

Insul-8 Mobile Electrification

Cable Reels ♦ Conductor Bar ♦ Festoon ♦ Pendants ♦ Drives ♦ Slip Rings

Solutions From A Single Source

Safe-Lec 2TM V-Contact Conductor Bar



New V-Contact bar for the
Electrification of:

- Overhead Cranes
- Monorails
- Automated Storage and Retrieval Systems
- For speeds up to 900 feet per minute



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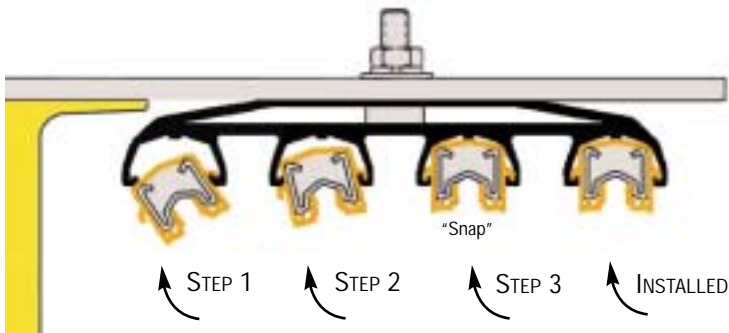


8 GREAT REASONS

Safe-Lec 2

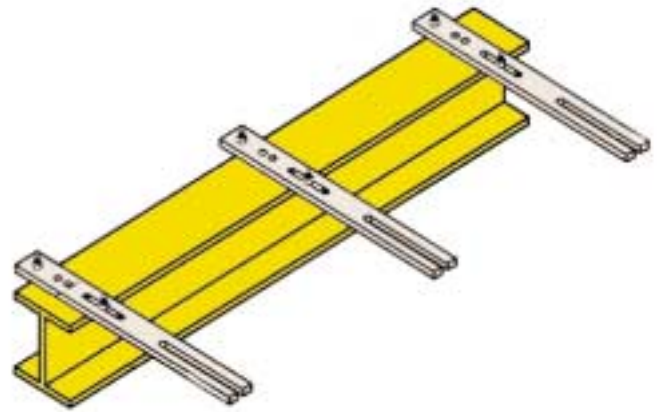
- ◆ BAR GUIDES THE COLLECTOR SHOE
- ◆ NO LIVE PARTS EXPOSED
- ◆ REDUCED CHANCE OF ACCIDENTAL CONTACT
- ◆ IP2 CERTIFIED

1 SINGLE BOLT 4-POLE HANGER



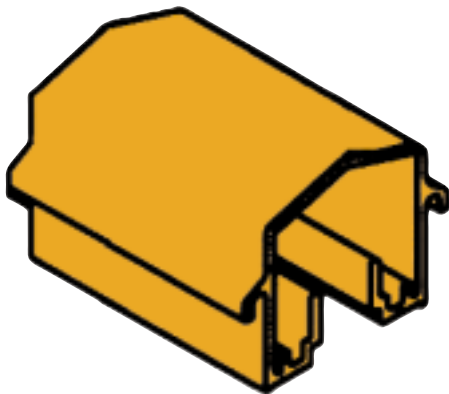
- It's a "snap" to install
- Multiple runs can be installed smoothly and effortlessly
- Reduce crane downtime
- Hangers also available in single-pole, double-pole and 3-pole versions

2 SLOTTED BRACKETS



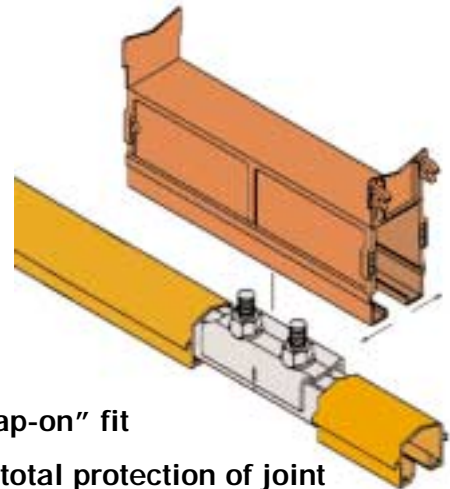
- Hanger support brackets feature slide-in slots
- No more hassles with holes that don't line up
- Accurate alignment every time

5 VERSATILE COVER



- Natural "peak" shape sheds water
- Dust will not accumulate as it does on a more horizontal surface
- One cover can hold 60, 100, 125, 160, 200, 250, 315 and 400 amp bar
- One common spare part

6 ONE PIECE JOINT COVER



- Easy "snap-on" fit
- Provides total protection of joint
- No exposed/live parts to contact

INSUL-8 SAFE-LEC 2

TO BUY INSUL-8

V-Contact Bar

◆ Ideal for speeds up to 900 fpm

3

SI AND DI COLLECTORS

- Simple and safe to connect
 - TYPE SI: Integral cable is protected, no tail
 - TYPE DI: All cable is fully enclosed, no tail
- Robust design for maximum life
- High pivot hinge point in collector head allows full articulation without unnecessary pull on connection cable
- Long wearing shoe reduces costs

4

FEWER EXPANSION ASSEMBLIES

To compensate for changes in system length due to temperature changes, it is necessary over certain system lengths to include expansion assemblies at specific intervals to absorb these temperature variances. Failure to do so may result in buckling of bars and possible derailment of the collectors.

- Safe-Lec 2 systems can run nearly 500 feet (150m) without an expansion assembly.
- Fewer expansion assemblies to purchase and install
- Save on installation labor hours and material costs
- Easy to install

7

LONGER BAR LENGTHS

Safe-Lec 2: Available in 15-foot lengths (4.5 m)
Other Bar: Available in 10-foot lengths

- Save money - fewer joints to purchase
- Save time - fewer labor hours to install
- Reduce crane downtime associated with installation

8

BOLTED JOINTS

- Eliminate bar separation common with pin joint systems
- Increased safety and system efficiency
- Superior electrical contact

MANY OTHER OPTIONS

- Heater Wire (p. 22)
- Stainless Steel Hardware (p. 11-12)
- Pick Up Guides (p. 21)
- Transfer Caps (p.21)
- Higher Temperature Resistant Covers



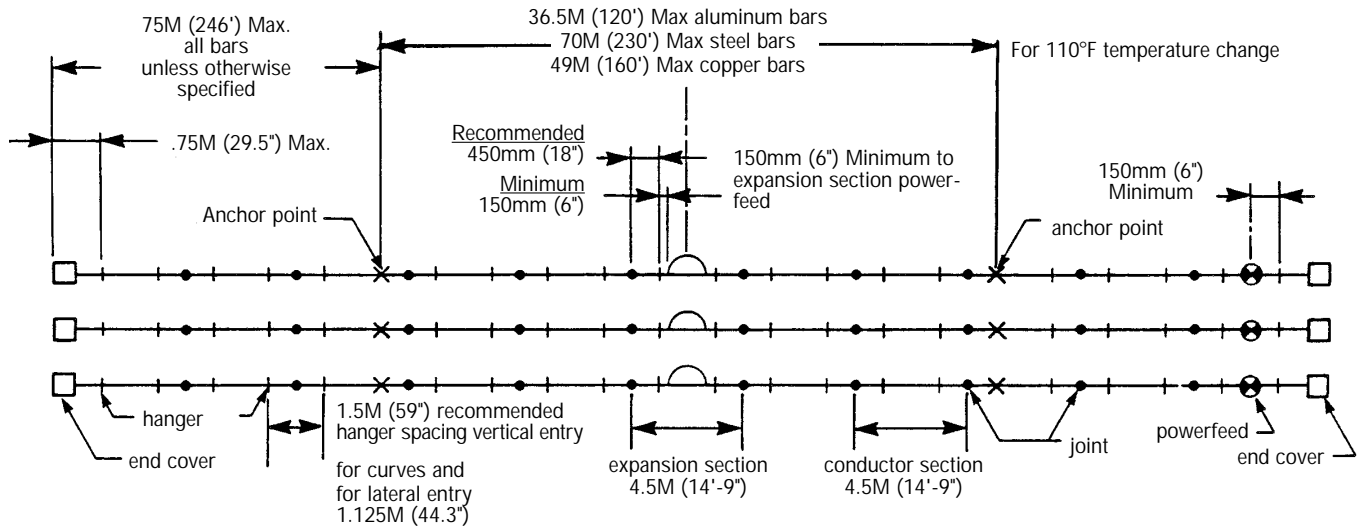
INSUL-8 SAFE-LEC 2

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TYPICAL 3-PHASE RUNWAY

Minimum Conductor Spacing	Single or multi-conductor hangers 43mm (1.7")	Insulated Hangers 60mm (2.36")
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NOTE: Maximum length without expansions:
150M (492') use anchor clamp at center

For greater than 110°F temperature change, consult Insul-8.

FOR SYSTEMS OF 600 VOLTS OR LESS

Conductor Bar	Galvanized Steel (pg. 7-8)			Copper (pg. 9-10)			Aluminum/S.S. (pg. 11-12)	
	600	600	600	600	600	600	600	600
Maximum Voltage	600	600	600	600	600	600	600	600
Amperage	60	100	125	160	250	400	200	315
Resistance R (for DC) at 20°C in Ω/M	0.003584	0.002867	0.001933	0.000342	0.000274	0.000184	0.000301	0.000261
Impedance Z (for AC) at 20°C in Ω/M	0.003604	0.002891	0.001968	0.000364	0.000300	0.000221	0.000325	0.000288
Expansion sections not required for runs less than:	150M	150M	150M	150M	150M	150M	150M	150M
Minimum bending radius (horizontal only)	1.5M	1.5M	1.5M	1.5M	1.5M	1.5M	1.5M	1.5M

Accurate choice of conductors can only be made when all of the following are known:

- The type of current: single or three-phase AC or continuous (DC)
- The maximum voltage and current
- The ambient temperature
- Environment (*dusty, coastal, humid, acidic...*)

SYSTEM SELECTION

SELECTING A SYSTEM IS SIMPLE

To select the proper Safe-Lec 2 V-contact bar system, simply answer the following questions. Return via fax and we'll provide a quote and qualified customer support.

- 1 Type of system (runway, bridge, monorail, other) _____
 - 2 Length of system _____
 - 3 Number of conductors _____
 - 4 Number of vehicles (cranes, etc.) _____
 - 5 Voltage _____ AC _____ DC _____ Phase _____ Cycle _____
 - 6 Amperage requirement of each vehicle _____ (see pg. 6)
 - 7 Total ampacity required _____ (see pg. 6)
 - 8 Environment: Indoor Outdoor Both
 - 9 Ambient temperature: (if other than -10°F to +100°F) _____ to _____
 - 10 Atmosphere: Dry Wet Dusty Dirty Corrosive Nuclear Other _____
 - 11 Bracket required? No Web, short Web, long Flange
 - 12 Do you want brackets supplied? Yes No
- Special Concerns _____

Icing problems? Insul-8 offers heated Safe-Lec 2 systems. See page 22.

