

CYCLONE II/III (SDSTR 2 LOOP/ HDSTR 3 LOOP)

The Cyclone II and III Strap cable cleats are metallic cable cleats consisting of a fabricated 316L stainless steel base and a stainless steel strap which have been designed, constructed, and tested in accordance with the International Standard 'cable cleats for Electrical Installations' IEC 61914.

The Cyclone II and III Strap cable cleats ensure the retention and securing of cables, whilst preventing damage to the cable when in normal operation or in the event a short circuit fault condition.

The cable cleats allow a wide range of applications including miscellaneous formations. They have an exceptional overlapping range and give the end user more flexibility when compared to more rigid cable cleats on the market. Each cable cleat is capable of securing various cable formations, such as single cable (multicore) or single cable in parallel formation, trefoil formation, and quad formation. Suitable for single cable applications diameters from 36mm to 165mm in 10 sizes, in trefoil formation from diameters of 24mm to 145mm in 15 sizes and quad formation from 21mm to 124mm in 15 sizes.

The Cyclone II Strap cable cleat is designed and tested to restrain cables securely during moderate short circuit forces, whilst the Cyclone III Strap cable cleat is designed for high short circuit forces. Cyclone II straps are designed to wrap around the cables twice, whilst the Cyclone III straps are designed to wrap around the cables three times to provide the resistance needed during high fault short circuit conditions.

The Cyclone II and III bases are manufactured from 316L stainless steel, giving the cable cleats high creep strength and excellent corrosion resistance. The Cyclone straps are manufactured in 316L stainless steel providing excellent corrosion resistance, and the tensioned straps act as a coil during short circuit conditions to restrain the cable. The Cyclone strap wraps around the angled Cyclone II or III stainless steel base ensuring the cables are always kept central, the strap is fastened to a stainless steel pin with a hexagon shaped head at one end allowing fast, easy installation via the use of a ratchet, power tool or other suitable mechanical device.

The Cyclone II and III Strap cable cleats have one M12 and two M10 fixing clearance holes within each base, allowing versatile installation, and enabling the product to be secured to a variety of mounting surfaces. Due to the design of the Cyclone, the cables do not need to be lifted and placed in to the cable cleat, instead the cables are placed on to the bases and the Cyclone straps then wrap around the cables securing them to the mounting surface of the base.

The Cyclone II and III cable cleats and Cyclone intermediate straps come with standard liners, which are classified as Low Smoke & Fume (LSF), Zero Halogen (LSOH) and Phosphorus free. A high temperature version of the liner is available by adding HT suffix to the ordering code. The liners help to restrain the cables within vertical applications, providing a layer of protection between the cable sheath and the Cyclone stainless steel strap and base during normal operation where thermal elongation of cables occurs. The liners also prevent the cable from chafing on any mounting surface due to differential movements such as those found in marine and offshore applications, and protect the cable during short circuit conditions.



The Cyclone Straps are designed to be used as an intermediate restraint (where applicable) between two Cyclone cable cleats to bind cables together giving a cost effective, easy application fixing system. Using the Cyclone II or III Strap cable cleat and the Cyclone Intermediate Restraints alternatively will dramatically reduce installation time and cost, when compared to alternative cable cleat only solutions.

FEATURES

- Third party certification to IEC 61914
- 316L stainless steel base with stainless steel strap
- Cyclone II short circuit rating of 151kA peak fault
- Cyclone III short circuit rating of 180kA peak fault
- Standard operating temperature -50°C to +40°C
- Standard liners are LUL approved and are classified as Low Smoke & Fume (LSF), Zero Halogen (LSOH) and Phosphorus Free
- High temperature liner version with HT suffix available with operating temperature -50°C to +90°C
- High temperature liners are classified as VO Flame Retardant Polymer
- Combined single (M12) and two bolt (M10) base fixing design

300MM CYCLONE II (0.1 SEC)	
CABLE OD (MM)	PEAK kA
36	151.0
38	155.1
43	165.0
59	193.3
65	202.9

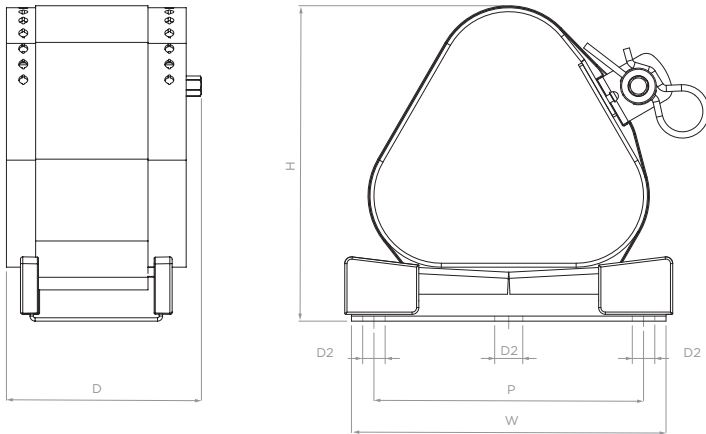
300MM CYCLONE III (0.1 SEC)	
CABLE OD (MM)	PEAK kA
36	180.0
38	184.9
43	196.7
59	230.4
65	241.9

