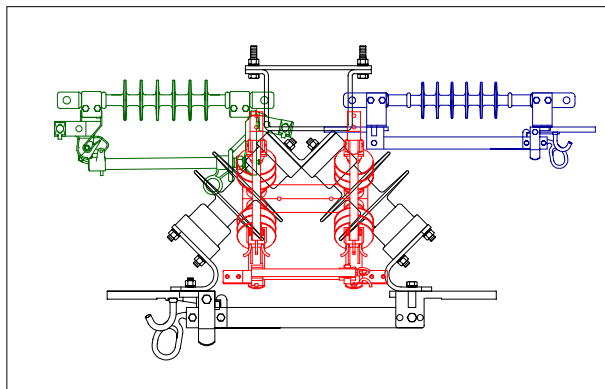




HIGH VOLTAGE PRODUCTS SWITCHES , HARDWARE, FIBERGLASS



BEL VOLT

History

Established in 1982, Firon Industries has developed into Canada's premiere and preferred manufacturer of non-automated, airbreak switches in the high voltage, electrical utility industry. Having developed the lightest, most durable and most advanced switches in the industry, Firon is recognized for its innovation and for its dedication to the advancement of new, superior quality products; and based on our proven track record, these products are certain to enhance the safety and simplicity of any high voltage operation.

Firon also manufactures a complete line of switch accessories and other hardware items, such as cutout and arrester brackets, pole top extensions, dead-end clamps and stirrups.

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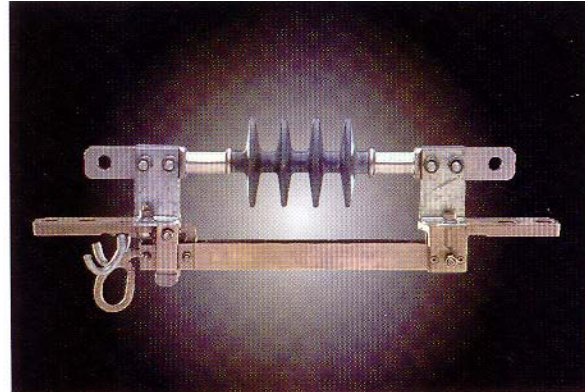
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www.belvolt.com

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ULTRA-LIGHT LINE TENSION SWITCH



APPLICATION

The Firon line tension switch is ideal where line sectionalizing is required; it eliminates the need for pole mounted switches and reduces "pole clutter". With a tested momentary of 40kA RMS (asymmetrical) and a current rating of 900 amps continuous, the switches are available in ratings from 15 thru 69 kV.

CONSTRUCTION

PREMIUM INSULATOR

The design voltage ratings: 15, 28, 34, 46 & 69 kV use the superior Silicone type insulators as the mounting base.

TERMINAL PADS

Line connections are made through the flat, two hole Nema pads with hexagon bolt depressions cast in place. These depressions enable the lineman to use a single wrench for the installation of various connectors.

CURRENT CARRYING COMPONENTS

The hinge and jaw assemblies are constructed from tin plated, electrical grade cast aluminum with nickel plated copper contacts, over-plated with silver. The jaw assembly contacts are backed up with stainless steel pressure plates.

The jaw and hinge castings have an IACS conductivity percentage rating approximately twice that of bronze used on similar type switches today.

The blade is manufactured from a square hollow section aluminum tubing, 6101-T6 to provide the maximum in strength and rigidity, far surpassing

the parallel or twin blade construction. Both jaw and hinge ends are equipped with nickel/silver plated copper contacts. All of the current carrying components are assembled using 18-8 (304), stainless steel fasteners.

LOADBUSTER™ HOOK

Heavy duty galvanized steel Loadbuster™ hook is fastened to the jaw assembly with stainless steel fasteners (15 to 34kV standard, optional on 46 kV).

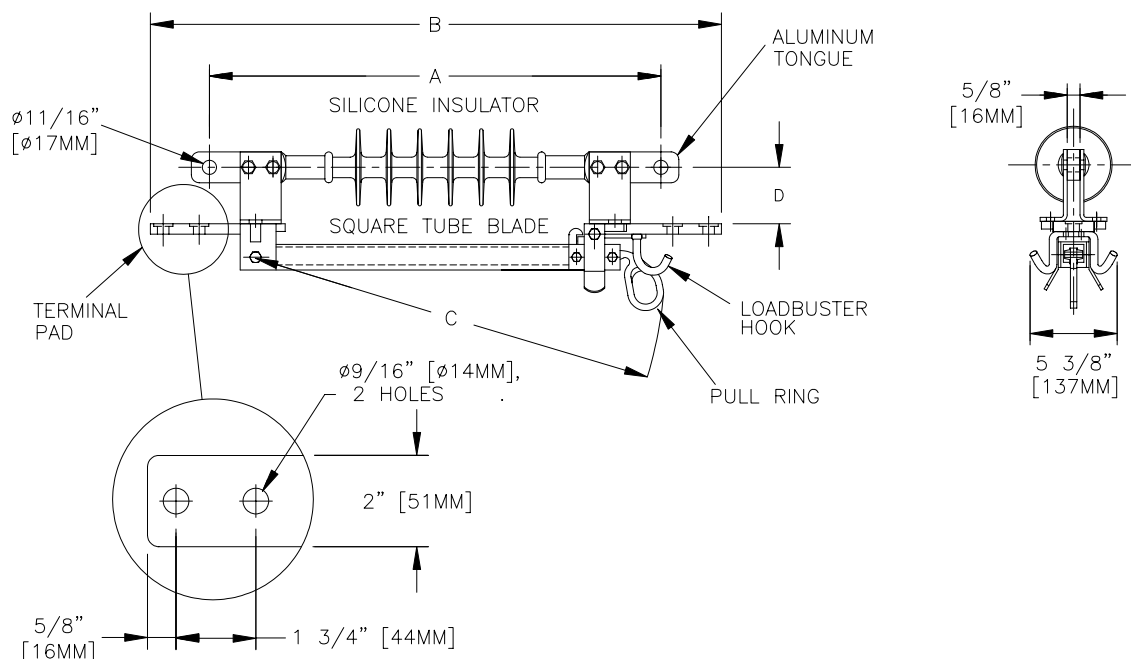
BLADE OPENING LIMITS

Two blade openings are available: 90 degrees and 180 degrees, the standard is a 180 degree opening, which is recommended for line switches. If a 90 degree blade opening is required, it should be requested at the time of order placement.

LARGE PULL RING AND LATCH

With the large tin plated, bronze pull ring located beyond the end of the switch blade, the switch in operation requires minimum effort to open or close (maximum leverage) and also provides the ultimate in operator control. A slight pull on the operating ring, transfers motion to the protected, tin plated spring-loaded latch, which initiates a pry out or ice breaking action to assist opening of the switch. The spring-loaded latch provides the security of blade closure retention when exposed to short circuit currents and vibration.

ULTRA-LIGHT LINE TENSION SWITCH



LINE TENSION SWITCH SPECIFICATIONS

CATALOG NUMBER	RATED VOLTAGE	CURRENT		NOMINAL BIL	FLASHOVER 60 HZ		LEAKAGE DISTANCE		DRY ARC DISTANCE	
		RATED	MOM		DRY	WET	IN.	MM.	IN.	MM.
TW15900S	15kV	900 A	40,000 A	145kV	100kV	70kV	15.1	385	7.6	195
TW28900S	28kV	900 A	40,000 A	215kV	125kV	110kV	23.2	589	11.4	289
TW34900S	34kV	900 A	40,000 A	230kV	130kV	110kV	27.7	704	12.5	318
TW46900S	46kV	900 A	40,000 A	300kV	180kV	165kV	40.4	1025	17.0	435
TW69900S	69kV	900 A	40,000 A	425kV	260kV	205kV	70.8	1798	24.7	627

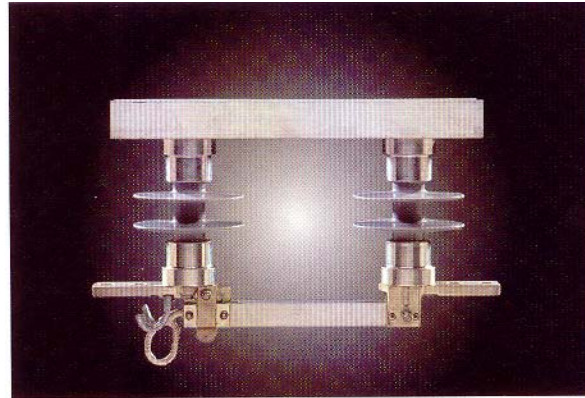
DIMENSIONS AND WEIGHTS

CATALOG NUMBER	A		B		C		D		WEIGHT	
	IN.	MM.	IN.	MM.	IN.	MM.	IN.	MM.	LB	KG
TW15900S	18 1/4	464	26 1/8	670	16 1/2	419	2 3/4	70	9	4.1
TW28900S	22 5/8	574	30 1/2	775	20 1/4	514	2 3/4	70	10.2	4.6
TW34900S	22 7/8	581	30 3/4	781	21 1/8	536	2 3/4	70	11	5.0
TW46900S	27 1/2	699	35 3/8	899	25 5/8	651	2 3/4	70	12	5.4
TW69900S	33 5/8	855	41 1/2	1054	30 5/8	778	5 3/4	146	14	6.3

OPTIONS:

- FOR TWO SETS OF SWITCH TERMINAL CONNECTORS, (CATALOG NUMBER 9920), ADD SUFFIX "C" TO THE CATALOG NUMBER. i.e. TW28900SC
- THE STANDARD TW46900S AND TW69900S HAVE NO LOADBUSTER HOOK. IF REQUIRED, ADD THE SUFFIX "L" TO THE CATALOG NUMBER. i.e. TW46900SL or TW69900SL
- FOR A HIGHLY CORROSIVE ATMOSPHERE, CURRENT CARRYING COMPONENTS CAN BE NICKEL PLATED. ADD THE SUFFIX "NP" TO THE CATALOG NUMBER. i.e. TW15900SNP.

ULTRA-LIGHT SURFACE MOUNT SWITCH



APPLICATION

The Firon Surface Mount Switch is ideal for branch feeder, main feeder and cross arm applications. When equipped with a Loadbuster™ hook and in conjunction with a Loadbuster™, the switch may be used for load interrupting and breaking line, cable-charging and transformer-magnetizing currents. The switch may be mounted in either the vertical or inverted positions.

CONSTRUCTION

The Firon Surface Mount Switch is hookstick operated and comes in two styles: the parallel insulator type and the "V" style insulator type. Equipped with Silicone post type insulators, mounted in a parallel configuration on a single base, the switch is light and robust with superior insulator qualities.

The current carrying components are the same as those utilized in the In-line switch (TW).

With a tested momentary of 40kA RMS (asymmetrical) and a current rating of 900 amps continuous, the switch is available from 15 thru 46kV. The standard blade opening is 90 degrees; if a 180 deg. opening is required, it should be indicated at time of ordering.

Terminal pads are standard Nema drilled with 9/16" diameter on 1-3/4" centers.

Loadbuster™ hooks are fitted on the jaw of each blade assembly, except the 46 kV rated switch.

The base is constructed from either galvanized, formed steel or an optional aluminum channel and is suitable for mounting on single or double cross arms. The switch may be directly bolted or mounted in conjunction with optional backstraps, it may also be mounted on structures or flat surfaces.

"V" STYLE SWITCH

APPLICATION

The switch can be used when there is only a single cross arm or when electrical clearances might be compromised by the longer base of the parallel insulator type switch.

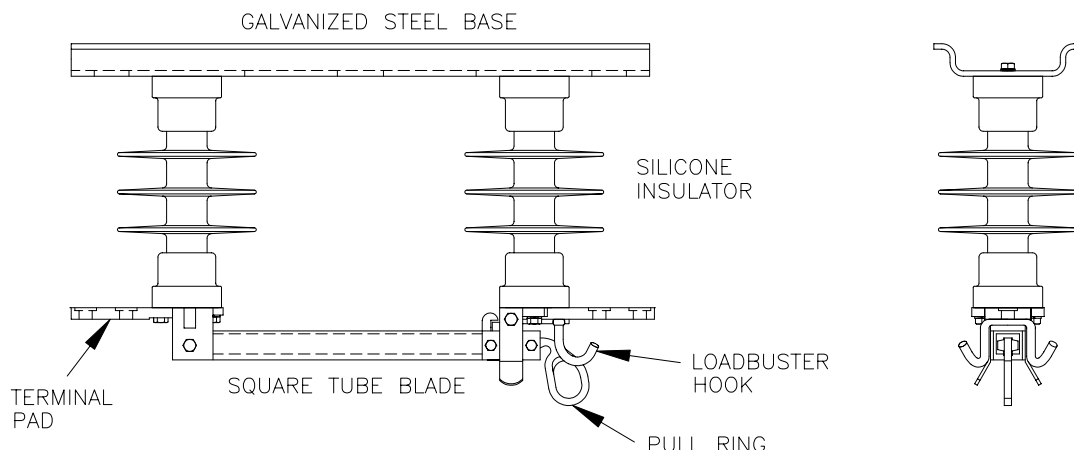
CONSTRUCTION

The V-style switch is similar in construction to the standard parallel insulator type switch except the Silicone insulators are mounted in a V-style configuration on a single base. This configuration inherently provides greater open gap clearance than that of the standard hookstick operated switch; therefore dielectric values are limited only to the electrical values of the insulator.

The standard blade opening is 90 degrees; if a 180 deg. opening is required, it should be indicated at the time of ordering.

This style is available from 15 thru 35kV.

ULTRA-LIGHT SURFACE MOUNT SWITCH



SURFACE MOUNT SWITCH SPECIFICATIONS

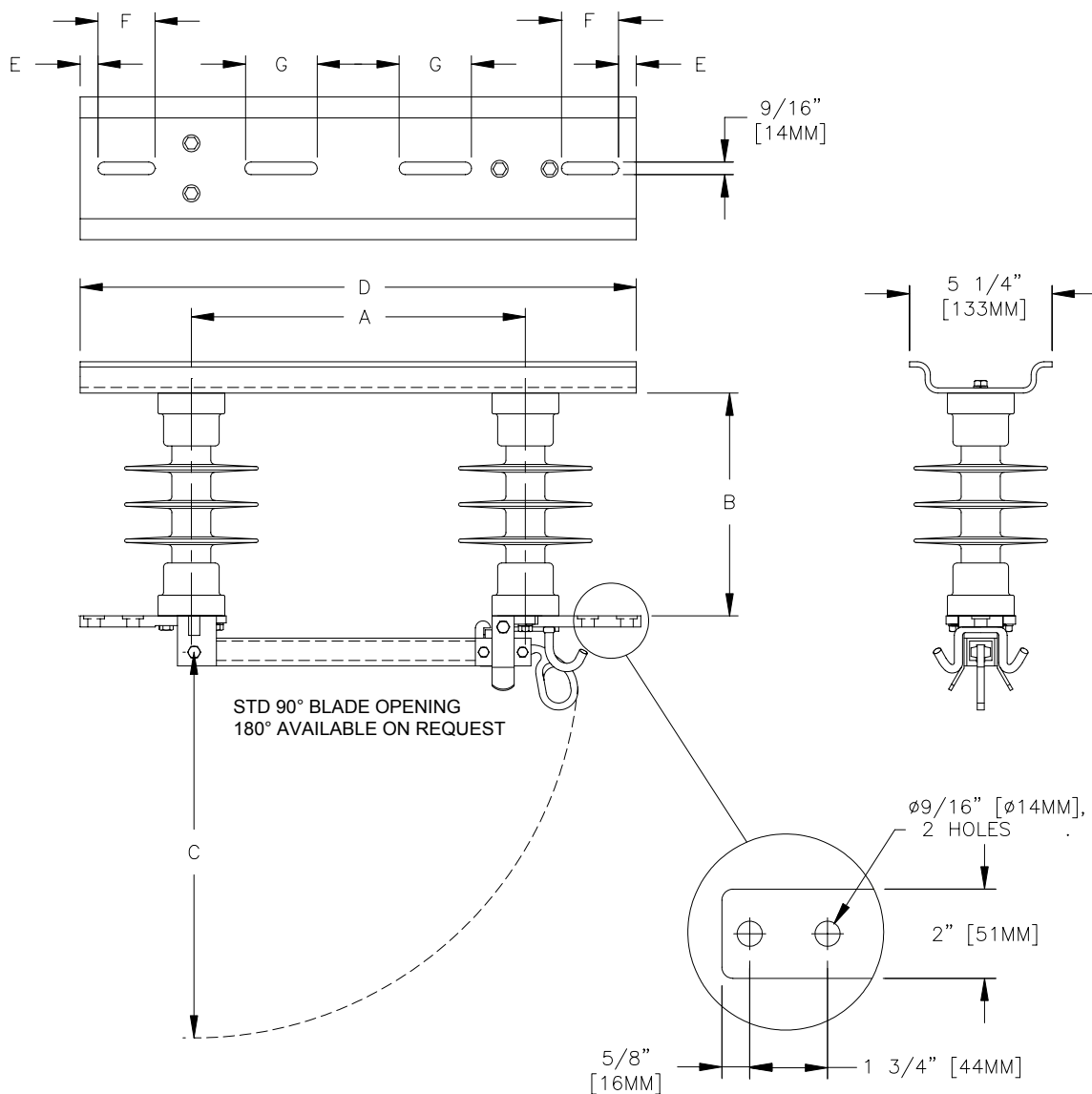
CATALOG NUMBER	RATED VOLTAGE	CURRENT		NOMINAL BIL	FLASHOVER 60 HZ		LEAKAGE DISTANCE		DRY ARC DISTANCE	
		RATED	MOM		DRY	WET	IN.	MM.	IN.	MM.
SM15900S	15kV	900 A	40,000 A	110kV	130kV	40kV	10.8	274	5.7	145
SM25900S	25kV	900 A	40,000 A	125kV	160kV	65kV	17.2	437	7.6	193
SM28900S	28kV	900 A	40,000 A	150kV	160kV	65kV	17.2	437	7.6	193
SM35900S	35kV	900 A	40,000 A	175kV	195kV	85kV	26.0	660	10.6	270
SM46900S	46kV	900 A	40,000 A	220kV	240kV	115kV	34.0	865	13.6	345

MAXIMUM DESIGN CANTILEVER: 1,200 lbs [5.3 kN]
 MAXIMUM DESIGN TENSION: 12,000 lbs [53 kN]
 MAXIMUM DESIGN COMPRESSION: 75,000 lbs [335 kN]
 MAXIMUM DESIGN TORSION: 6,000 in-lbs [680 Nm] FOR SM15, SM25 & SM28 SWITCH INSULATORS.
 9,000 in-lbs [1020 Nm] FOR SM35 SWITCH INSULATORS.

OPTIONS:

- FOR TWO SETS OF SWITCH TERMINAL CONNECTORS, (CATALOG NUMBER 9920), ADD THE SUFFIX "C" TO THE CATALOG NUMBER. i.e. SM28900SC
- THE STANDARD SM46900S HAVE NO LOADBUSTER HOOK. IF REQUIRED, ADD THE SUFFIX "L" TO THE CATALOG NUMBER. i.e. SM46900SL
- FOR A HIGHLY CORROSIVE ATMOSPHERE, CURRENT CARRYING COMPONENTS CAN BE NICKEL PLATED. ADD THE SUFFIX "NP" TO THE CATALOG NUMBER. i.e. SM15900SNP.
- ORDER BACK STRAP SEPARATELY IF REQUIRED.
Catalog Number: ZF9945S, Back strap for single crossarm.
Catalog Number: ZF9945D, Back strap for SM15900S, double crossarm.
Catalog Number: ZF9945DL, Back strap for SM25900S, SM28900S, SM35900S, double crossarm.
- GALVANIZED STEEL MOUNTING BASES ARE STANDARD. FOR ALUMINUM ALLOY BASES ADD THE SUFFIX "A" TO THE CATALOG NUMBER. i.e. SM25900SA.
- FOR PORCELAIN INSULATORS, REPLACE THE CHARACTER "S" IN THE CATALOG NUMBER WITH "P". i.e. SM15900P.

