 150 - 170 mm	12 - 95 mm (5) 95 - 120 mm (1) 95 - 150 mm (3) 120 - 150 mm (1) 150 - 195 mm (3)	23 - 26 mm 25 - 28 mm 27 - 30 mm 29 - 32 mm 31 - 35 mm 34 - 38 mm 37 - 41 mm 40 - 44 mm	43 - 47 mm 46 - 51 mm 50 - 56 mm 50 - 56 mm 55 - 61 mm 60 - 67 mm 66 - 75 mm	38 - 46 mm 46 - 58 mm 58 - 70 mm 70 - 83 mm 83 - 97 mm 97 - 109 mm 109 - 120 mm	10 - 13 mm 13 - 16 mm 16 - 19 mm 19 - 23 mm 23 - 27 mm 27 - 32 mm 32 - 38 mm 38 - 46 mm	46 - 51 mm 51 - 57 mm



CUSTOM CLEAT SOLUTIONS AVAILABLE

For global engineered custom solutions and technical support, reach out to your local Panduit Sales Representative.

To learn more visit: www.panduit.com/cable-cleats

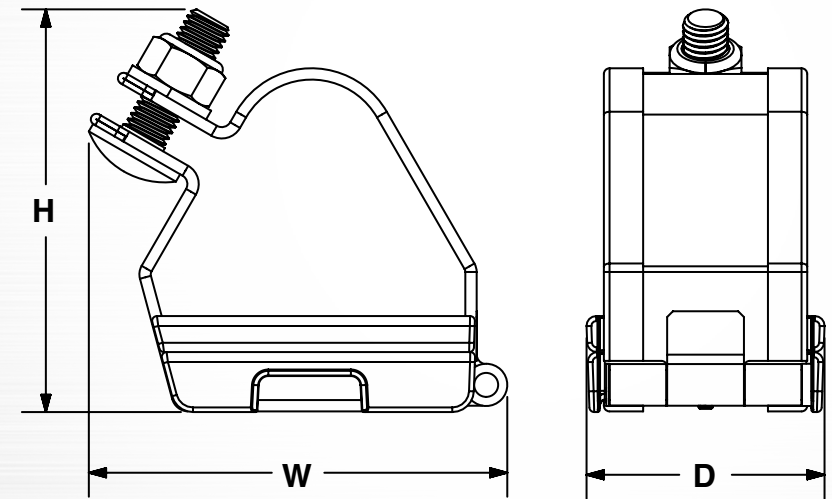
Trefoil Cleat	Two-Hole Cleat		One-Hole Cleat	
Polymer	Polymer		Polymer	
6 Parts	10 Parts		10 Parts	
22 - 28 mm	38 - 46 mm	109 - 120 mm	10 - 13 mm	32 - 38 mm
26 - 33 mm	46 - 58 mm	120 - 135 mm	13 - 16 mm	38 - 46 mm
31 - 39 mm	58 - 70 mm	135 - 150 mm	16 - 19 mm	46 - 51 mm
37 - 45 mm	70 - 83 mm	150 - 165 mm	19 - 23 mm	51 - 57 mm
43 - 52 mm	83 - 97 mm		23 - 27 mm	
50 - 60 mm	97 - 109 mm		27 - 32 mm	

STAINLESS STEEL TREFOIL CLEAT



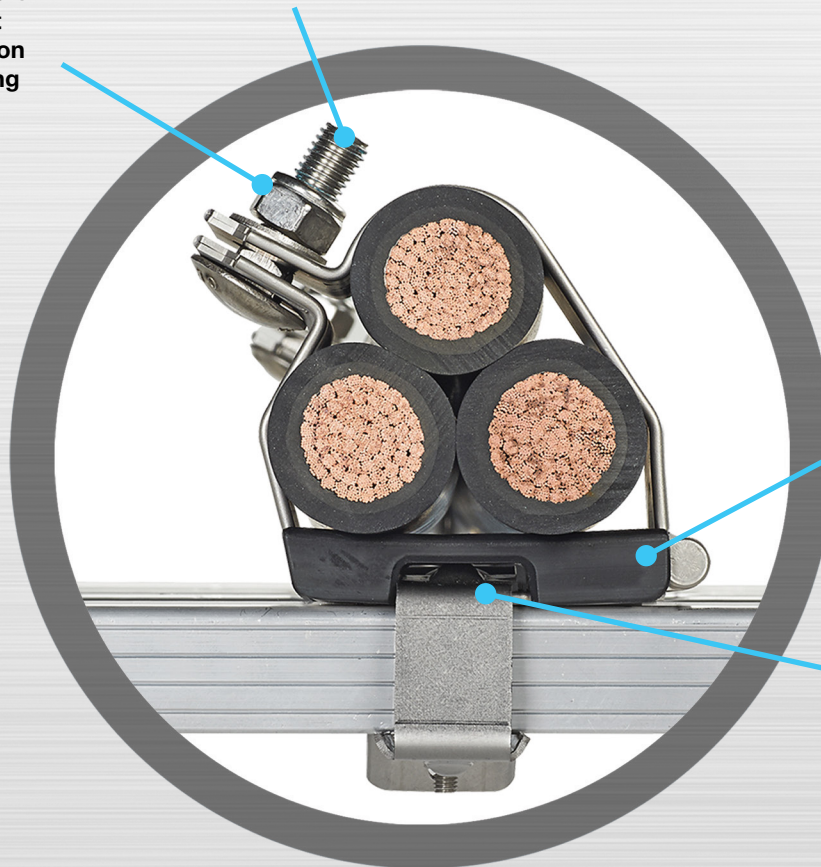
The Stainless Steel Trefoil Cable Cleat offers protection against extreme environments and high short circuit current faults. It is made of 316L stainless steel, available in multiple sizes with cable range taking capability, and suitable for trefoil cable arrangements.

The cleat can be installed after running cable using a Panduit mounting bracket or before running cable by installing direct to the cable tray rung through a fixing hole using an M8 bolt.



Nylon insert
lock nut
for vibration
dampening

Tightening bolt can
be installed from
top or bottom



Removeable
spacer for cable
range taking

Mounting bracket
slot allows for
installation flexibility



Part Number	Cable Diameter Range		H		W		D		Weight		Mounting Holes
	In.	mm	In.	mm	In.	mm	In.	mm	Lb.	g	
CCSSTR2025-X	0.79 - 0.98	20 - 25	3.43	87	3.39	86	2.48	63	0.92	417	1 X M8
CCSSTR2328-X	0.91 - 1.10	23 - 28	3.58	91	3.54	90			0.97	439	
CCSSTR2632-X	1.02 - 1.26	26 - 32	3.74	95	3.82	97			1.06	480	
CCSSTR3036-X	1.18 - 1.42	30 - 36	3.94	100	4.13	105			1.14	518	
CCSSTR3440-X	1.34 - 1.58	34 - 40	4.25	108	4.37	111			1.21	547	
CCSSTR3844-X	1.50 - 1.73	38 - 44	4.25	108	4.69	119			1.28	581	
CCSSTR4248-X	1.65 - 1.89	42 - 48	4.41	112	4.96	126			1.35	613	
CCSSTR4652-X	1.81 - 2.05	46 - 52	4.61	117	5.24	133			1.43	647	
CCSSTR5057-X	1.97 - 2.24	50 - 57	4.84	123	5.63	143			1.51	686	
CCSSTR5461-X	2.13 - 2.40	54 - 61	5.12	130	5.91	150			1.59	720	
CCSSTR5865-X	2.28 - 2.56	58 - 65	5.43	138	6.18	157			1.66	754	
CCSSTR6269-X	2.44 - 2.72	62 - 69	5.71	145	6.50	165			1.72	782	

Short Circuit Testing Summary¹

Trefoil Formation 38 mm Cable Diameter	Trefoil Formation 38 mm Cable Diameter	Trefoil Formation 35 mm Cable Diameter	Trefoil Formation 38 mm Cable Diameter
One Short Circuit Event (Clause 6.4.4) 300 mm spacing	Two Short Circuit Events (Clause 6.4.5) 300 mm spacing	One Short Circuit Event (Clause 6.4.4) 600 mm spacing	Two Short Circuit Events (Clause 6.4.5) 600 mm spacing
0.1 sec	0.1 sec	0.1 sec	0.1 sec
172 kA Peak	167 kA Peak	143 kA Peak	125 kA Peak
8926 lbs force (39.77 kN)	8415 lbs force (37.4 kN)	13398 lbs force (59.5 kN)	9429 lbs force (41.9 kN)

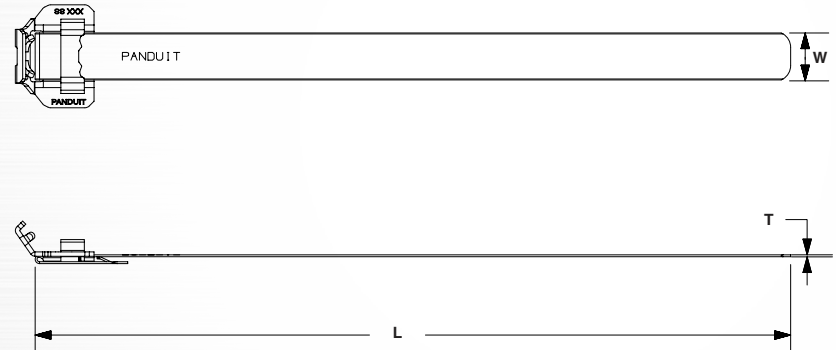
¹Test compliance to IEC 61914 utilizing KEMA facility; Independent, ISO 17025 accredited testing, inspection, and certification services (IEEE, IEC, UL, and ANSI) for electric power equipment.

