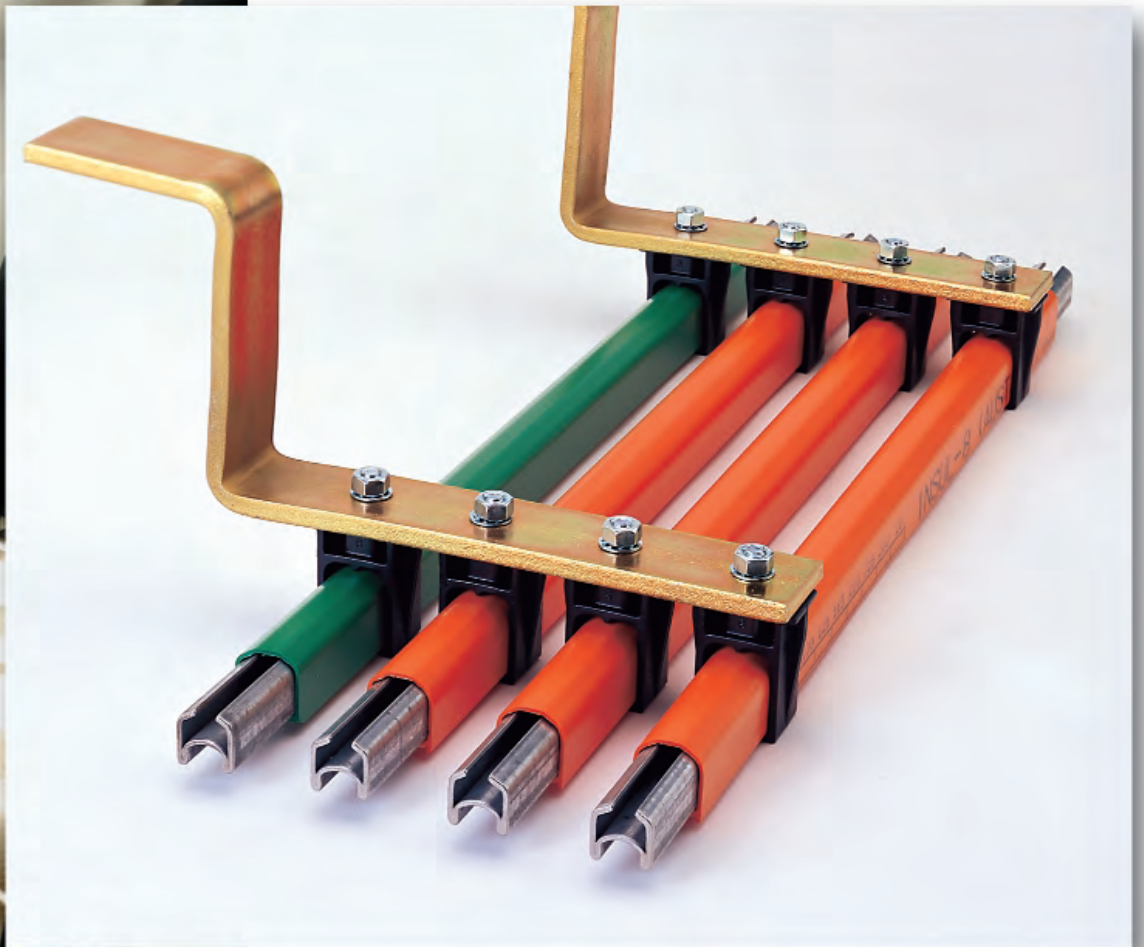


# **ACTIV-8 PLUS**

*Insulated Conductor Bar*



**CONDUCTIX**  
INSUL 8

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[www.conductix.com.au](http://www.conductix.com.au)



# ACTIV-8 PLUS

ACTIV-8 is the most widely used and stocked conductor rail in use in Australia. It was designed by Conductix engineers utilising over thirty years of experience and supported by the worldwide Delachaux group of companies with over fifty years of pioneering innovation in mobile electrification.

Across Australia you can find ACTIV-8 used in many applications including overhead cranes, automated storage and retrieval, assembly lines and other moving powered equipment.

With the ACTIV-8 range of accessories, the ease of installation and the Conductix team ready to assist in the design of difficult installations, it becomes obvious why ACTIV-8 has become accepted as the industry standard.

## Some benefits of the ACTIV-8 PLUS system:

- Current ratings from 90 to 400 Amps
- Finger safe to IP2
- Systems up to 200m without expansion sections
- Able to be curved down to a 1.5m radius
- Green coloured earth components.