PICK YOUR SYSTEM

The following components make up standard conductor bar systems used on cranes, monorails, conveyors, and other mobile electrification applications.

- ✓ **Conductor Bar:** Choose amperage capacity required
- ✓ **Joints:** Order one less than total number of conductor bar, per run
- ✓ **Joint Covers:** Remember: Powerfeeds take the place of a joint cover, except for the end powerfeed
- ✓ **Hanger Clamps:** Attach the bar to brackets (See pages. 13-14)
- ✓ **Brackets:** Support mechanisms that attach to crane rail (See pages 15-16)
- ✓ **Powerfeed:** Attaches to incoming power
- ✓ **End Cover:** Provides protection at each end of a run. 2 per run required.
- ✓ **Collector:** Conducts the power from the electrified bar to the motors that are used to power the crane, hoist, etc.

Note: **Expansion Sections** are required to compensate for thermal expansion.

Safe-Lec 2 Systems can run for 150m (492 feet) without an expansion section.

VOLTAGE DROP INFORMATION

Proper selection of conductor and covers for Insul-8 Safe-Lec 2™ V-contact conductor systems is simple, requiring only the ampacity, voltage and ambient conditions.

The method of determining the rating for cranes and hoists is completely outlined in NEC 610-14(e). Further references to the Code are made where applicable.

For a single crane, simply use the nameplate full load ampere rating of the largest motor or group of motors for any one function plus half the rating of the next largest motor or motor groups.

$$\begin{aligned} \text{Hoist} &= 65\text{a} \times 1 = 65 \\ \text{Bridge} &= 27\text{a} \times .5 = \underline{13.5} \\ \text{Total} &= 78.5 \text{ amps} \end{aligned}$$

For multiple cranes, use the same method for each crane, add the results and multiply by the demand factor shown in table 610-14(e) NEC Handbook. Examples:

$$\begin{aligned} &\text{Crane \#1} \\ &\text{Hoist} = 65\text{a} \times 1 = 65 \\ &\text{Bridge} = 27\text{a} \times .5 = \underline{13.5} \\ &\text{Total} = 78.5 \text{ amps} \\ &\text{Crane \#2} \\ &\text{Hoist} = 52\text{a} \times 1 = 52 \\ &\text{Bridge} = 14\text{a} \times .5 = \underline{7} \\ &\text{Total} = \underline{59 \text{ amps}} \\ &\text{Total} = 137.5 \times .95 = 130 \text{ amps} \end{aligned}$$

Voltage Drop: *The arithmetical difference between the voltages at the feed point and the load at the extreme end.* It is usually expressed as a percentage of the supply voltage and can be calculated as shown below.

Voltage drop increases in direct proportion to the length of the conductors. The CMAA Specifications for Electric Overhead Traveling Cranes (Sec. 5.13) limits total voltage drops to 3% on runways and 2% on bridge conductors. Since powerfeeds are usually located at the mid-point of a system, the effective length is the distance from powerfeed to the end of the runway. On longer systems it may be necessary to provide additional feedpoints.

Voltage drop calculation = ΔU

(according to the following formula):

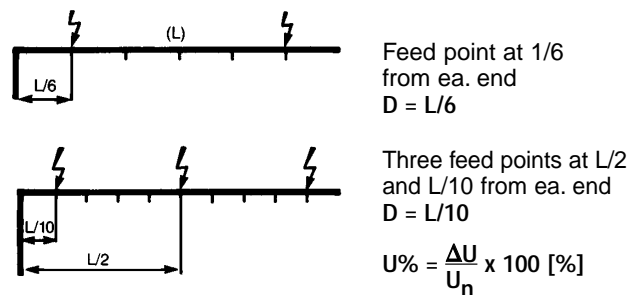
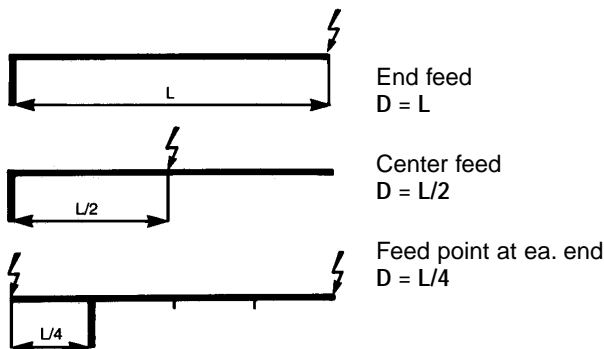
$$\begin{aligned} \text{3-phase AC} & \quad \Delta U = \sqrt{3} \times I \times D \times Z \\ \text{Single-phase AC} & \quad \Delta U = 2 \times I \times D \times Z \\ \text{Continuous current (DC)} & \quad \Delta U = 2 \times I \times D \times R \end{aligned}$$

Where:

- ΔU = Voltage drop in volts
- U_n = Nominal voltage
- I = Maximum current in amps
- D = Distance between the feed and pick-up points in meters
- R = Resistance of conductor in ohms per meter (see page 4)
- Z = Impedance of conductor in ohms per meter (see page 4)

FORMULA

Note: The value of D will vary dependent upon whether a line is fed at one or several points. (See diagrams below)



Note: When calculating ΔU , do not forget to account for the effects of temperature caused by:

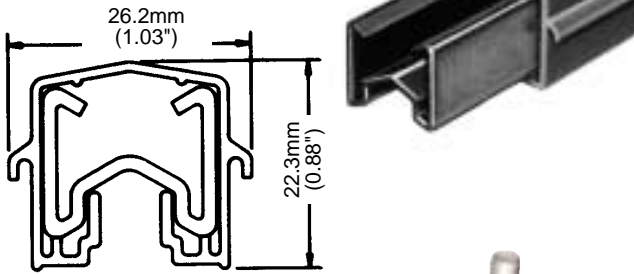
- heating of the conductor in relation to the duty cycle, and a rise in ambient temperature above 45°C (113°F)

GALVANIZED STEEL SYSTEMS

CONDUCTOR BAR

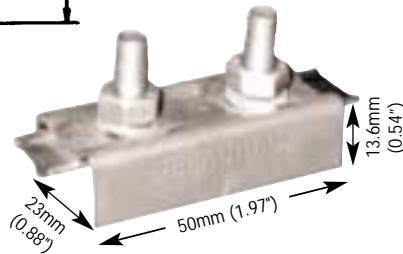
INSULATED CONDUCTOR BAR

LENGTH: 4.5 METERS (14' 9")



STEEL JOINT

Description	Part No.
Steel Joint	310872
Weight: 0.041kg (0.094lb)	

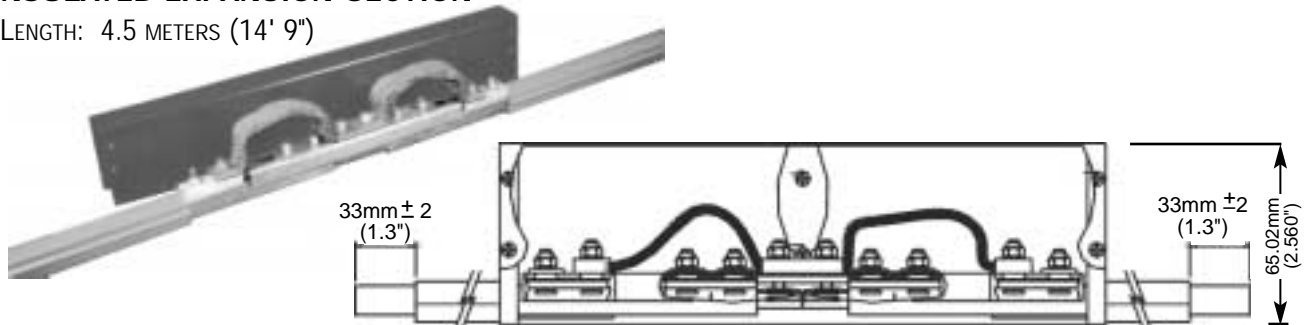


GALVANIZED STEEL

INSULATED CONDUCTOR BAR	60 AMP Part No.	100 AMP Part No.	125 AMP Part No.
Standard Phase Cover (Orange)	310001	310101	310201
Standard Ground Cover (Green)	310002	310102	310202
Medium Heat Cover (Red)	310003	310103	310203
Weight (kg)	2.410	2.860	3.890
Weight (lb)	5.314	6.306	8.597
INSULATED EXPANSION SECTION			
Standard Phase Cover (Orange)	310007	310107	310207
Standard Ground Cover (Green)	310008	310108	310208
Medium Heat Cover (Red)	310009	310109	310209
Weight (kg)	3.540	3.970	5.030
Weight (lb)	7.806	8.754	11.091
ISOLATION SECTION			
Standard Phase Cover (Orange)	310025	310125	310225
Standard Ground Cover (Green)	310026	310126	310226
Medium Heat Cover (Red)	310027	310127	310227
Weight (kg)	2.710	3.160	4.190
Weight (lb)	5.976	6.968	9.239

INSULATED EXPANSION SECTION

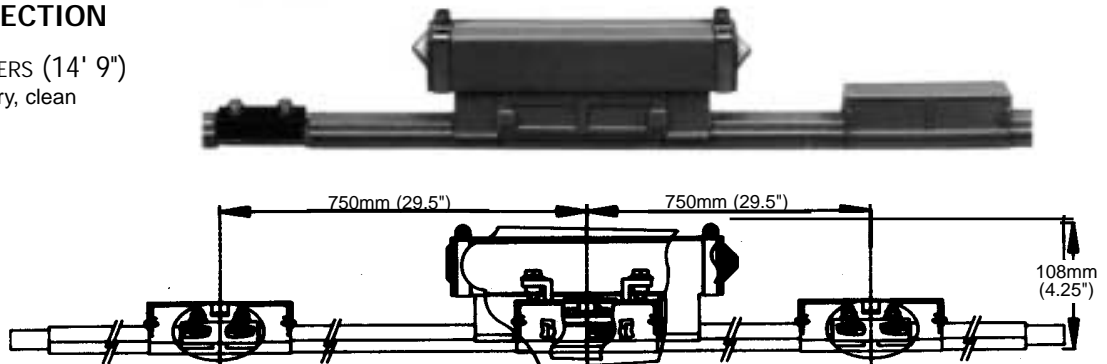
LENGTH: 4.5 METERS (14' 9")



ISOLATION SECTION

LENGTH: 4.5 METERS (14' 9")

For use in indoor, dry, clean conditions only.