STAINLESS STEEL BUCKLE STRAP CLEAT



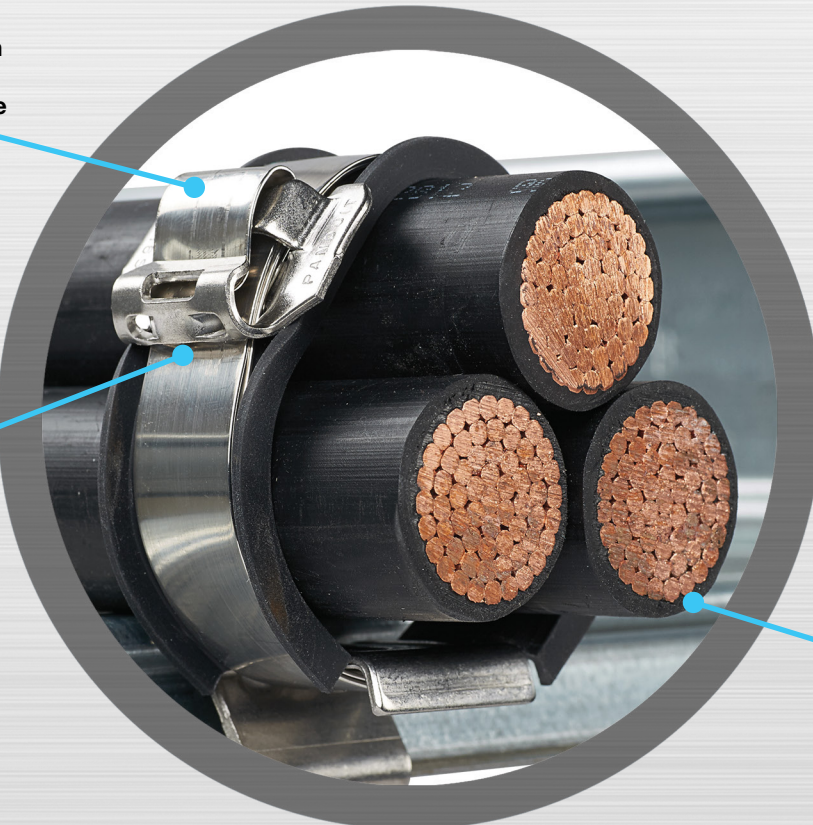
The Stainless Steel Buckle Strap Cleat is an effective option for protecting against high short circuit fault current requirements in harsh environments. The strap is made of 316L stainless steel, has inherent cable range-taking, and is compatible with quad, trefoil, and multicore cables.

The cleat is installed after running the cable via a unique in the industry mounting bracket. It is tensioned and cut using a manually-operated, ratchet-style installation tool or a tension screw drive installation tool. The straps have rounded edges to protect from damaging the cable and are often used in combination with a cushion sleeve inserted between the strap and cable for added protection.



Buckle design provides low finished profile

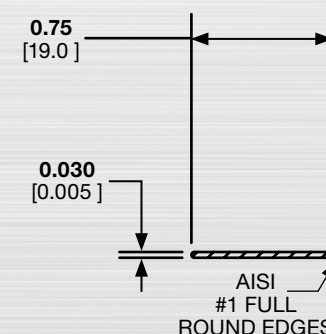
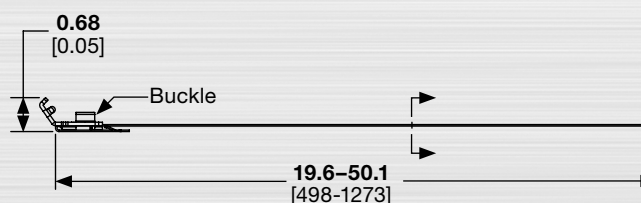
Smooth surfaces and rounded edges reduce risk of cable insulation damage



Compatible with a variety of cable trays and cables



Part Number	Flat/Multicore Double Loop Cable Diameter Range		Flat/Multicore Triple Loop Cable Diameter Range		Trefoil Double Loop Cable Diameter Range		Trefoil Triple Loop Cable Diameter Range		Quad Double Loop Cable Diameter Range		Quad Triple Loop Cable Diameter Range		Width		Length		Std. Pkg. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	
MS4W75T30-Q6	0.47 - 1.77	12 - 45	0.47 - 1.18	12 - 30	0.47 - 0.79	12 - 20	—	—	—	—	—	—	0.75	19.10	19.6	498	25
MS6W75T30-Q6	1.77 - 2.76	45 - 70	1.18 - 1.81	30 - 46	0.79 - 1.18	20 - 30	0.47 - 0.79	12 - 20	0.47 - 0.98	12 - 25	—	—			26.5	673	
MS8W75T30-Q6	2.76 - 3.74	70 - 95	1.81 - 2.48	46 - 63	1.18 - 1.65	30 - 42	0.79 - 1.02	20 - 26	0.98 - 1.42	25 - 36	0.47 - 0.87	12 - 22			32.7	831	
MS10W75T30-Q6	3.74 - 4.72	95 - 120	2.48 - 3.15	63 - 80	1.65 - 2.28	42 - 58	1.02 - 1.38	26 - 35	1.42 - 1.93	36 - 49	0.87 - 1.18	22 - 30			39.0	991	
MS12W75T30-Q6	4.72 - 5.91	120 - 150	3.15 - 3.94	80 - 100	2.28 - 2.83	58 - 72	1.38 - 1.73	35 - 44	1.93 - 2.4	49 - 61	1.18 - 1.46	30 - 37			44.7	1135	
MS14W75T30-Q6	5.91 - 6.69	150 - 170	3.94 - 4.45	100 - 113	2.83 - 3.39	72 - 86	1.73 - 2.09	44 - 53	2.4 - 2.87	61 - 73	1.46 - 1.77	37 - 45			50.1	1273	



Short Circuit Testing Summary¹

MS##W75T30-Q6 Double Loop Product			
Trefoil Formation 37 mm Cable Diameter	Trefoil Formation 38 mm Cable Diameter	Trefoil Formation 39 mm Cable Diameter	Trefoil Formation 39 mm Cable Diameter
One Short Circuit Event (Clause 6.4.4) 300 mm spacing	Two Short Circuit Events (Clause 6.4.5) 300 mm spacing	One Short Circuit Event (Clause 6.4.4) 600 mm spacing	Two Short Circuit Events (Clause 6.4.5) 600 mm spacing
153 kA	142 kA	109 kA	109 kA
7254 lbs force (32.3 kN)	6084 lbs force (27.1 kN)	6960 lbs force (31.0 kN)	6960 lbs force (31.0 kN)

MS##W75T30-Q6 Triple Loop Product	
Trefoil Formation 39 mm Cable Diameter	Trefoil Formation 39 mm Cable Diameter
One Short Circuit Event (Clause 6.4.4) 300 mm spacing	Two Short Circuit Events (Clause 6.4.5) 300 mm spacing
188 kA	188 kA
10391 lbs force (46.2 kN)	10391 lbs force (46.2 kN)

¹Test compliance to IEC 61914 utilizing KEMA facility; Independent, ISO 17025 accredited testing, inspection, and certification services (IEEE, IEC, UL, and ANSI) for electric power equipment.

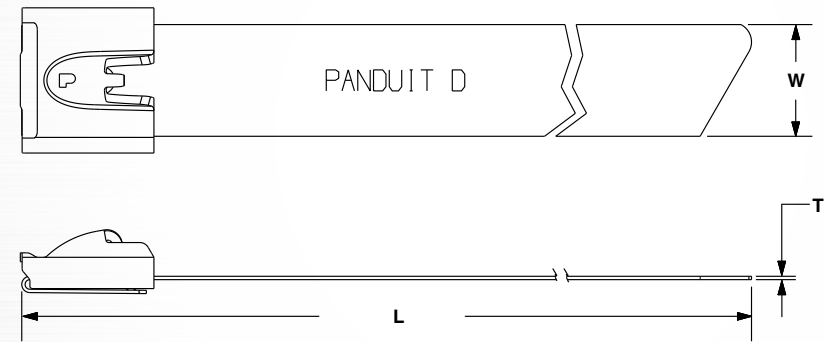
While Panduit's Cable Cleats are tested to meet the CSA standard C22.2 No.61914 it is the responsibility of the installer to ensure that the installation complies with all applicable local codes and regulations.

STAINLESS STEEL LOCKING STRAP CLEAT



The **Stainless Steel Locking Strap Cleat** is an effective option for protecting against lower to medium short circuit fault current requirements in harsh environments. The strap is made of 316L stainless steel, has inherent cable range-taking, and is compatible with quad, trefoil, and multicore cables.

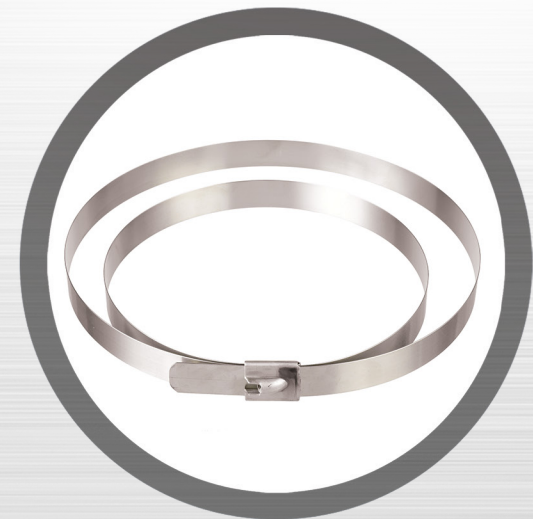
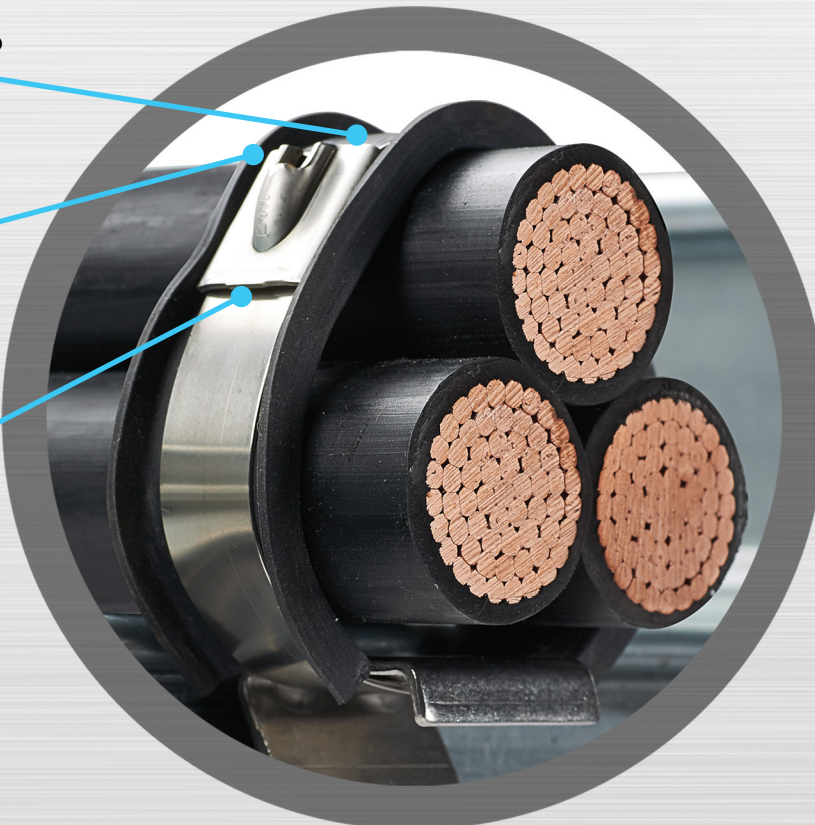
The cleat is installed after running the cable via a unique in the industry mounting bracket. It is tensioned and cut using a battery-operated, electromechanical or manually-operated, ratchet-style installation tool. The straps have rounded edges to protect from damaging the cable and are often used in combination with a cushion sleeve inserted between the strap and cable for added protection.