### Conductor Bars:

Available in galvanised steel, copper and high conductive aluminium with a stainless steel contact surface. Supplied in either four or two metre lengths and in a range of 90 to 400 Amps. Factory curved units are offered.

### Power Feeds:

Power feeds are designed in a variety of styles ranging from 54 to 330 Amps and available to suit cable sizes up to 70mm<sup>2</sup>.

### Expansion Sections:

Expansion sections are used at all structural expansion joints and for long runways to compensate for thermal expansion.

### Insulating Covers:

Standard conductor bar covers of PVC meet all requirements for electrical insulation and may be used outdoors and in temperatures up to 75°C.

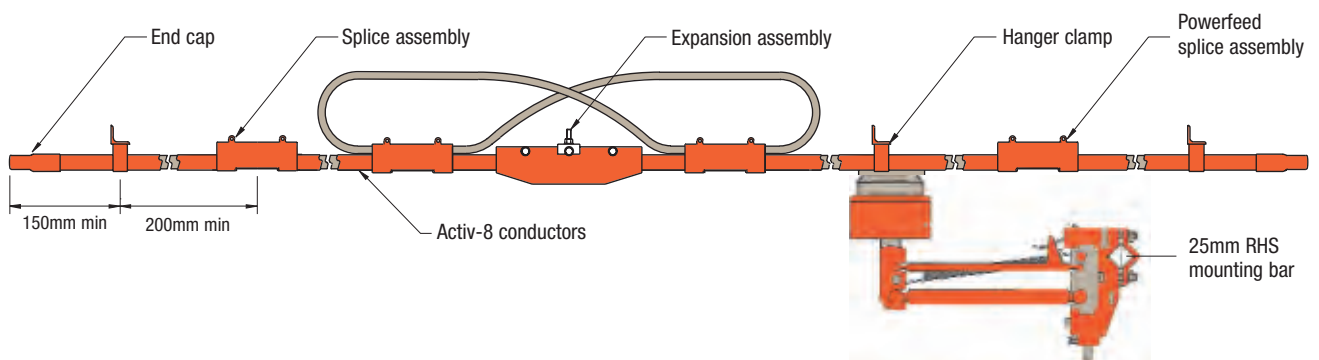
### Hanger Clamps / Anchor Clamps:

Hanger clamps made from high strength Xenoy support the conductors and are of a "sliding tight" design. Anchor clamps are designed to grip and support the conductors "anchor-tight" and are used at anchor points only.

### Collectors:

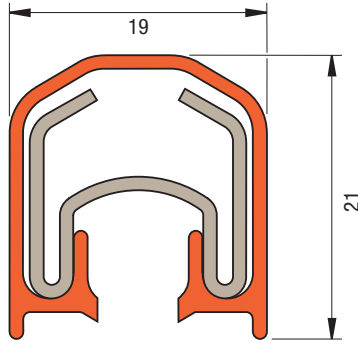
Insulated contact heads that hold the replaceable shoes are mounted on spring loaded arms and are designed to both articulate and swivel. No exposed metal surfaces carry current.

### Basic System Design:

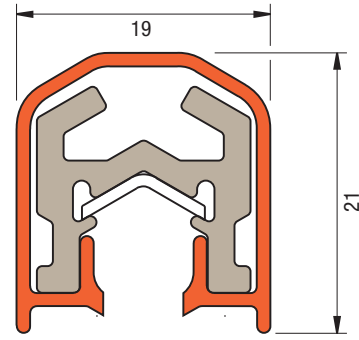


# SYSTEM COMPONENTS

**Conductor Bar Detail**  
**Gal Steel & Copper**



**Conductor Bar Detail**  
**Alu/Stainless Steel**



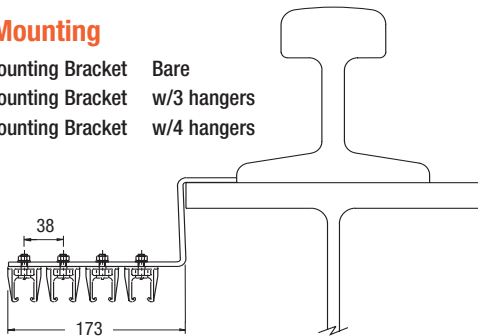
	90A	120A	140A	250A	300A	400A
	Gal Steel	Gal Steel	Gal Steel	Copper	Alu/Stainless	Copper
<b>Conductor Bar 4m</b>	98352	98353	98354	98355	98358	98357
<b>Conductor Bar 4m Med.Temp.*</b>	98362	98363	98364	98365	98368	98367
<b>Splice Assembly</b>	98306	98306	98306	98306	97750	98306
<b>Power Feed</b>	98307	98307	98307	98307	90156	98307
<b>End Cover</b>	98309	98309	98309	98309	98309	98309
<b>Expansion Section 1.5m</b>	97052	97053	97054	97055	97059	97057
<b>Isolation Section 500mm</b>	97061/090	97061/120	97061/140	97061/250	97061/300	97061/400

All components listed above (except Med. Temp. cover) are available in green to designate earth.

