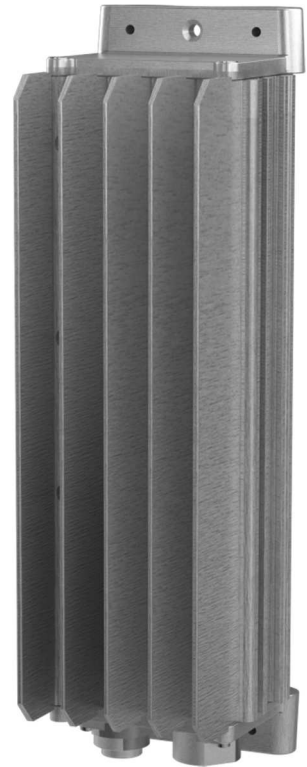


High efficiency and reliable IP65 rectifiers

With the rollout of 4G, LTE and other broadband services, the telecom infrastructure is installed closer to where people are. The challenge for the operators is to provide an optimal service without having a significant visual impact in the city streets, shopping malls or sports arenas.

The Chameleon 48/650 HE is targeting these applications. A compact and insignificant exterior and a powerful interior well protected by an IP65 housing. It is prepared for mounting close to the Telecom equipment on a pole or wall. The plugs provide fast connection without breaking the IP protection.



CHAMELEON RECTIFIERS

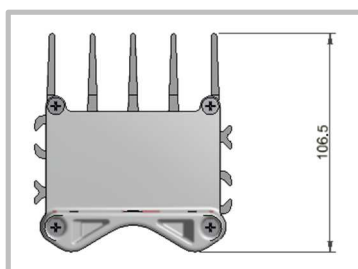
48 / 650 HE

Doc 241125.1XX.DS3 - v1

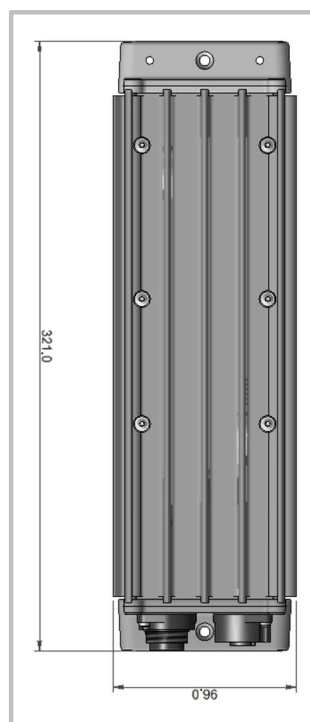
APPLICATIONS

TELECOM - MOBILE / WIRELESS

- **SMALL CELL**
 - **LTE**
 - **3G**
 - **4G**
 - **WIMAX**



TOP VIEW



FRONT VIEW

KEY FEATURES

- SURGE PROTECTION ON INPUT AND OUTPUT
- CONVECTION COOLING - NO FANS
- IP 65 PLUG AND PLAY CONNECTORS
- HIGH EFFICIENCY (HE)
- WIDE TEMPERATURE RANGE
- POLE OR WALL MOUNT
- GLOBAL COMPLIANCE (CE, UL)
- TELECOM SPECIFICATIONS