Cable tie cut off eliminates exposed sharp edges

Self-locking head for high-retained tension

Smooth surfaces and rounded edges reduce risk of cable insulation damage



Part Number	Trefoil Double Loop Cable Diameter Range		Flat Multicore Double Loop Cable Diameter Range		Quad Double Loop Cable Diameter Range		Width		Thickness		Length	
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm
MLT4DH-L316	0.47 - 1.65	12 - 42	0.47 - 3.74	12 - 95	0.47 - 1.42	12 - 36	0.31	7.9	0.010	0.25	28.0	711
MLT4DH-L							0.50	12.7	0.015	0.38	29.5	749
MLT4DEH15-Q316												
MLT4DSH-Q316												
MLT4DSH-Q							0.50	12.7	0.015	0.38	41.5	1054
MLT6DEH15-Q316												
MLT6DSH-Q316												
MLT6DSH-Q	1.65 - 2.84	42 - 72	3.74 - 5.91	95 - 150	1.42 - 2.40	36 - 61	0.62	15.9	0.015	0.38	53.5	1359
MLT8DEH15-Q316												
MLT8DSH-Q316												
MLT8DSH-Q	2.84 - 3.94	72 - 100	5.91 - 7.68	150 - 195	2.40 - 3.35	61 - 85	0.63	15.9	0.015	0.38	53.5	1359

Short Circuit Testing Summary¹

MLT#DH-L316 Product			
Trefoil Formation 39 mm Cable Diameter	Trefoil Formation 39 mm Cable Diameter	Trefoil Formation 39 mm Cable Diameter	Trefoil Formation 39 mm Cable Diameter
One Short Circuit Event (Clause 6.4.4) 300 mm spacing	Two Short Circuit Events (Clause 6.4.5) 300 mm spacing	One Short Circuit Event (Clause 6.4.4) 600 mm spacing	Two Short Circuit Events (Clause 6.4.5) 600 mm spacing
47.0 kA	47.0 kA	42.2 kA	33.2 kA
649 lbs force (2.89 kN)	649 lbs force (2.89 kN)	1047 lbs force (4.66 kN)	648 lbs force (2.88 kN)
MLT#DSH-Q316 Product			
Trefoil Formation 38 mm Cable Diameter	Trefoil Formation 38 mm Cable Diameter	Trefoil Formation 39 mm Cable Diameter	Trefoil Formation 39 mm Cable Diameter
One Short Circuit Event (Clause 6.4.4) 300 mm spacing	Two Short Circuit Event (Clause 6.4.5) 300 mm spacing	One Short Circuit Event (Clause 6.4.4) 600 mm spacing	Two Short Circuit Events (Clause 6.4.5) 600 mm spacing
75.1 kA	75.1 kA	60.4 kA	60.4 kA
1702 lbs force (7.57 kN)	1702 lbs force (7.57 kN)	2145 lbs force (9.45 kN)	2145 lbs force (9.45 kN)
MLT#DEH15-Q316 Product			
Trefoil Formation 38 mm Cable Diameter	—	Trefoil Formation 39 mm Cable Diameter	Trefoil Formation 39 mm Cable Diameter
One Short Circuit Event (Clause 6.4.4) 300 mm spacing	—	One Short Circuit Event (Clause 6.4.4) 600 mm spacing	Two Short Circuit Events (Clause 6.4.5) 600 mm spacing
56.1 kA	—	42.4 kA	35.7 kA
925 lbs force (4.11 kN)	—	1057 lbs force (4.70 kN)	749 lbs force (3.33 kN)

¹Test compliance to IEC 61914 utilizing KEMA facility; Independent, ISO 17025 accredited testing, inspection, and certification services (IEEE, IEC, UL, and ANSI) for electric power equipment.

While Panduit's Cable Cleats are tested to meet the CSA standard C22.2 No.61914 it is the responsibility of the installer to ensure that the installation complies with all applicable local codes and regulations.

THE COMPLETE PANDUIT CABLE CLEAT TOOLS

The manually-operated **BT2HTI** and **BT75SDT** tools are used to install the buckle strap cleats.

The **BT2HTI** is a ratchet-style installation tool, allowing for high tension with minimal effort.

The **BT75SDT** tensions the strap using a screw drive mechanism, providing high tension while reducing operator fatigue.

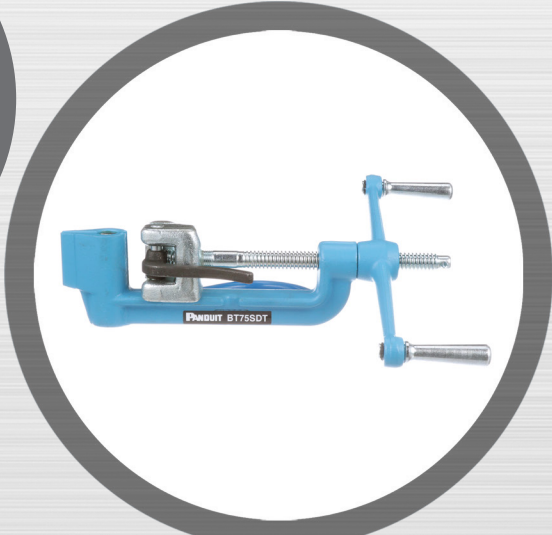
Both tools use a lever to cut the strap so there is an appropriate length remaining to fold over and secure with the buckle tab. A side entry slot allows for easy strap insertion, streamlining installation. The BT2HTI is more suitable for higher volume installations, and the BT75SDT for lower volume.



For use with
Stainless Steel
Buckle Strap Cleats



BT2HTI



BT75SDT

Part Number	Description	Length		Width		Used With	Std Pkg. Qty.
		In.	mm	In.	mm		
BT2HTI	Installation tool for use with MS75 buckles.	6.94	176	7.64	194	Stainless Steel Buckle Strap Cleat	1
BT75SDT	Screw drive tension mechanism provides high tension with minimal effort, reducing operator fatigue; Heavy duty construction offers a longer service life; Strapping side entry allows quick side entry of the strap into tool to speed installation.	15	381	8	203	Stainless Steel Buckle Strap Cleat	

THE COMPLETE PANDUIT CABLE CLEAT TOOLS

The **battery-operated PBTMT** and **manually-operated, ratchet-style RT2HT** tools are used to install the locking strap cleats.

Both tools tension the strap through its locking head using a gripping tooth mechanism and then cut the end flush, eliminating any sharp edges.

A side entry slot allows for easy strap insertion, streamlining installation. The PBTMT is more suitable for higher volume installations, and the RT2HT for lower volume.



For use with
**Stainless Steel
Locking
Strap Cleat**



PBTMT/E



RT2HT

Part Number	Description	Length		Width		Used With	Std Pkg. Qty.
		In.	mm	In.	mm		
PBTMT/E	Battery powered installation tool, for use with Pan-Steel® Heavy, Extra-heavy, and Super-Heavy, Cross Section MLT Style Ties, and MLTD Double Wrapped Style Ties, 2–12 volt lithium-ion batteries and 115 volt, 60 Hz charger included.	10.33	262.4	3.17	80.5	Stainless Steel Locking Strap Cleat	1
RT2HT	Hand Operated Tool for use with Extra-Heavy and Super-Heavy Cross Section Pan-Steel® Type MLT Ties.	7.1	180	4.05	103	Stainless Steel Locking Strap Cleat	

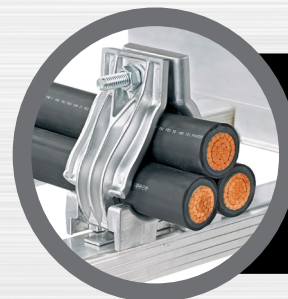
PANDUIT MOUNTING BRACKETS AND CUSHION SLEEVE

Mounting Brackets for Easy Installation and Labor Savings

Install cable cleats after the cable is pulled with Panduit mounting brackets that affix to the cable tray and cleat after the cable is run in the tray.

CBH Series Brackets are compatible with the CCSSTR series stainless steel trefoil cleats and CCALTR series aluminum trefoil cleats.

UC Series Brackets work in concert with Panduit's unique MLT series locking strap cleats and MS75 series buckle strap cleats.