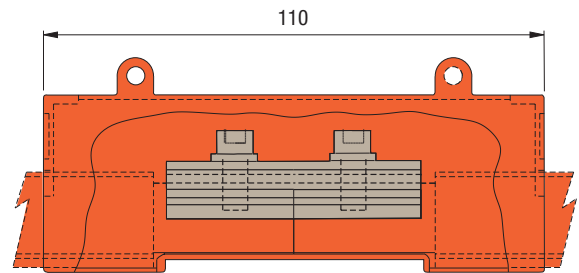
\* Medium Temperature conductor bar incorporates red, halogen-free lexan cover.

## Standard Mounting

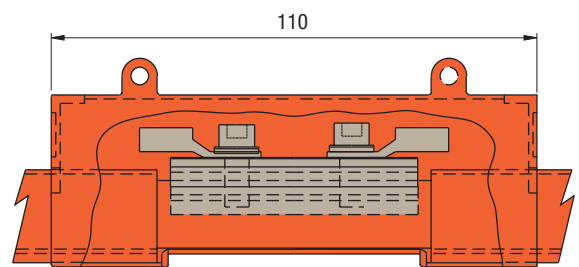
- 97879 "Z" Mounting Bracket Bare
- 98382 "Z" Mounting Bracket w/3 hangers
- 98383 "Z" Mounting Bracket w/4 hangers



## Splice Assembly P/No. 98306

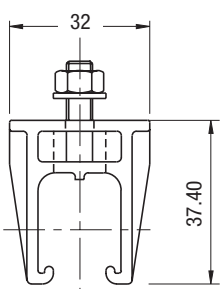


## Power Feed Assembly 54-330A P/No. 98307

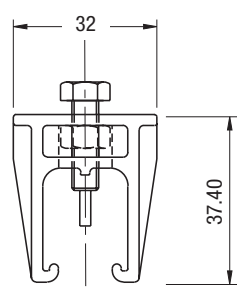


Galv. & Copper	Alum/ S/S	Description	Amps	
			1 Lug Connected	2 Lugs Connected
98307/06	90156/06	Powerfeed 6mm <sup>2</sup> Crimp Lug	54	108
98307/10	90156/10	Powerfeed 10mm <sup>2</sup> Crimp Lug	74	148
98307/16	90156/16	Powerfeed 16mm <sup>2</sup> Crimp Lug	99	198
98307/25	90156/25	Powerfeed 25mm <sup>2</sup> Crimp Lug	135	270
98307/35	90156/35	Powerfeed 35mm <sup>2</sup> Crimp Lug	165	330