ULTRA-LIGHT SURFACE MOUNT SWITCH

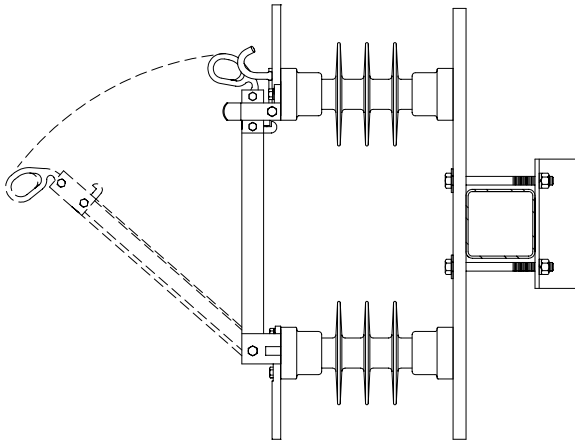


DIMENSIONS AND WEIGHTS

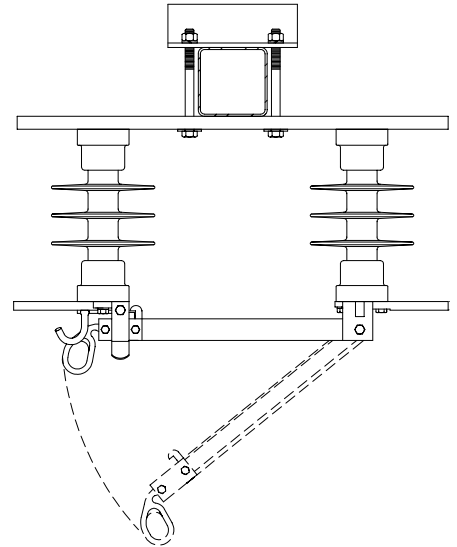
CATALOG NUMBER	A		B		C		D		E		F		G		WEIGHT	
	IN.	MM.	IN.	MM.	IN.	MM.	IN.	MM.	IN.	MM.	IN.	MM.	IN.	MM.	LBS	KG
SM15900S	12	304	8	203	14 1/4	362	22	559	27/32	21	2 9/16	65	2 9/16	65	15	6.8
SM25900S	15	381	10	254	17 1/2	444	27	686	23/32	18	2 9/16	65	2 9/16	65	17	7.7
SM28900S	15	381	11 1/2	292	17 1/2	444	27	686	23/32	18	2 9/16	65	2 9/16	65	18	8.2
SM35900S	21	533	14	356	23 1/2	597	26	660	N/A	N/A	N/A	N/A	4 1/2	114	24	10.9
SM46900S	30	762	17	431	32 1/2	826	42	1066	N/A	N/A	N/A	N/A	N/A	N/A		

ULTRA-LIGHT SURFACE MOUNT SWITCH

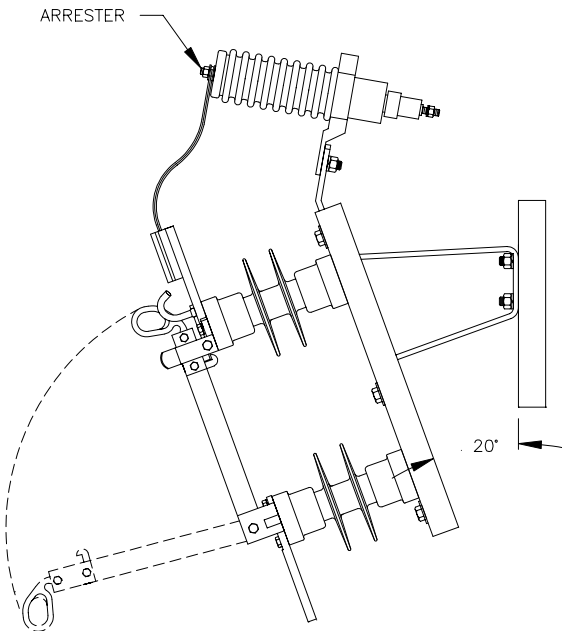
MOUNTING POSITIONS



VERTICAL



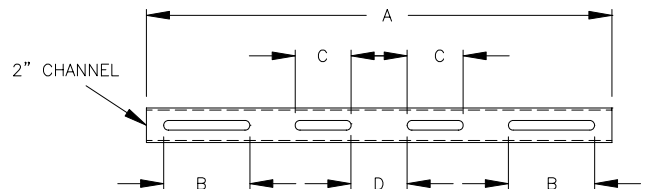
UNDERHUNG



20° VERTICAL INCLINE

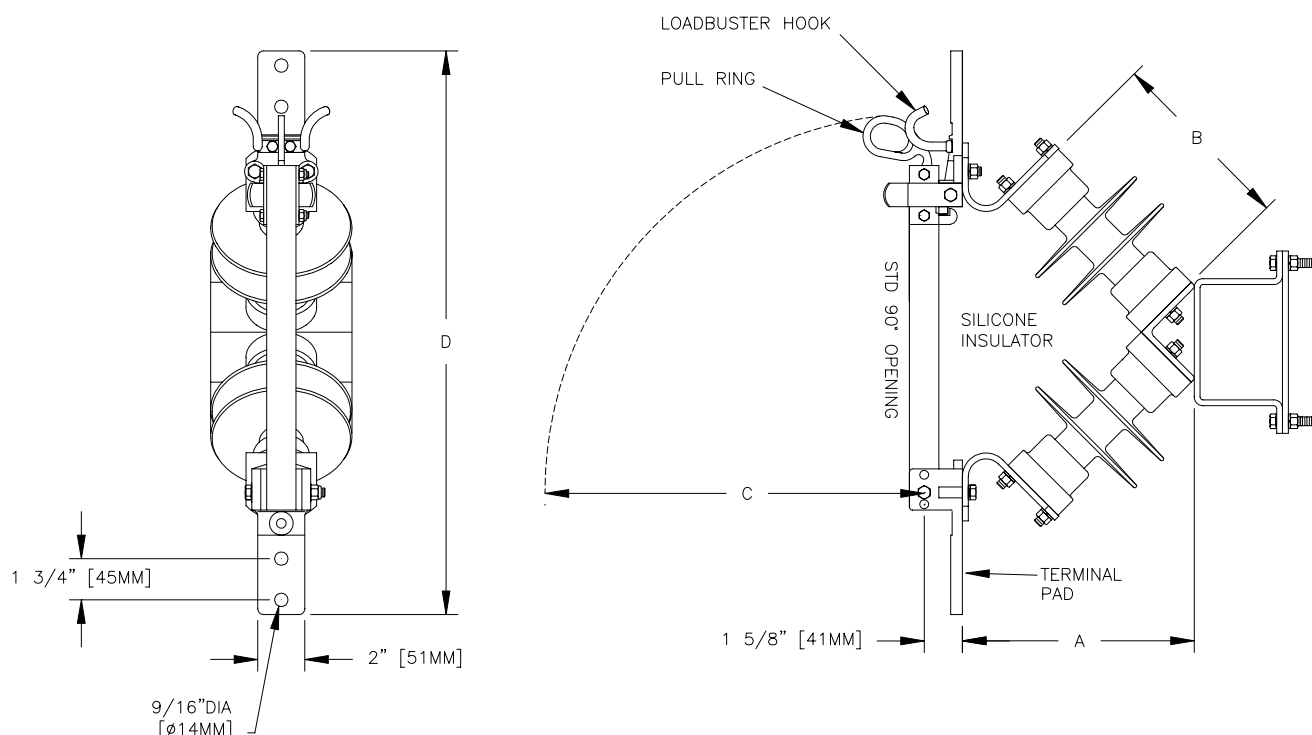
SWITCH BACK STRAP

HOT DIP GALVANIZED STEEL
C/W 1/2" CARRIAGE BOLTS



CATALOG NUMBER	A	B	C	D	WEIGHT PER 100
ZF9945S	9" [229MM]	2 1/4" [57MM]	N/A	3 1/4" [83MM]	275LB [125KG]
ZF9945D	22" [559MM]	2" [51MM]	2" [51MM]	3 1/4" [83MM]	525LB [240KG]
ZF9945DL	27" [686MM]	5" [127MM]	3 1/4" [83MM]	3 1/4" [83MM]	600LB [275KG]

ULTRA-LIGHT V-STYLE SWITCH



V-STYLE SWITCH SPECIFICATIONS

CATALOG NUMBER	RATED VOLTAGE	CURRENT		NOMINAL BIL	FLASHOVER 60 HZ		LEAKAGE DISTANCE		DRY ARC DISTANCE	
		RATED	MOM		DRY	WET	IN.	MM.	IN.	MM.
SV15900S	15kV	900 A	40,000 A	110kV	130kV	40kV	10.8	275	5.7	145
SV25900S	25kV	900 A	40,000 A	125kV	160kV	65kV	17.2	437	7.6	193
SV28900S	28kV	900 A	40,000 A	150kV	160kV	65kV	17.2	437	7.6	193
SV35900S	35kV	900 A	40,000 A	175kV	195kV	85kV	26.0	660	10.6	270

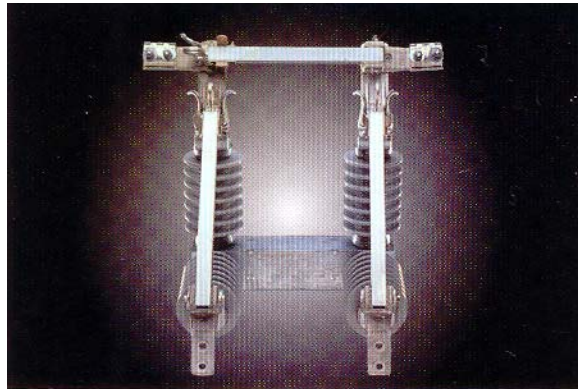
DIMENSIONS AND WEIGHTS

CATALOG NUMBER	A		B		C		D		WEIGHT	
	IN.	MM.	IN.	MM.	IN.	MM.	IN.	MM.	LB	KG
SV15900S	9 3/4	248	8	203	16	406	26	660	19	8.6
SV25900S	11 1/4	286	10	254	19	483	28 7/8	733	22	10
SV28900S	12 1/4	311	11 1/2	292	21	533	31	787	24	11
SV35900S	14 1/4	362	14	356	23	584	33	832	26	11.8

OPTIONS:

- FOR TWO SETS OF SWITCH TERMINAL CONNECTORS, (CATALOG NUMBER 9920), ADD SUFFIX "C" TO THE CATALOG NUMBER. i.e. SV15900SC.
- FOR A HIGHLY CORROSIVE ATMOSPHERE, CURRENT CARRYING COMPONENTS CAN BE NICKEL PLATED. ADD THE SUFFIX "NP" TO THE CATALOG NUMBER. i.e. SV15900SNP.
- FOR PORCELAIN INSULATORS, REPLACE THE CHARACTER "S" IN THE CATALOG NUMBER WITH "P". i.e. SV15900P.

ULTRA-LIGHT BY-PASS SWITCH



OIL CIRCUIT BREAKER / RECLOSER BY-PASS SWITCH

APPLICATION

The Firon recloser by-pass switch is a safe and economical alternative to maintaining service continuity, when isolating a Recloser for repair or routine maintenance.

CONSTRUCTION

The Firon recloser by-pass switch is hookstick operated and manually sequenced with triple blade construction.

Silicone insulators mounted in a V-style configuration on a single base inherently, provide greater open gap clearance than that of a standard hookstick operated switch; therefore, dielectric values are limited only to the electrical values of the insulator.

The current carrying components are the same as those utilized in the In-line (TW) and Surface Mount (SM) style switches.

With a tested momentary of 40kA RMS (asymmetrical) and a current rating of 900 amps continuous, the switch is available from 15 thru 28 kV.

For three-phase cluster mounting, left and right hand opening blades operate away from the center phase, which is bolted to a pole mounted, standoff bracket.

Terminal pads are standard Nema drilled with 9/16" diameter on 1-3/4" centers.

Loadbuster™ hooks are fitted on the jaw of each blade assembly.

The operating sequence is to close the horizontal or by-pass blade first, then disengage the recloser feeder blades. The reverse sequence must be performed to reconnect the recloser and open the by-pass blade. The by-pass blade opens to 180 degrees. The other blades open to 90 degrees.

OIL CIRCUIT BREAKER / RECLOSER FUSED BY-PASS SWITCH

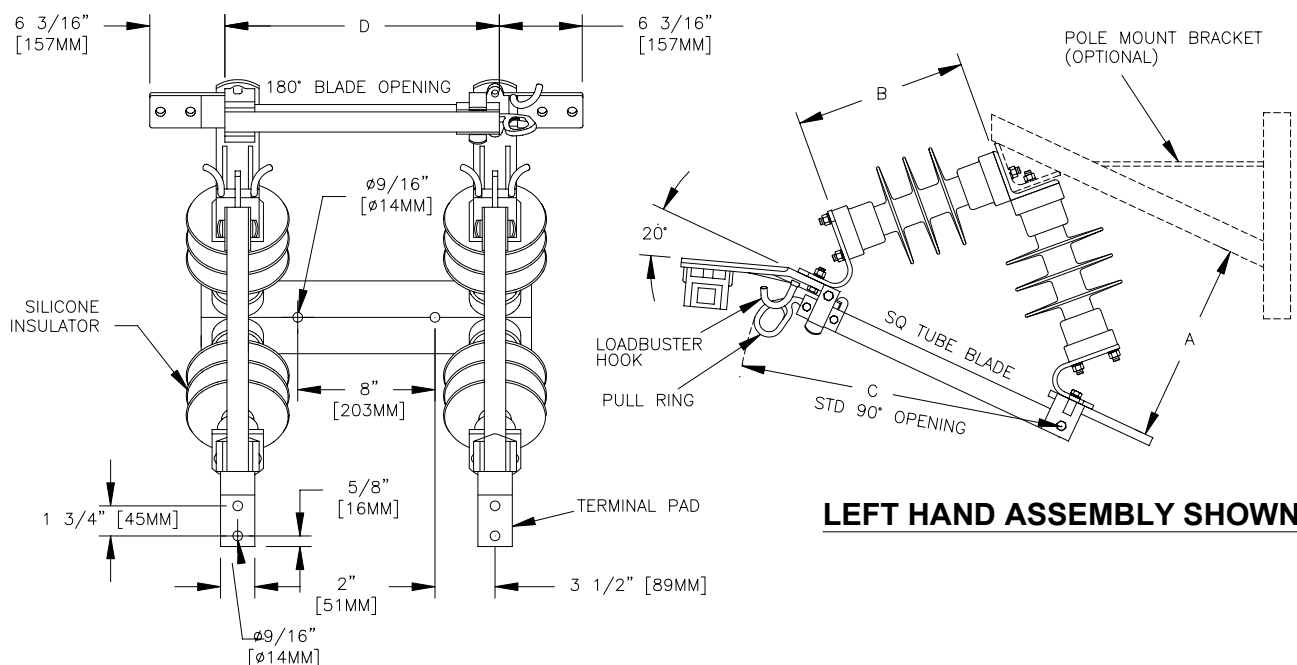
APPLICATION

For use when there is a maximum requirement for safety and continuity of service. The fused breaker by-pass disconnect combination provides safe breaker isolation, while maintaining continuity on a protected circuit. The fused portion of the combination is available at 100 and 200 amps; the switch portion is rated at 900 amps.

CONSTRUCTION

The fused by-pass switch is similar in construction to the standard by-pass switch, except the by-pass portion is fused with a universal expulsion fuse holder, such as that used in a regular drop out style cutout. Interchangeable, current limiting, full range fuse holders up to 27kV are also available.

ULTRA-LIGHT BY-PASS SWITCH



BY-PASS SWITCH SPECIFICATIONS

CATALOG NUMBER	RATED VOLTAGE	CURRENT		NOMINAL BIL	FLASHOVER 60 HZ		LEAKAGE DISTANCE		DRY ARC DISTANCE	
		RATED	MOM		DRY	WET	IN.	MM.	IN.	MM.
BP15900S-L	15kV	900 A	40,000 A	110kV	130kV	40kV	10.8	275	5.7	145
BP25900S-L	25kV	900 A	40,000 A	125kV	160kV	65kV	17.2	437	7.6	193
BP28900S-L	28kV	900 A	40,000 A	150kV	160kV	65kV	17.2	437	7.6	193

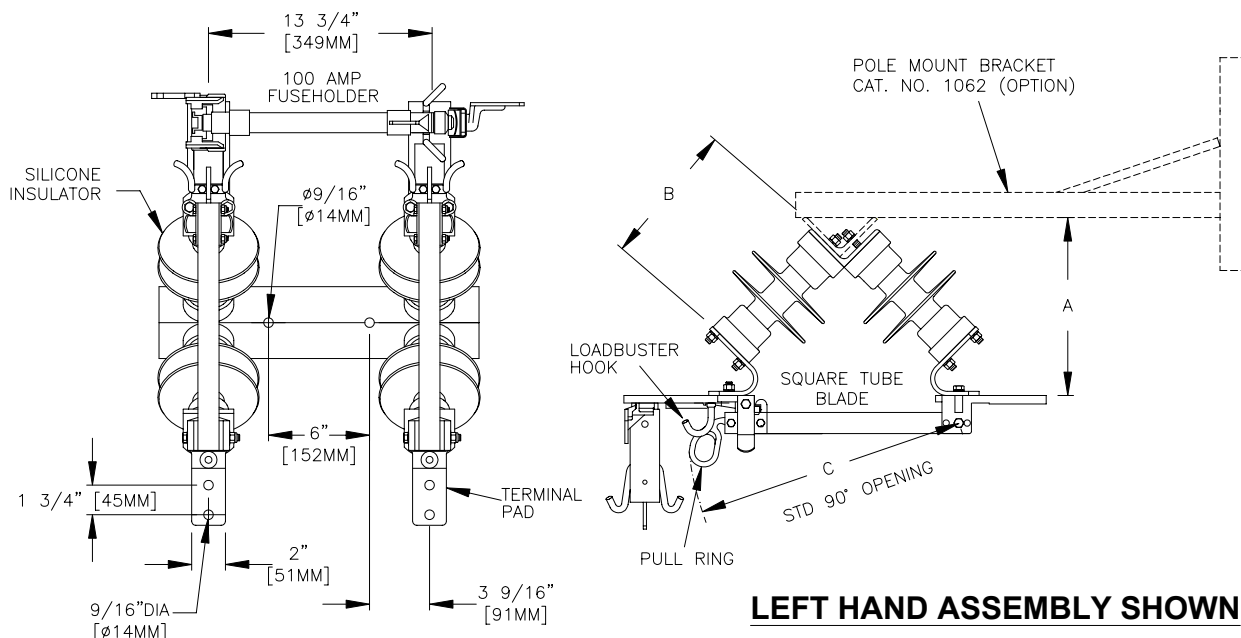
DIMENSIONS AND WEIGHTS

CATALOG NUMBER	A		B		C		D		WEIGHT	
	IN.	MM.	IN.	MM.	IN.	MM.	IN.	MM.	LB	KG
BP15900S-L	10	254	8	203	16 1/16	408	12	305	44	20
BP25900S-L	11 1/2	292	10	254	18 15/16	481	15	381	49	22
BP28900S-L	12 1/2	318	11 1/2	292	21	533	15	381	51	23

OPTIONS:

- FOR FOUR SETS OF SWITCH TERMINAL CONNECTORS, (CATALOG NUMBER 9920), ADD SUFFIX "C" TO THE CATALOG NUMBER. i.e. BP15900SC-L
- FOR A RIGHT HAND OPENING SWITCH, REPLACE THE CHARACTER "L" WITH THE CHARACTER "R". i.e. BP15900S-R
- FOR A POLE MOUNT BRACKET, ADD THE SUFFIX "P" TO THE CATALOG NUMBER. i.e. BP15900S-LP
- FOR A HIGHLY CORROSIVE ATMOSPHERE, CURRENT CARRYING COMPONENTS CAN BE NICKEL PLATED. ADD THE SUFFIX "NP" TO THE CATALOG NUMBER. i.e. BP15900SNP-L.
- FOR PORCELAIN INSULATORS, REPLACE THE CHARACTER "S" IN THE CATALOG NUMBER WITH "P". i.e. BP15900P-L.

ULTRA-LIGHT FUSED BY-PASS SWITCH



FUSED BY-PASS SWITCH SPECIFICATIONS

CATALOG NUMBER	RATED VOLTAGE	CURRENT		NOMINAL BIL	FLASHOVER 60 HZ		LEAKAGE DISTANCE		DRY ARC DISTANCE	
		RATED	MOM		DRY	WET	IN.	MM.	IN.	MM.
FBP15900S-L	15kV	900 A	40,000 A	110kV	130kV	40kV	10.8	275	5.7	145
FBP25900S-L	25kV	900 A	40,000 A	125kV	160kV	65kV	16.7	437	7.6	193
FBP28900S-L	28kV	900 A	40,000 A	150kV	160kV	65kV	16.7	437	7.6	193

DIMENSIONS AND WEIGHTS

CATALOG NUMBER	A		B		C		WEIGHT	
	IN.	MM.	IN.	MM.	IN.	MM.	LB	KG
FBP15900S-L	10	254	8	203	16 1/16	408	48	22
FBP25900S-L	11 1/2	292	10	254	18 15/16	481	53	24
FBP28900S-L	12 1/2	318	11 1/2	292	21	533	55	25

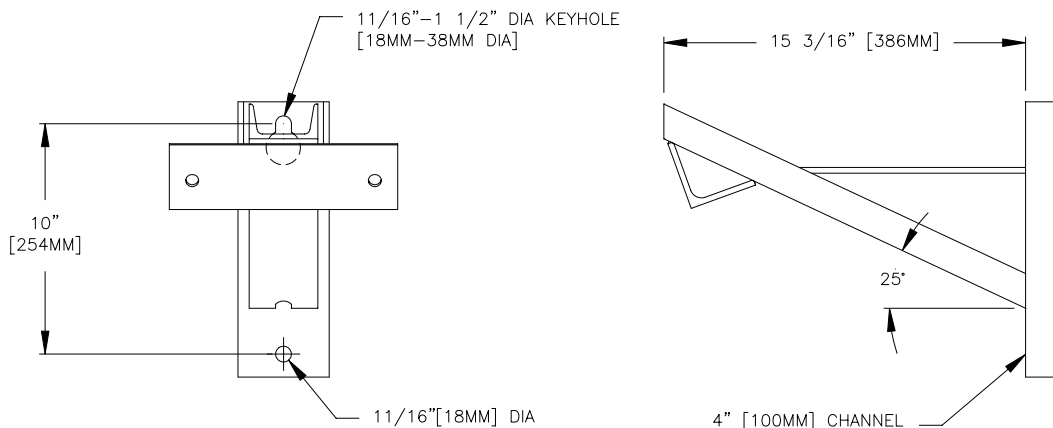
OPTIONS:

- FOR TWO SETS OF SWITCH TERMINAL CONNECTORS, (CATALOG NUMBER 9920), ADD SUFFIX "C" TO THE CATALOG NUMBER. i.e. FBP15900SC-L
- FOR A POLE MOUNT BRACKET, ADD THE SUFFIX "P" TO THE CATALOG NUMBER. i.e. FBP15900SP-L
- FOR A HIGHLY CORROSIVE ATMOSPHERE, CURRENT CARRYING COMPONENTS CAN BE NICKEL PLATED. ADD THE SUFFIX "NP" TO THE CATALOG NUMBER. i.e. FBP15900SNP-L.
- FOR PORCELAIN INSULATORS, REPLACE THE CHARACTER "S" IN THE CATALOG NUMBER WITH "P". i.e. FBP15900P-L.