CYCLONE II SHORT CIRCUIT TESTING TO IEC 61914 - CLAUSE 9.5

TREFOIL FORMATION						
One short circuit			One short circuit w/ Cyclone strap	Two short circuits		Two short circuits w/ Cyclone strap
fixed cleat centres 300mm	300mm	600mm	1200mm	600mm	600mm	1200mm
0.1 sec	1 sec	1 sec	0.1 sec	0.1 sec	1 sec	0.1 sec
151kA Peak	80kA Peak	75kA Peak	125kA Peak	120kA Peak	70kA Peak	114kA Peak
68.6kA r.m.s	35.6kA r.m.s	34.8kA r.m.s	56.8kA r.m.s	54.5kA r.m.s	32.8kA r.m.s	51.8kA r.m.s

CYCLONE III SHORT CIRCUIT TESTING TO IEC 61914 - CLAUSE 9.5

TREFOIL FORMATION						
One short circuit			One short circuit w/ Cyclone strap	Two short circuits		Two short circuits w/ Cyclone strap
fixed cleat centres 300mm	300mm	600mm	1200mm	600mm	600mm	1200mm
0.1 sec	1 sec	1 sec	0.1 sec	0.1 sec	1 sec	0.1 sec
180kA Peak	90kA Peak	80kA Peak	137kA Peak	135kA Peak	75kA Peak	130kA Peak
81.8kA r.m.s	41.7kA r.m.s	36.9kA r.m.s	62.2kA r.m.s	61.4kA r.m.s	34.7kA r.m.s	60kA r.m.s



TECHNICAL DATA & CLASSIFICATION

TYPE	6.1.3 Composite Strap Cable Cleat - 2 Loop Cyclone II / 3 Loop Cyclone III
DESIGN SPECIFICATION	IEC 61914
TEMPERATURE FOR PERMANENT APPLICATION	-50 to +40°C IEC 61914 clause / part 6.2
NEEDLE FLAME TEST	Pass - 120 second flame application time, IEC 61914 clause 10.0, 10.1, IEC 60695-11-5
LATERAL LOAD TEST	Single - 5.5kN - 20kN Cyclone II and 6.5kN - 22kN Cyclone III, IEC 61914 clause 9.3 Trefoil - Refer to CMP Products, Cyclone II and Cyclone III, IEC 61914 clause 9.3
AXIAL LOAD TEST	IEC 61914 clause 9.4, Single - 0.4kN - 0.6kN Cyclone II and 0.4kN Cyclone III IEC 61914 clause 9.4, Trefoil - 0.4kN Cyclone II and 0.4kN Cyclone III
IMPACT RESISTANCE	Very Heavy, IEC 61914 clause 6.3, 6.3.5, 9.2
MATERIAL	316L Stainless Steel Base & Strap Standard liners are classified as Low Smoke & Fume (LSF), Zero Halogen (LSOH) and Phosphorus Free. HT liners are classified as VO Flame Retardant Polymer

CABLE CLEAT SELECTION TABLE

CYCLONE II PART NO.	CYCLONE III PART NO.	CABLE Ø RANGE TAKE (MM)			DIMENSIONS MM						WEIGHT (g)
		SINGLE	TREFOIL	QUAD	W	H	D	P	FIXING HOLE Ø		
									D1	D2	
2CYC024034	3CYC024034	36-50	24-34	21-29	108	96	89	80	2 x M10	1 x M12	519
2CYC030041	3CYC030041	45-60	30-41	26-35	108	109	89	80	2 x M10	1 x M12	538
2CYC037047	3CYC037047	55-69	37-47	32-40	128	120	89	100	2 x M10	1 x M12	612
2CYC043054	3CYC043054	64-80	43-54	37-46	128	134	89	100	2 x M10	1 x M12	634
2CYC050060	3CYC050060	75-88	50-60	43-51	148	145	89	120	2 x M10	1 x M12	729
2CYC056067	3CYC056067	83-99	56-67	49-57	148	158	89	120	2 x M10	1 x M12	747
2CYC063073	3CYC063073	94-108	63-73	55-62	168	170	89	140	2 x M10	1 x M12	822
2CYC069080	3CYC069080	103-118	69-80	60-68	168	183	89	140	2 x M10	1 x M12	841
2CYC072085	3CYC072085	114-150	72-85	66-72	188	193	89	160	2 x M10	1 x M12	951
2CYC082095	3CYC082095	145-165	82-95	70-81	188	212	89	160	2 x M10	1 x M12	978
2CYC092105	3CYC092105		92-105	70-81	210	231	89	100	2 x M10	1 x M12	1051
2CYC102115	3CYC102115		102-115	88-98	210	250	89	100	2 x M10	1 x M12	1080
2CYC112125	3CYC112125		112-125	96-107	235	269	89	100	2 x M10	1 x M12	1210
2CYC122135	3CYC122135		122-135	105-116	235	288	89	100	2 x M10	1 x M12	1239
2CYC132145	3CYC132145		132-145	113-124	250	307	89	120	2 x M10	1 x M12	1314

Note: Both Cyclone II and Cyclone III cable cleat consists of one base and one strap, additional cable straps (restraints) ordered separately. Coatings are available upon request by adding the following suffixes to the ordering reference - EC for epoxy coating, PC for polyester coating and TC for thermoplastic coating. Order reference example for epoxy coating of cable cleat base suffix EC (2CYC024034EC). Order reference example for high temperature liner version suffix HT (2CYC024034HT). Fasteners required to secure the cable cleat to the support structure are not included but can be supplied upon request - see cleat fixing pack page 64-65. Isolation/separation pads (to prevent corrosion between two dissimilar metals) are not included but can be supplied on request - see isolation/separation pad page 66.