Model	48/650 HE	
Part number	241125.105	
INPUT DATA		
Voltage (nominal)	185 - 275 V _{AC}	
Voltage (operating range)	85 - 305 V _{AC}	
Frequency	45 - 66 Hz	
Current (maximum) / min breaker for selectivity	4.6 A _{RMS} / 16A C-Char	
Surge	IEC 61000-4-5 (Test level X: 8 kV) ¹⁾	
Power Factor	> 0.99 at full load	
Protection	Fuse in L & N, Shutdown above 305 V _{AC}	
OUTPUT DATA		
Voltage (default)	53.5 V _{DC}	
Voltage (adjustable range)	43.5 - 57.6 V _{DC}	
Power @ 230 V _{AC}	650 W	
Power @ 110 V _{AC}	440 W	
Current	13.5 A	
Surge	IEC 61000-4-5 (Test level X: 8 kV)	
Current sharing, active via CAN bus	< ±5% of maximum current from 10 to 100% load	
Static Voltage regulation (10 - 100% load)	±0.5%	
Dynamic Voltage regulation	±5.0% for 10-90% or 90-10% load variation, regulation time < 50ms	
Hold up time, maximum output power	>20ms; output voltage > 42 V _{DC}	
Ripple	< 150 mV peak to peak, 30 MHz bandwidth	
Protection	ORing FET, Short circuit proof, High temperature protection	
OTHER SPECIFICATIONS		
Efficiency @ nominal input	Up to 95.5%	
Isolation	3.0 kV _{AC} - input to output, 1.5 kV _{AC} - input to earth, 710 V _{DC} - output to earth	
Alarms, alarm relay (NO)	Open and no power on output: low/high Mains or Temperature shutdown, Rectifier Failure, Overvoltage on output	
Switching capacity max 75V/2A/60W		
Communication	CAN bus	
Cooling	Convection	
Altitude	4000m (~13000ft)	
Environmental Protection	Anodized aluminum chassis, IP65, vent	
Operating temperature ²⁾	-45 to + 70°C [-49 to +158°F]	
Dimensions[WxHxD] / Weight [excluding brackets]	96 x 321 x 107mm (3.78 x 12.63 x 4.19") / < 2.8 kg (6.2 lbs)	
CONNECTIONS		
AC	L, N & PE	
DC, monitoring and control	Output +, Output -, Alarm NO, Alarm C, CAN _L & CAN _H	
DESIGN STANDARDS		
Electrical safety	EN 60950-1:2006+A11:2009+A1:2010+A12:2011, EN 60950-22:2006+A11:2008 ³⁾ UL 60950-1:2011, UL 60950-22:2011 ³⁾	
EMC	ETSI EN 300 386 v.1.6.1, FCC Part 15 Subpart 109:2013 EN 61000-6-1:2007, -6-2:2005, -6-3:2007 + A1:2010, -6-4:2007 + A1:2010,	
Environment	ETSI EN 300 019: -2-1 (Class 1.2), -2-2 (Class 2.3) & -2-4 (Class 4.1E & 4.2H) RoHS (2011/65/EU) and WEEE (2002/96/EC) compliant Seismic Zone 4 (Telcordia GR 63 Core), NEMA 3R	
¹⁾ Test voltage > 6kV and load below 1A, performance criteria B (reset and automatically restart). ²⁾ RAL installation required for temperatures above 60°C [140°F]. ³⁾ Full sun radiation combined with ambient temperatures above 55°C [131°F] without wind or rain will lead to de-rating of maximum output power, linear down to 450 W @ 70°C [+158°F]. ³⁾ Internal surge protection is not certified for IEC 61643, so an external device according to IEC 61643 must be used to meet 60950-22		
Accessories		Part number
Connectors for AC/input by <u>outer cable diameter</u> (Screw terminal max 2.5mm ²)	6-9.5mm: 334321 (Binder 99-4222-00-04)	10-12mm: 334323 (Binder 99-4222-14-04)
	8-10mm: 334322 (Binder 99-4222-110-04)	12-14mm: 314804 (Binder 99-4222-160-04)
Connectors for DC/output by <u>outer cable diameter</u> (Screw terminal max 1.5mm ²)	6-8mm: 334328 (Binder 99-4217-00-07)	10-12mm: 334330 (Binder 99-4217-14-07)
	8-10mm: 334329 (Binder 99-4217-110-07)	12-14mm: 314805 (Binder 99-4217-160-07)
Pole mount kits	40-135mm Ø clamps: 241125.910	
241125.105 revision ≥ 2.2 has no accessories included.		