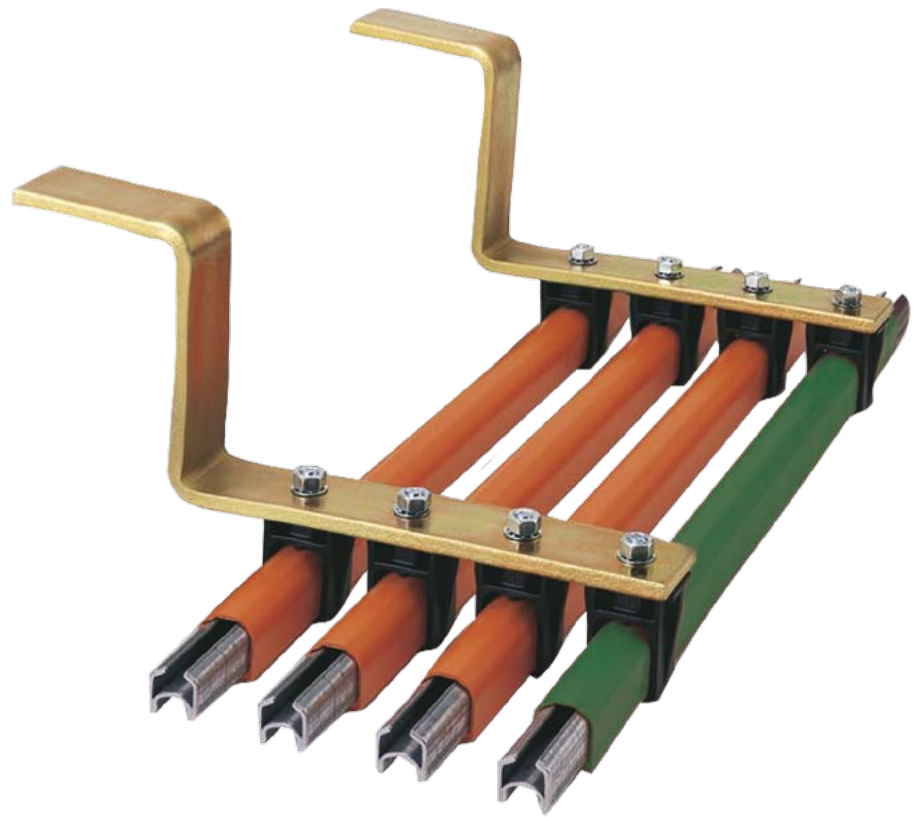




Insulated Conductor Rail

ACTIV-8 PLUS



ACTIV-8 PLUS

The Industry Standard in Conductor Rails

ACTIV-8 is the most widely used and stocked conductor rail in use in Australia. It was designed by Conductix-Wampfler 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-Wampfler 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 200 m without expansion sections
- Able to be curved down to a 1.5 m radius
- Green coloured earth components.

Basic System Components

Conductor Rails

Available in galvanised steel or copper. Supplied in four 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 70 mm².

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. Standard temperature PVC cover rated to 75° C. Medium temperature Lexan cover rated to 120° C.