BP & FBP SWITCH BRACKET

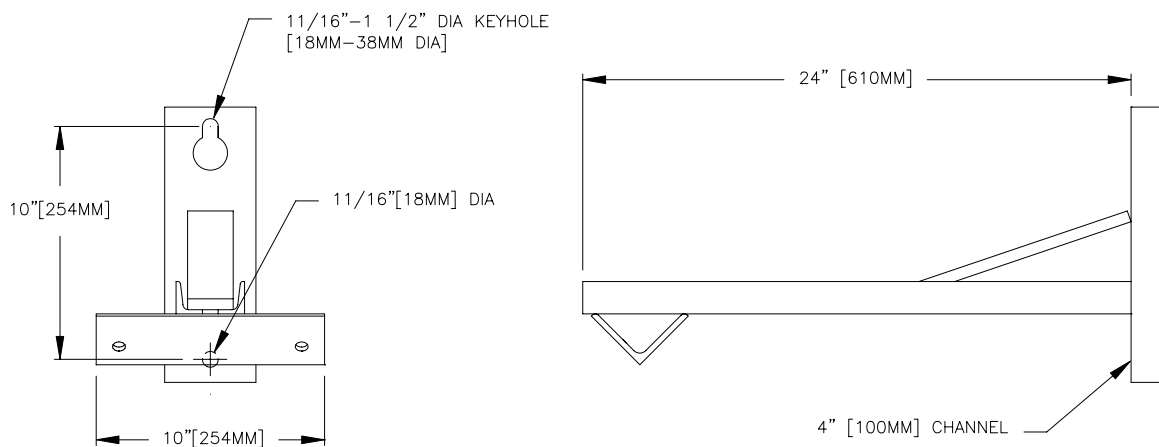
BY-PASS SWITCH BRACKET

MATERIAL: HOT DIP GALVANIZED STEEL
 CATALOG NO.: 1063
 WEIGHT: 16 LBS [7.3 KG] EA

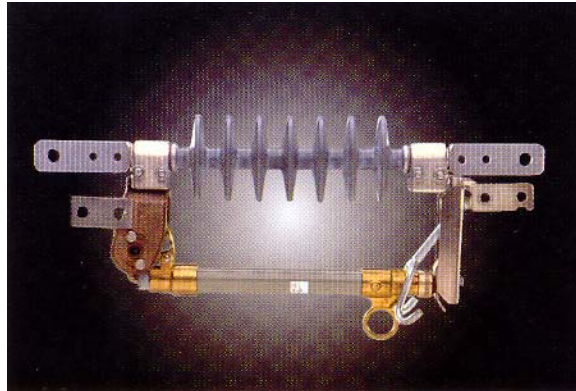


FUSED BY-PASS SWITCH BRACKET

MATERIAL: HOT DIP GALVANIZED STEEL
 CATALOG NO.: 1062
 WEIGHT: 21 LBS [9.5 KG] EA



ULTRA-LIGHT IN-LINE FUSED SWITCH



APPLICATION

An open fuse cutout (fused switch) is a device that provides protection against excessive currents produced by abnormal conditions such as line faults, line or equipment overloads or equipment failures. Firon's type "IF" in-line fused cutout provides this protection. Two voltage rated units, 15kV and 27kV are available to meet the user's needs. These are mounted on Silicone dead end type insulators, which exceed leakage distances of porcelain type cutouts. The fuseholder of these units are interchangeable with other manufacturers.

The in-line fused switch is ideal and inexpensive for line protection. With this style of switch, it is not necessary to dead end the line and then bring the line to the cutout and the disconnect switch mounted on a pole.

The "IF", in-line fused switch can be applied without restrictions on any three phase system that has a line-to-line voltage less or equal to the switch rating. They can also be applied on any single phase to neutral circuit or three-phase solidly grounded WYE connected circuit, where the recovery voltage does not exceed the cutout rating.

The cutout selected should have a continuous current rating sufficient to handle the expected load. The 100 amp rated fuseholder accepts fuse links from 1 to 100 amps. The 200 amp (*) fuseholder will accept fuse links from 140 to 200 amps. A 300 amp disconnect blade is also available.

NOTE: *For application on a single phase-to-neutral or solidly grounded WYE connected circuit, where the recovery voltage does not exceed the maximum design voltage of the device.

CONSTRUCTION

Mounted on a Silicone insulator with galvanized cast iron clamps, the hinge and jaw housings are constructed of a tin plated cast bronze. Stainless steel back-up springs and nickel plated, copper contacts minimize contact resistance and ensure excellent continuous contact throughout the life of the unit. A large stainless steel coil spring ensures constant contact pressure for operating currents until interruption is completed. A stainless steel sleet hood provides improved protection of line contacts from icing. Loadbreak hooks for use with the Loadbuster™ tool are standard and serve as a "close-in" guide to ensure positive closure.

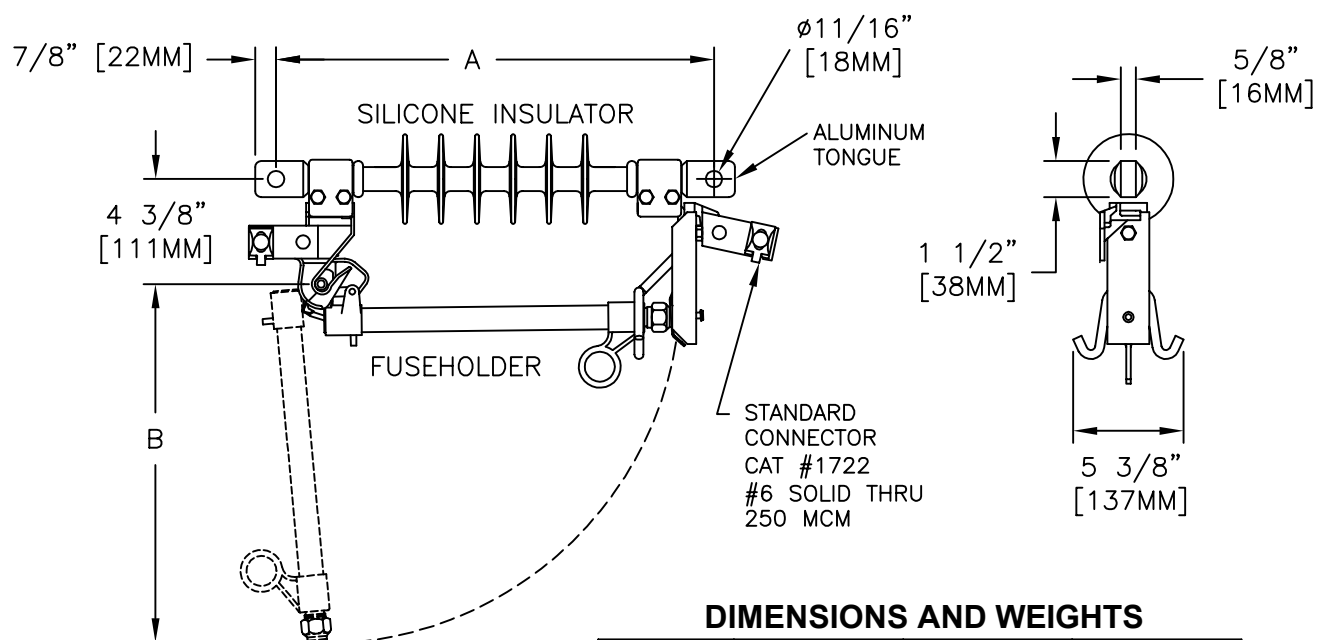
The fuse holder is single vented and constructed of an epoxy impregnated glass filament wound tube, utilizing arc-quenching materials. A large bronze pull ring is utilized for ease of operation and re-fusing. The bronze trunnion, with lifting ring is both side and front assessable. The grooved flipper assembly controls link tension and ensure low fault interruption and prevent link breakage on "close-in".

The insulator is a strain insulator type with tongue terminations at each end.

The Ultra-Light in-line fused switch uses standard distribution fuse links.

NOTE: Two hole Nema pad or #6 solid thru 4/0 ACSR or 250 MCM Str parallel connectors are available.

ULTRA-LIGHT IN-LINE FUSED SWITCH



DIMENSIONS AND WEIGHTS

CATALOG NUMBER	A		B		WEIGHT	
	IN.	MM.	IN.	MM.	LB	KG
IF15100	13 1/2	343	11 5/8	295	11	5
IF15200						
ID15300						
IF27100	18 1/16	460	15 1/8	384	13	6
IF27200						
ID27300						

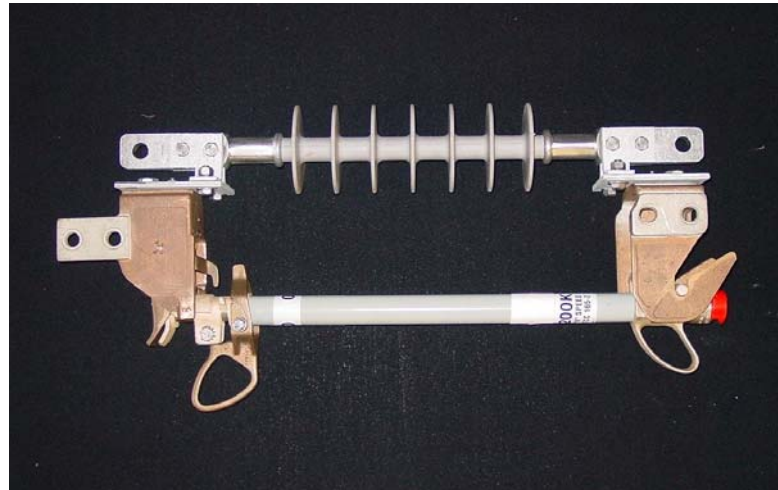
IN-LINE FUSED SWITCH SPECIFICATIONS

CATALOG NUMBER	RATED VOLTAGE	CURRENT		NOMINAL BIL	LEAKAGE DISTANCE		DRY ARC DISTANCE	
		RATED	INTERRUPT ASYM		IN.	MM.	IN.	MM.
IF15100	15kV	100 A	16,000 A	110kV	15.1	384	7.6	193
IF15200		200 A	10,000 A					
ID15300		300 A	-					
IF27100	27kV	100 A	12,000 A	150kV	27.7	704	12.5	318
IF27200		200 A	12,000 A					
ID27300		300 A	-					

OPTIONS:

- FOR 2 HOLE NEMA PAD , ADD SUFFIX "N" TO THE CATALOG NUMBER. i.e. IF27100N.
- FOR ONE SET OF 2 HOLE NEMA PAD CONNECTORS (CATALOG 9920), ADD SUFFIX "C" TO THE CATALOG NUMBER. i.e. IF27100NC.

ULTRA-LIGHT IN-LINE POWER FUSE MOUNTING



APPLICATION

The Ultra-Light In-line Power Fuse Mounting is similar in function and design to the standard "IF" fused switch. But when installed with the appropriate power fuse barrel, it will provide greater protection to distribution feeder circuits & lines than conventional switches, currently used.

Because of increased demands for electric power to feed heavier loads, larger transformers are often being utilized. This has increased the short circuit interruption requirements beyond the capabilities of the existing fused in-line switch or cutout.

The exhaust generated, during interruption of the fuse is minimal and nonconductive, whereas the existing fused switch or cutout discharges a highly ionized cloud of gas. This allows a smaller phase spacing of the conductors, which is an asset, when retrofitting into an existing circuit.

The mounting can be opened or closed with an insulated hook stick and therefore may be used for opening and closing unloaded circuits, as such the switch acts like a normal disconnect eliminating the need for another disconnect to divide circuits. The mounting is also equipped with Loadbuster™ hooks; therefore, a line man equipped with a Loadbuster™ tool can open circuits under load.

Two voltage rated units, 25kV and 27kV are available to meet the user's needs. These units are mounted on Silicone dead end type insulators, which exceed leakage distances of porcelain type cutouts.

The Ultra-Light Power Fuse mounting accepts the following fuses (200 Amp Maximum):

- 1) S & C type SMU 20.
- 2) Eaton type DBU.
- 3) Cooper type CMU.

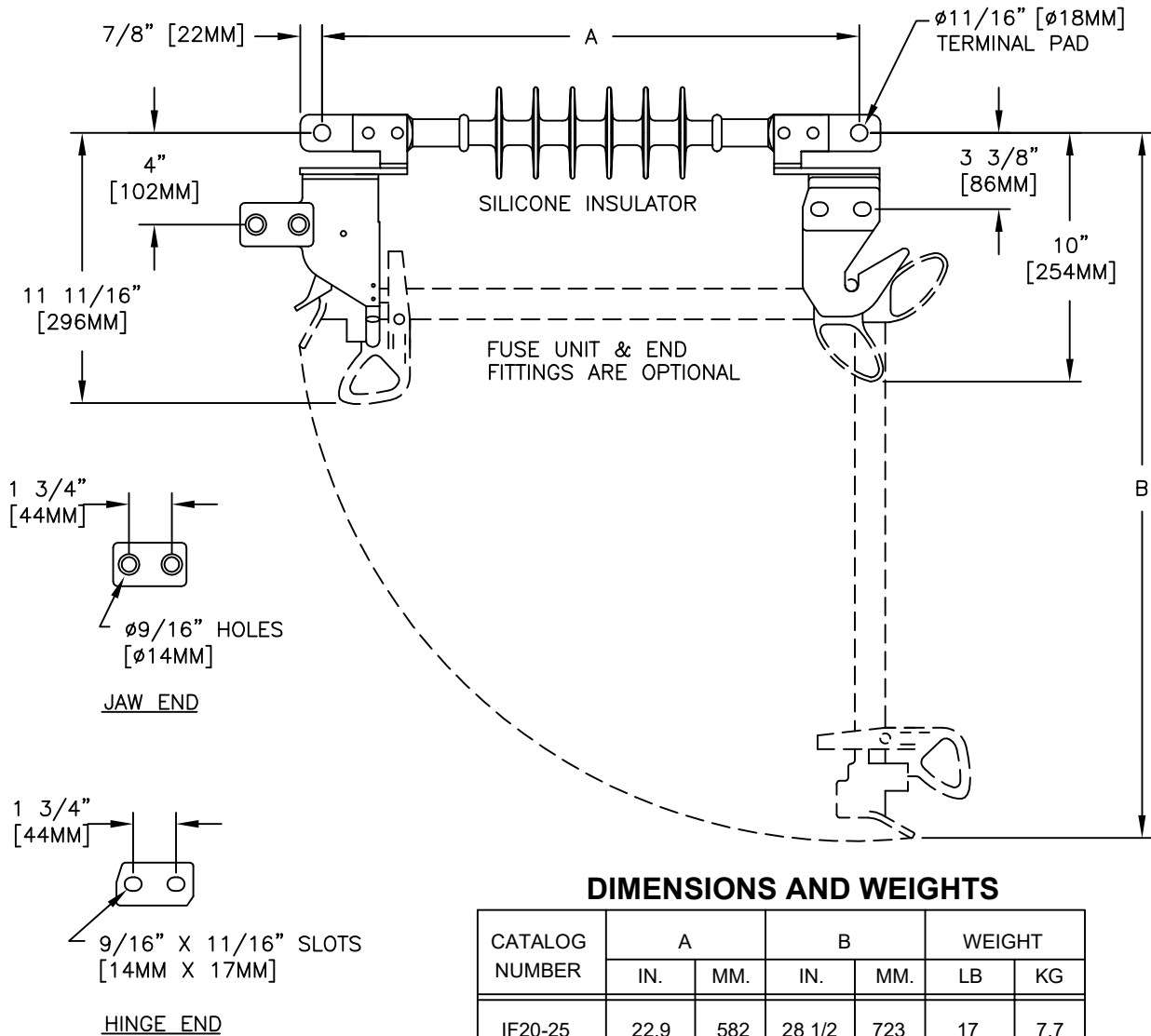
CONSTRUCTION

Mounted on a Silicone insulator with galvanized steel mounting plates, the hinge and jaw assemblies are constructed from a tin plated cast bronze. Stainless steel back-up springs and nickel plated copper contacts, over-plated with silver, minimize contact resistance and ensure excellent continuous contact throughout the life of the unit.

Load break hooks for use with the Loadbuster™ tool are standard and serve as a "close-in" guide to ensure positive closure.

The insulator is a strain insulator type with tongue terminations at each end. The jaw and hinge ends of the mounting come with a standard two hole Nema pad.

ULTRA-LIGHT IN-LINE POWER FUSE MOUNTING



DIMENSIONS AND WEIGHTS

CATALOG NUMBER	A		B		WEIGHT	
	IN.	MM.	IN.	MM.	LB	KG
IF20-25	22.9	582	28 1/2	723	17	7.7
IF20-28	22.9	582	34 3/4	883	18	8.2
IF20-35	27.4	695	34 1/2	876	17	7.7

POWER FUSE MOUNTING SPECIFICATIONS

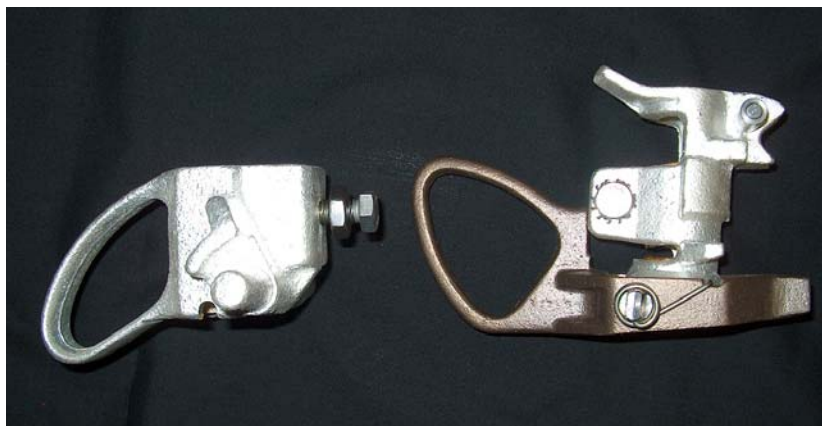
CATALOG NUMBER	RATED VOLTAGE	MAX VOLTAGE	NOMINAL BIL	CURRENT	
				RATED	MOM
IF20-25	25kV	27kV	150 kV	200A	20,000A
IF20-28	27kV*	29kV	170 kV	200A	20,000A
IF20-35	35kV	38kV	200 kV	200A	20,000A

NOTE: 1) *USE 34.5kV FUSE UNIT TO MEET 29kV MAX, 170kV BIL RATING.
2) 15kV UNIT AVAILABLE UPON REQUEST.

OPTIONS:

- FOR TWO SETS OF SWITCH TERMINAL CONNECTORS, (CATALOG NUMBER 9920), ADD SUFFIX "C" TO THE CATALOG NUMBER. i.e. IF20-25C

POWER FUSE MOUNTING ASSESSORY



APPLICATION

The Power Fuse End Fittings are used in the Firon IF20-25, IF20-28 & IF20-35 Power Fuse Mountings.

The End Fittings are compatible with the following fuse units (200 Amp Max):

- 1) Eaton DBU.
- 2) S&C SMU.
- 3) Cooper CMU.

ORDERING INFORMATION

Add the suffix "E" when ordering with the switch.
i.e. IF20-25E, IF20-28E.

Use Catalog No. F3096, when ordering separately,

Packaging dimensions: 7-3/8"x 4"x 4-1/4"

Weight: 4 lbs.

ULTRA-LIGHT POWER FUSE MOUNT



The Firon FMD20, Ultra-Light Power Fuse Mount, when used in conjunction with a compatible fuse unit, can provide full fault spectrum protection. The FMD20, Power Fuse Mount is a maintenance-free, protective device suitable for overhead distribution feeder applications and outdoor distribution substation installations. It is similar in nature to a distribution cutout but provides superior performance since it can handle higher fault currents, higher loads and higher voltages. The FMD20 Power Fuse Mount, when used with a compatible fuse unit, can interrupt loads up to 200 amps at distribution system voltages up to 27 kV.

APPLICATION

The Firon FMD20, Ultra-Light Power Fuse Mount can protect equipment and devices including transformers, capacitor banks, overhead lines and underground cables. When used with a compatible fuse unit, the FMD20 Power Fuse Mount can interrupt faults on either the primary or secondary side of a transformer with either the line-to-line or line-to ground voltage across the fuse. The FMD20 Power Fuse Mounting can also offer protection of pole or station mounted capacitor banks.