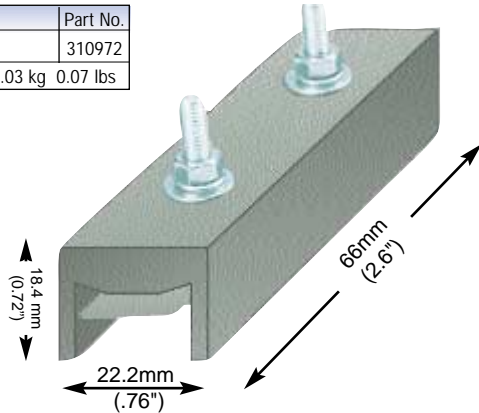
Consult Insul-8 for other environments

INSUL-8 SAFE-LEC 2

SYSTEM COMPONENTS

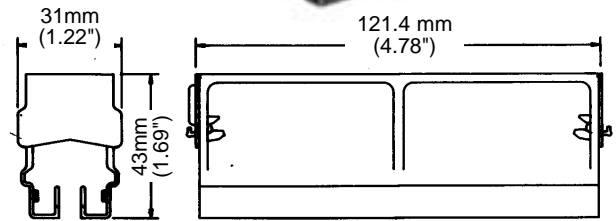
ISOLATION SPLICE

ISO Splice	Part No.
Steel	310972
Weight: 0.03 kg 0.07 lbs	



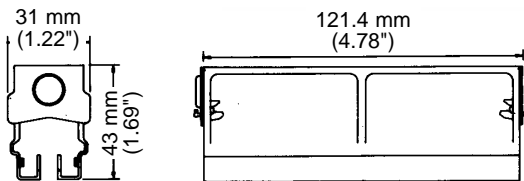
JOINT COVER

Joint Cover	Part No.
Standard Phase	310850
Standard Ground	310851
Med. Heat	310855
Weight: 0.027kg (0.060lb)	



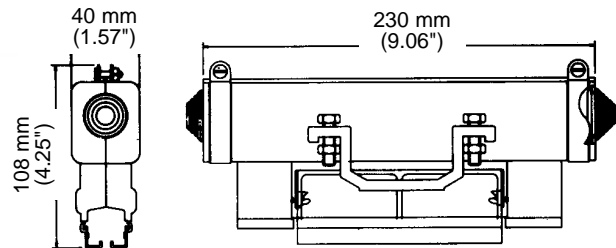
JOINT POWERFEED

60 Amp.	Part No.
Standard	310034
Medium Heat	310066
Weight: 0.027kg (0.060lb)	



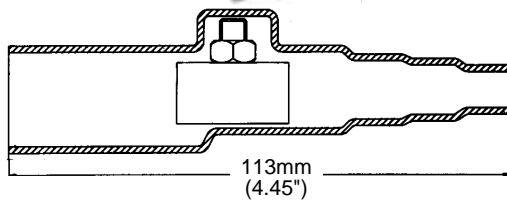
JOINT POWERFEED and COVER

Up to 250 Amp	Part No.
Standard	310910
Medium Heat	310913
Weight: 0.179kg (0.395lb)	



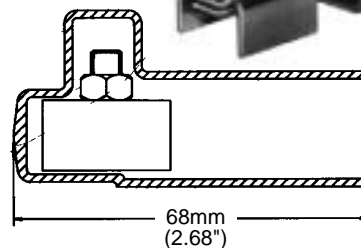
END POWERFEED

Up to 100 Amp	Part No.
End Powerfeed	310911
Weight: 0.037kg (0.082lb)	



END COVER

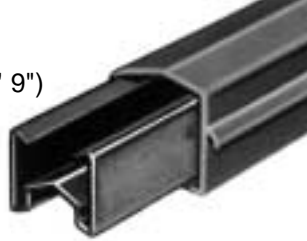
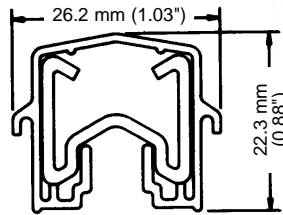
End Cover	Part No.
Steel/Copper	310892
Weight: 0.020kg (0.044lb)	



CONDUCTOR BAR

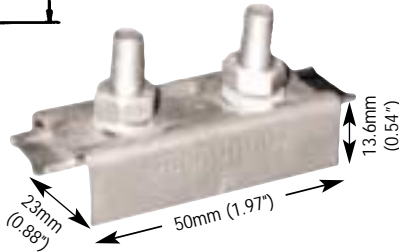
INSULATED CONDUCTOR BAR

LENGTH: 4.5 METERS (14' 9")



COPPER JOINT

Description	Part No.
Copper Joint	310873
Weight: 0.044kg (0.097lb)	

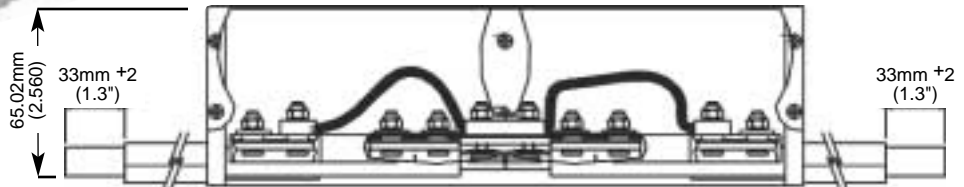
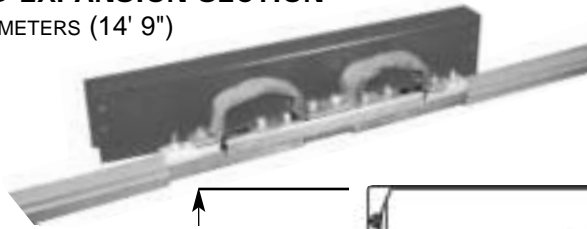


COPPER

INSULATED CONDUCTOR BAR	160 AMP Part No.	250 AMP Part No.	400 AMP Part No.
Standard Phase Cover (Orange)	310301	310401	310501
Standard Ground Cover (Green)	310302	310402	310502
Medium Heat Cover (Red)	310303	310403	310503
Weight (kg)	2.670	3.120	4.380
Weight (lb)	5.887	6.880	9.658
INSULATED EXPANSION SECTION			
Standard Phase Cover (Orange)	310307	310407	310507
Standard Ground Cover (Green)	310308	310408	310508
Medium Heat Phase Cover (Red)	310309	310409	310509
Weight (kg)	3.810	4.270	5.530
Weight (lb)	8.401	9.415	12.194
ISOLATION SECTION			
Standard Phase Cover (Orange)	310325	310425	310525
Standard Ground Cover (Green)	310326	310426	310526
Medium Heat Phase Cover (Red)	310327	310427	310527
Weight (kg)	2.970	3.420	4.680
Weight (lb)	6.549	7.541	10.319

INSULATED EXPANSION SECTION

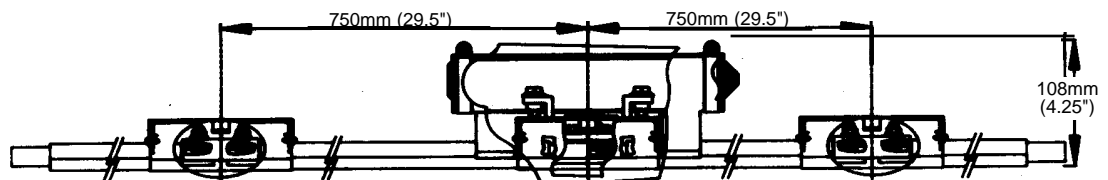
LENGTH: 4.5 METERS (14' 9")



ISOLATION SECTION

LENGTH: 4.5 METERS (14' 9")

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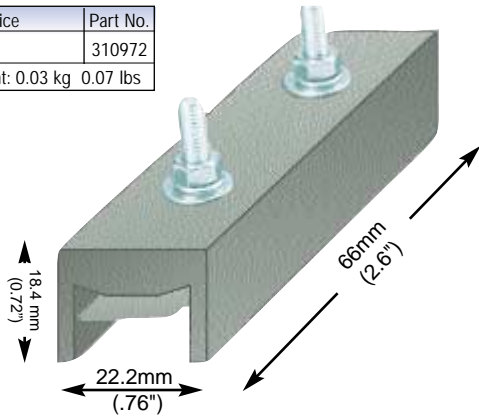


Consult Insul-8 for other environments.

SYSTEM COMPONENTS

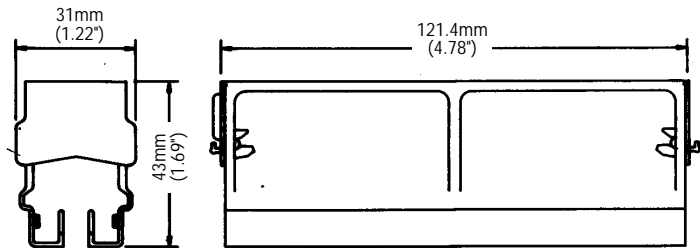
ISOLATION SPLICE

ISO Splice	Part No.
Copper	310972
Weight: 0.03 kg 0.07 lbs	



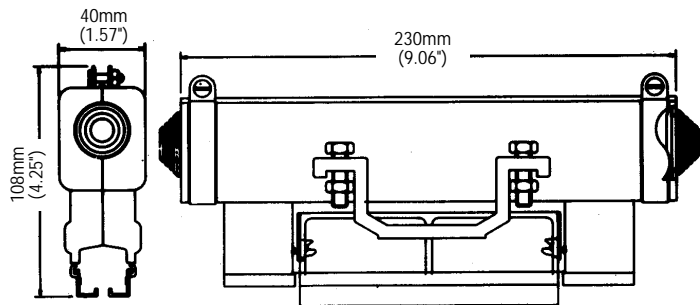
JOINT COVER

Joint Cover	Part No.
Standard Phase	310850
Standard Ground	310851
Med. Heat Phase	310855
Weight: 0.027kg (0.060lb)	



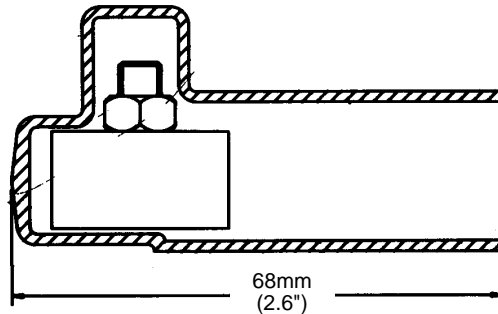
JOINT POWERFEED and COVER

Up to 250 Amp	Part No.
Standard	310910
Medium Heat	310913
Up to 400 Amp	Part No.
Standard	310912
Medium Heat	310915
Weight: 0.179kg (0.395lb)	