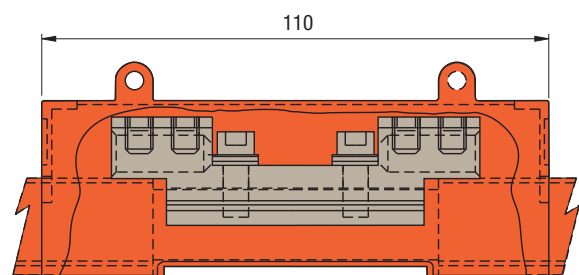
## Hanger P/No. 98380



## Anchor P/No. 98381

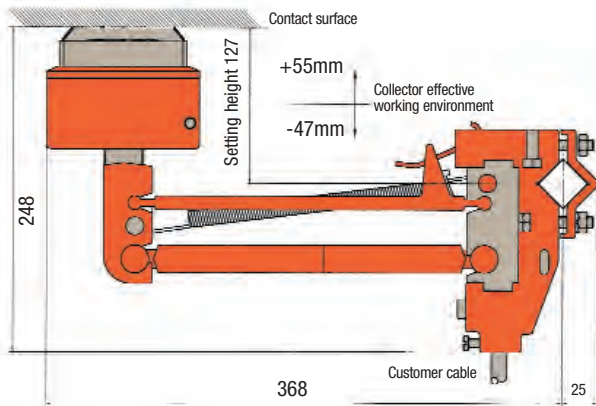


## Power Feed Assembly 330A P/No. 97027

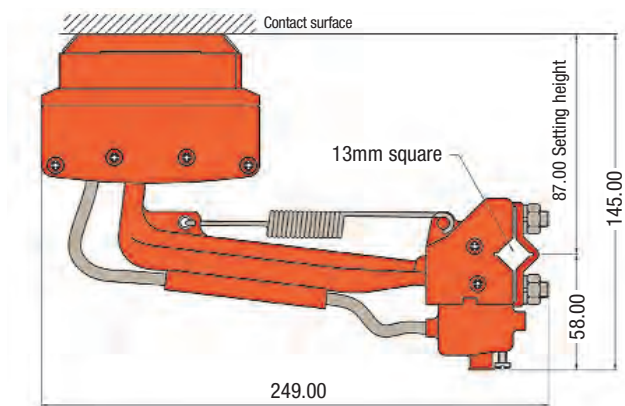


# SYSTEM COMPONENTS

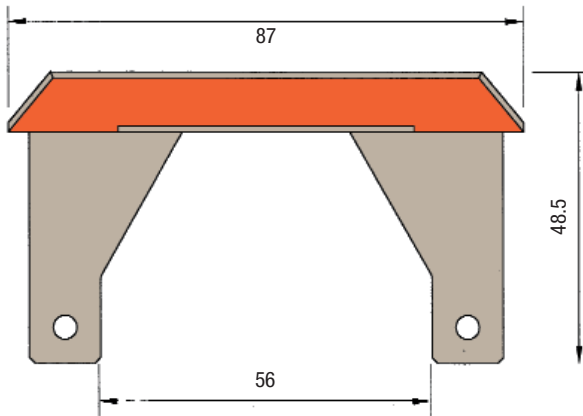
## 100 Amp DI Collector P/No. 310990



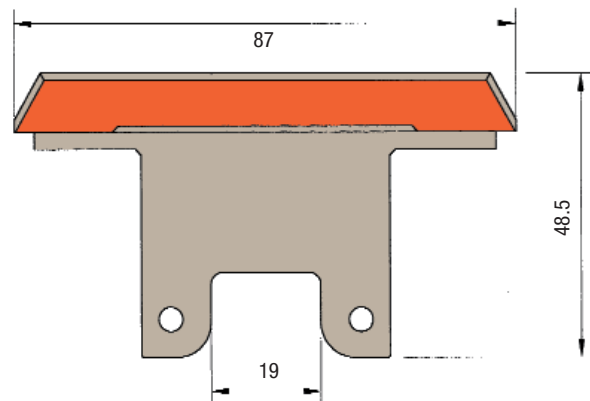
## 50 Amp SI Collector P/No. Live: 399360 Earth (Green): 399380



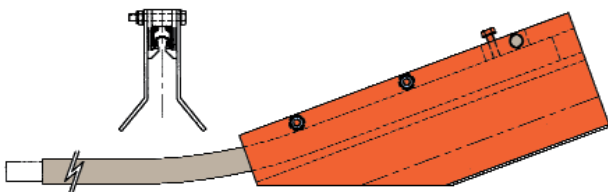
## 100 Amp DI Collector Shoe P/No. 310993 (includes holder)



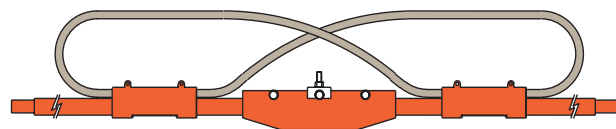
## Collector Shoe for Double Arm Collector (P/No. 98497) P/No. 98387