After a fault is interrupted, the positive drop out action of the fuse in the Power Fuse Mount provides an immediate visual indication that the fuse has interrupted a fault and the faulted circuits or equipment has been isolated from the rest of the system.

The FMD20 Power Fuse Mount, when used with a compatible fuse unit, can provide greater protection for overhead distribution feeder and substation installations than that offered by either Distribution Cutouts or Current Limiting Fuses.

With Distribution Cutouts, the fault interrupting capabilities typically do not exceed 16,000 amps and may be subject to application restrictions. The FMD20 Power Fuse Mount, installed with a compatible fuse unit, can provide full fault spectrum protection with interrupting capabilities up to 22,400 amps asymmetrical for 27 kV systems and 20,000 amps asymmetrical for 15 kV systems.

With Current Limiting fuses, the fusible element is susceptible to damage due to mechanical or thermal stresses and this can lead to premature melting or separation. The time-current characteristics curve may shift resulting in a loss of coordination between the fuse and any overcurrent protection device. The fuse unit used in the FMD20 is constructed with a fusible element able to withstand damage from current surges that approach the fuse's minimum melting time-current characteristic curve. Because these fuse units are more accurate and precise than Current Limiting fuses, they are able to provide faster and more reliable protection without affecting coordination.

ULTRA-LIGHT POWER FUSE MOUNT

CONSTRUCTION AND OPERATION

The Firon FMD20, Ultra-Light Power Fuse Mount consists of the following two components:

- 1) Mounting frame
- 2) Fuse unit end fittings.

1) The mounting frame consists of a Maclean Power Systems' Polymer Insulator, line side latch assembly and load side hinge assembly.

The Polymer Insulator is constructed with silicone rubber sheds, glass rod and galvanized steel center bracket & end fittings. The 27 kV insulator is constructed with an extra leakage distance Polymer body.

The line side latch assembly comes with a integrated hook attachment allowing the use of a loadbreak tool. The line side latch assembly is constructed from a high strength cast bronze alloy with silver plated contacts and stainless steel back-up springs.

The load side hinge assembly is constructed from a high strength cast bronze alloy with silver plated contacts and stainless steel back-up springs.

The line side latch and load side hinge assemblies come with standard parallel groove connectors. The parallel groove connectors can accommodate conductors in the range No. 6 solid (.162"dia) thru 4/0 ACSR (.563"dia).

2) The fuse unit end fittings consist of an upper fuse assembly and a lower trunion assembly. The lower trunion assembly is constructed from a cast bronze alloy with a silver plated finish. The lower trunion assembly comes with a hookeye which allows the fuse unit to be easily lifted in or out of the load side hinge assembly of the mounting. The upper fuse assembly is constructed from a silver plated, high strength bronze cast alloy and includes a cast bronze pull ring. The pull ring allows for operation of the fuse unit with an insulated hook stick. The fuse unit end fittings can be reused if undamaged.

Fuse unit end fittings are installed on either ends of the fuse unit and the fittings complete the electrical connection necessary between the fuse unit and the Power Fuse Mount.

The fuse unit end fittings accept the following fuses units:

- 1) S&C type SMU-20
- 2) Eaton type DBU
- 3) Cooper type CMU

These fuse units are the Boric acid expulsion power fuses. They are the replaceable type and for outdoor applications. Fuse units are available with an Amperage range of 3 thru 200. Available Fuse speeds: Standard, Slow & Fast. Fuse units are not included and must be purchased separately.

The FMD20, Power Fuse Mount operates with minimum electrical resistance between the fuse unit end fittings and the mounting frame. When the fuse unit is closed in the mount, the electrical current path is through parts which are either copper alloy or silver plated copper alloy.

ORDERING INFORMATION

To order a 15kV FMD20 with fuse unit end fittings, use catalog number FMD20-15

Wt: 14 lbs

Dimensions: 6-1/2" x 12-1/2" x 25-1/2"

To order a 27kV FMD20 with fuse unit end fittings, use catalog number FMD20-27

Wt: 19 lbs

Dimensions: 8-1/4" x 14-1/2" x 29-1/2"

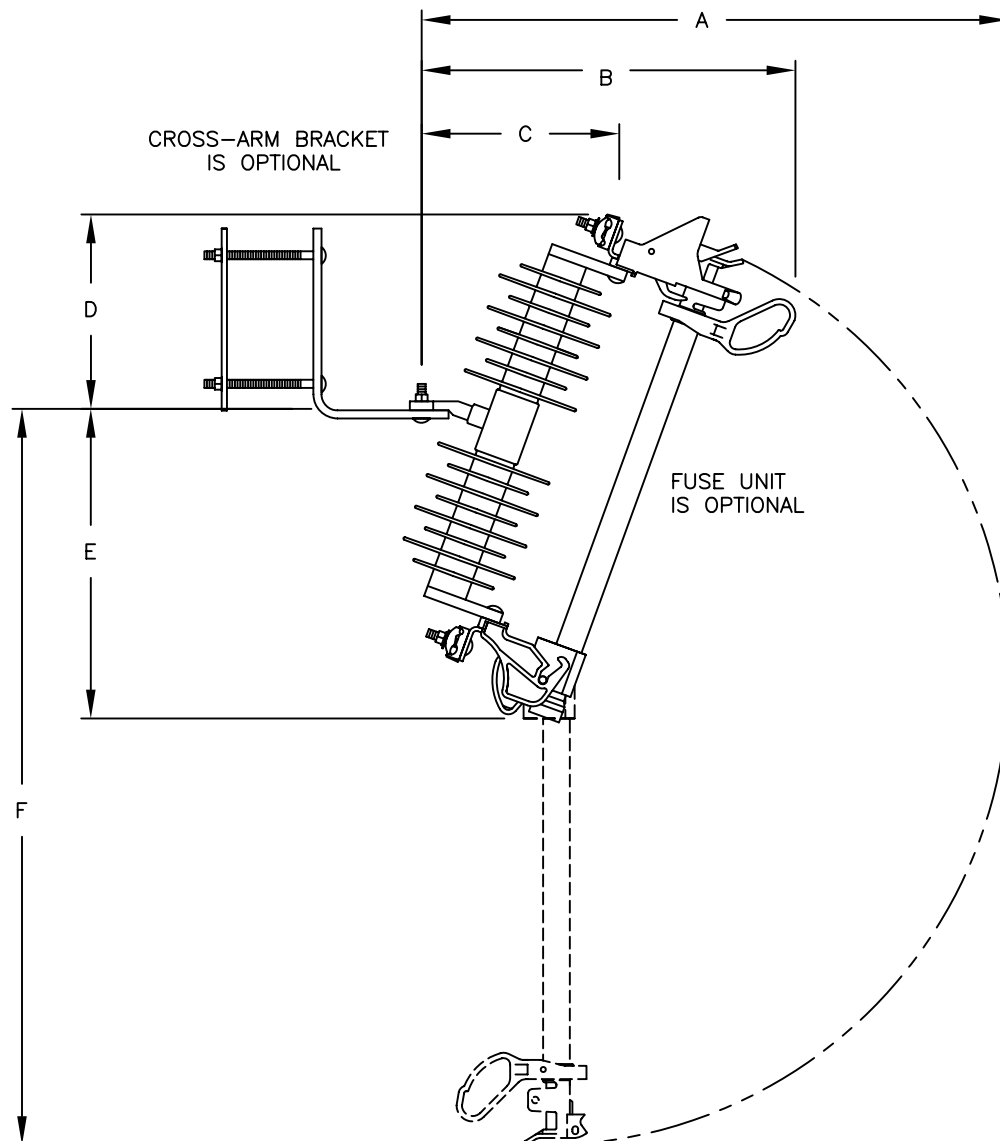
Spare fuse unit end fittings can be ordered separately under catalog number F3095.

Packaging dimensions: 7-3/8"x4"x4-1/4"

Wt: 4 lbs

To order a Cross-Arm Mounting Bracket add the suffix "XB" to the catalog number.

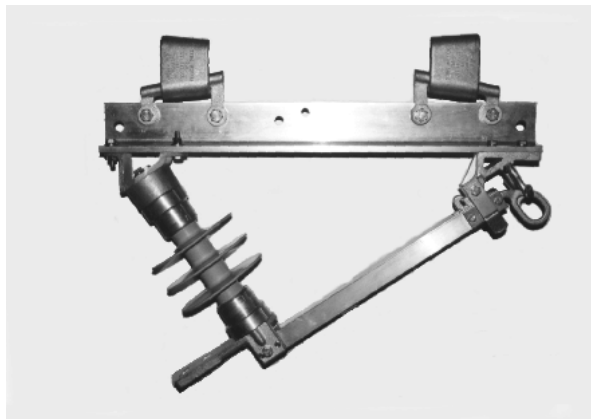
ULTRA-LIGHT POWER FUSE MOUNT



SPECIFICATIONS AND DIMENSIONS

CATALOG NUMBER	RATING [kV]		AMPS MAX	LEAKAGE DISTANCE IN [MM]	A	B	C	D	E	F	WEIGHT LBS [KG]
	NOM [MAX]	BIL									
FMD20-15	15 [17]	150	200	19.1 [485]	27.0 [686]	16.8 [427]	8.0 [203]	9.5 [241]	14.3 [363]	33.5 [851]	14 [6.4]
FMD20-27	25 [27]	170	200	35.6 [904]	23.3 [592]	16.0 [406]	7.3 [185]	7.5 [191]	12.8 [325]	28.8 [732]	19 [8.6]

ULTRA-LIGHT LINE TAP SWITCH



APPLICATION

The Firon Line Tap Switch is ideal for applications where space constraints make the mounting of a conventional disconnect switch difficult. This line tap switch can be used as a simple tap off a line, when mounted to the line with optional conducting stirrups, fixed by wedge connectors. This system provides a conductive path along with the support for the switch.

The switch can also be mounted directly to the line with line clamps and in conjunction with a strain clamp and a strain insulator to provide a tap at a dead end. This is particularly useful and cost effective where lines are dead ended and the line must be tapped off to underground lines.

When equipped with Loadbuster™ hooks and in conjunction with a Loadbuster™, the switch may be used for load interrupting or breaking transformer-magnetizing, line and cable-charging currents.

Other installation configurations are shown in the following illustrations.

CONSTRUCTION

The Firon Line Tap Switch is hookstick operated. Equipped with a Silicone post style insulator mounted on an aluminum angle base, it is an extremely light and robust switch with superior insulator qualities.

The current carrying components are the same as those utilized in the In-line (TW).

With a tested momentary of 40kA RMS (asymmetrical) and a current rating of 600 amps continuous, the switch is available from 15 thru 34kV. The aluminum base also provides a current path, when required by the application.

The standard blade opening is 180 degrees; if a 90 deg. opening is required, it should be indicated at time of ordering.

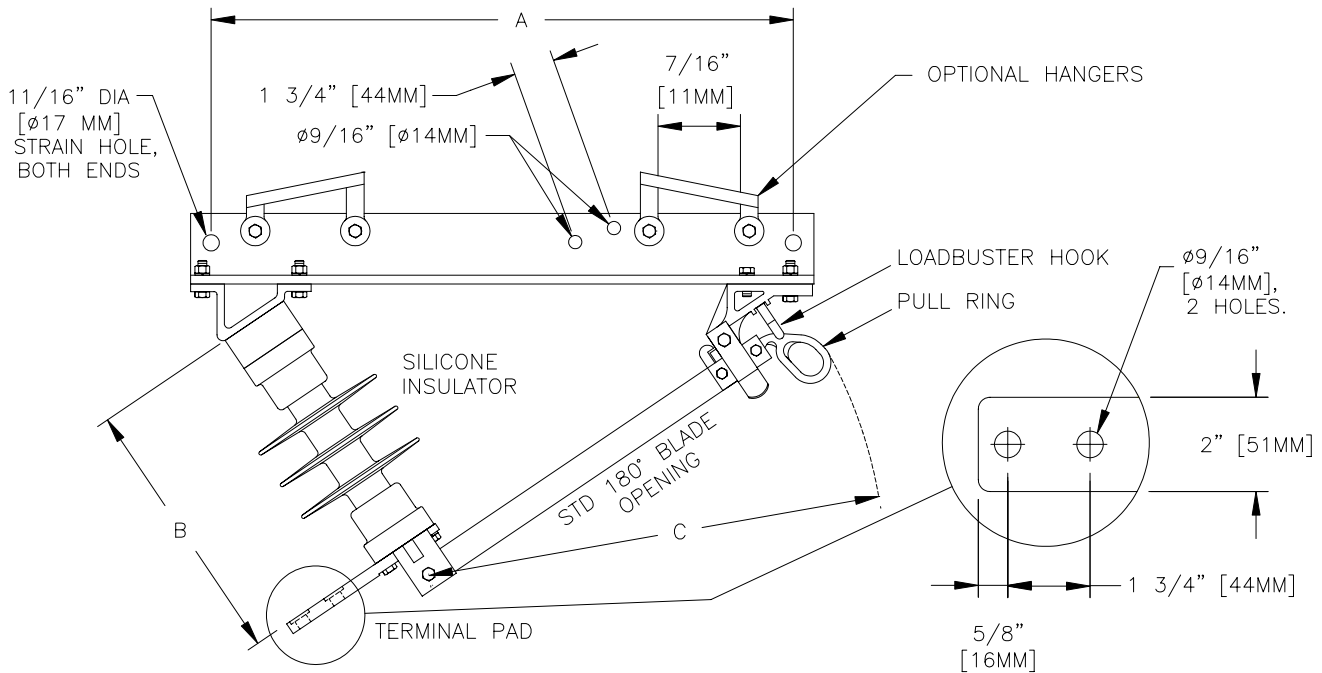
The optional stirrups are either ½ inch or ¾ inch diameter to provide for a range of wedge clamp connectors.

Terminal pads are standard Nema drilled with 9/16" diameter on 1-3/4" centers.

Loadbuster™ hooks are fitted on the jaw of each blade assembly.

The base is constructed from an aluminum angle and drilled to provide all the mounting and termination options shown in the illustrations.

ULTRA-LIGHT LINE TAP SWITCH



LINE TAP SWITCH SPECIFICATIONS

CATALOG NUMBER	RATED VOLTAGE	CURRENT		NOMINAL BIL	FLASHOVER 60 HZ		LEAKAGE DISTANCE		DRY ARC DISTANCE	
		RATED	MOM		DRY	WET	IN.	MM.	IN.	MM.
LTS156S	15kV	600 A	40,000 A	110 kV	130kV	40kV	10.8	274	5.7	145
LTS256S	25kV	600 A	40,000 A	125 kV	160kV	65kV	16.7	424	7.3	185
LTS286S	28kV	600 A	40,000 A	150 kV	160kV	65kV	16.7	424	7.3	185
LTS346S	34kV	600 A	40,000 A	175 kV	195kV	85kV	26.0	660	10.6	270

DIMENSIONS AND WEIGHTS

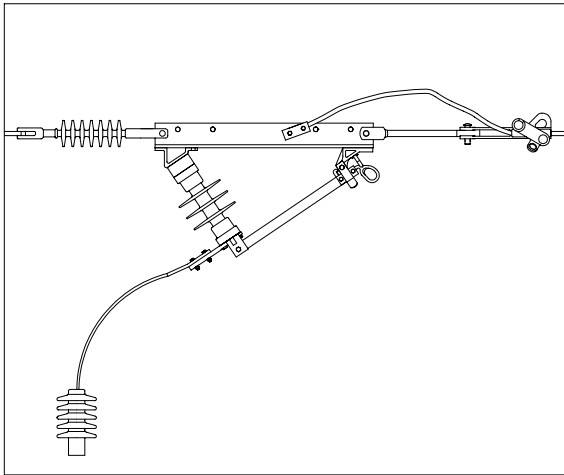
CATALOG NUMBER	A		B		C		WEIGHT	
	IN.	MM.	IN.	MM.	IN.	MM.	LB	KG
LTS156S	18 1/2	470	7 7/8	200	11 7/8	302	17.5	7.9
LTS256S	22 1/4	565	10	254	15	381	18.0	8.1
LTS286S	24 7/8	632	11 3/8	289	17 1/8	435	18.5	8.4
LTS346S	29 3/8	746	14	356	21	533	20.0	9.0

OPTIONS:

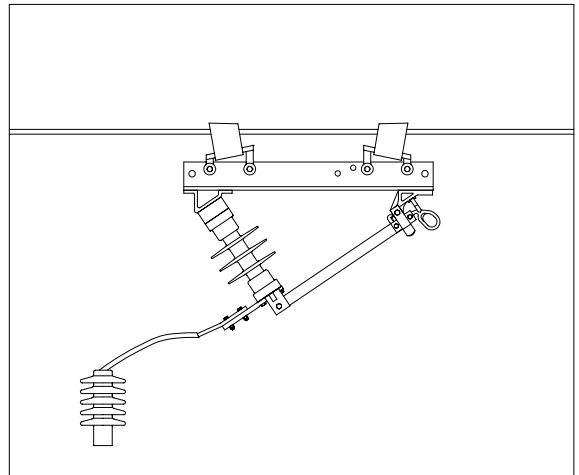
- FOR ONE SET OF SWITCH TERMINAL CONNECTOR, (CATALOG NUMBER 9920), ADD SUFFIX "C" TO THE CATALOG NUMBER. i.e. LTS156SC
- FOR ONE SET OF 1/2" DIA (4/0 EQUIV.) OR 3/4" DIA (477 MCM EQUIV.) HANGERS. ADD SUFFIX "1/2H" OR "3/4H" TO THE CATALOG NUMBER. i.e. LTS156S1/2H OR LTS156S3/4H.
- FOR A HIGHLY CORROSIVE ATMOSPHERE, CURRENT CARRYING COMPONENTS CAN BE NICKEL PLATED. ADD THE SUFFIX "NP" TO THE CATALOG NUMBER. i.e. LTS156SNP.
- FOR PORCELAIN INSULATORS, REPLACE THE CHARACTER "S" IN THE CATALOG NUMBER WITH "P". i.e. LTS156P.
- 180° BLADE OPENING IS STANDARD, FOR A 90° BLADE OPENING, ADD THE SUFFIX "90" TO THE CATALOG NUMBER. i.e. LTS156S-90.

ULTRA-LIGHT LINE TAP SWITCH

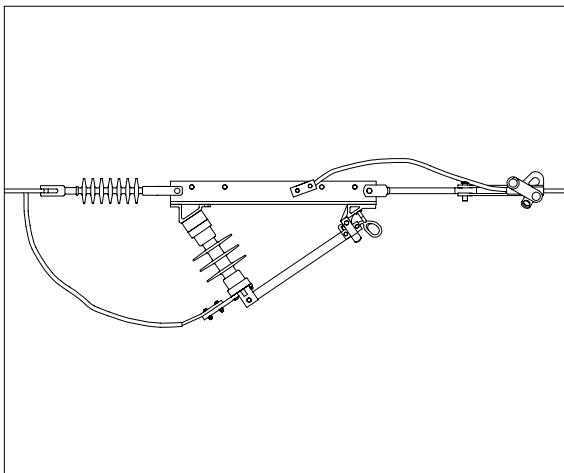
TYPICAL SWITCH APPLICATIONS



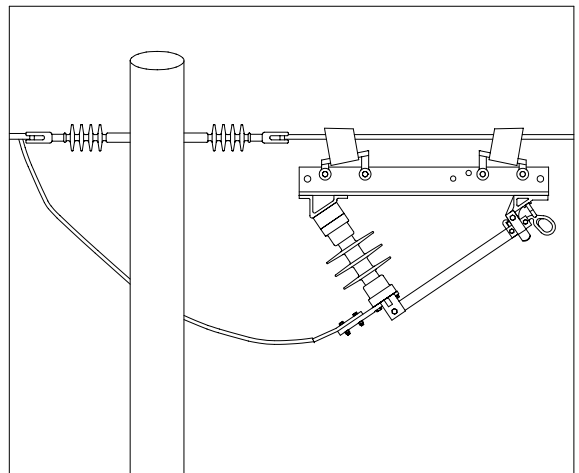
SHOWN IS A SWITCH CONNECTED TO A CONDUCTIVE BASE AND DEAD ENDED TO A POLE.



SHOWN IS A SWITCH CONNECTED TO AN OVERHEAD CONDUCTOR WITH WEDGE CONNECTORS.

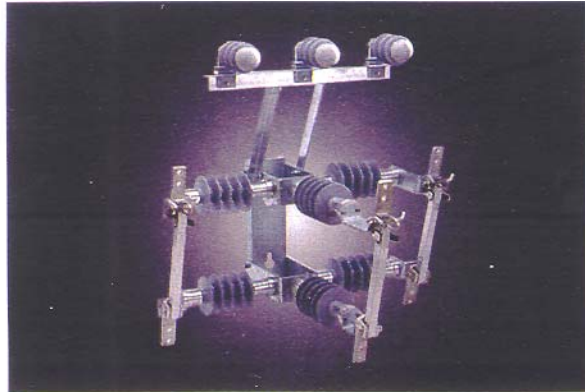


SHOWN IS A SWITCH CONNECTED TO A CONDUCTIVE BASE FOR IN-LINE DISCONNECTING.



SHOWN IS A SWITCH CONNECTED TO AN OVERHEAD CONDUCTOR WITH WEDGE CONNECTORS FOR IN-LINE DISCONNECTING.

ULTRA-LIGHT CLUSTER MOUNT SWITCH



APPLICATION

The Firon Cluster Mount Switch is a three phase hookstick operated switch, mounted on a single base. This configuration is ideal for disconnecting drops to underground cable.