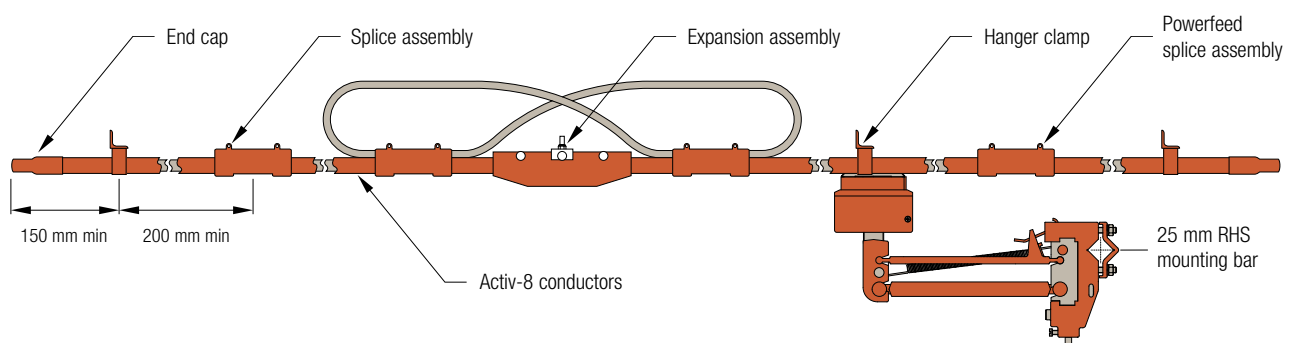
Hanger Clamps / Anchor Clamps

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

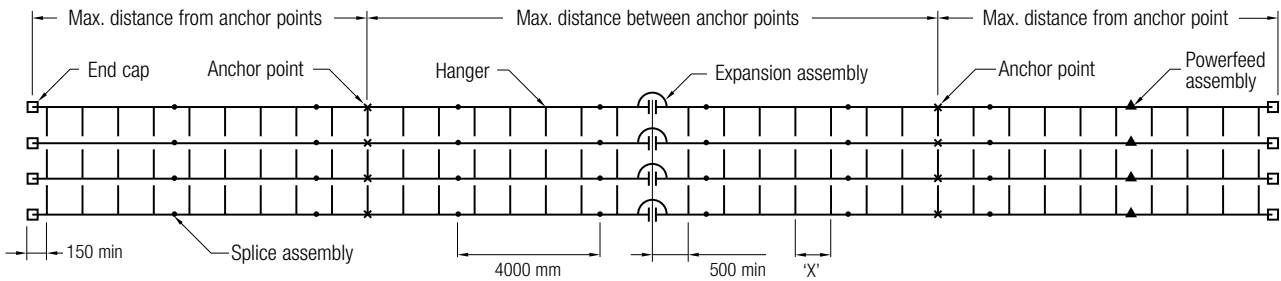
Insulated contact heads that hold the replaceable shoes are mounted on spring loaded arms and are designed to both articulate and swivel. No exposed metal surfaces carry current.

Basic System Design



Technical Data

Typical 4 Pole System



Typical bracket spacing: 'X' = 1500 mm standard mount / 'X' = 1000 mm lateral mount / 'X' = 1000 mm curves

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
- Expected duty cycle of the system
- The maximum current load for all motors
- The ambient temperature range
- Allowable voltage drop for the motors being supplied
- Environment (dusty, coastal, humid, acidic...)

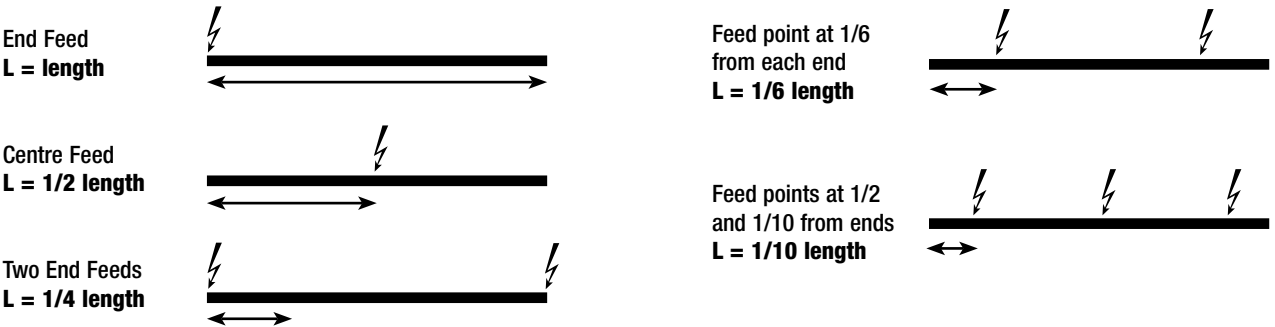
	Galvanised Steel			Copper	
	90 A	120 A	140 A	250 A	400
Cross sectional area in sq mm	45.36	61.05	88.64	46.24	88.64
Weight per four meter length	1.91 kg	2.4 kg	3.26 kg	2.14 kg	3.65 kg
Resistance R (for DC) (ohm/m)	0.002621	0.001948	0.00134	0.000381	0.000203
Impedance Z (Ohm/m) 22 mm cts @ 20° C	0.002416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

* Z bracket arrangement

Voltage Drop Calculations

AC three phase	$VD = L \times I \times Z \times 1.73 \text{ Volts}$	$VD = \text{Voltage drop in Volts}$	$R = \text{DC resistance in Ohms per meter}$
AC single phase	$VD = L \times I \times Z \times 2 \text{ Volts}$	$I = \text{Maximum Current in Amps}$	$Z = \text{Impedance in Ohms per meter}$
DC	$VD = L \times I \times R \times 2 \text{ Volts}$	$L = \text{System length in meters from feed}$	