END COVER

End Cover	Part No.
Steel/Copper	310892
Weight: 0.020kg (0.044lb)	

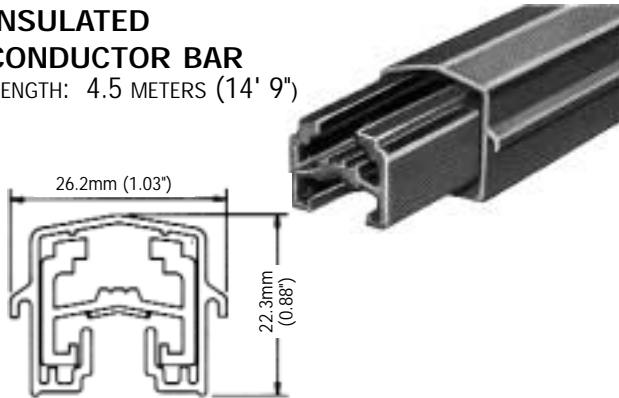


ALUMINUM / STAINLESS STEEL SYSTEMS

CONDUCTOR BAR

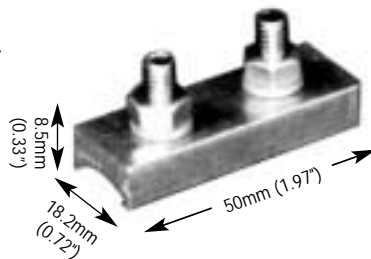
INSULATED CONDUCTOR BAR

LENGTH: 4.5 METERS (14' 9")



ALUMINUM JOINT

Description	Part No.
Aluminum	310874
Weight: 0.032kg (0.071lb)	

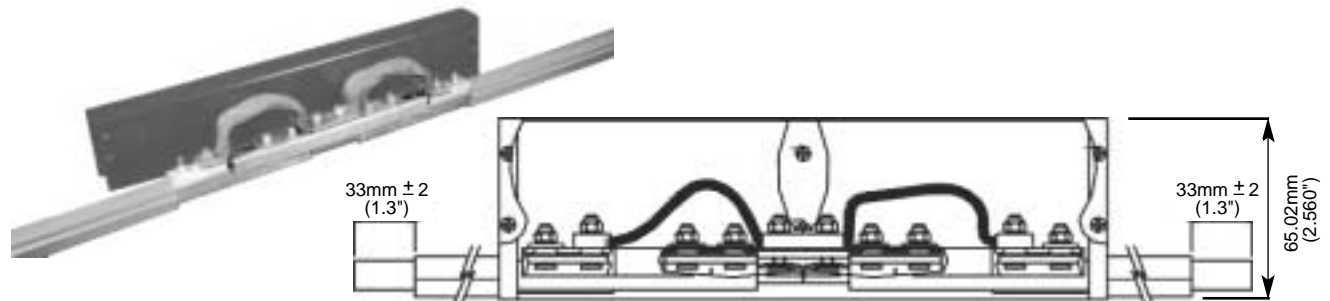


ALUMINUM / STAINLESS STEEL

INSULATED CONDUCTOR BAR	200 AMP Part No.	315 AMP Part No.
Standard Phase Cover (Orange)	310601	310701
Standard Ground Cover (Green)	310602	310702
Medium Heat Cover (Red)	310603	310703
Weight (kg)	2.100	2.300
Weight (lb)	4.631	5.072
INSULATED EXPANSION SECTION		
Standard Phase Cover (Orange)	310607	310707
Standard Ground Cover (Green)	310608	310708
Medium Heat Phase Cover (Red)	310609	310709
Weight (kg)	3.230	3.430
Weight (lb)	7.122	7.633
ISOLATION SECTION		
Standard Phase Cover (Orange)	310625	310725
Standard Ground Cover (Green)	310626	310726
Medium Heat Phase Cover (Red)	310627	310727
Weight (kg)	2.400	2.600
Weight (lb)	5.292	5.733

INSULATED EXPANSION SECTION

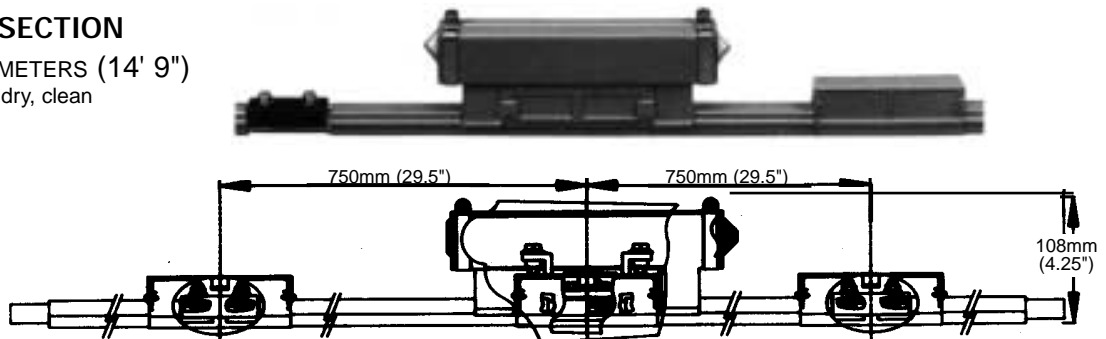
LENGTH: 4.5 METERS (14' 9")



ISOLATION SECTION

LENGTH: 4.5 METERS (14' 9")

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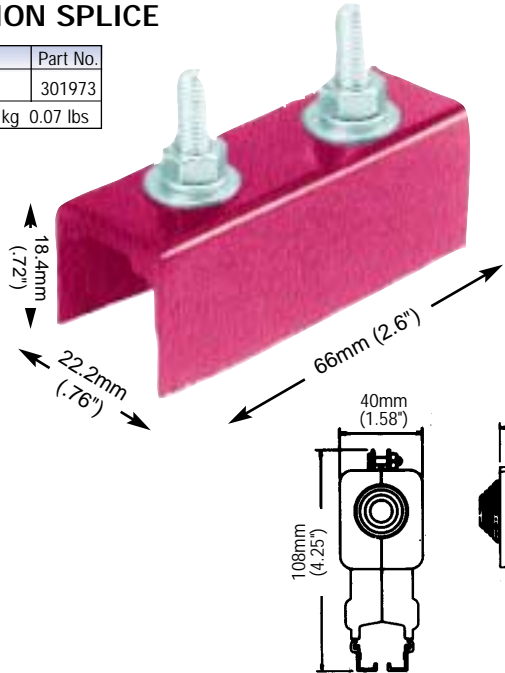
Consult Insul-8 for other environments.

ALUMINUM / STAINLESS STEEL SYSTEMS

SYSTEM COMPONENTS

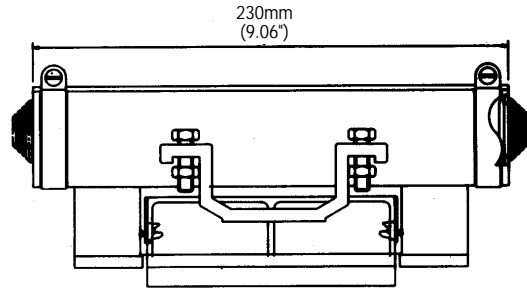
ISOLATION SPLICE

ISO Splice	Part No.
For Alu. / S.S.	301973
Weight: 0.03 kg 0.07 lbs	



JOINT POWERFEED and COVER

Up to 250 Amp	Part No.
Standard	310910
Medium Heat	310913
Up to 400 Amp	Part No.
Standard	310912
Medium Heat	310915
Weight: 0.179kg (0.395lb)	



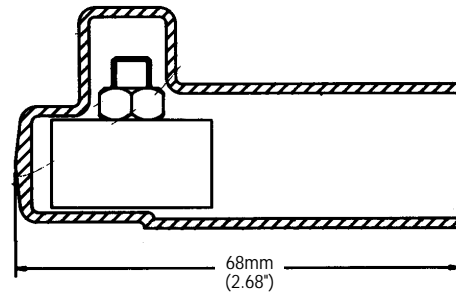
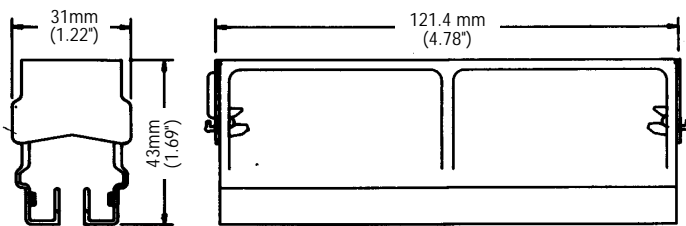
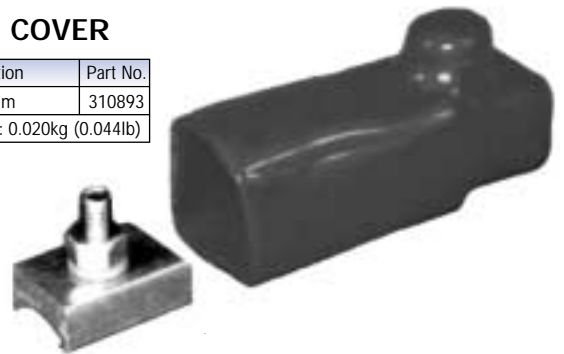
JOINT COVER

Description	Part No.
Standard Phase	310850
Standard Ground	310851
Med. Heat Phase	310855
Weight: 0.027kg (0.060lb)	



END COVER

Description	Part No.
Aluminum	310893
Weight: 0.020kg (0.044lb)	



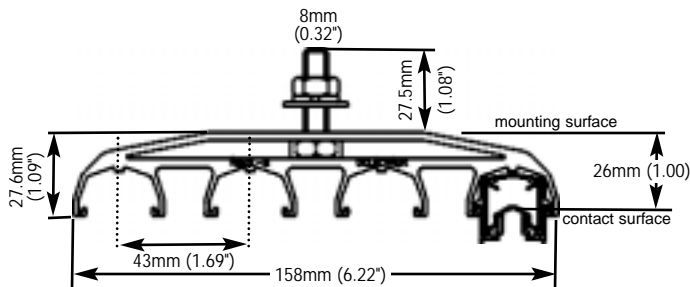
COMPONENTS COMMON TO ALL SYSTEMS

MULTI-POLE HANGERS

Multiple runs can be installed smoothly and effortlessly with these single bolt, multi-pole hangers.