The switch is lighter than conventional switches equipped with porcelain or epoxy insulators.

When equipped with Loadbuster™ hooks and in conjunction with a Loadbuster™, the switch may be used for load interrupting, breaking transformer-magnetizing currents and line and cable-charging currents.

The Cluster Mount Switch may be equipped with the optional lightning arrester bracket for further protection.

CONSTRUCTION

The Firon Surface Mount Switch is a three phase hookstick operated switch. The phases are independently mounted side by side on a common base, with the center phase standing out from the two outer phases.

Equipped with Silicone, post style insulators, it is a light and robust switch with superior insulator qualities.

The current carrying components are the same as those utilized in the In-line switch (TW).

With a tested momentary of 40kA RMS (asymmetrical) and a current rating of 900 amps continuous, the switch is available from 15 thru 46kV.

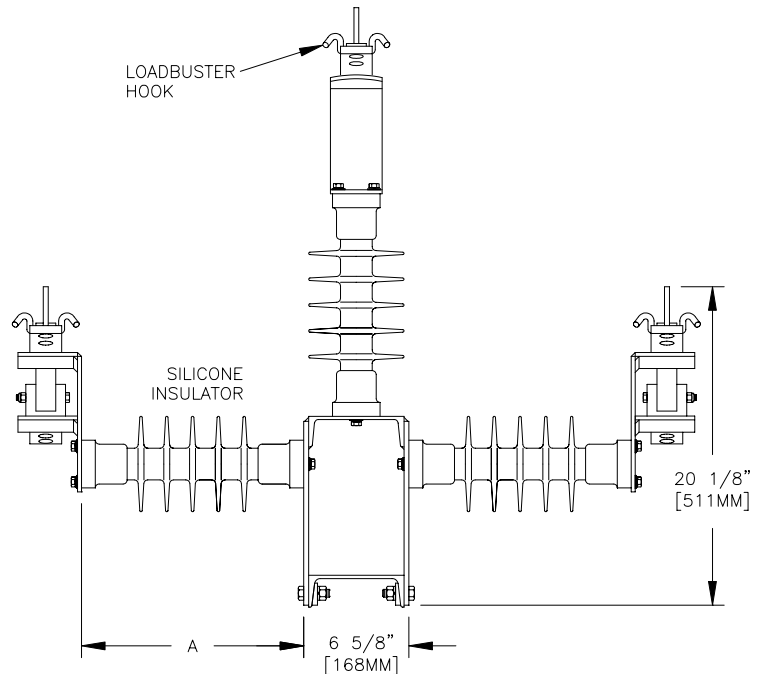
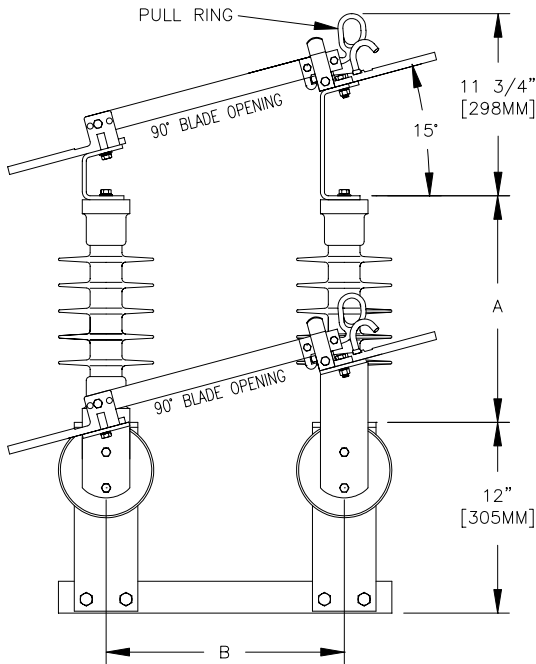
The standard blade opening is 90 degrees; if a 180 deg. opening is required, it should be indicated at the time of ordering.

Terminal pads are standard Nema drilled with 9/16" diameter on 1-3/4" centers. Loadbuster™ hooks are fitted on the jaw of each blade assembly, except the 46 kV rated switch.

The base is constructed from a galvanized steel channel and is supplied with two "key hole" mounting holes for 5/8" mounting bolts. The channel base provides secure clamping to poles.

The optional arrester bracket is supplied with 1/2" mounting bolts to mount the lightning arrestors.

ULTRA-LIGHT CLUSTER MOUNT SWITCH



DIMENSIONS AND WEIGHTS

CATALOG NUMBER	A		B		C		D		WEIGHT	
	IN.	MM.	IN.	MM.	IN.	MM.	IN.	MM.	LB	KG
CM15900S	8	203	15	381	10	254	21	533	95	43
CM25900S	10	254	15	381	10	254	21	533	100	45
CM28900S	15	381	15	381	10	254	21	533	110	50
CM46900S	17	432	30	762	21	533	36	914	-	-

CLUSTER MOUNT SWITCH SPECIFICATIONS

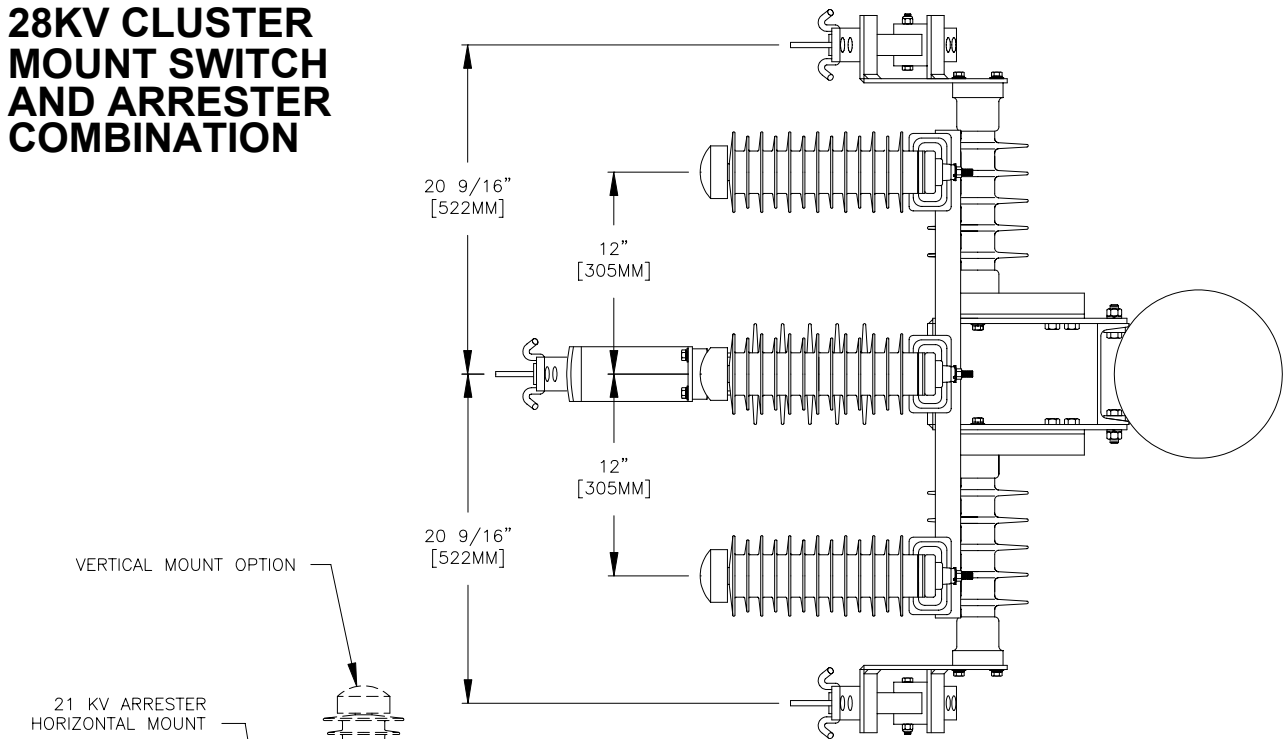
CATALOG NUMBER	RATED VOLTAGE	CURRENT		NOMINAL BIL	FLASHOVER 60 HZ		LEAKAGE DISTANCE		DRY ARC DISTANCE	
		RATED	MOM		DRY	WET	IN.	MM.	IN.	MM.
CM15900S	15kV	900 A	40,000 A	110kV	130kV	40kV	10.8	275	5.7	145
CM25900S	25kV	900 A	40,000 A	150kV	160kV	65kV	17.2	437	7.6	193
CM28900S	28kV	900 A	40,000 A	175kV	195kV	85kV	26.1	663	10.7	272
CM46900S	46kV	900 A	40,000 A	220kV	240kV	115kV	34.0	865	13.6	345

OPTIONS:

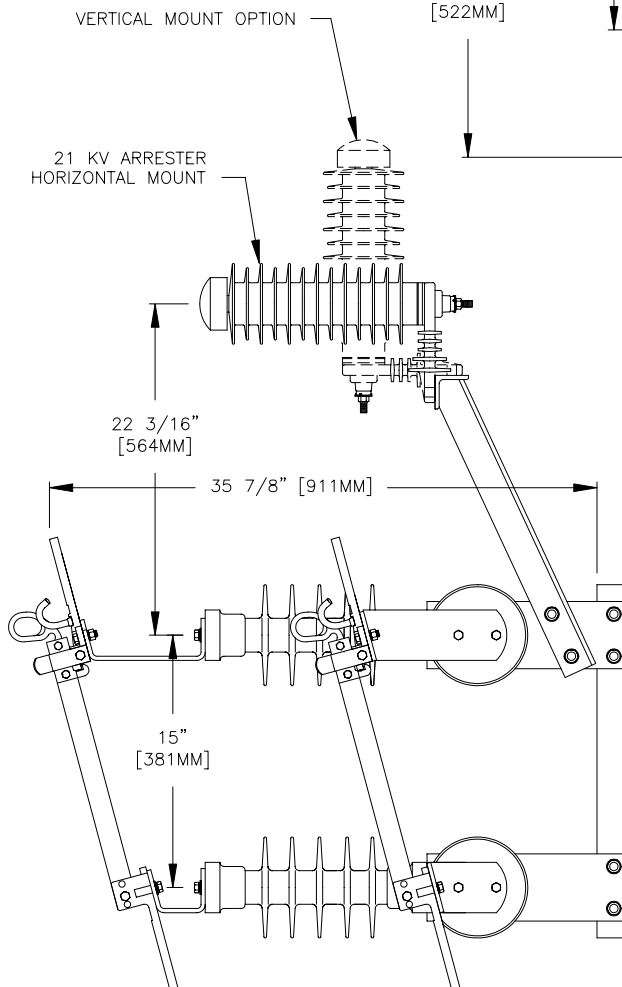
- FOR SIX SETS OF SWITCH TERMINAL CONNECTORS, (CATALOG NUMBER 9920), ADD SUFFIX "C" TO THE CATALOG NUMBER. i.e. CM15900SC
- FOR AN ARRESTER BRACKET, ADD THE SUFFIX "B" TO THE CATALOG NUMBER. i.e. CM15900SB

CM SWITCH & ARRESTER COMBINATION

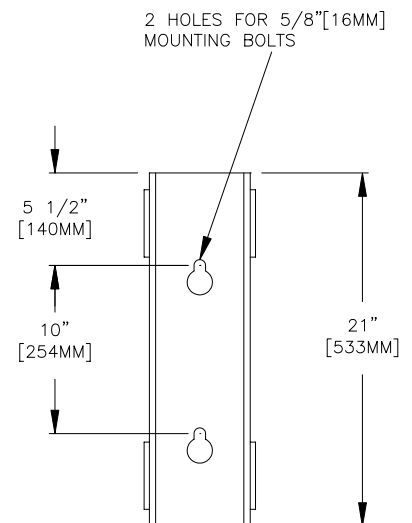
28KV CLUSTER MOUNT SWITCH AND ARRESTER COMBINATION



PLAN VIEW



SIDE VIEW



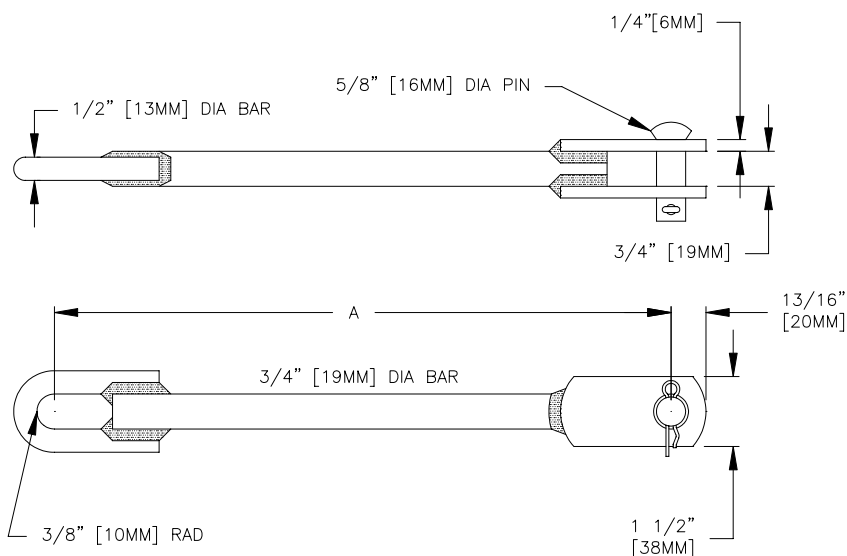
SWITCH ACCESSORY

ANTI-ROTATION BAR

FOR ADDED LINE STABILITY, WHEN THE INSTALLATION IS CLOSE TO A POLE, AN ANTI-ROTATION BAR CAN ENABLE THE LINEMAN TO ADJUST THE SWITCH TO ANY ANGLE AWAY FROM THE POLE, RELATIVE TO THE ADJACENT LINES. THE LINEMAN CAN OPERATE THE SWITCH FROM ANY ANGLE OTHER THAN FROM DIRECTLY UNDER THE LINES. THE ANTI-ROTATION BAR FITS SNUGLY INTO ANY LINE POST SADDLE.

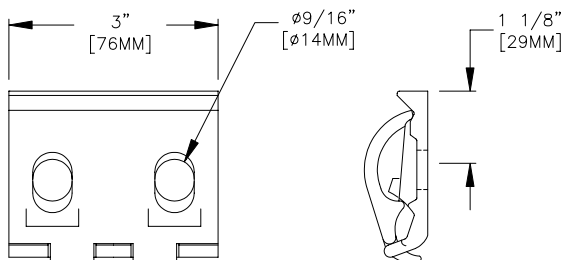
MATERIAL: STEEL TO CSA G40-21M, GR 300W OR EQUIVALENT
FINISH: HOT DIP GALVANIZE.

CATALOG NO.	A	WEIGHT
9930	18" 457MM	3 LBS 1.4KG
9931	24" 610MM	4 LBS 1.8KG
9932	30" 762MM	4.7 LBS 2.1KG
9933	36" 914MM	5.5 LBS 2.5KG



SWITCH TERMINAL WIRE CONNECTOR

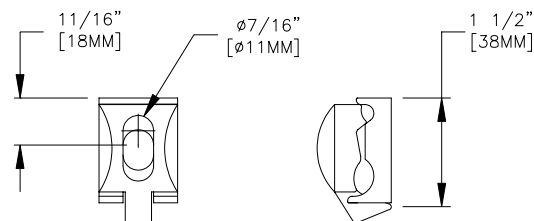
MATERIAL: BASE - TIN PLATED ALUMINUM
TOP - TIN PLATED BRONZE



SINGLE GROOVE - #2 (.257" [6.5MM] DIA)
TO 500MCM (.812" [20.6MM] DIA)

CATALOG NO.: 9920
WEIGHT: 3/4 LBS [.34KG] EA

MATERIAL: BASE - TIN PLATED ALUMINUM



DOUBLE GROOVE - #6 SOLID (.162" [4.1MM] DIA)
TO 250MCM (.575" [14.6MM] DIA)

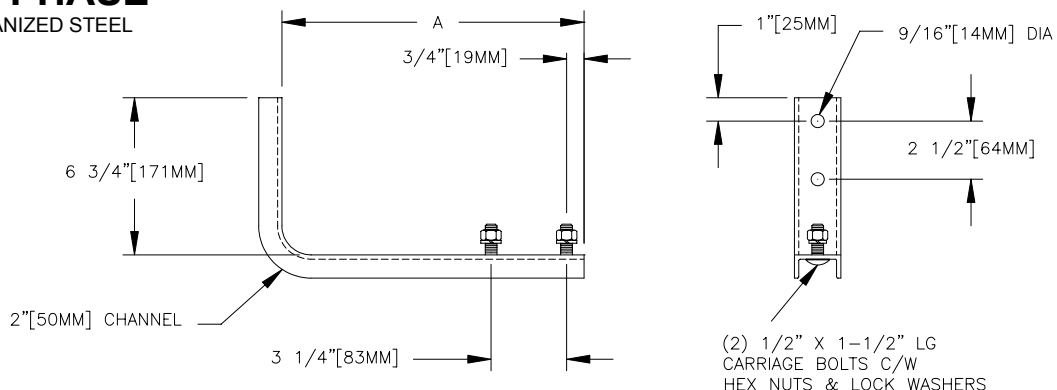
CATALOG NO.: 1722
WEIGHT: 1/2 LBS [.23KG] EA

CUTOUT & ARRESTER BRACKET

CHANNEL TYPE A

SINGLE PHASE

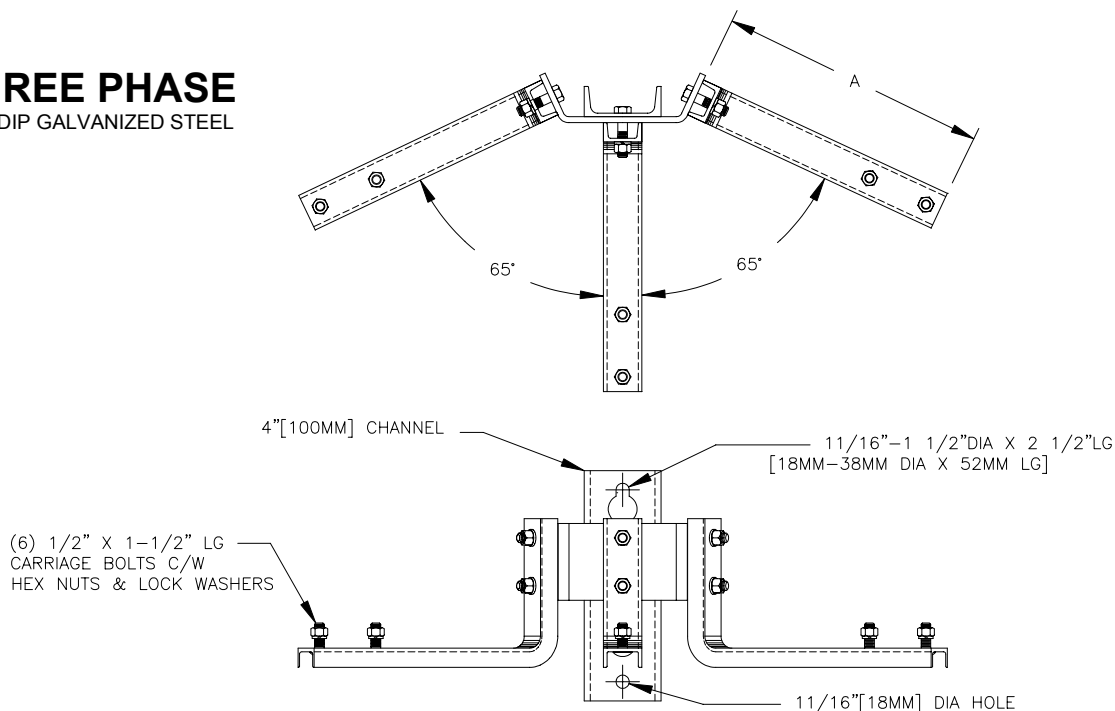
HOT DIP GALVANIZED STEEL



CATALOG NO.	KV	A	WEIGHT
BF3280	15	14" 356MM	4.5 LB 2 KG
BF3279	28	25" 635MM	7.0 LB 3 KG

THREE PHASE

HOT DIP GALVANIZED STEEL



CATALOG NO.	KV	A	WEIGHT
BF3360	15	14" 356MM	24LBS 11KG
BF3361	28	25" 635MM	31LBS 14KG

CUTOUT & ARRESTER BRACKET

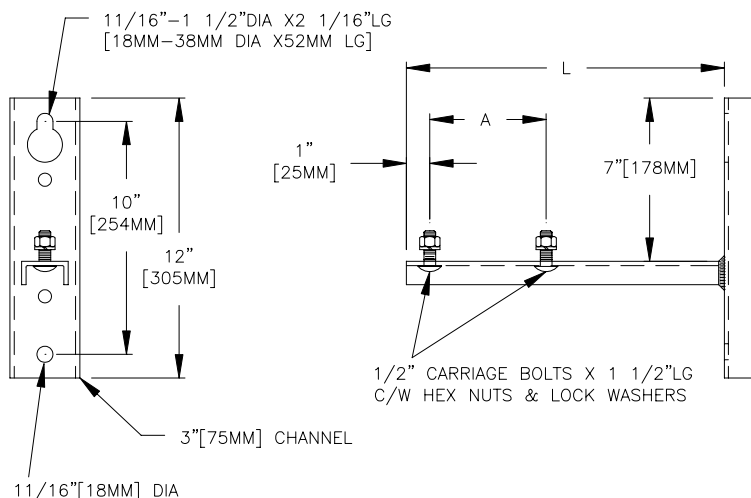
CHANNEL TYPE B

SINGLE PHASE

HOT DIP GALVANIZED STEEL

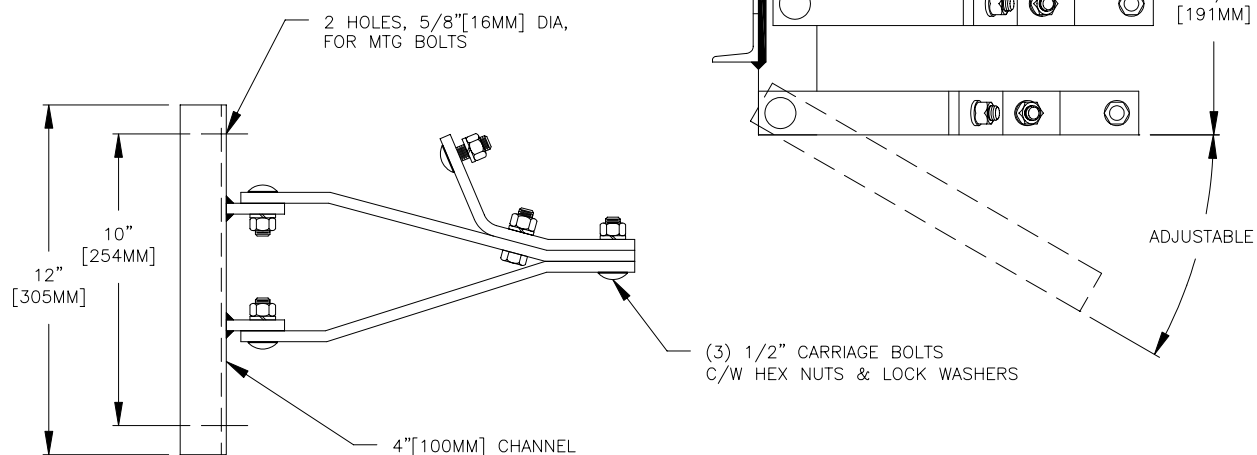
CATALOG NO.	L	A	WEIGHT
BF3286	13" 330MM	6" 152MM	6 LBS 2.7 KG
BF3282	19" 483MM	6" 152MM	8.5 LBS 3.8 KG
BF3283	24" 610MM	10" 254MM	9.5 LBS 4.3 KG