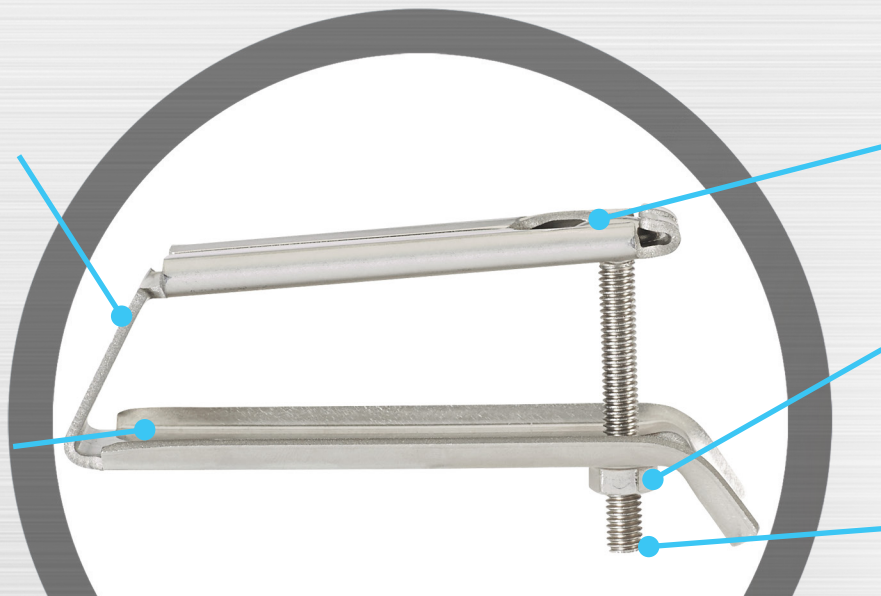


For use with
**Stainless
and Aluminum
Trefoil Cleats**



No loose
pieces eliminates
lost parts.

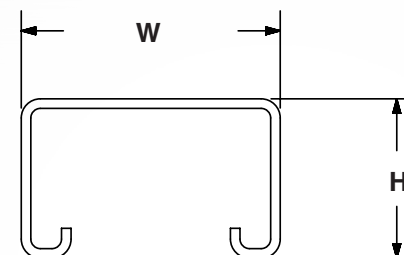
Mounting
bracket
eliminates the
need to drill
holes through
rungs to
secure cleats*



Capture slot for
swing bolt provides
added security

Peened nut
prevents it from
backing out
completely off
the screw

Easy-to-use
swing bolt
assembly

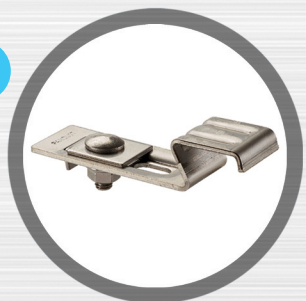


CABLE CLEAT BRACKETS

Part Number	Rung Height		Rung Width		Part Weight	
	In.	mm	In.	mm	lb.	g
CBH15L50-V6	0.59	15	1.97	50	0.32	145
CBH20L50-V6	0.59 - 0.79	15 - 20			0.33	151
CBH25L50-V6	0.79 - 0.98	20 - 25			0.34	154
CBH30L50-V6	0.98 - 1.18	25 - 30				

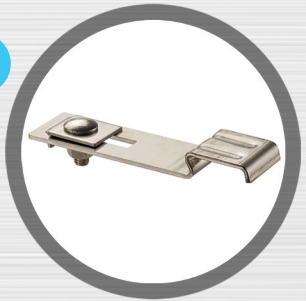
PANDUIT MOUNTING BRACKETS AND CUSHION SLEEVE

1



I-Beam Mounting Bracket*

2



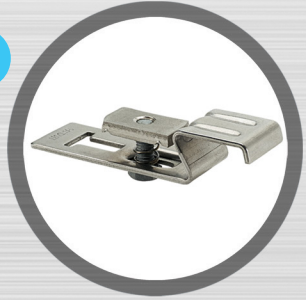
Top Hat Mounting Bracket*

3



Round Type Mounting Bracket*

4



Strut Mounting Bracket*

MOUNTING BRACKETS

Part Number	Std. Pkg. Qty.
UCSQ1-VC	5
UCRND1-VC	
UCIB1-VC	
UCTH1-VC	
UCFG1-V316	
UCSQ1-V316	
UCRND1-V316	
UCIB1-V316	
UCTH1-V316	

*Available in 316L stainless steel and galvanized steel.

CUSHION SLEEVE

Part Number	Length		Width		Std Pkg. Qty.
	In.	mm	In.	mm	
PCSLSH-B-CR	100	30.5	1.05	26.8	1

Pkg. -CR = 100 ft. (30.5 m) reel.

INDIVIDUAL CUSHION SLEEVES

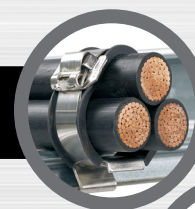
Part Number	Flat/Multicore Cable Diameter Range		Trefoil Cable Diameter Range		Quad Cable Diameter Range		Length		Width		Thickness		Std. Pkg. Qty.
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	
CSB42-150-230-Q	1.38 - 2.75	35 - 70	0.71 - 1.26	18 - 32	0.63 - 1.14	16 - 29	10.80	274	2.62	66.70	0.10	2.50	25
CSB42-230-330-Q	2.75 - 3.94	70 - 100	1.26 - 1.97	32 - 50	1.14 - 1.73	29 - 44	14.80	376					
CSB42-330-430-Q	3.94 - 5.12	100 - 130	1.97 - 2.75	50 - 70	1.73 - 2.28	44 - 58	18.80	478					

CUSHION SLEEVE REELS

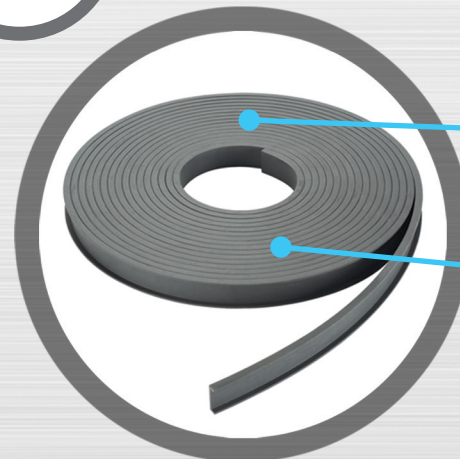
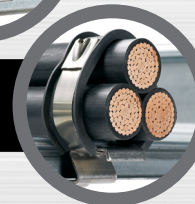
Part Number	Material	Length		Width		Thickness		Std. Pkg. Qty.
		Ft.	m	In.	mm	In.	mm	
BEST SELLER PCSLSH-B-CR	TPE Low Smoke, Halogen Free	100	30.5	1.05	26.8	0.08	2.2	1
BEST SELLER PCSSH-B-CR	Neoprene			0.91	23.1	0.12	3.1	



For use with
Stainless Steel Buckle Strap Cleat



For use with
Stainless Steel Locking Strap Cleat



Available
in 100 ft.
(30.5 m) rolls

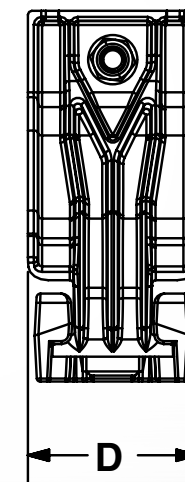
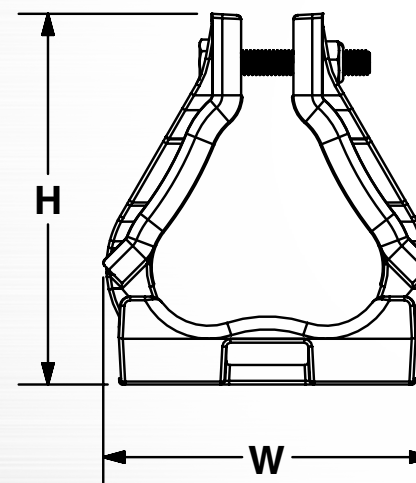
TPE low-smoke,
halogen-free, and
flame-resistant

ALUMINUM TREFOIL CLEAT



The Aluminum Trefoil Cable Cleat is ideal for medium-high short circuit faults in less corrosive environments. It is available in multiple sizes with cable range-taking capability and is suitable for trefoil cable arrangements.

The cleat can be installed after running cable via a unique in the industry mounting bracket or before running cable through it by installing direct to the cable tray rung via a fixing hole and M8 bolt. Insulating spacers and washers are available to protect against galvanic corrosion between dissimilar cable tray rung and cable cleat materials.