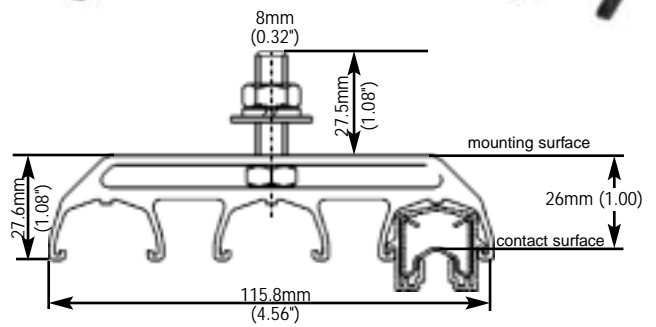
4-POLE HANGER

Standard Mount	Part No.
Black/Standard	310821
Red/Med. Heat	310857
Lateral Mount	Part No.
Black	310835
Red	310859
Weight: 0.057kg (0.126lb)	



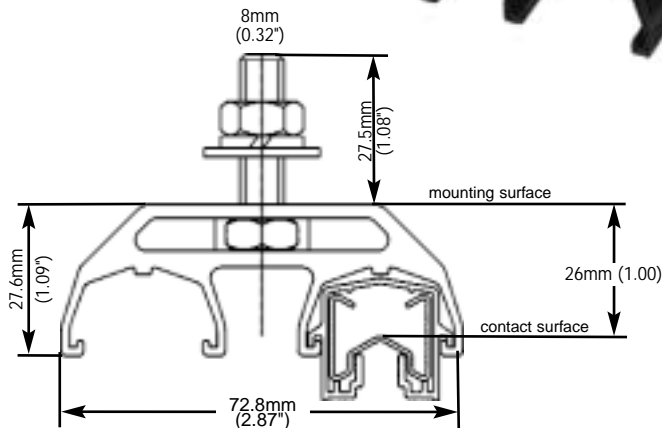
3-POLE HANGER

Standard/Lateral	Part No.
Black/Standard	310861
Red/Med. Heat	310871
Weight: 0.044kg (0.097lb)	



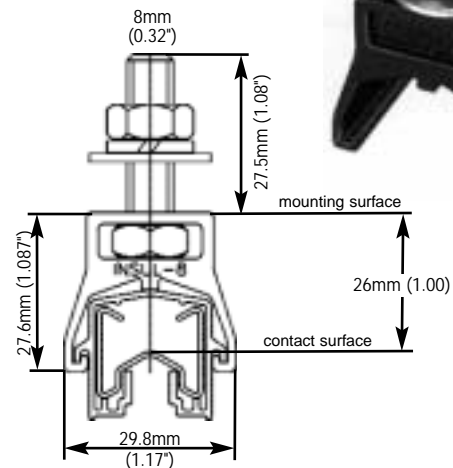
2-POLE HANGER

Standard/Lateral	Part No.
Black/Standard	310882
Red/Med. Heat	310899
Weight: 0.030kg (0.066lb)	



1-POLE HANGER

Standard/Lateral	Part No.
Black/Standard	310824
Red/Med. heat	310829
Weight: 0.030kg (0.066lb)	

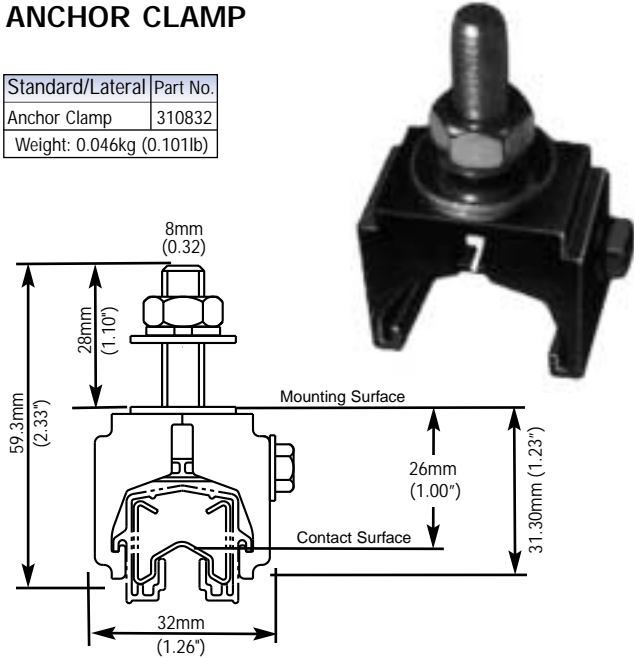


COMPONENTS COMMON TO ALL SYSTEMS

ANCHOR CLAMP

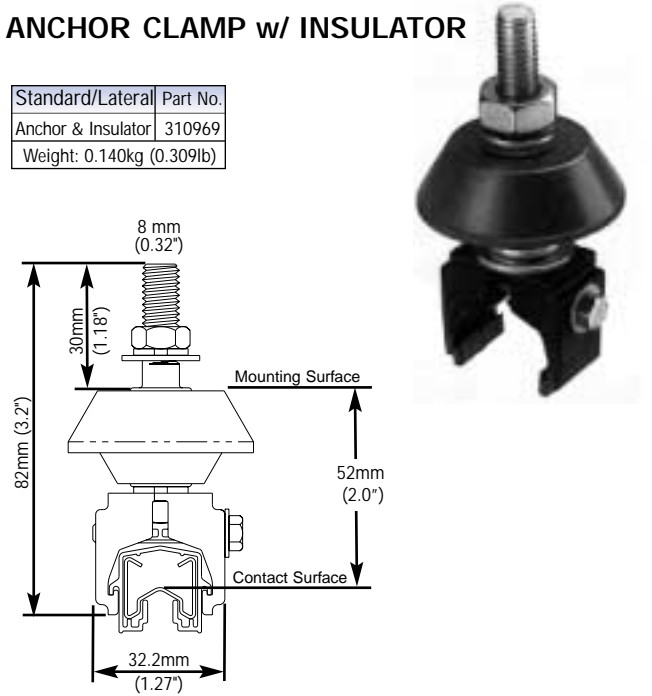
ANCHOR CLAMP

Standard/Lateral	Part No.
Anchor Clamp	310832
Weight:	0.046kg (0.101lb)



ANCHOR CLAMP w/ INSULATOR

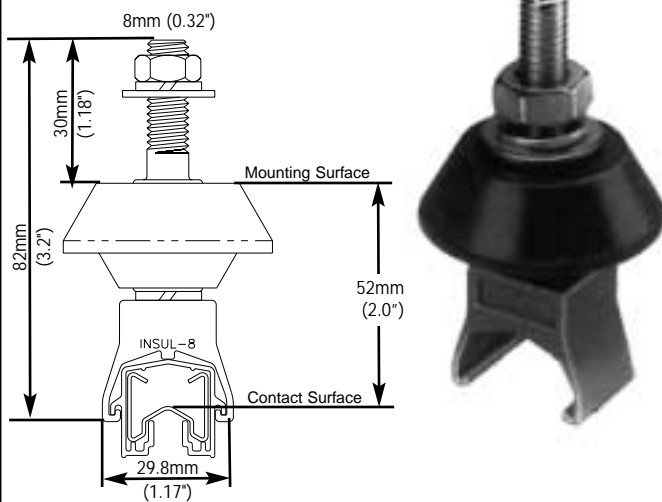
Standard/Lateral	Part No.
Anchor & Insulator	310969
Weight:	0.140kg (0.309lb)



SINGLE-POLE HANGERS

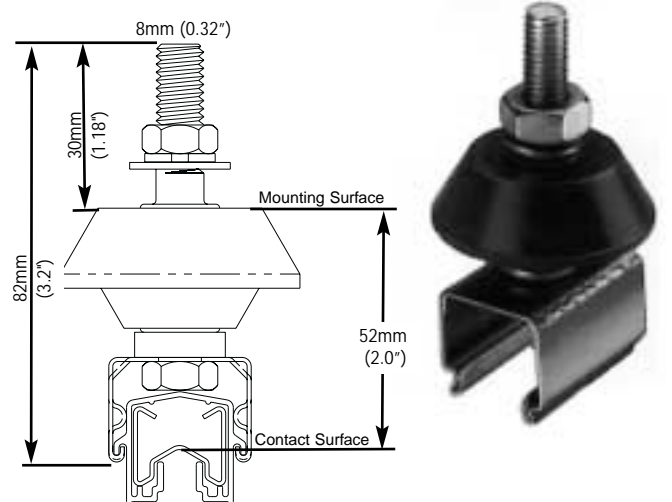
SINGLE-POLE HANGER w/ INSULATOR

Standard/Lateral	Part No.
Black/Standard	310918
Red/Med. Heat	310834
Weight:	0.120kg (0.265lb)



SINGLE-POLE STAINLESS STEEL HANGER w/ INSULATOR

Standard/Lateral	Part No.
SS+ Insulator	310827
Weight:	0.130kg (0.287lb)



INSUL-8 SAFE-LEC 2

COMPONENTS COMMON TO ALL SYSTEMS

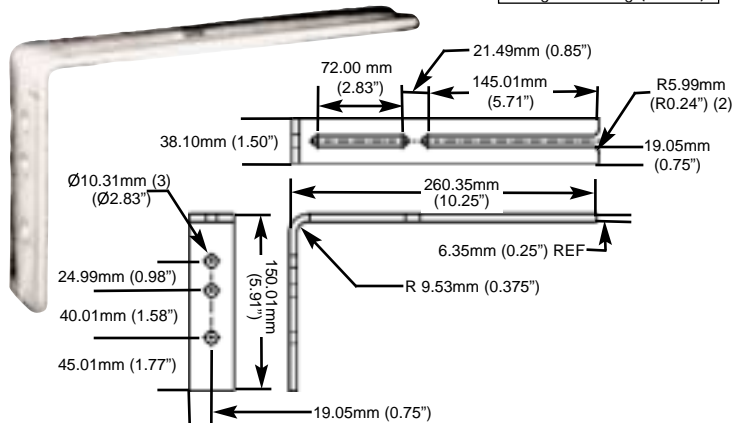
BRACKET SPACING

- ▶ Standard spacing = 1500 mm (59")
- ▶ Lateral spacing = 1125 (44.3")