OTHER SIZES AVAILABLE ON REQUEST



THREE PHASE FOLDING TYPE

CATALOG NO.	MATERIAL	WEIGHT
BF3335	GALVANIZED STEEL	30 LBS[13KG]
BF3335A	ALUMINUM	12 LBS[5.4KG]



CUTOUT & ARRESTER BRACKET

ROUND TUBE TYPE

HOT DIP GALVANIZED STEEL

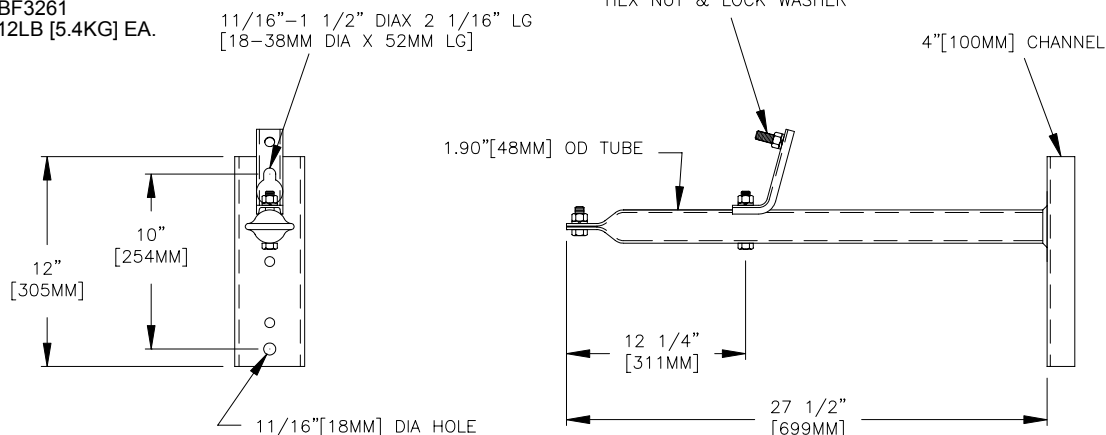
SINGLE PHASE

CAT NO.: BF3261
WEIGHT: 12LB [5.4KG] EA.

11/16"-1 1/2" DIA X 2 1/16" LG
[18-38MM DIA X 52MM LG]

(2) 1/2" DIA HEX BOLT C/W
HEX NUT & LOCK WASHER

4" [100MM] CHANNEL

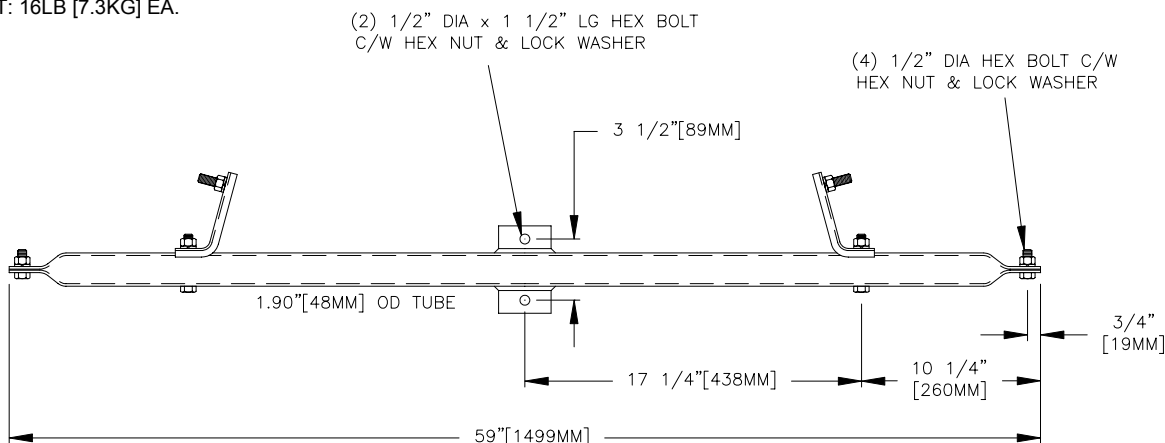


DOUBLE PHASE

CAT NO.: BF3262
WEIGHT: 16LB [7.3KG] EA.

(2) 1/2" DIA x 1 1/2" LG HEX BOLT
C/W HEX NUT & LOCK WASHER

(4) 1/2" DIA HEX BOLT C/W
HEX NUT & LOCK WASHER

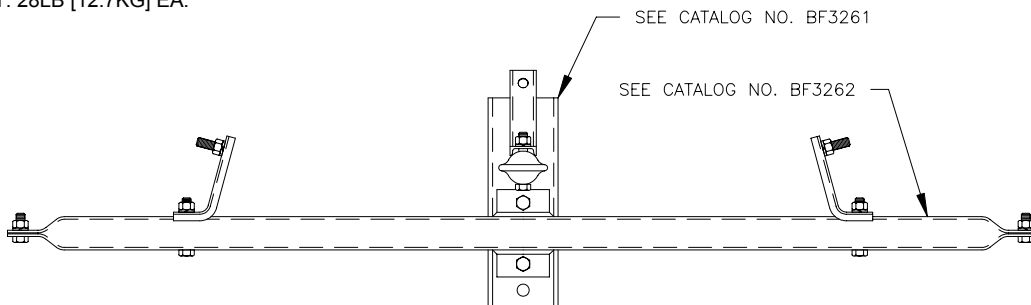


THREE PHASE

CAT NO.: BF3263
WEIGHT: 28LB [12.7KG] EA.

SEE CATALOG NO. BF3261

SEE CATALOG NO. BF3262



CUTOUT & ARRESTER BRACKET

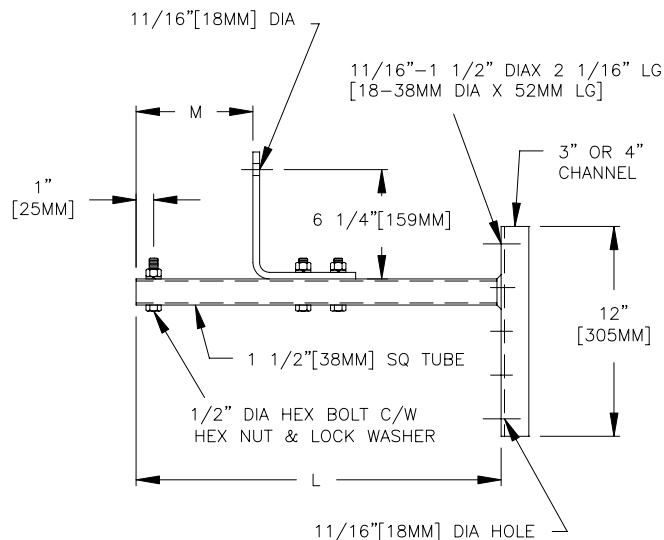
SQUARE TUBE TYPE

HOT DIP GALVANIZED STEEL

SINGLE PHASE

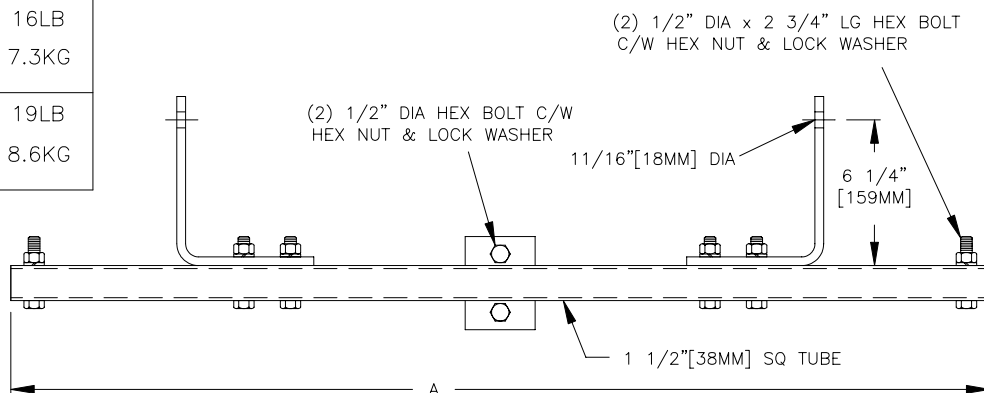
CATALOG NO.	L	CHANNEL SIZE	M	WEIGHT
BF3258	27 1/2" 699MM	3" 75MM	9 1/8" 232MM	12LB 5.4KG
BF3240	31" 787MM	3" 75MM	10 9/16" 268MM	13LB 5.9KG
BF3259	27 1/2" 699MM	4" 100MM	9 1/8" 232MM	13LB 5.9KG
BF3241	31" 787MM	4" 100MM	10 9/16" 268MM	14LB 6.3KG

OTHER SIZES AVAILABLE ON REQUEST



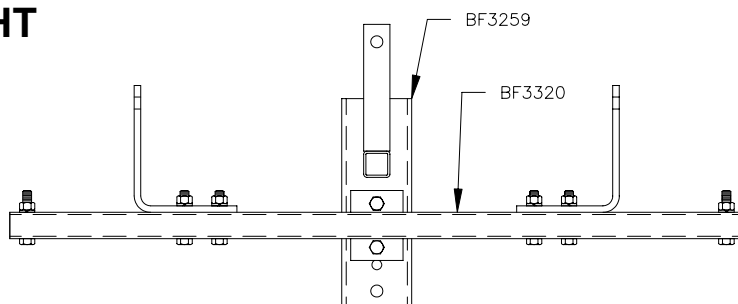
DOUBLE PHASE-STRAIGHT

CATALOG NO.	A	WEIGHT
BF3310	42" 1067MM	16LB 7.3KG
BF3320	59" 1499MM	19LB 8.6KG



THREE PHASE-STRAIGHT

TO ORDER A THREE PHASE BRACKET,
SELECT ONE SINGLE PHASE AND
ONE DOUBLE PHASE BRACKET
i.e. SINGLE PHASE - BF3259,
DOUBLE PHASE - BF3320



CUTOUT & ARRESTER BRACKET

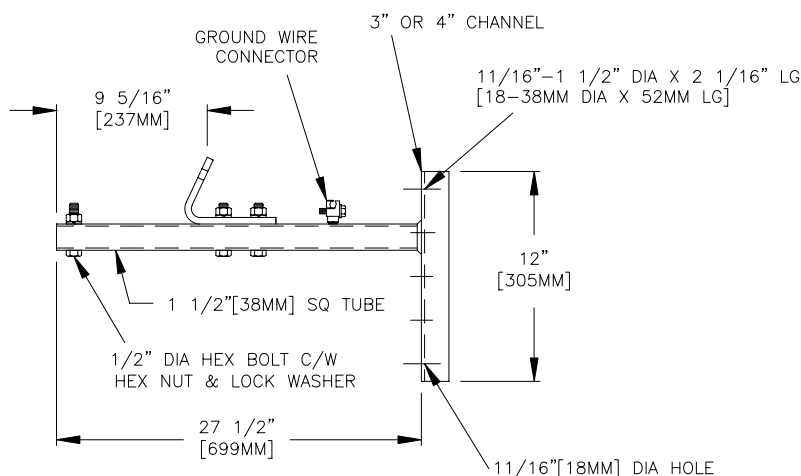
SQUARE TUBE TYPE

HOT DIP GALVANIZED STEEL

SINGLE PHASE

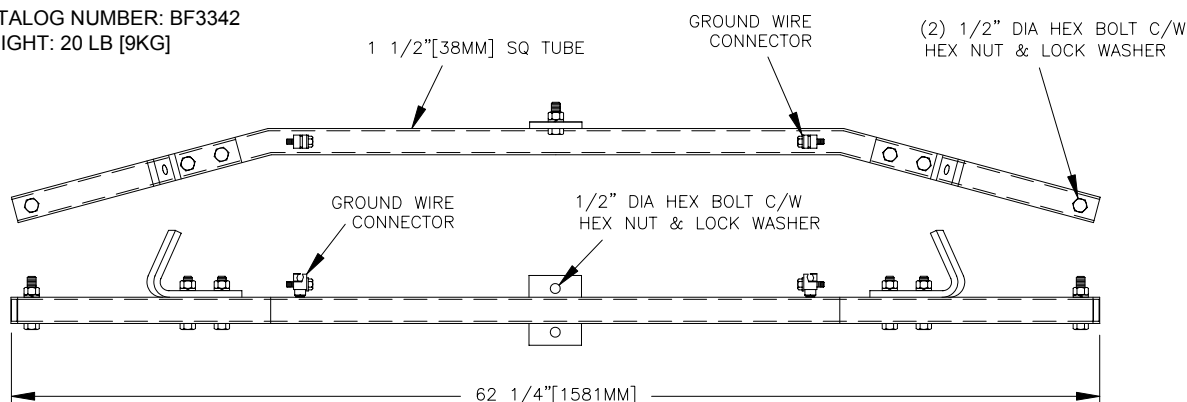
CATALOG NO.	CHANNEL SIZE	WEIGHT
BF3341	4" 102MM	12LB 5.4KG
BF3343	3" 75MM	13LB 5.9KG

OTHER SIZES AVAILABLE
ON REQUEST



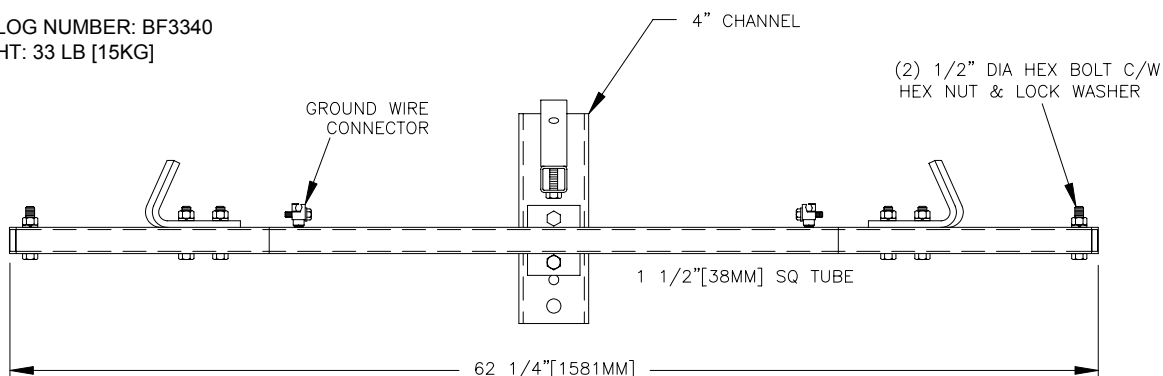
DOUBLE PHASE-CURVED

CATALOG NUMBER: BF3342
WEIGHT: 20 LB [9KG]



THREE PHASE-CURVED

CATALOG NUMBER: BF3340
WEIGHT: 33 LB [15KG]

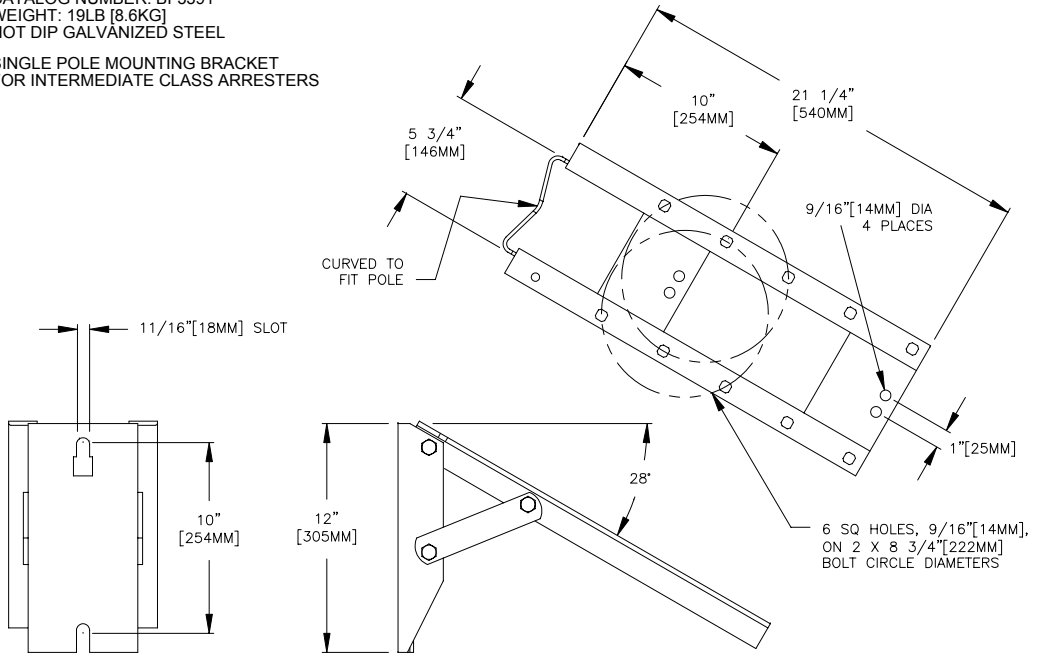


ARRESTER BRACKET

POLE MOUNTING BRACKET WITH 28° SLOPE

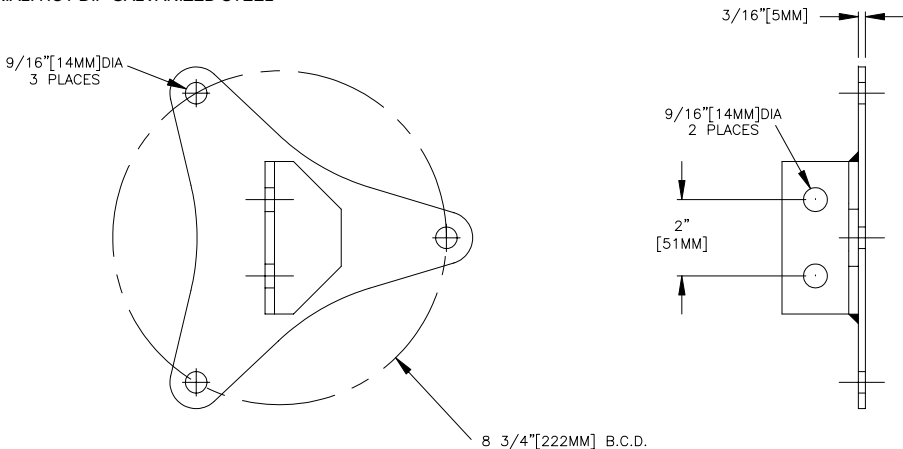
CATALOG NUMBER: BF3391
WEIGHT: 19LB [8.6KG]
HOT DIP GALVANIZED STEEL

SINGLE POLE MOUNTING BRACKET
FOR INTERMEDIATE CLASS ARRESTERS



ARRESTER BRACKET

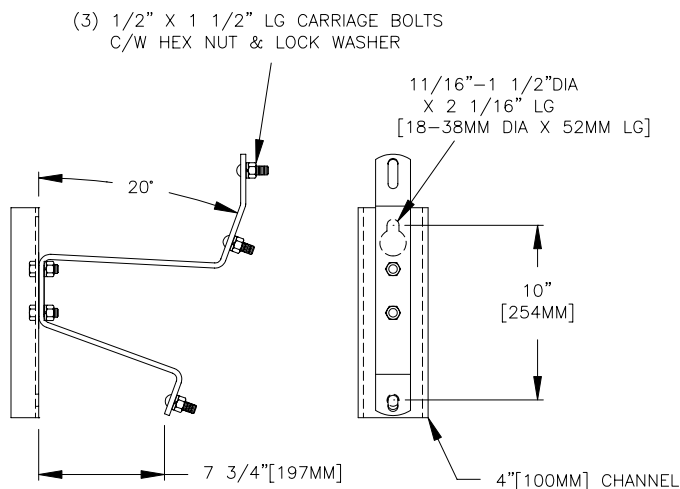
CATALOG NO.: BF3001
WEIGHT: 2.75 LB [1.1KG]
MATERIAL: HOT DIP GALVANIZED STEEL



SM SWITCH & ARRESTER BRACKET

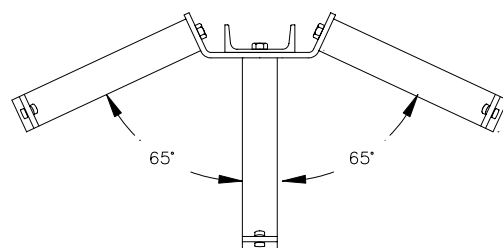
FIRON BRACKETS ARE DESIGNED FOR SUPPORTING THE FIRON SURFACE MOUNT DISCONNECT SWITCH. SINGLE AND THREE PHASE BRACKETS ARE CONSTRUCTED FROM HOT DIP GALVANIZED STEEL.