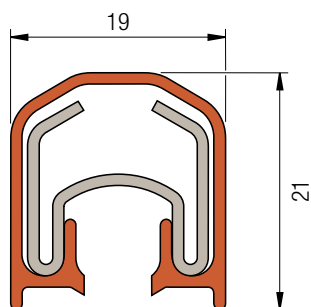
The value of L will vary dependent on the placement of the power feed(s) as shown in the diagram below:



System Components

Conductor Rail Detail

Galvanised Steel/Copper



	Galvanised Steel			Copper	
	90 A	120 A	140 A	250 A	400
Conductor Rail 4 m	98352	98353	98354	98355	98357
Conductor Rail 4 m Med. Temp. *	98362	98363	98364	98365	98367
Splice Assembly	98341	98341	98341	98306	98306
Power Feed	98307	98307	98307	98307	98307
End Cover	98309	98309	98309	98309	98309
Expansion Section 1.5 m	97052	97053	97054	97055	97057
Isolation Section 500 mm	97061/090	97061/120	97061/140	97061/250	97061/400

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

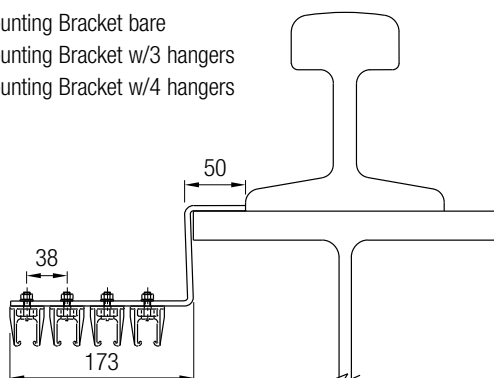
* Medium Temperature conductor bar incorporates red, halogen-free lexan cover.

Standard Mounting

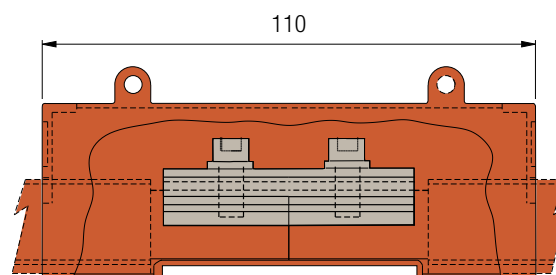
97879 "Z" Mounting Bracket bare

98382 "Z" Mounting Bracket w/3 hangers

98383 "Z" Mounting Bracket w/4 hangers

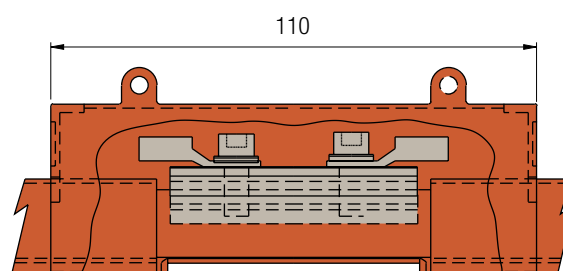


Splice Assembly P/No. 98306 (Copper) / P/No. 98341 (Galv.)

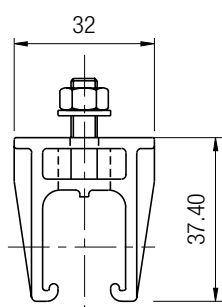


Galv. & Copper Part No.	Description	Amps	
		1 Lug Connected	2 Lugs Connected
98307/06	Power Feed 6 mm ² Crimp Lug	54	108
98307/10	Power Feed 10 mm ² Crimp Lug	74	148
98307/16	Power Feed 16 mm ² Crimp Lug	99	198
98307/25	Power Feed 25 mm ² Crimp Lug	135	270
98307/35	Power Feed 35 mm ² Crimp Lug	165	330

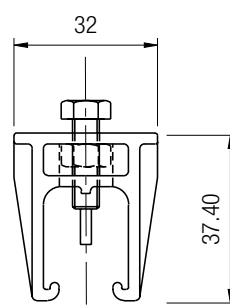
Power Feed Assembly 54-330 A – P/No. 98307