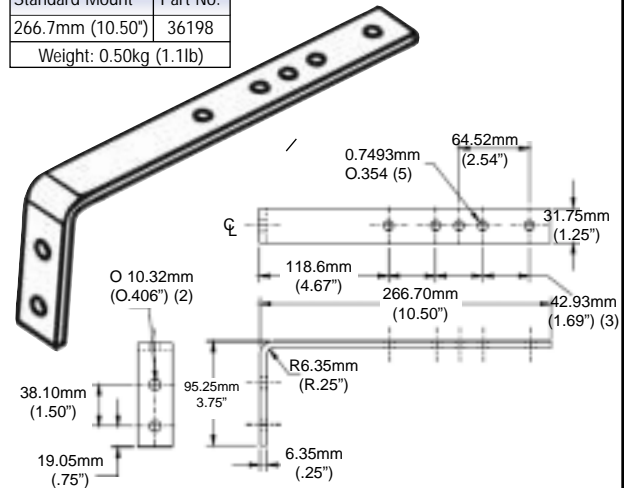
WEB BRACKETS

STANDARD MOUNT WEB BRACKET

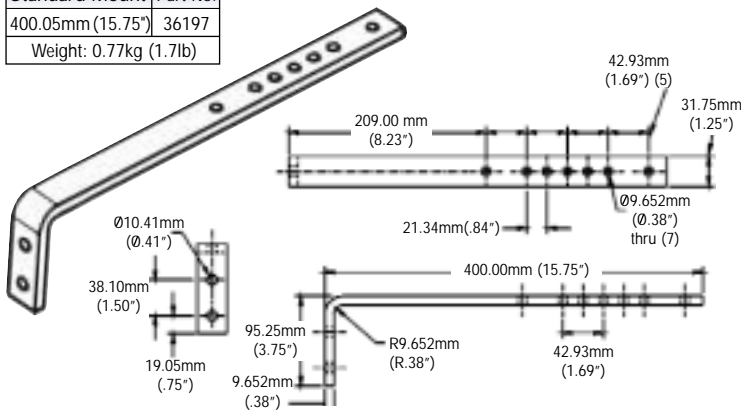
Standard Mount	Part No.
260mm (10.23")	310984
Weight: 0.540kg (1.191lb)	



Standard Mount	Part No.
266.7mm (10.50")	36198
Weight: 0.50kg (1.1lb)	

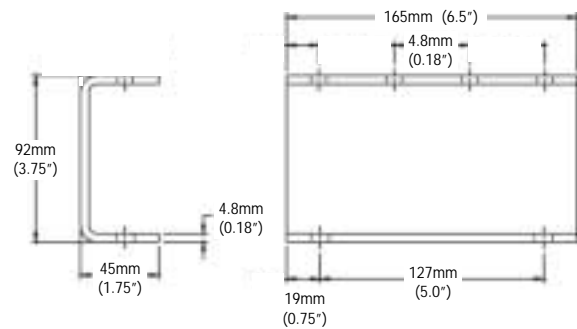


Standard Mount	Part No.
400.05mm (15.75")	36197
Weight: 0.77kg (1.7lb)	



LATERAL MOUNT WEB BRACKET

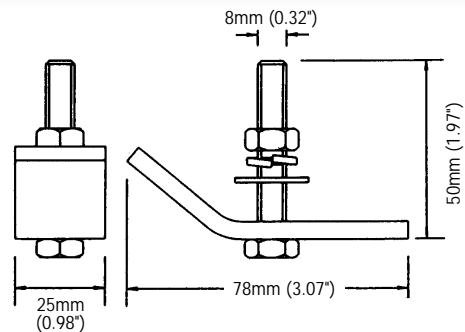
Lateral Mount	Part No.
92mm (3.6")	399517
Weight: 0.91kg (2.01lb)	



BEAM CLAMP

NOTE: Used with flange brackets on page 16.
Two (2) beam clamps required per bracket.

Description	Part No.
Beam Clamp	310985
Weight: 0.106kg (0.234lb)	



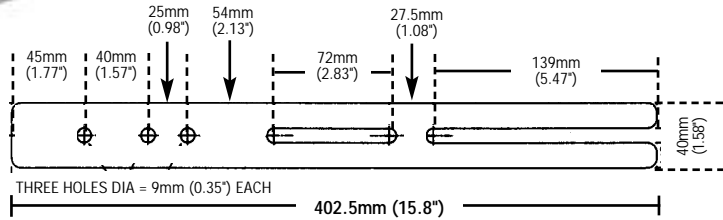
COMPONENTS COMMON TO ALL SYSTEMS

FLANGE BRACKETS (SLOTTED)

SINGLE-SIDED BRACKET 402.5 mm (15.8")

Beam	Part No.
80-155mm	310980
Weight: 0.540kg (1.191lb)	

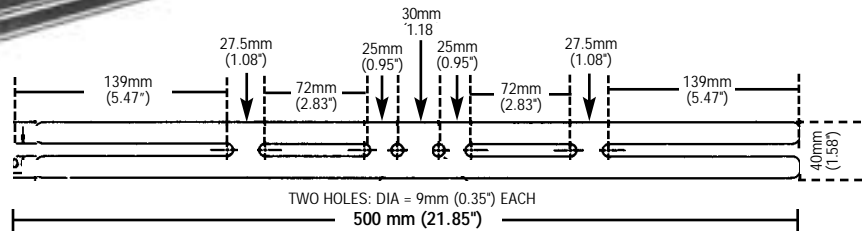
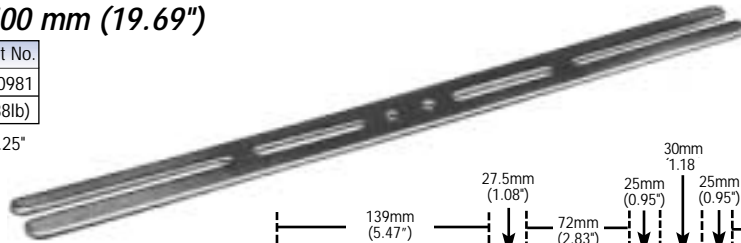
Flange Width = 3.25"- 6"



DOUBLE-SIDED BRACKET 500 mm (19.69")

Beam	Part No.
80-185mm	310981
Weight: 0.720kg (1.588lb)	

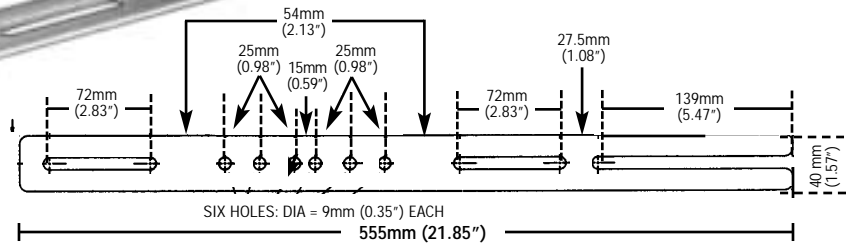
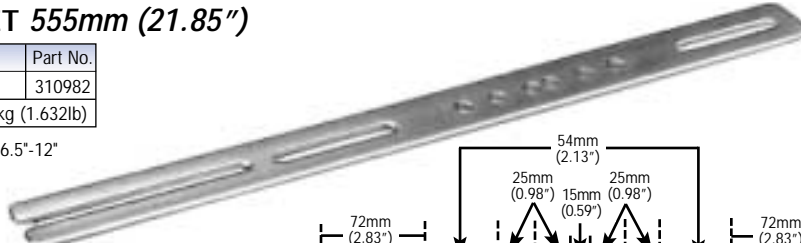
Flange Width = 3.25"-7.25"



SINGLE-SIDED BRACKET 555mm (21.85")

Beam	Part No.
170-305mm	310982
Weight: 0.740kg (1.632lb)	

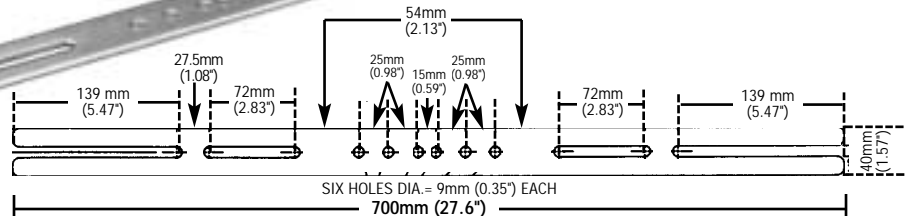
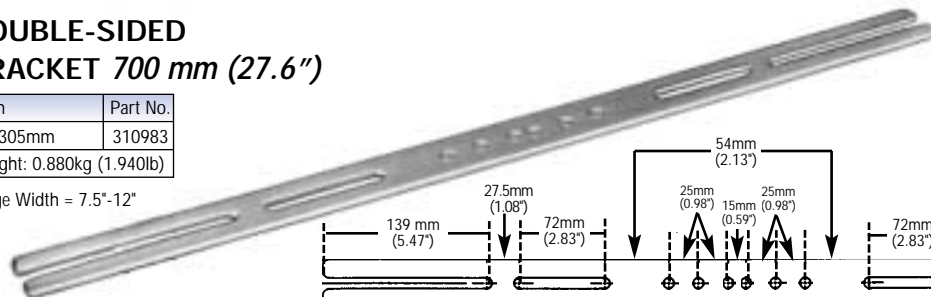
Flange Width = 6.5"-12"



DOUBLE-SIDED BRACKET 700 mm (27.6")

Beam	Part No.
191-305mm	310983
Weight: 0.880kg (1.940lb)	

Flange Width = 7.5"-12"



50 AMP COLLECTOR

TYPE SI

50 AMP COLLECTOR

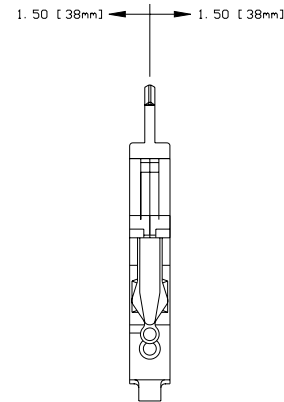
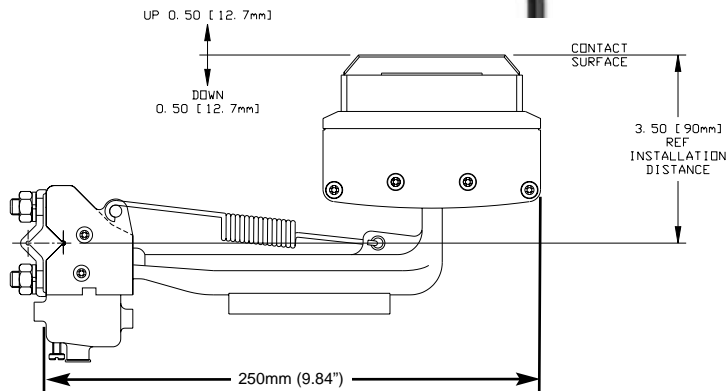
50 Amp Collector	Part No.
Red (Phase)	399360
Green (Ground)	399380
Weight: 0.39 kg (0.87 lbs)	