SINGLE PHASE



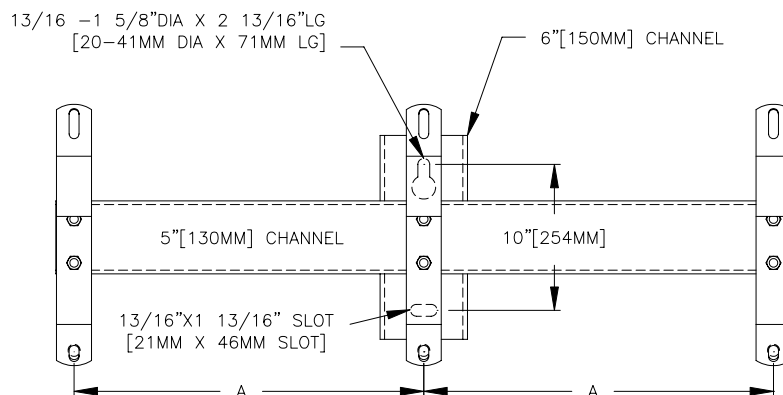
SWITCH	CATALOG NO.	WEIGHT
15KV & 28KV	BF3380	11.5LB [5.2KG]

THREE PHASE - 65° APART

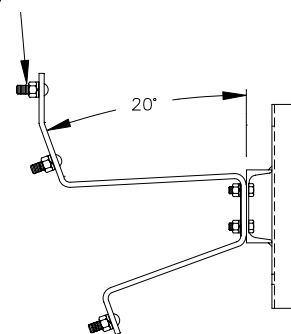


SWITCH	CATALOG NO.	WEIGHT
15KV & 28KV	BF3381	28LB [12.7KG]

THREE PHASE - PARALLEL



(9) 1/2" x 1 1/2" LG CARRIAGE BOLT
C/W LOCK WASHER & HEX NUT



SWITCH	CATALOG NO.	"A"	WEIGHT
15KV	BF3362-15	24" [610MM]	55LB [25KG]
28KV	BF3362-28	30" [762MM]	62LB [28KG]
35KV	BF3362-35	36" [914MM]	69LB [31KG]

FIBERGLASS MID-SPAN BRACKET

FOR DEAD ENDING TRIPLEX SERVICE TO OPEN WIRE SECONDARY BUS AT MID-SPAN.

MATERIAL:

THE INSULATING BAR OF THE BRACKET IS MADE FROM A HIGH STRENGTH FIBERGLASS REINFORCED POLYESTER RESIN UV STABILIZED.

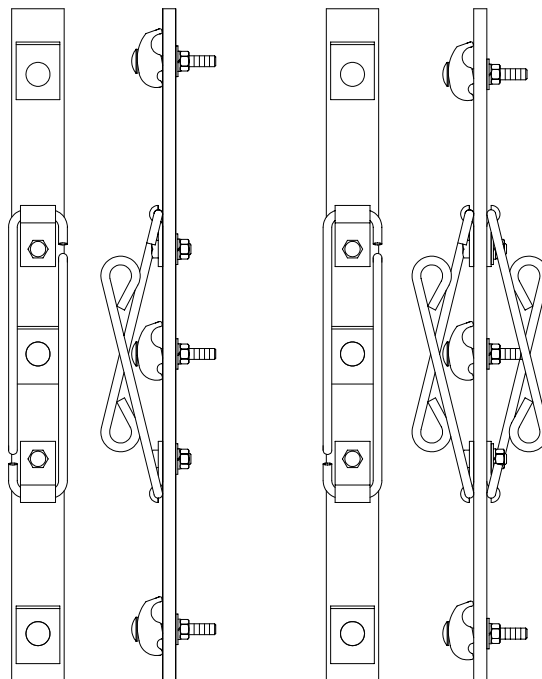
ALL FASTENERS AND METAL COMPONENTS ARE MADE FROM HOT DIP GALVANIZED STEEL

COLOUR: MUNSELL GREY

MINIMUM WET DIELECTRIC TEST VALUE OF INSULATING BAR IS 2500 VOLTS PER INCH [984 VOLTS/CM]

ULTIMATE SAFE TRANSVERSE WORKING LOAD IS 674 LBS [3 KN] PER SIDE ACCORDING TO CSA C83.

THE BRACKETS ARE PACKED WITH PULL RING RODS FOLDED FLAT ONTO THE BAR FOR EASY STORAGE.



BF3700

SINGLE TAKEOFF

BF3700-2

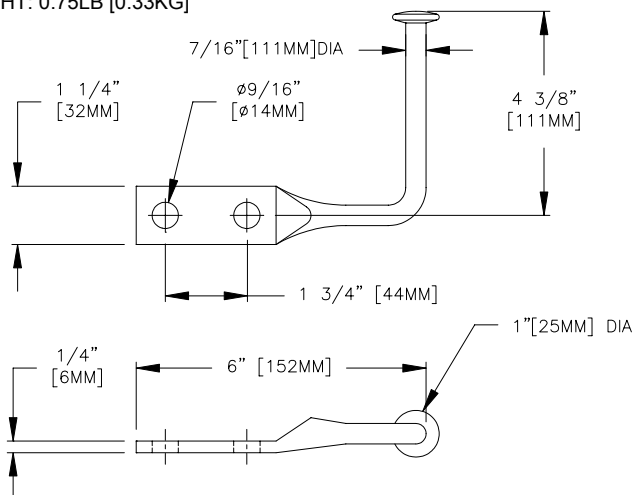
DOUBLE TAKEOFF

CATALOG NUMBER	CONDUCTOR RANGE	NUMBER OF CONDUCTORS	SPACING		NUMBER OF SERVICE TAPS	WT/100	
			IN.	MM.		LBS	KG
BF3700	NO. 6 - 477	3	8	203	1	180	82
BF3700-2	NO. 6 - 477	3	8	203	2	200	91
BF3690	NO. 6 - 477	3	10	254	1	200	91
BF3690-2	NO. 6 - 477	3	10	254	2	220	100
BF3710	NO. 6 - 477	3	13	330	1	220	100
BF3710-2	NO. 6 - 477	3	13	330	2	240	109
BF3720	NO. 6 - 477	4	8	203	1	260	118
BF3720-2	NO. 6 - 477	4	8	203	2	280	127
BF3721	NO. 6 - 477	5	8	203	1	300	136
BF3721-2	NO. 6 - 477	5	8	203	2	320	145
BF3680	NO. 6 - 477	3	18	457	1	320	145
BF3680-2	NO. 6 - 477	3	18	457	2	340	155

GROUND STIRRUP

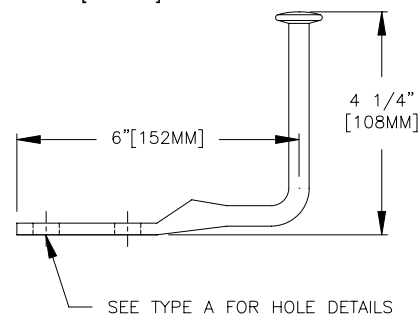
TYPE A

MATERIAL: BRONZE
CATALOG NO: ZF9914
WEIGHT: 0.75LB [0.33KG]



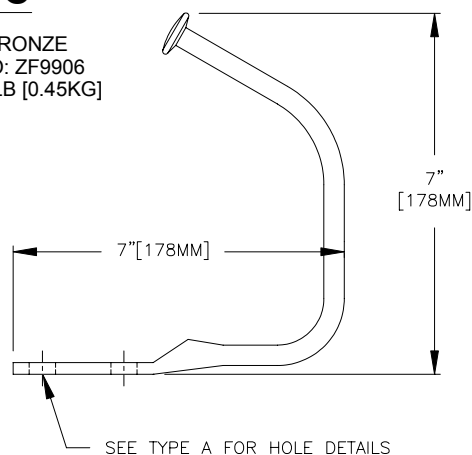
TYPE B

MATERIAL: BRONZE
CATALOG NO: ZF9908
WEIGHT: 0.75LB [0.33KG]



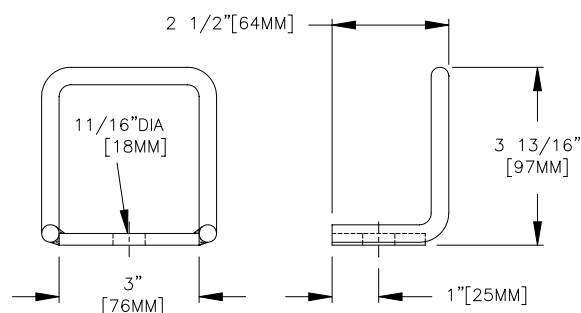
TYPE C

MATERIAL: BRONZE
CATALOG NO: ZF9906
WEIGHT: 1.0LB [0.45KG]



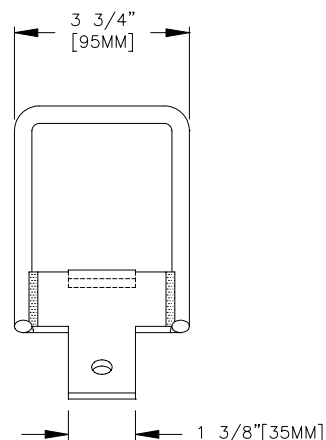
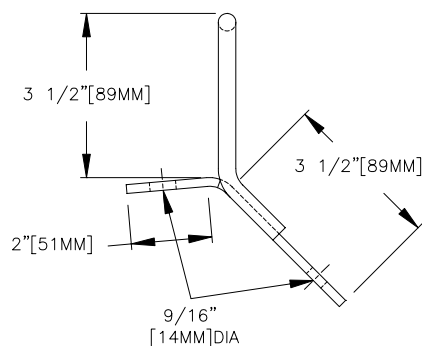
TYPE D

MATERIAL: COPPER
CATALOG NO: ZF9909
WEIGHT: 0.90LB [0.40KG]



TYPE E

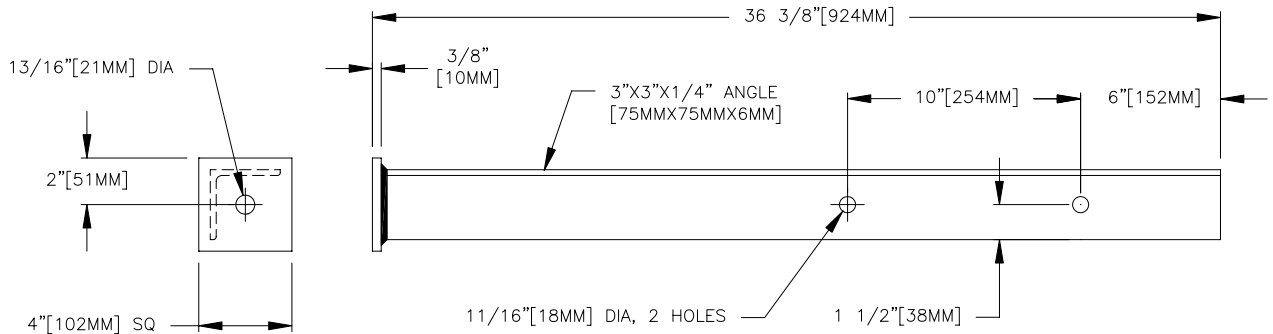
MATERIAL: COPPER
CATALOG NO: ZF9900
WEIGHT: 1.10LB [0.50KG]



POLE TOP BRACKET

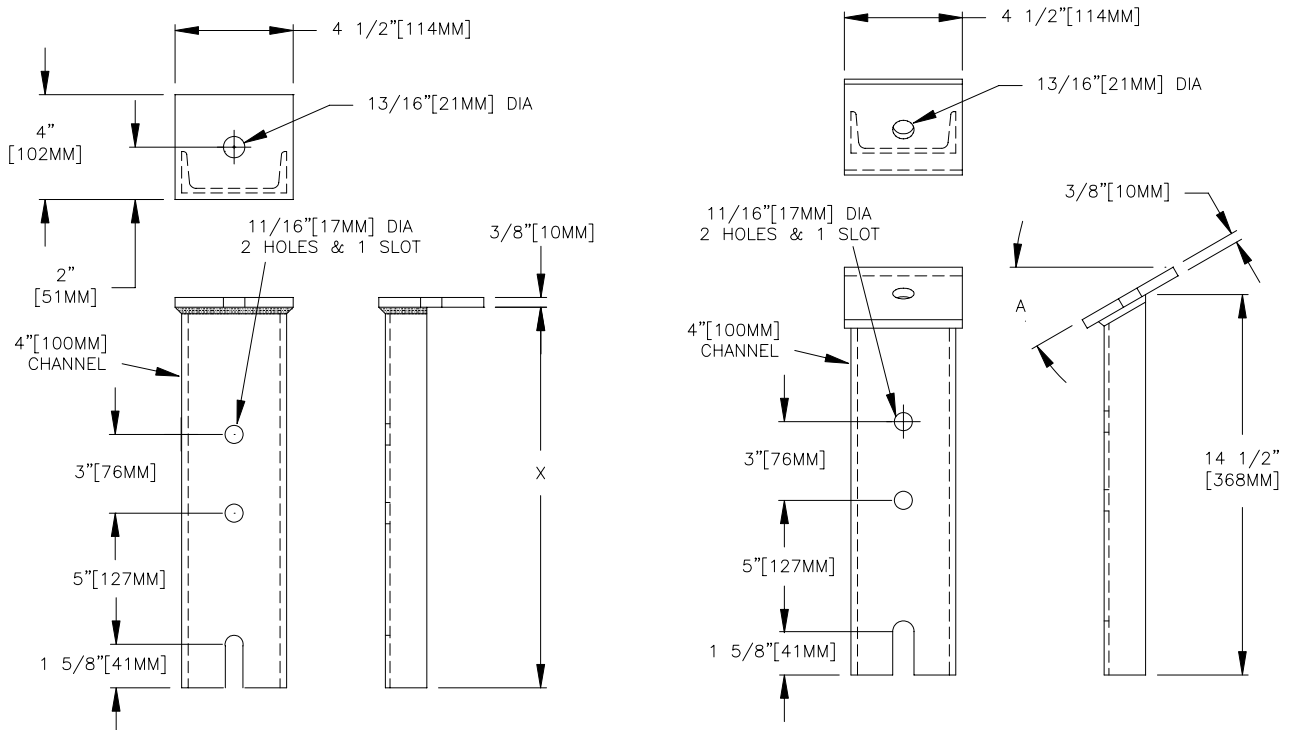
POLE TOP - ANGLE

HOT DIP GALVANIZED STEEL
CATALOG NUMBER: BF7501
WEIGHT: 20LB [9KG]



POLE TOP - CHANNEL

HOT DIP GALVANIZED STEEL



CATALOG NUMBER

BF3053
BF3055
BF3059

DIM "X"

48" [1219MM]
14 7/8" [378MM]
54" [1372MM]

WEIGHT

22LB[10KG]
9LB[4KG]
28LB[13KG]

CATALOG NUMBER

BF3055-15
BF3055-30

ANGLE "A"

15°
30°

WEIGHT

9LB[4KG]
9LB[4KG]

STRAIN LINK & YOKE PLATE

YOKE PLATES

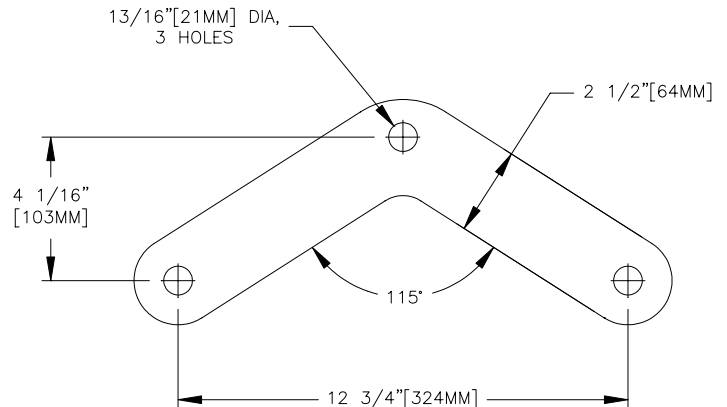
BOOMERANG STYLE

MATERIAL: STEEL PER CSA G40.21 GR 44W
TENSILE STRENGTH 65 KSI [448MPa]

FINISH: HOT DIP GALVANIZE

CATALOG NUMBER	MATERIAL THICKNESS	WEIGHT PER 100
PF7900	1/2" 13MM	550LB 250KG
PF7905	5/8" 16MM	700LB 318KG

OTHER SIZES AND DRILLING AVAILABLE ON REQUEST



STRAIN LINKS

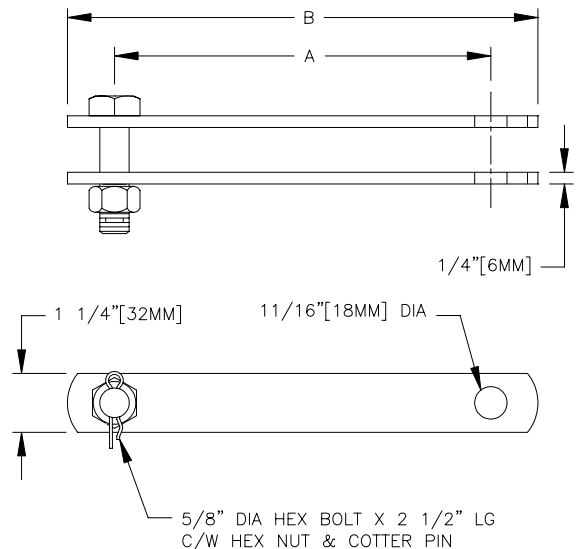
USED TO PROVIDE ADDITIONAL CLEARANCE BETWEEN
PRIMARY CONDUCTOR AND GROUND

HOT DIP GALVANIZED STEEL

RING FILLS OR SPACING WASHERS - ORDER SEPARATELY

CATALOG NUMBER	A	B	WEIGHT PER 100
CF4710	7 1/2" 191MM	9" 229MM	210LB 95KG
CF4711	13 1/2" 343MM	15" 381MM	320LB 145KG
CF4712	19 1/2" 495MM	21" 533MM	400LB 182KG
CF4713	27 1/2" 699MM	29" 737MM	560LB 254KG
CF4714	32" 813MM	33 1/2" 851MM	640LB 291KG
CF4715	18" 457MM	19 1/2" 495MM	375LB 170KG

OTHER SIZES AND DRILLING AVAILABLE ON REQUEST



CABLE SUPPORT

CABLE SUPPORT ASSEMBLIES

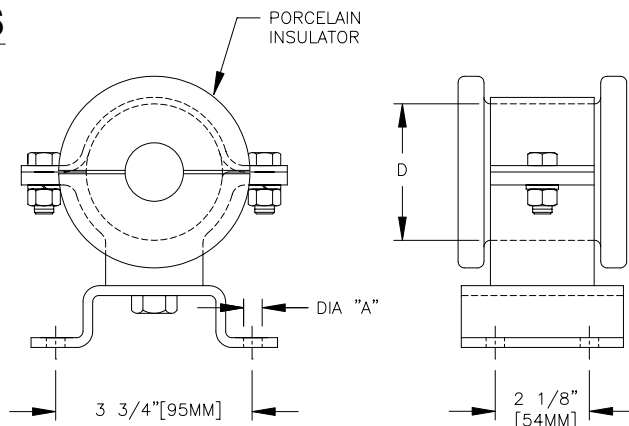
BASE MOUNT BRACKET

USED TO SUPPORT CABLES MOUNTED ON CEILINGS OR WALLS OF UNDERGROUND VAULTS.

INSULATOR IS SECURED WITH TWO 3/8" DIA BOLTS, HEX NUTS AND LOCK WASHERS.

ALUMINUM HOUSING AND GALVANIZED STEEL STRAP PREVENT MAGNETIC-FIELD CABLE HEATING ON AC INSTALLATIONS.