Hanger Clamp P/No. 98380

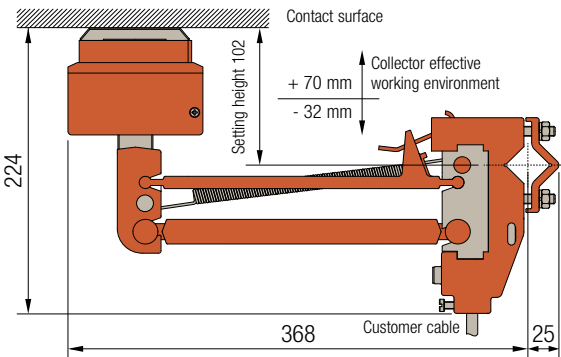


Anchor Clamp P/No. 98381

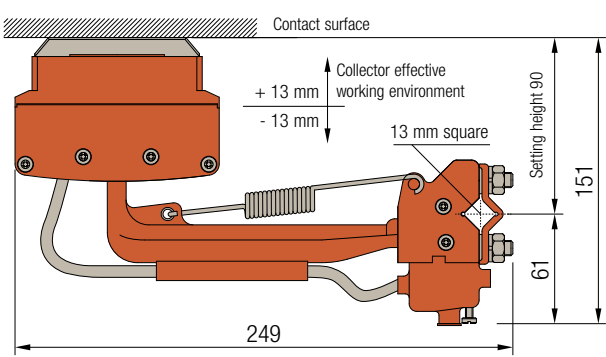


System Components

100 Amp DI Collector P/No. 310990 (Phase) / 310990G (Earth)

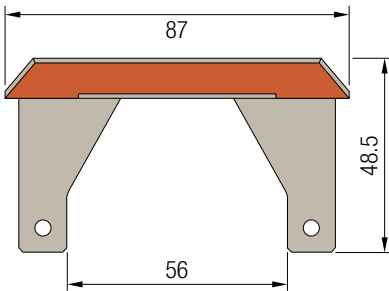


50 Amp SI Collector P/No. 399360 (Phase) / 399380 (Earth)



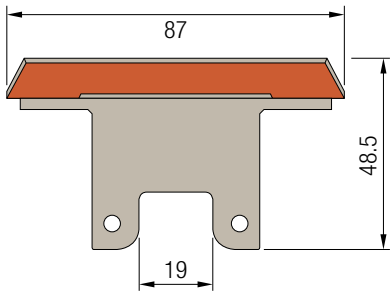
100 Amp DI / 50 Amp SI Collector Shoe P/No. 310993

Includes holder

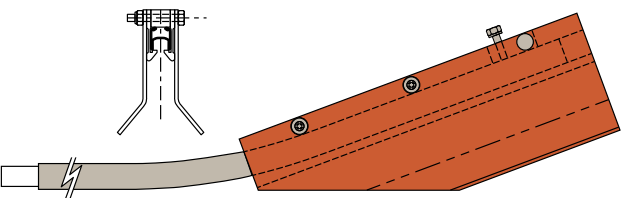


Collector Shoe P/No. 98387

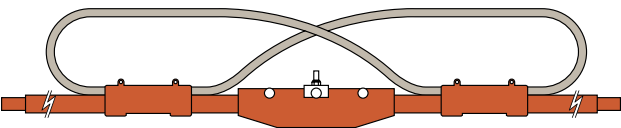
For Double Arm Collector (P/No. 98497)



Pick-up Guide



Expansion Section



Other Components

Part No.	Description
28082	30 A Collector Shoe
31582	30 A 1 Pole Collector
31583	30 A 3 Pole Collector
31584	30 A 4 Pole Collector
97011	Monopole Pick-up Guide Assembly
97012	Two Pole Pick-up Guide Assembly
97013	Three Pole Pick-up Guide Assembly
97014	Four Pole Pick-up Guide Assembly
97061	Monopole Isolating Section
97062	Two Pole Isolating Section
97063	Three Pole Isolating Section
97064	Four Pole Isolating Section
98275	Conductor Bar PVC Insulating Cover
98288	Splice Cover Half
98308	Cluster Style Anchor Clamp

Part No.	Description
98309	End Cover
98310	12 mm Collector Mount Bar
98311	Cluster Style Monopole Hanger Clamp
98313	Cluster Style 3 Pole Hanger Clamp
98314	Cluster Style 4 Pole Hanger Clamp
98324	Splice Clamp w/o Cover
98325	54-330 A Power Feed w/o Cover
310951C311	Transfer Cap
98328/70	Power Feed for 70 mm Cable
98388	100 A Cast Iron Cleaning Shoe for 98497 collector
98651	100 A Cast Iron Cleaning Shoe for DI + SI collector
A163	"Danger Live Rail" Sign
A164	25mm Collector Mount Bar
97879C672	3 Phase Anchor Clamp Kit (incl. Z-Bracket)
97879C671	4 Phase Anchor Clamp Kit (incl. Z-Bracket)