GROUND COLLECTOR w/DEFLECTOR (GREEN)

Ground Collector w/Deflector	Part No.
Left Green	399372
Right Green	399373
Weight: 0.41kg (0.91 lbs)	



Customer's supplied cable
 * Maximum cable size permissible: #10AWG THHN

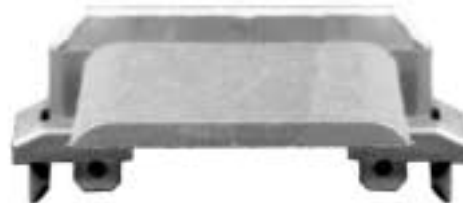


50 AMP SHOE and HOLDER



50 Amp Shoe & Holder	Part No.
Red (Phase)	310993
Green (Ground)	399357
Weight: 0.08 kgs (0.18 lbs)	

50 AMP SHOE and HOLDER w/ DEFLECTOR (GROUND)



Ground Shoe, Holder w/Deflector	Part No.
Green (Ground)	399356
Weight: 0.10 kg (0.22 lbs)	

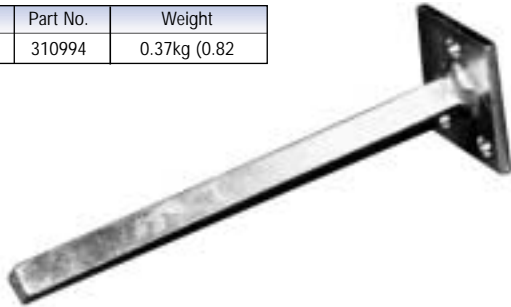
50 AMP COLLECTOR BRACKETS

COLLECTOR BRACKETS FOR TYPE SI (50 AMP)

SHORT - SINGLE COLLECTOR BRACKET

Length: 203mm (8")

SHORT	Part No.	Weight
Single	310994	0.37kg (0.82)



SHORT - DOUBLE COLLECTOR BRACKET

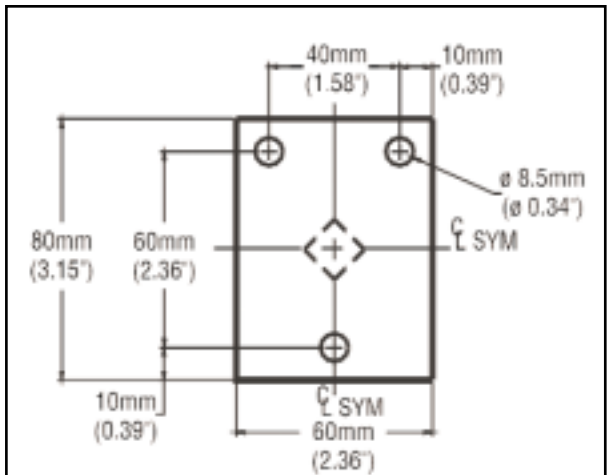
Length: 203mm (8")

SHORT	Part No.	Weight
Double	310898	0.76 kg (1.67 lbs)



FOR ALL COLLECTOR BRACKETS
SHOWN ON THIS PAGE:

- ▶ Mounting staff = 13mm (0.51") square
- ▶ Mounting plate thickness = 6mm (0.25")
- ▶ Use only with Type SI (50 Amp) Collectors

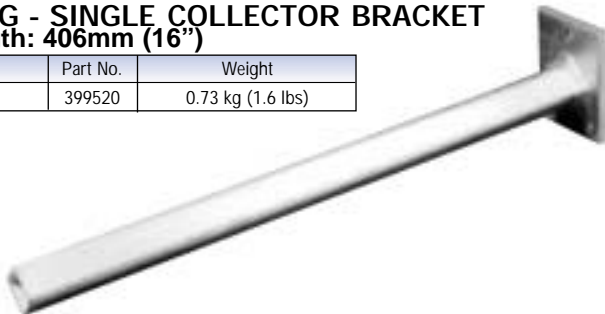


SINGLE STAFF COLLECTOR BRACKET:
Dimensions for mounting plate (shown above) is the same for both lengths.

LONG - SINGLE COLLECTOR BRACKET

Length: 406mm (16")

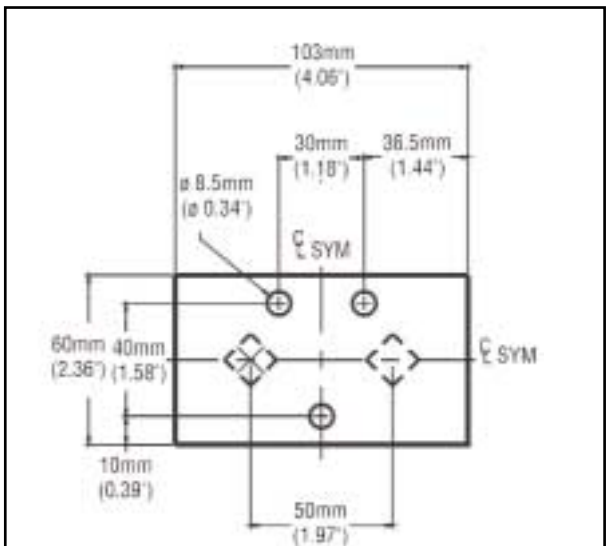
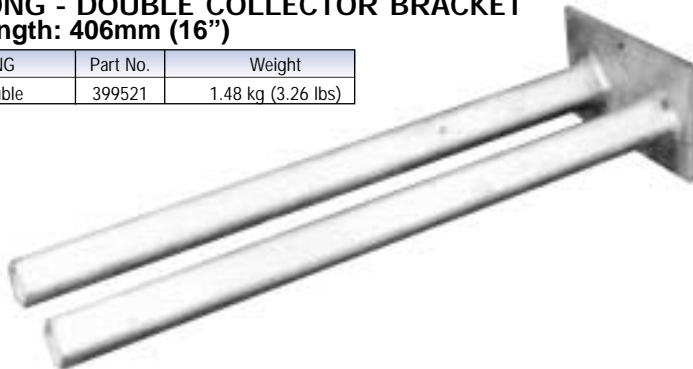
LONG	Part No.	Weight
Single	399520	0.73 kg (1.6 lbs)



LONG - DOUBLE COLLECTOR BRACKET

Length: 406mm (16")

LONG	Part No.	Weight
Double	399521	1.48 kg (3.26 lbs)



DOUBLE STAFF COLLECTOR BRACKET:
Dimensions for mounting plate (shown above) is the same for both lengths.

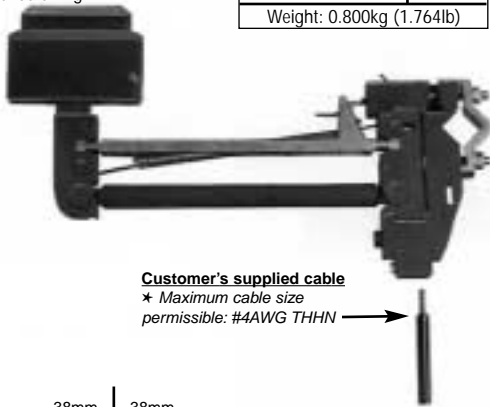
100 AMP COLLECTOR

TYPE DI

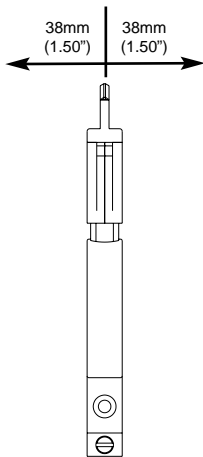
100 AMP COLLECTOR

* If using pickup guides, please see special collectors required on Pg. 21

Collector	Part No.
Red (Phase)	310990
Green (Ground)	399355
Red phase for use with pickup guide	310988
Green ground for use with pickup guide	399358
Weight: 0.800kg (1.764lb)	



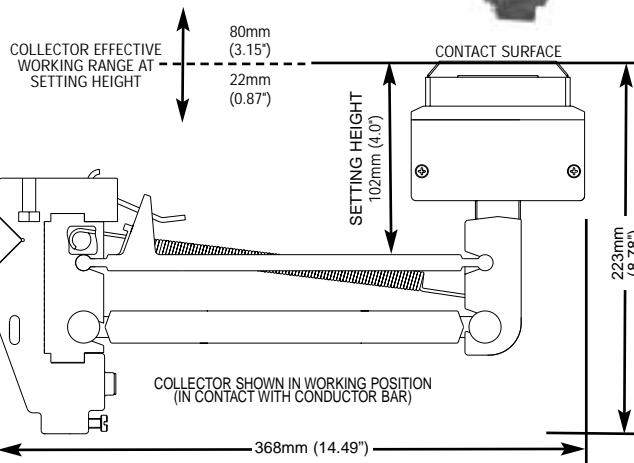
Customer's supplied cable
 * Maximum cable size permissible: #4AWG THHN



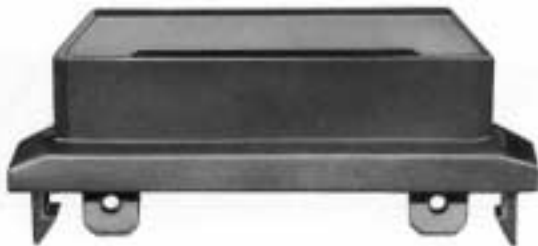
100 AMP SHOE and

100 AMP GROUND COLLECTOR w/ DEFLECTOR

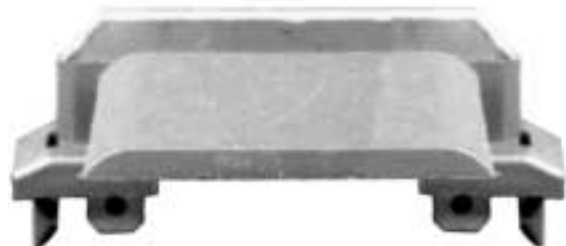
Ground Collector w/ Deflector	Part No.
Green (Left)	399352
Green (Right)	399340
Weight: 0.85kg (1.884lb)	



100 AMP SHOE and HOLDER w/ DEFLECTOR (GROUND)



Shoe & Holder	Part No.
Red (Phase)	310993
Green (Ground)	399357
Weight: 0.08 kg (0.18 lbs)	



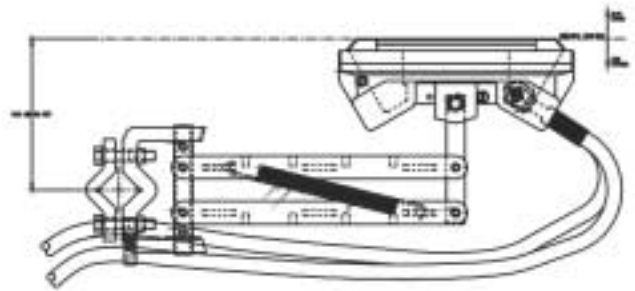
Shoe, Holder & Deflector	Part No.
Green (Ground)	399356
Weight: 0.10 kg (0.22 lbs)	