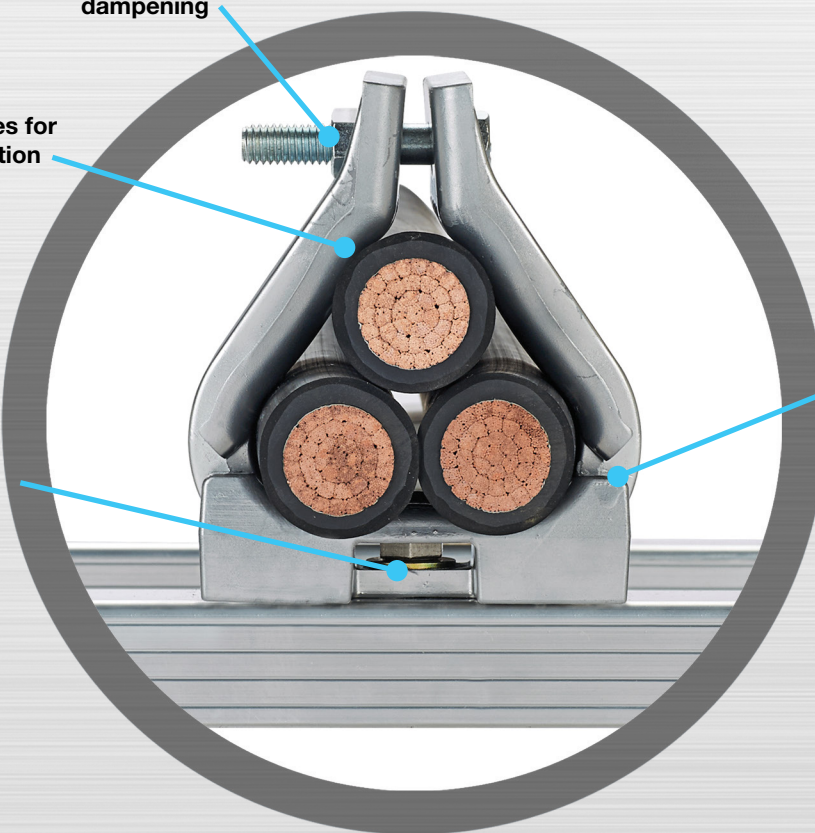


Nylon insert lock nut for vibration dampening

Rounded edges for cable protection

Installation before or after cable is run via fixing bolt or mounting bracket

Hinged for cable range-taking



Part Number	Cable Diameter Range		H		W		D		Weight		Mounting Holes
	In.	mm	In.	mm	In.	mm	In.	mm	Lb.	g	
CCALTR2326-X	0.91 - 1.02	23 - 26	3.92	100	3.98	101	2.17	55	0.81	370	1 x M8
CCALTR2528-X	0.98 - 1.10	25 - 28	4.06	103	4.15	105			0.85	385	
CCALTR2730-X	1.06 - 1.18	27 - 30	4.19	107	3.86	98			0.85	388	
CCALTR2932-X	1.14 - 1.26	29 - 32	4.33	110	3.87	98			0.87	397	
CCALTR3135-X	1.22 - 1.38	31 - 35	4.55	116	3.96	101			0.92	418	
CCALTR3438-X	1.34 - 1.50	34 - 38	4.77	121	4.18	106			0.93	424	
CCALTR3741-X	1.46 - 1.61	37 - 41	4.99	127	4.41	112			0.98	448	
CCALTR4044-X	1.57 - 1.73	40 - 44	5.24	133	4.63	118			1.05	477	
CCALTR4347-X	1.69 - 1.85	43 - 47	5.52	140	4.85	123			1.14	516	
CCALTR4651-X	1.81 - 2.01	46 - 51	5.83	148	5.05	128			1.23	558	
CCALTR5056-X	1.97 - 2.20	50 - 56	6.20	158	5.50	140			1.32	602	
CCALTR5561-X	2.17 - 2.40	55 - 61	6.57	167	5.72	145			1.42	647	
CCALTR6067-X	2.36 - 2.64	60 - 67	7.01	178	6.15	156			1.55	706	
CCALTR6675-X	2.60 - 2.95	66 - 75	7.93	193	6.72	171			1.73	787	

Short Circuit Testing Summary¹

Trefoil Formation 38 mm Cable Diameter	Trefoil Formation 38 mm Cable Diameter	Trefoil Formation 38 mm Cable Diameter	Trefoil Formation 38 mm Cable Diameter
One Short Circuit Event (Clause 6.4.4) 300 mm spacing	Two Short Circuit Events (Clause 6.4.5) 300 mm spacing	One Short Circuit Event (Clause 6.4.4) 600 mm spacing	Two Short Circuit Events (Clause 6.4.5) 600 mm spacing
114 kA	109 kA	94.6 kA	94.6 kA
3921 lbs force (17.4 kN)	3585 lbs force (15.9 kN)	5401 lbs force (24.0 kN)	5401 lbs force (24.0 kN)

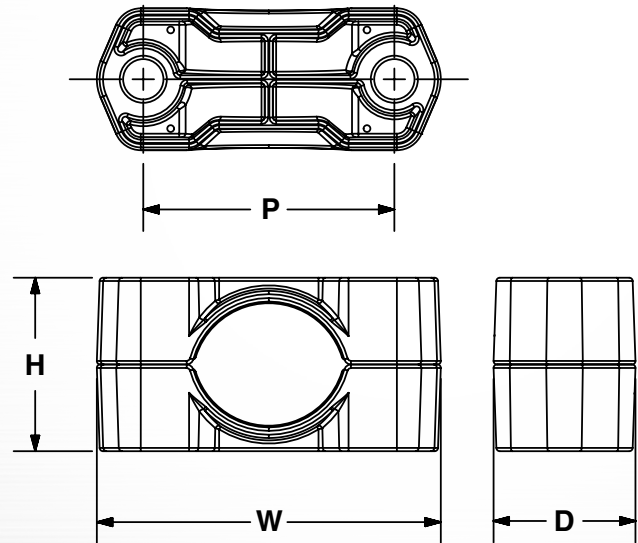
¹Test compliance to IEC 61914 utilizing KEMA facility; Independent, ISO 17025 accredited testing, inspection, and certification services (IEEE, IEC, UL, and ANSI) for electric power equipment.

ALUMINUM TWO-HOLE CLEAT



The **Aluminum Two-Hole Cleat** is ideal for medium-high short circuit faults in less corrosive environments. It is available in multiple sizes with cable range-taking capability and is suitable for single conductor cables.

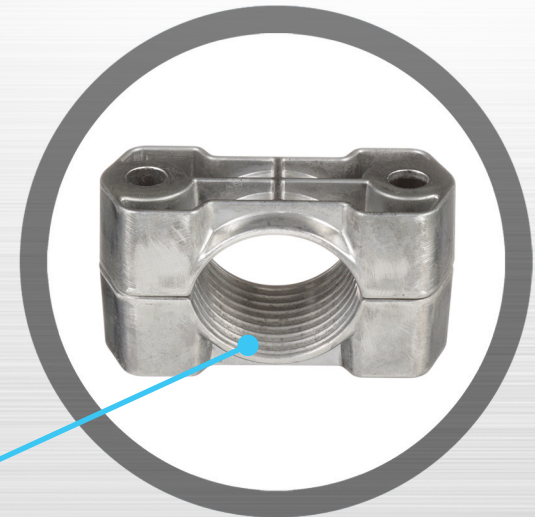
The cleat is installed after running cable by installing direct to the cable tray rung via fixing holes and two M10 bolts. Insulating spacers and washers are available to protect against galvanic corrosion in case of dissimilar cable tray rung and cable cleat materials.



Tightening bolts can be installed from top or bottom

Rounded edges for cable protection

Ridges to hold cable in place



Part Number	Cable Diameter Range		H		W		D		F		Weight		Mounting Holes
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	Lb.	g	
CCAL2H3846-X	1.50 - 1.81	38 - 46	2.01	51	3.98	101	1.64	42	2.91	74	0.50	226	2 x M10
CCAL2H4658-X	1.81 - 2.28	46 - 58	2.36	60	4.52	115	1.69	43	3.39	86	0.64	291	
CCAL2H5870-X	2.28 - 2.76	58 - 70	2.87	73	5.18	132	1.75	45	3.96	101	0.89	404	
CCAL2H7083-X	2.76 - 3.27	70 - 83	3.39	86	5.71	145	1.81	46	4.47	114	1.09	496	
CCAL2H8397-X	3.27 - 3.82	83 - 97	3.94	100	6.36	162	1.87	47	5.06	129	1.39	630	
CCAL2H97109-X	3.82 - 4.29	97 - 109	4.53	115	6.87	175	1.93	49	5.55	141	1.66	754	
CCAL2H109120-X	4.29 - 4.72	109 - 120	5.04	128	7.33	186	1.98	50	5.99	152	1.92	873	

Short Circuit Testing Summary¹

Flat Formation 105 mm Cable Spacing	Flat Formation 105 mm Cable Spacing
One Short Circuit Event (Clause 6.4.4) 600 mm spacing	Two Short Circuit Events (Clause 6.4.5) 600 mm spacing
131 kA	131 kA
3748 lbs force (16.7 kN)	3748 lbs force (16.7 kN)

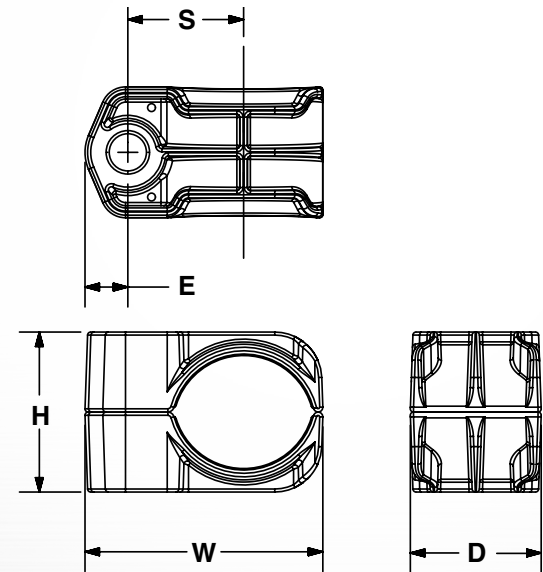
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ALUMINUM ONE-HOLE CLEAT



The **Aluminum One-Hole Cleat** is ideal for lower to medium short circuit faults in less corrosive environments. It is available in multiple sizes with cable range-taking capability and is suitable for single conductor cables.

The cleat is installed after running cable by installing direct to the cable tray rung via a fixing hole and M10 bolt. Insulating spacers and washers are available to protect against galvanic corrosion in case of dissimilar cable tray rung and cable cleat materials.