## Pick-up Guide



## Expansion Section

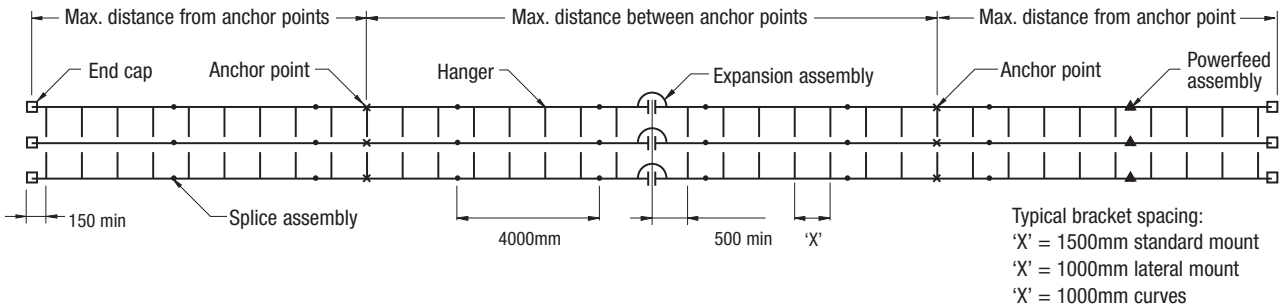


## Other components:

Part No.	Description	Part No.	Description
28082	30 A Collector Shoe	98308	Cluster Style Anchor Clamp
31582	30 A 2 Pole Collector	98309	End Cover
31583	30 A 3 Pole Collector	98310	12mm Collector Mount Bar
31584	30 A 4 Pole Collector	98311	Cluster Style Monopole Hanger Clamp
97011	Monopole Pick-up Guide Assembly	98313	Cluster Style 3 Pole Hanger Clamp
97012	Two Pole Pick-up Guide Assembly	98314	Cluster Style 4 Pole Hanger Clamp
97013	Three Pole Pick-up Guide Assembly	98324	Splice Clamp w/o Cover
97014	Four Pole Pick-up Guide Assembly	98325	54-330 A Power Feed w/o Cover
97061	Monopole Isolating Section	98326	330 A Power Feed w/o Cover
97062	Two Pole Isolating Section	98327	Transfer Cap
97063	Three Pole Isolating Section	98328/70	Power Feed for 70mm Cable
97064	Four Pole Isolating Section	98388	100 A Cast Iron Cleaning Shoe for 98497 collector
97752	330 A Power Feed for Alu/SS Bar	A163	"Danger Live Rail" Sign
98275	Conductor Bar PVC Insulating Cover	A164	25mm Collector Mount Bar
98288	Splice Cover Half	97879C672	3 Phase Anchor Clamp Kit
		97879C671	4 Phase Anchor Clamp Kit

# TECHNICAL DATA

## Typical 3 Phase System:



An accurate choice of conductors can only be made when all of the following information is known:

- Type of current: single or three phase AC; continuous DC
- The maximum current load for all motors
- Allowable voltage drop for the motors being supplied
- Expected duty cycle of the system
- The ambient temperature range
- Environment (dusty, coastal, humid, acidic...)

	Galvanised Steel			Copper	Alu/Stainless	Copper
	90A	120A	140A	250A	300A	400A
Cross sectional area in sq mm	45.36	61.05	88.64	46.24	104.00	88.64
Weight per four meter length	1.91kg	2.4kg	3.26kg	2.14kg	1.62kg	3.65kg
Resistance R (for DC) (ohm/m)	0.002621	0.001948	0.00134	0.000381	0.000303	0.000203
Impedance Z (Ohm/m) 22mm cts @ 20°C	0.002416	0.001808	0.001253	0.000393	0.000319	0.000235
*Impedance Z (Ohm/m) 38mm cts @ 20°C	0.002431	0.001823	0.001268	0.000408	0.000334	0.000250
Impedance Z (Ohm/m) 75mm cts @ 20°C	0.00245	0.001842	0.001287	0.000427	0.000353	0.000269
Max. system length without expansions	200m	200m	200m	150m	150m	150m
Max. distance between anchor points	180m	180m	180m	120m	85m	120m
Max. distance from anchor to end of run	100m	100m	100m	75m	75m	75m
Min. bending radius	1.5m	1.5m	1.5m	1.5m	2.0m	1.5m
Thickness/gauge of conductor in mm	0.8	1.1	1.6	0.8	extrusion	1.6

\* Z bracket arrangement

## Voltage Drop Calculations:

AC three phase       $VD = L \times I \times Z \times 1.73$  Volts

AC single phase       $VD = L \times I \times Z \times 2$  Volts

DC       $VD = L \times I \times R \times 2$  Volts

VD = Voltage drop in Volts

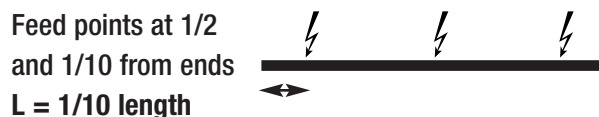
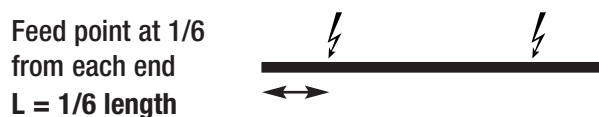
I = Maximum Current in Amps

L = System length in meters from feed

R = DC resistance in Ohms per meter

Z = Impedance in Ohms per meter

The value of L will vary dependent on the placement of the power feed(s) as shown in the diagram below:



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