250 AMP COLLECTOR

250 AMP

250 AMP COLLECTOR

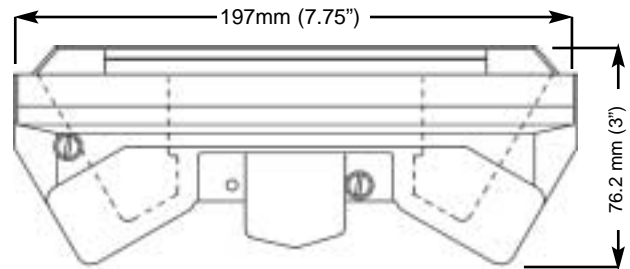
Description	Part No.
250 Amp	34956
Weight: 2.05kg (4.52lb)	



Cable Size and Length:
#2 AWG, 42" Long

250 AMP SHOE and HOLDER

Shoe & Holder	Part No.
250 Amp	35289
Weight: 0.236kg (0.52lb)	

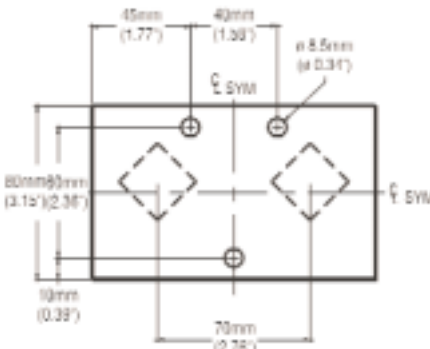
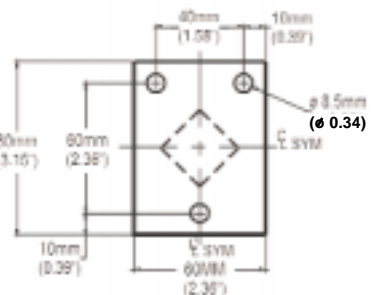


COLLECTOR BRACKETS

THESE CAN BE USED WITH
100 AMP AND 250 AMP
COLLECTORS

Length: 400mm (16") long
Staff: 25mm (1") square

25mm	Part No.	Weight
Single	310991	0.85 kg (1.88 lbs)
Double	310992	1.87 kg (4.13 lbs)



SINGLE STAFF (PLATE DIMENSIONS)

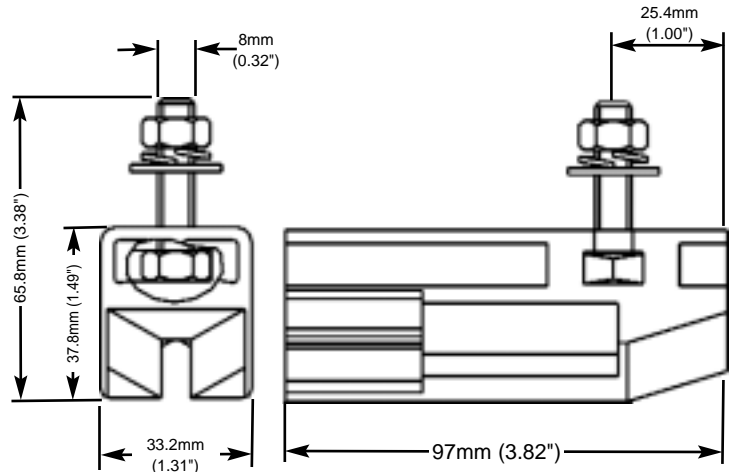
DOUBLE STAFF (PLATE DIMENSIONS)

OTHER COMPONENTS

TRANSFER CAP



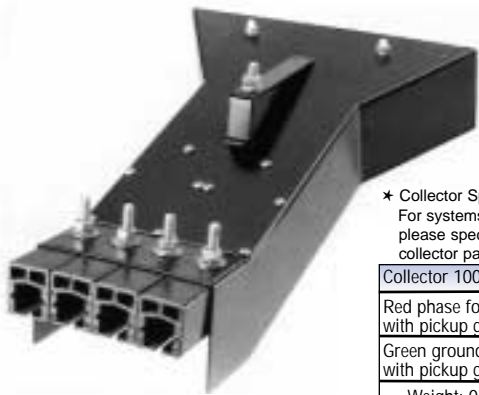
Description	Part No.
Transfer Cap	310951
Weight: 0.11kg (.24 lbs.)	



Bolt size M8 = 8mm (.32")

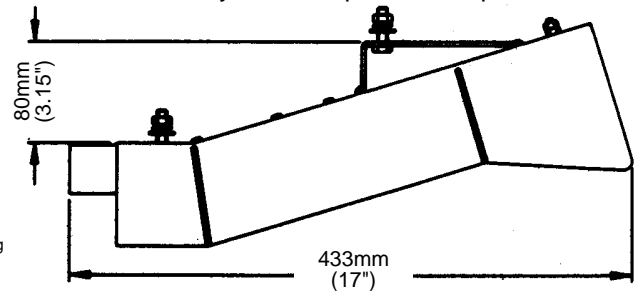
PICK-UP GUIDE (TYPICAL)

Pick-Up Guides are recommended for discontinuous systems. Please consult Insul-8 for assistance in selecting a Pick Up Guide based on application requirements. Not all systems require Pick-Up Guides.



★ Collector Specification:
For systems using pickup guides please specify one of the following collector part #'s

Collector 100Amp	Part No.
Red phase for use with pickup guide	310988
Green ground for use with pickup guide	399358
Weight: 0.800kg (1.764lb)	



Pick-up guide	Part No.
4 Conductor	310929
3 Conductor	399502
1 Conductor	310920

JOINT COMPOUND

Description	Part No.
Joint Compound	15629
Weight: 0.225 kg (0.496 lbs)	



- Required for aluminum/stainless steel systems only.
- Optimizes electrical connection.
- Enough compound provided for over 300 connections.
- Supplied at no charge with each aluminum/stainless steel system.

HEATER WIRE SYSTEM

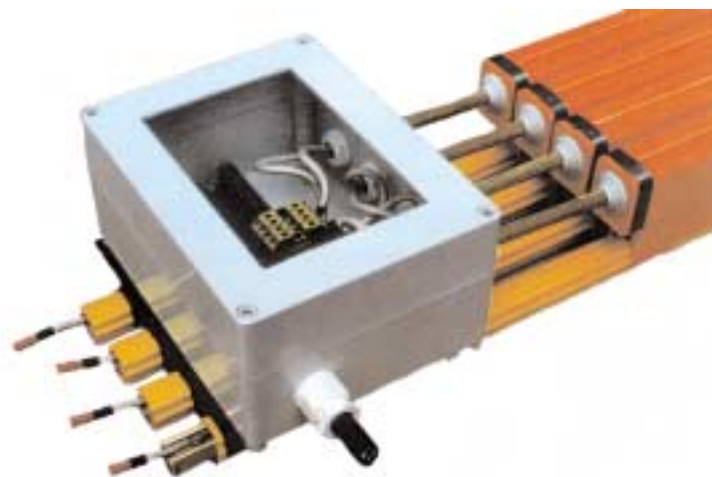
- ▶ Insul-8 recommends a heater wire system for your Safe-Lec 2 v-contact systems when used in outdoor applications where frost and ice buildup may occur.
- ▶ Thermostatic control box will automatically energize heater wire systems at temperature levels of 35° F (1.66° C) and below.
- ▶ Heater wires are pre-installed with bar.
- ▶ Please consult Insul-8 for assistance in selecting a heater wire system for Safe-Lec 2 v-contact bar.



HEATER WIRE CONNECTION



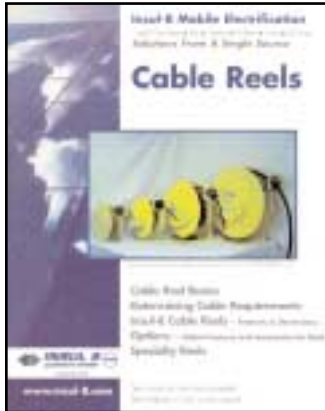
HEATER WIRE (MALE/FEMALE)



MAIN CONNECTION BOX

Solutions from a Single Source

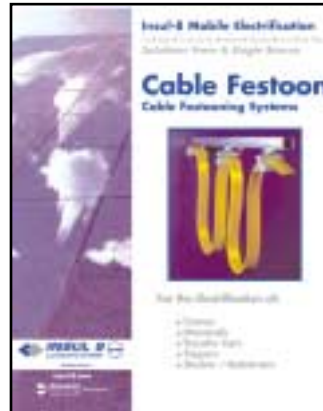
ISO 9001 Certified



SPRING DRIVEN REELS



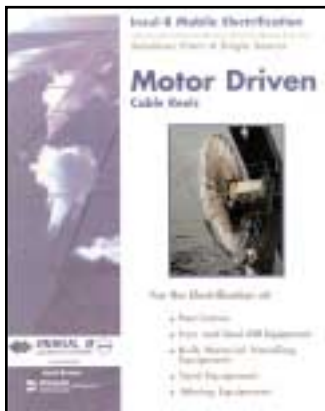
SLIP RINGS



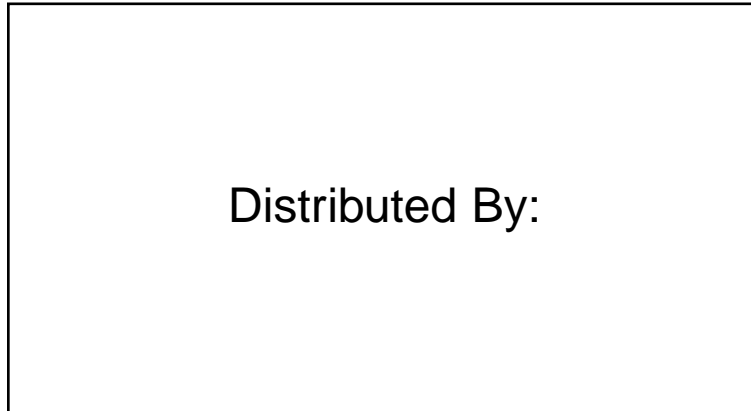
FESTOON



CONDUCTOR BAR



MOTOR DRIVEN REELS



Distributed By:



CONDUCTOR BAR

Above is just a sampling of Insul-8's product offering. We have the electrification solution for you.

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www.insul-8.com

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