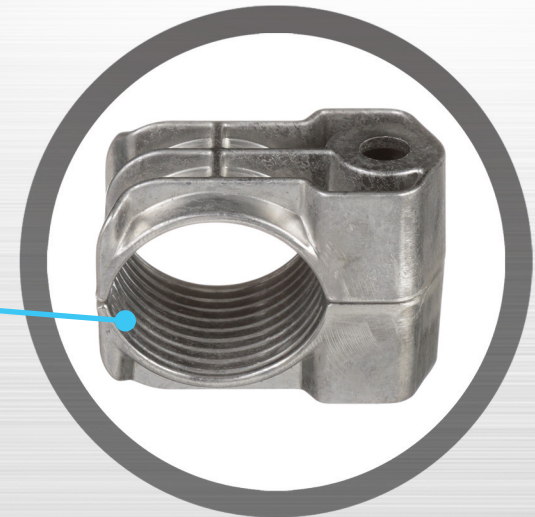
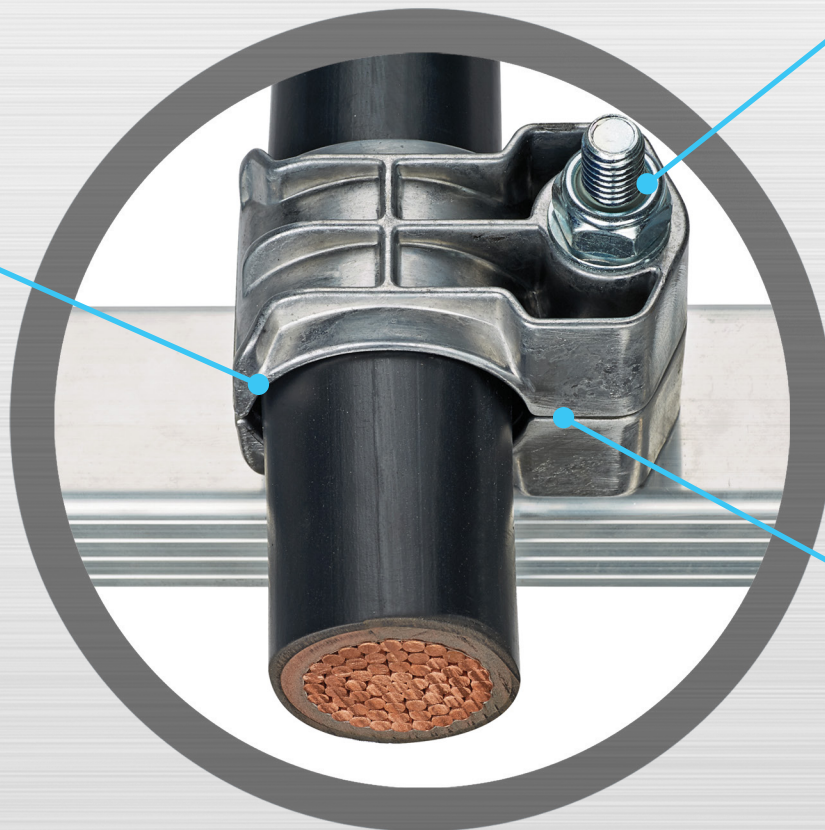


Rounded edges for cable protection

Tightening bolt can be installed from top or bottom

Ridges to hold cable in place

Interlock feature prevents rotation between top and bottom pieces



	Cable Diameter Range		H		W		D		E		S		Weight		Mounting Holes		
Part Number	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	Lb.	g			
CCAL1H1013-X	0.39 - 0.51	10 - 13	0.91	23	1.59	40	1.60	41	0.48	12	0.77	20	0.11	50	1 x M10		
CCAL1H1316-X	0.51 - 0.63	13 - 16	1.02	26	1.72	44	1.61		0.50	13	0.83	21	0.13	59			
CCAL1H1619-X	0.63 - 0.75	16 - 19	1.14	29	1.88	48					0.91	23	0.15	68			
CCAL1H1923-X	0.75 - 0.91	19 - 23	1.26	32	2.04	52					0.99	25	0.17	77			
CCAL1H2327-X	0.91 - 1.06	23 - 27	1.42	36	2.28	58	1.62		0.51		1.07	27	0.20	89			
CCAL1H2732-X	1.06 - 1.26	27 - 32	1.57	40	2.44	62	1.63	42	0.53	14	1.19	30	0.24	107			
CCAL1H3238-X	1.26 - 1.50	32 - 38	1.77	45	2.68	68					1.30	33	0.27	125			
CCAL1H3846-X	1.50 - 1.81	38 - 46	2.01	51	2.98	76					1.64	1.45	37	0.33		149	
CCAL1H4651-X	1.81 - 2.01	46 - 51	2.36	60	3.25	83					1.65	0.56	1.58	40		0.40	181
CCAL1H5157-X	2.01 - 2.24	51 - 57	2.56	65	3.49	89					1.66	0.57	1.70	43		0.44	202

Short Circuit Testing Summary¹

Flat Formation 105 mm Cable Spacing	Flat Formation 105 mm Cable Spacing
One Short Circuit Event (Clause 6.4.4) 600 mm spacing	Two Short Circuit Events (Clause 6.4.5) 600 mm spacing
93.4 kA	93.4 kA
1904 lbs force (8.47 kN)	1904 lbs force (8.47 kN)

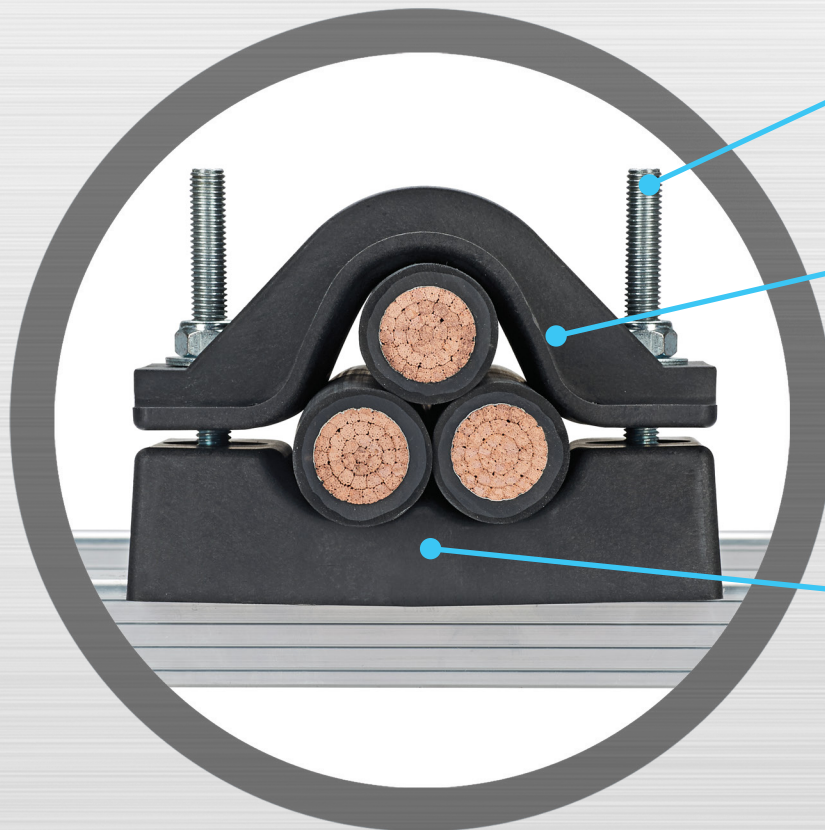
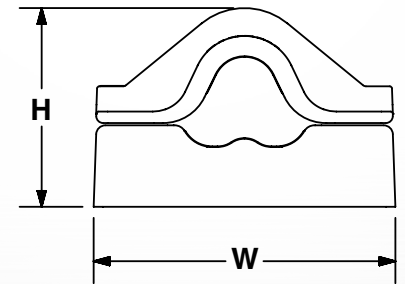
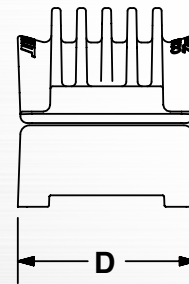
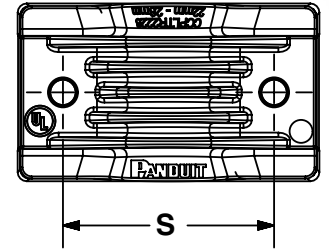
¹Test compliance to IEC 61914 utilizing KEMA facility; Independent, ISO 17025 accredited testing, inspection, and certification services (IEEE, IEC, UL, and ANSI) for electric power equipment.

POLYMER TREFOIL CLEAT



The **Polymer Trefoil Cleat** is ideal for medium-high short circuit faults in less harsh environments. It is available in multiple sizes with cable range-taking capability and is suitable for trefoil cable arrangements.

The cleat is installed after running cable by installing direct to the cable tray rung via a fixing hole and M10 bolt.

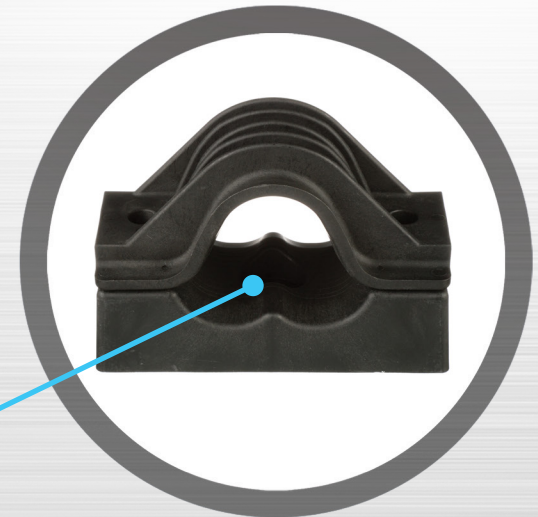


Dual bolt installation

Rounded edges for cable protection

Ridges to hold cable in place

Corrosion resistant body



Part Number	Cable Diameter Range		H		W		D		S		Weight		Mounting Holes
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	Lb.	g	
CCPLTR2228-X	0.87 - 1.10	22 - 28	3.46	88	5.20	132	3.07	78	3.62	92	1.29	585	1 X M10, 2 X M10
CCPLTR2633-X	1.02 - 1.30	26 - 33	3.86	98	5.59	142			4.02	102	1.39	630	
CCPLTR3139-X	1.22 - 1.54	31 - 39	4.13	105	6.06	154			4.49	114	1.51	685	
CCPLTR3745-X	1.46 - 1.77	37 - 45	4.61	117	6.54	166			4.96	126	1.64	745	
CCPLTR4352-X	1.69 - 2.05	43 - 52	5.04	128	7.09	180			5.51	140	1.80	815	
CCPLTR5060-X	1.97 - 2.36	50 - 60	5.55	141	7.76	197			6.14	156	1.97	895	