WHITE-GLAZE SPLIT PORCELAIN INSULATOR ELIMINATES THE NEED TO THREAD THE CABLES THROUGH THE SUPPORT.



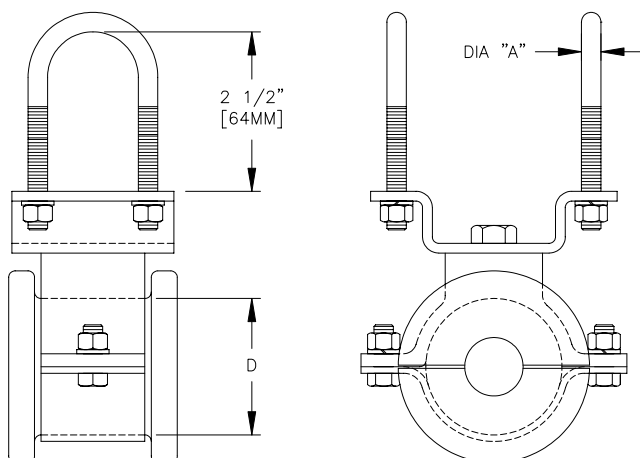
CATALOG NUMBER	HOUSING DIA "D"	MTG HOLES DIA "A"	WEIGHT PER 100
CF3801	2 5/8" [67MM]	7/16" [11MM]	180LB [82KG]
CF3811	3 1/8" [79MM]	7/16" [11MM]	200LB [91KG]
CF3821	3 3/4" [95MM]	7/16" [11MM]	220LB [100KG]

NOTE: INSULATORS TO BE ORDERED SEPARATELY

PIPE MOUNT BRACKET

USED TO SUPPORT CABLES MOUNTED ON PIPES

BRACKET CONSTRUCTION AND SIZE ARE THE SAME AS THE BASE MOUNTED BRACKETS.

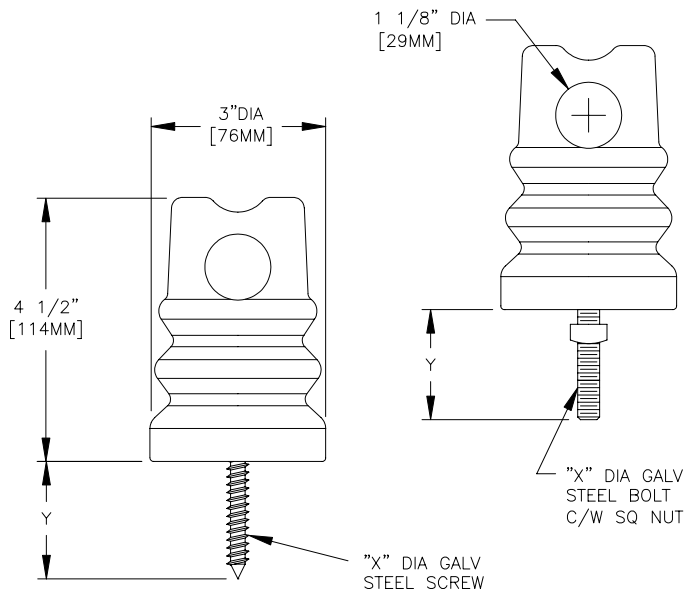


CATALOG NUMBER	HOUSING DIA "D"	U BOLT DIA "A"	WEIGHT PER 100
CF3800	2 5/8" [67MM]	3/8" [10MM]	240LB [109KG]
CF3810	3 1/8" [79MM]	3/8" [10MM]	260LB [118KG]
CF3820	3 3/4" [95MM]	3/8" [10MM]	280LB [127KG]

NOTE: INSULATORS TO BE ORDERED SEPARATELY

PORCELAIN WIRE HOLDER

TYPE A - FOR PRIMARY LEAD WIRE

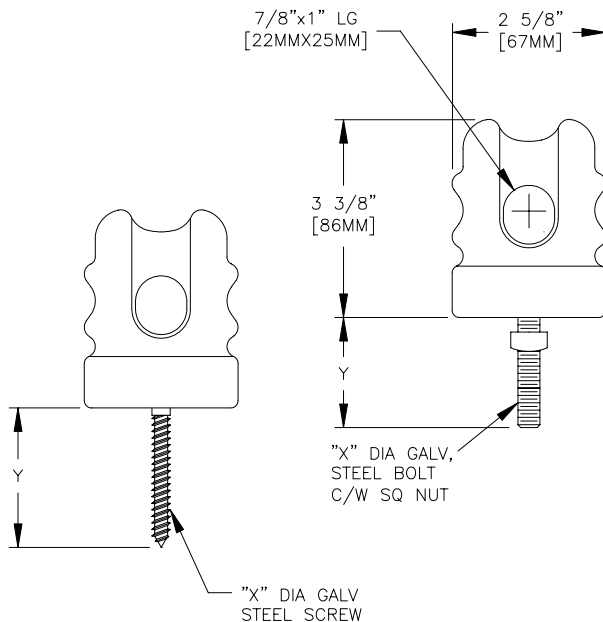


PORCELAIN COLOUR - GREY

CATALOG NUMBER	"Y"	"X" DIA BOLT/SCREW	WEIGHT PER 100
IF7010	2" 51MM	5/16" DIA SCREW 8MM	145LB 66KG
IF7011	1 1/2" 38MM	3/8" DIA SCREW 10MM	150LB 68KG
IF7012	3" 76MM	5/16" DIA SCREW 8MM	150LB 68KG
IF7013	2 1/2" 64MM	3/8" DIA SCREW 10MM	155LB 70KG
IF7015	2" 51MM	3/8" DIA SCREW 10MM	150LB 68KG
IF7016	3" 76MM	3/8" DIA SCREW 10MM	165LB 75KG
IF7020	1 1/4" 32MM	3/8" DIA BOLT 10MM	145LB 66KG

OTHER BOLT/SCREW SIZE & LENGTH AVAILABLE ON REQUEST.

TYPE B - FOR SERVICE DROP WIRE



PORCELAIN COLOUR - GREY

CATALOG NUMBER	"Y"	"X" DIA BOLT/SCREW	WEIGHT PER 100
IF7025	1 1/4" 32MM	3/8" DIA BOLT 10MM	135LB 61KG
IF7014	2 1/4" 57MM	5/16" DIA SCREW 8MM	130LB 59KG

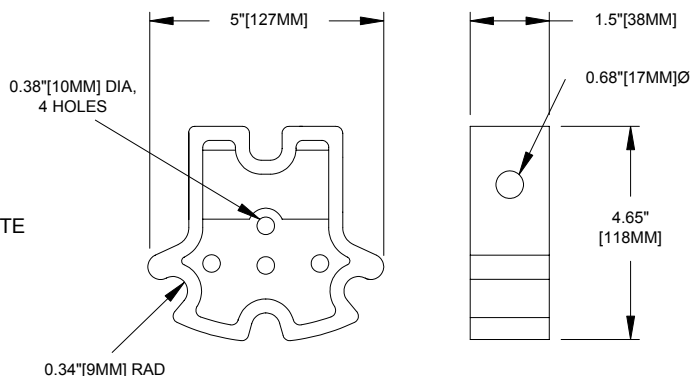
OTHER BOLT/SCREW SIZE & LENGTH AVAILABLE ON REQUEST.

SPREADER BRACKET

CABLE SPREADER

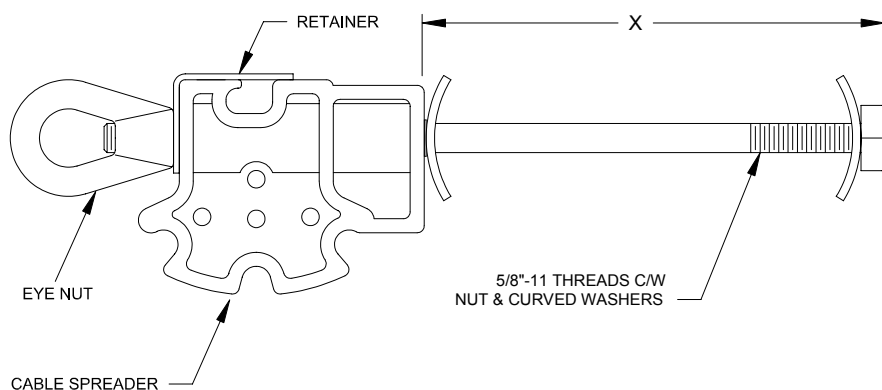
CATALOG NO.: 2910
WEIGHT: 0.5LB[0.2KG]
MATERIAL: BLACK POLYETHYLENE

DESIGNED TO HANDLE UP TO FOUR CONDUCTORS, THE CABLE SPREADER IS MADE FROM A BLACK POLYETHYLENE MATERIAL. USE OF THE SPREADER IS SAFE, EASY AND AN ECONOMICAL WAY TO SEPARATE THE PHASE CONDUCTORS AND BARE NEUTRAL.



SPREADER BRACKET ASSEMBLY

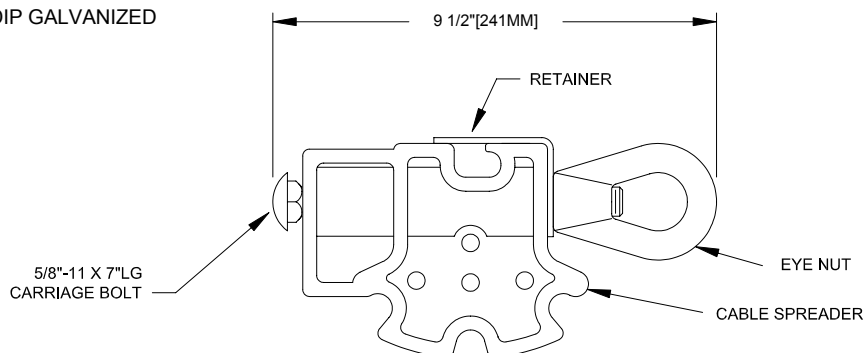
STEEL COMPONENTS ARE HOT DIP GALVANIZED



CATALOG NUMBER	"X"	WEIGHT
2925	10" 254MM	3.5LB 1.6KG
2926	12" 305MM	3.8LB 1.7KG
2927	14" 356MM	4.1LB 1.9KG

TRIPLEX POLE BAND BRACKET

CATALOG NO.: 3390
WEIGHT: 2LB[0.9KG]
STEEL COMPONENTS ARE HOT DIP GALVANIZED



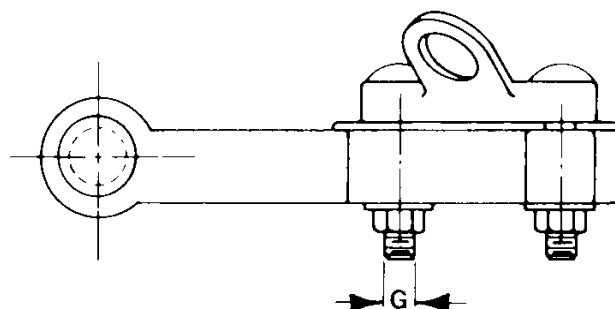
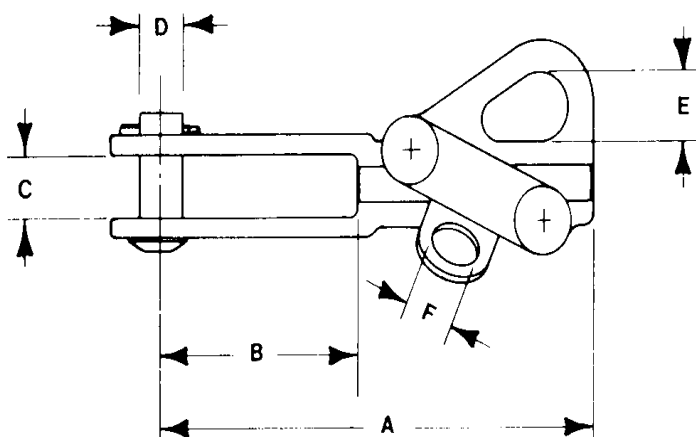
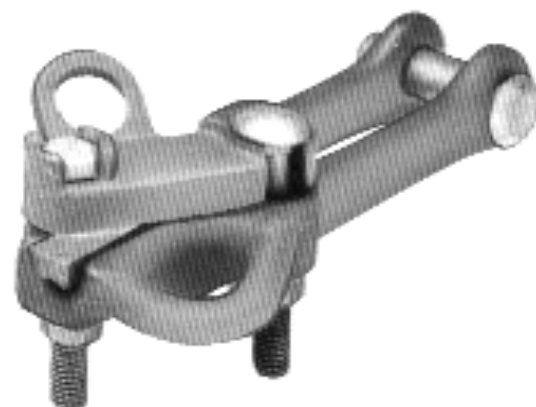
BOLTED DEAD END CLAMP

ALUMINUM STRAIGHT LINE BOLTED DEAD ENDS

Firon Aluminum Straight Line Bolted Dead End Clamps feature swing away design cable entry and incorporate heat treated primary grade aluminum castings with grade five, high strength fasteners. A favorite of linemen for dead ending and temporary openers, Firon Dead Ends exhibit reduced installation time, eliminate conductor damage and increase installer safety.

The beam structure of the keeper casting and top quality fasteners combine to produce Dead Ends stronger than the cable they encircle.

An integral large pulling eye provides ease of operation to connect and disconnect the come along hook.

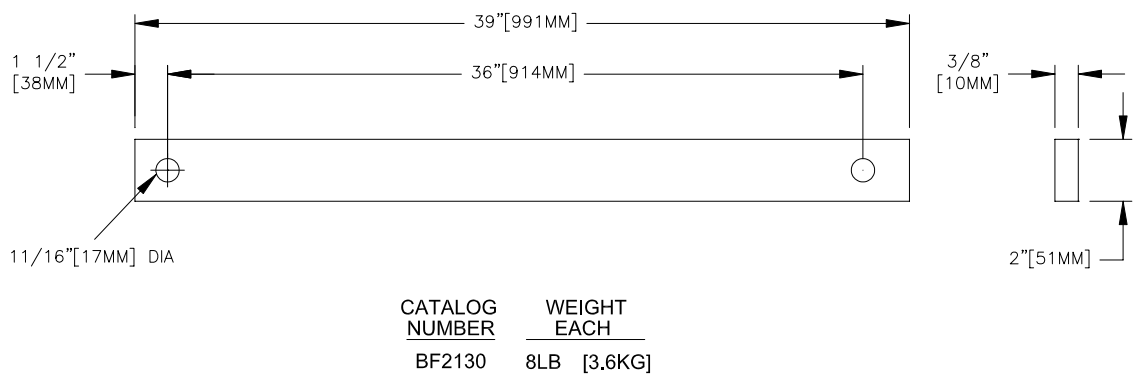
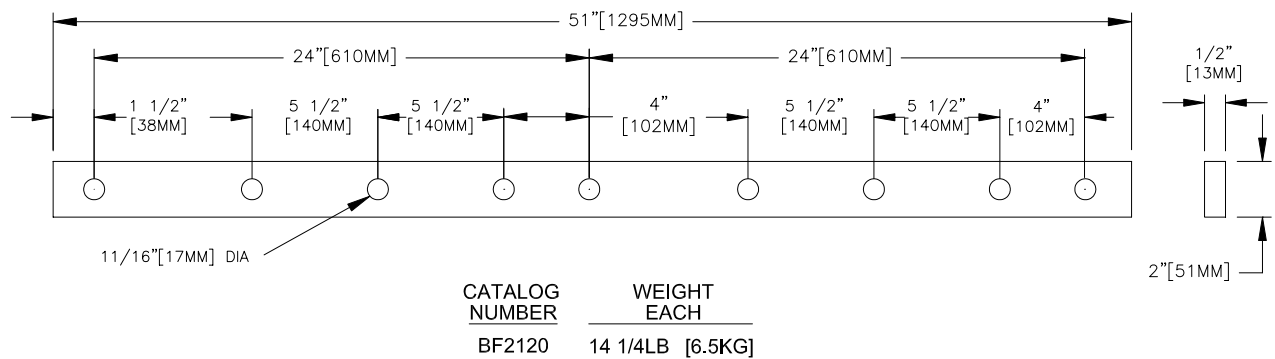
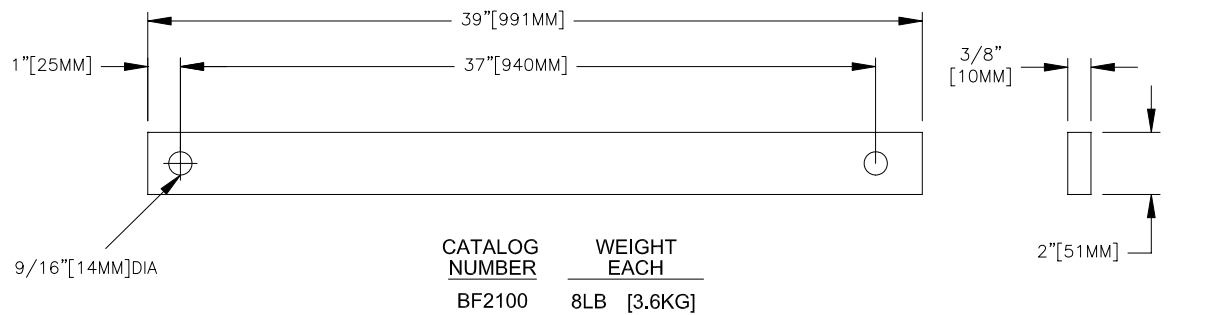


CATALOG NO.	CONDUCTOR RANGE		APPROXIMATE DIMENSION (INCHES)							OVERALL WIDTH
	MAX	MIN	A	B	C	D	E	F	G	
3358	2/0 ACSR	6 ACSR	6 5/8	3	3/4	5/8	7/8		3/8	3
3355	397.5 ACSR	4 ACSR	10	5	3/4	5/8	1	7/8	1/2	3 1/4
3352	477 ACSR 556 AAC	3/0 ACSR	10 1/8	5 1/4	3/4	5/8	1	7/8	1/2	3 7/8

CROSSARM BRACE

FLAT CROSSARM BRACES

HOT DIP GALVANIZED STEEL



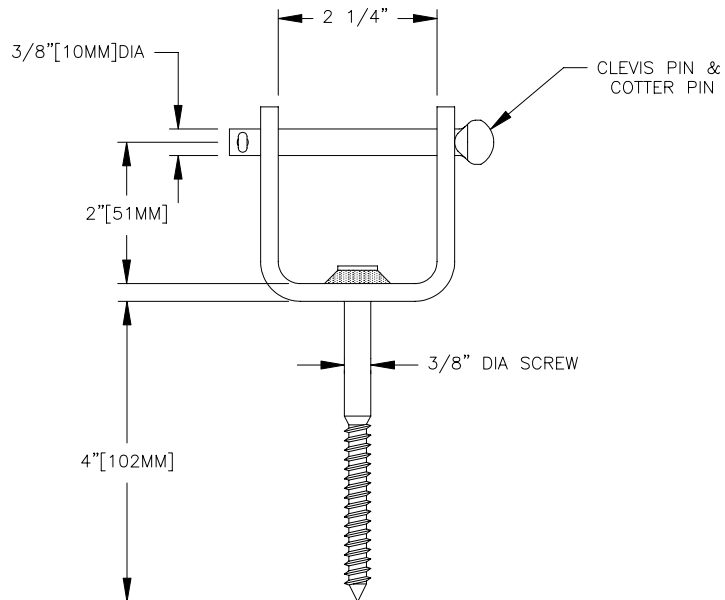
CLEVIS ASSEMBLY

SCREW TYPE

CATALOG NO.: CF4700

WEIGHT: 2LB[0.91KG]

MATERIAL: HOT DIP GALVANIZED STEEL



CATALOG NUMBER INDEX

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BF3053.....	39	BP25900S-L.....	12	LTS346S.....	24
BF3055.....	39	BP28900S-L.....	12	PF7900.....	40
BF3055-15.....	39	CF3800.....	41	PF7905.....	40
BF3055-30.....	39	CF3801.....	41	SM15900S.....	7
BF3059.....	39	CF3810.....	41	SM25900S.....	7
BF3240.....	33	CF3811.....	41	SM28900S.....	7
BF3241.....	33	CF3820.....	41	SM35900S.....	7
BF3258.....	33	CF3821.....	41	SM46900S.....	7
BF3259.....	33	CF4700.....	46	SV15900S.....	10
BF3261.....	32	CF4710.....	40	SV25900S.....	10
BF3262.....	32	CF4711.....	40	SV28900S.....	10
BF3263.....	32	CF4712.....	40	SV35900S.....	10
BF3279.....	30	CF4713.....	40	TW15900S.....	5
BF3280.....	30	CF4714.....	40	TW28900S.....	5
BF3282.....	31	CF4715.....	40	TW34900S.....	5
BF3283.....	31	CM15900S.....	27	TW46900S.....	5
BF3286.....	31	CM25900S.....	27	TW69000S.....	5
BF3310.....	33	CM28900S.....	27	ZF9900.....	38
BF3320.....	33	CM46900S.....	27	ZF9906.....	38
BF3335.....	31	F3096.....	19	ZF9908.....	38
BF3335A.....	31	FBP15900S-L.....	13	ZF9909.....	38
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BF3341.....	34	FBP28900S-L.....	13	ZF9945S.....	9
BF3342.....	34	FMD20-15.....	22	ZF9945D.....	9
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