Short Circuit Testing Summary¹

Trefoil Formation 38 mm Cable Diameter	Trefoil Formation 38 mm Cable Diameter	Flat Formation 38 mm Cable Diameter	Flat Formation 38 mm Cable Diameter
One Short Circuit Event (Clause 6.4.4) 300 mm spacing	Two Short Circuit Events (Clause 6.4.5) 300 mm spacing	One Short Circuit Event (Clause 6.4.4) 600 mm spacing	Two Short Circuit Events (Clause 6.4.5) 600 mm spacing
136 kA	130 kA	109 kA	109 kA
5581 lbs force (24.8 kN)	5099 lbs force (22.7 kN)	7170 lbs force (31.8 kN)	7170 lbs force (31.8 kN)

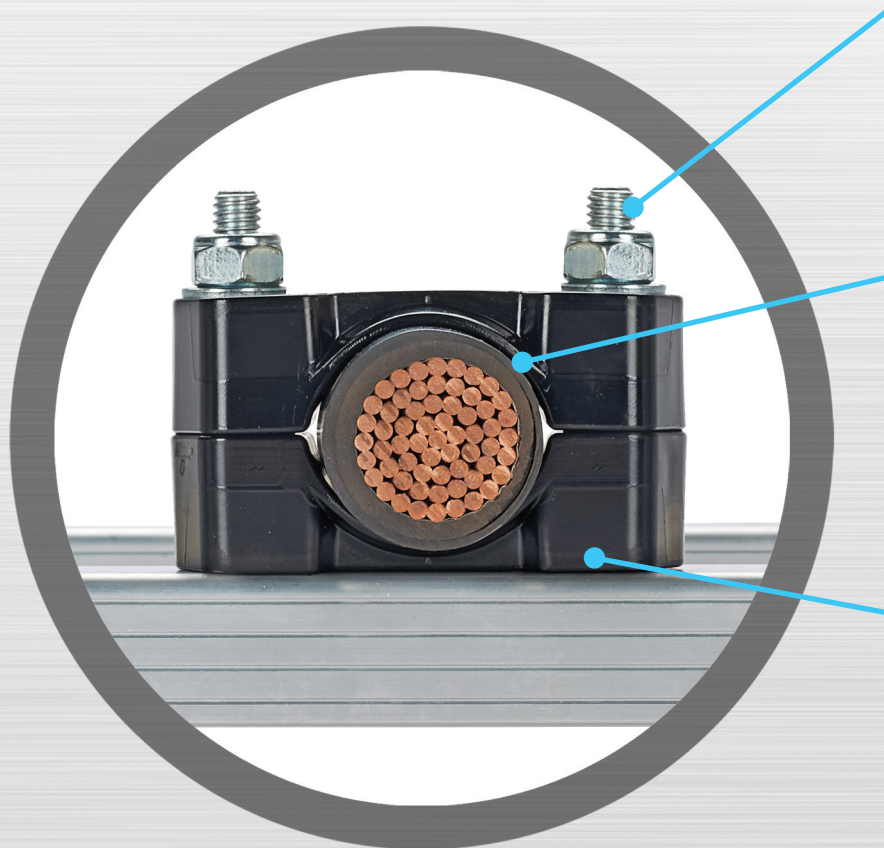
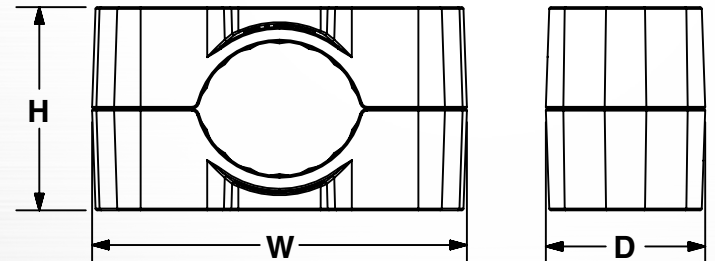
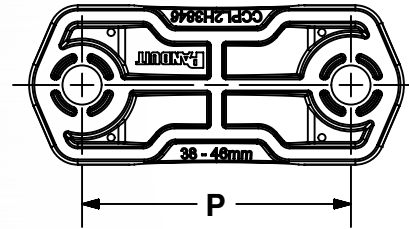
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POLYMER TWO-HOLE CLEAT



The **Polymer Two-Hole Cleat** is ideal for lower to medium short circuit faults in less harsh environments. It is available in multiple sizes with cable range-taking capability and is suitable for single conductor cable arrangements.

The cleat is installed after running cable by installing direct to the cable tray rung via fixing holes and two M10 bolts.



Dual bolt
installation

Rounded
edges
for cable
protection

Ridges
to hold
cable in
place

Corrosion
resistant body



Part Number	Cable Diameter Range		H		W		D		P		Weight		Mounting Holes
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	Lb.	g	
CCPL2H3846-X	1.50 - 1.81	38 - 46	2.20	56	4.07	103	1.73	44	2.92	74	0.31	143	2 x M10
CCPL2H4658-X	1.81 - 2.28	46 - 58	2.56	65	4.53	115	1.74		3.37	86	0.38	175	
CCPL2H5870-X	2.28 - 2.76	58 - 70	3.07	78	5.04	128	1.76	45	3.85	98	0.48	220	
CCPL2H7083-X	2.76 - 3.27	70 - 83	3.19	81	5.56	141	1.85	47	4.36	111	0.60	273	
CCPL2H8397-X	3.27 - 3.82	83 - 97	4.13	105	6.13	156	1.95	50	4.91	125	0.74	335	
CCPL2H97109-X	3.82 - 4.29	97 - 109	4.72	120	6.64	169	2.06		5.40	137	0.88	402	
CCPL2H109120-X	4.29 - 4.72	109 - 120	5.24	133	7.10	180	2.09	53	5.84	148	1.01	460	
CCPL2H120135-X	4.72 - 5.31	120 - 135	5.71	145	7.69	195	2.17	55	6.42	163	1.17	533	
CCPL2H135150-X	5.31 - 5.91	135 - 150	6.34	161	8.31	211	2.19	56	7.01	178	1.35	615	
CCPL2H150165-X	5.91 - 6.50	150 - 165	6.97	177	8.92	227	2.29	58	7.61	193	1.57	712	

Short Circuit Testing Summary¹

Flat Formation 105 mm Cable Spacing	Flat Formation 105 mm Cable Spacing
One Short Circuit Event (Clause 6.4.4) 600 mm spacing	Two Short Circuit Events (Clause 6.4.5) 600 mm spacing
85.4 kA	85.4 kA
1593 lbs force (7.09 kN)	1593 lbs force (7.09 kN)

¹Test compliance to IEC 61914 utilizing KEMA facility; Independent, ISO 17025 accredited testing, inspection, and certification services (IEEE, IEC, UL, and ANSI) for electric power equipment.

POLYMER ONE-HOLE CLEAT



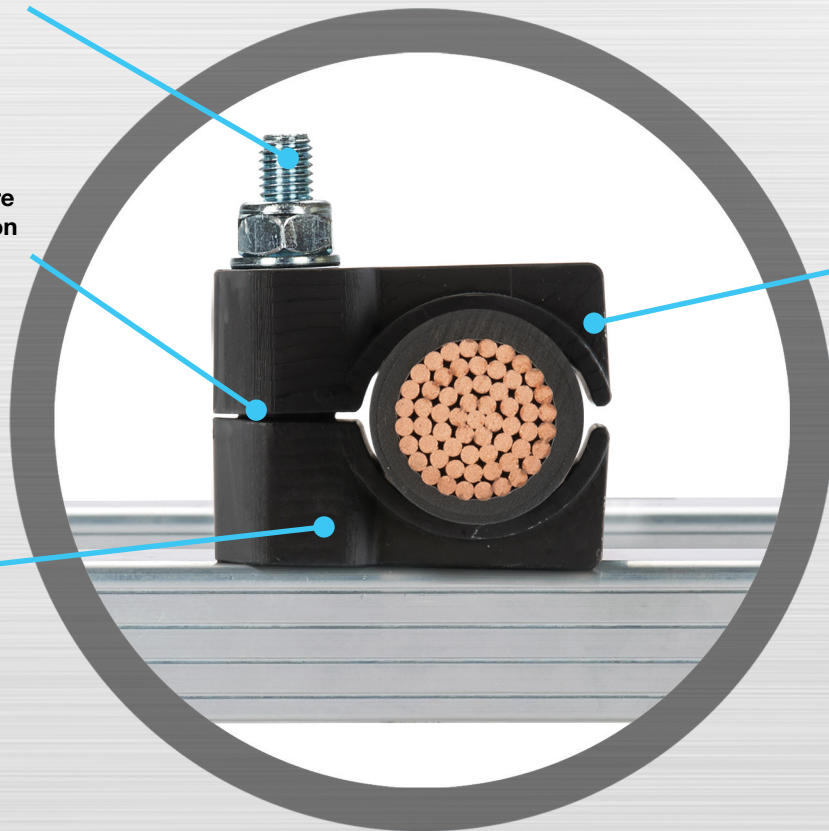
The **Polymer One-Hole Cleat** is ideal for lower to medium short circuit faults in less harsh environments. It is available in multiple sizes with cable range-taking capability and is suitable for single conductor cable arrangements.

The cleat is installed after running cable by installing direct to the cable tray rung via a fixing hole and M10 bolt.

Single bolt installation

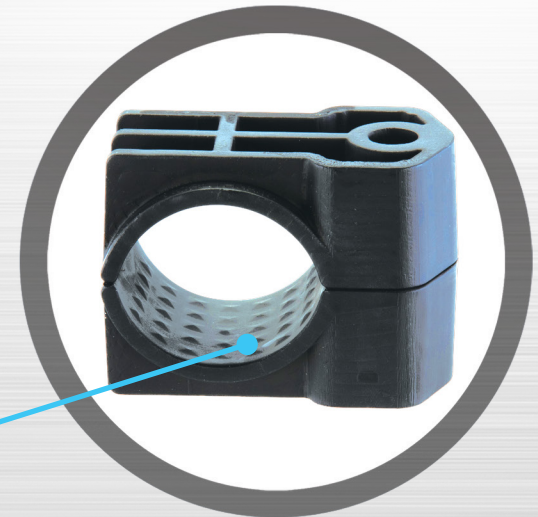
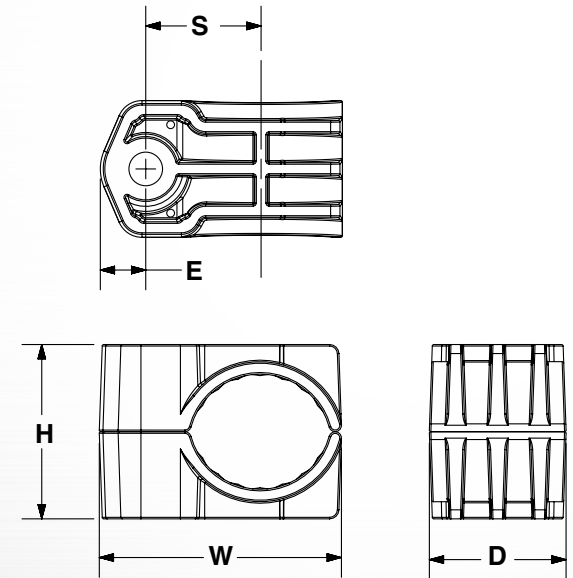
Interlock feature prevents rotation between top and bottom pieces

Corrosion resistant body



Rounded edges for cable protection

Ridges to hold cable in place



Part Number	Cable Diameter Range		H		W		D		E		S		Weight		Mounting Holes
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	Lb.	g	
CCPL1H1013-X	0.39 - 0.51	10 - 13	1.10	28	1.74	44	1.69	43	0.56	14	0.81	21	0.08	38	1 x M10
CCPL1H1316-X	0.51 - 0.63	13 - 16	1.22	31	1.87	48					0.87	22	0.10	44	
CCPL1H1619-X	0.63 - 0.75	16 - 19	1.34	34	2.00	51	1.70				0.94	24	0.11	49	
CCPL1H1923-X	0.75 - 0.91	19 - 23	1.46	37	2.15	55					1.01	26	0.12	56	
CCPL1H2327-X	0.91 - 1.06	23 - 27	1.61	41	2.32	59	1.71				1.09	28	0.14	63	
CCPL1H2732-X	1.06 - 1.26	27 - 32	1.77	45	2.52	64		1.19	30	0.16	72				
CCPL1H3238-X	1.26 - 1.50	32 - 38	1.97	50	2.75	70	1.72	44	0.57	15	1.31	33	0.18	82	
CCPL1H3846-X	1.50 - 1.81	38 - 46	2.28	58	3.06	78	1.73				1.46	37	0.21	96	
CCPL1H4651-X	1.81 - 2.01	46 - 51	2.56	65	3.29	84	1.74		0.58		1.57	40	0.25	114	
CCPL1H5157-X	2.01 - 2.24	51 - 57	2.76	70	3.53	90	1.75				1.69	43	0.28	125	

Short Circuit Testing Summary¹

Flat Formation 105 mm Cable Spacing	Flat Formation 105 mm Cable Spacing
One Short Circuit Event (Clause 6.4.4) 600 mm spacing	Two Short Circuit Events (Clause 6.4.5) 600 mm spacing
69.5 kA	69.5 kA
1055 lbs force (4.69 kN)	1055 lbs force (4.69 kN)

¹Test compliance to IEC 61914 utilizing KEMA facility; Independent, ISO 17025 accredited testing, inspection, and certification services (IEEE, IEC, UL, and ANSI) for electric power equipment.

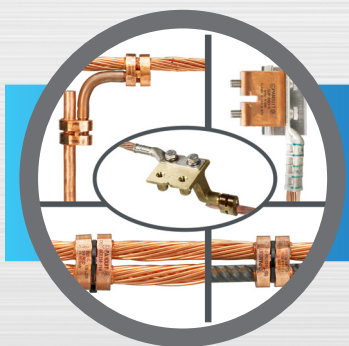
PANDUIT SOLUTIONS FOR ELECTRICAL AND NETWORKING INSTALLATIONS

From Breaking Ground to Routine Maintenance and Repair, Panduit Products Impact Your Entire Project Lifecycle

Partner with a company committed to meeting the daily challenges you face. We offer a full solution of over 30,000 readily available parts — from cable ties to power connectors, terminals to identification — Panduit products are engineered for all aspects of designing, installing and maintaining infrastructures within heavy-duty industrial environments.

- **Productivity** Reduce costs and meet deadlines with products and tools engineered to improve efficiency
- **Reliability** Ensure performance and design consistency of products that are vital to the success of the job
- **Safety** Protect personnel, equipment and infrastructure

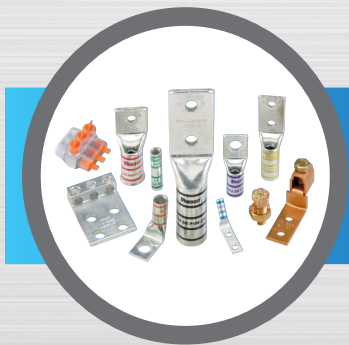
START EVERY PROJECT OFF RIGHT



StructuredGround™ Direct Burial Compression Grounding System



Crimp Tools



Power Connectors



Abrasion Protection

PANDUIT SOLUTIONS FOR ELECTRICAL AND NETWORKING INSTALLATIONS



Stainless Steel Cable Ties



Labeling and Identification



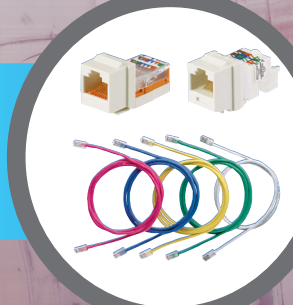
Cable Ties



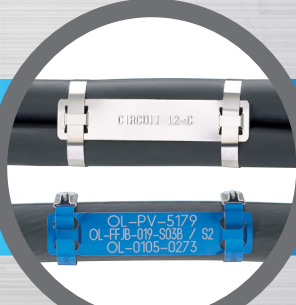
Lockout/Tagout and Safety Systems



VeriSafe™ Absence of Voltage Tester - AVT



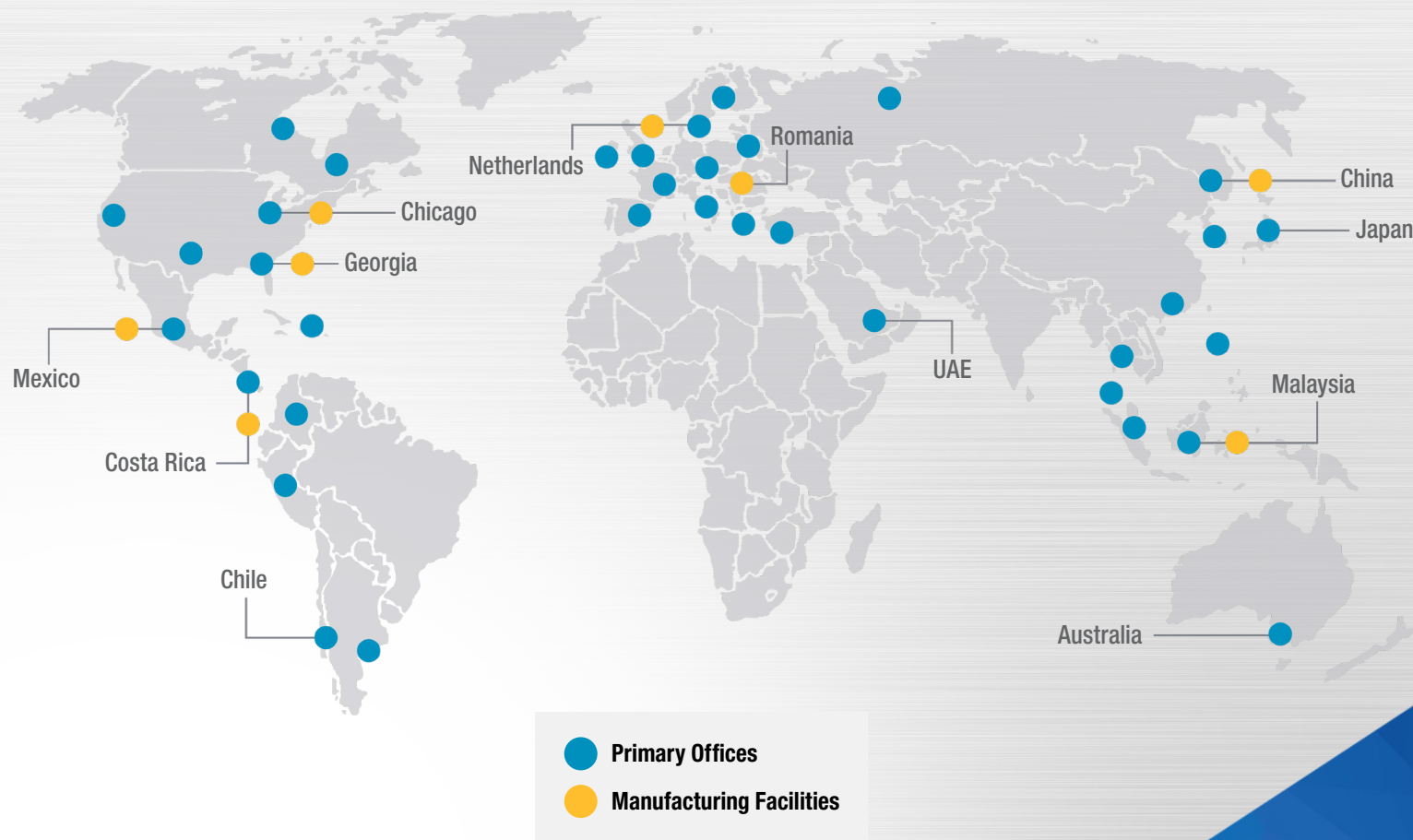
NetKey® Network Components



Permanent Identification



Cable Management Accessories



Global Capabilities

Global Expertise and Support

Global distribution, manufacturing, sales and technical support teams make Panduit solutions readily accessible, allowing the right products to be delivered when and where they are needed.

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