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Level VI, DOE EPS 2.0/ErP2 compliant 18W Power over Ethernet (POE) Injector/IEEE802.3af PoE PSE (Power Sourcing Equipment), Gigabit, Class I IEC60320-C6

Information

Model Number	GT-96180-1856-R3A-AP
Description	GT-96180-1856-R3A-AP, PoE, Active Power Injector, Wall Plug-in+Desktop Combination, Single Port Power Over Ethernet Midspan (IEEE802.3af PoE PSE), , Input Rating: 100-240V~, 50-60 Hz, IEC 60320/C6 AC Inlet Connector, Class I, Earth Ground (aka "Mickey Mouse"), Output Rating: 18 Watts, Power rating with convection cooling (W) , 56-56V in 0.1V increments, Approvals: CB 62368; Patent US9838207B2; EAC; CE; WEEE; VCCI; Ukraine; China RoHS; RoHS; Level VI; PSE; Class I; ETL; S-Mark 60950; CB 60335;
Model Picture	
Agency Documents	http://www.globtek.info/certs/GT-96180-POE/
CE EC-Declaration	https://www.globtek.com/pdf/ec_declaration/a0Oa000000MmZEHEA3
RoHS/RoHS2 Declaration	https://www.globtek.com/pdf/rohs_cert/a0Oa000000MmZEHEA3
REACH Declaration	https://www.globtek.com/pdf/iso_certificates/REACH.pdf
Conflict Minerals Declaration	https://www.globtek.com/pdf/conflict-minerals.pdf

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Model Parameters

Type	Wall Plug-in+Desktop Combination
Technology	Single Port Power Over Ethernet Midspan (IEEE802.3af PoE PSE)
Category	PoE, Active Power Injector
Input Voltage	100-240V~, 50-60 Hz
I/P Amps (A)	0.6A
Wattage (W)	18.0
Vout Range (V)	56-56
Efficiency Level	VI
Ingress Protection	Indoor Use
Size (mm)	

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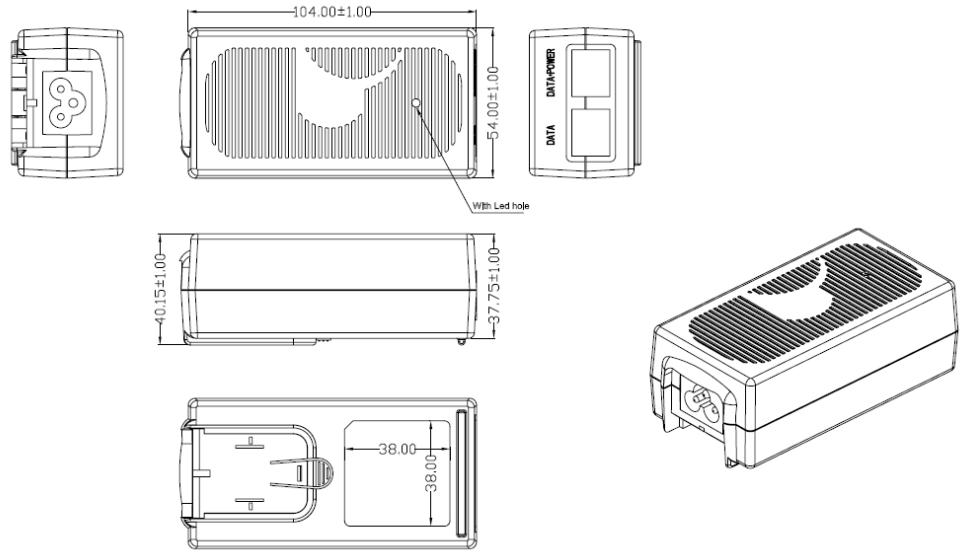
ENCLOSURE



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RATING TABLE

Model Number	Voltage	Amps(A)	Watts(W)	RFQ
GT-96180-1856-R3A-AP	56 V	0.321	17.98	RFQ

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SPECIFICATIONS

GlobTek's GT-96180-1856 Active Power over Ethernet Midspan Injector offers cost effective and reliable solution for remote powering of Wireless LAN Access Points, Voice over IP phones, Security Cameras, RFID readers and other IP terminals up to 18 Watts over existing network infrastructure. This Injector is configured to provide up to 18watts of power per port over two pairs in compliance with IEEE 802.3af standard.

The GT-96180-1856 Active PoE Injector is designed to function with and provide power to any IEEE 802.3af compliant PoE device.

MAIN FEATURES
- Withstands high energy EMI Immunity events without going into latched shutdown state
- Enhanced 18W output power capability
- IEEE 802.3af Detection, Disconnect and Overload Protection
- LED User Interface for Power Good and Fault Conditions
- Compliant to PoE+, 10/100/1000 BaseT Data Rates
- Universal Input Power from 100Vac to 240Vac
- Unique Patented Green Design: Compliant to DoE efficiency level VI requirement.
- Full Protection for Over Voltage and Current
- Compact 104 x 54 x 40 mm (w/o MTG Flange)

APPLICATIONS
- VoIP Phones
- VoIP Phone with Video
- Wireless Access Points
- Bluetooth Access Points
- Multi-Band Wireless Access Points
- Network Security Cameras
- Point of Sales
- Industrial Controllers
- Electronic Time Card Readers
- Building Security Systems
- Network Camera with Pan, Tilt and Zoom Features
- Electronic Signs
- RFID Readers
- Motion Sensors
- HVAC Controllers
- Magnetic Card Readers
- PDAs
- Digital Time clock

A) ELECTRICAL SPECIFICATIONS:
INPUT
Input Range: 90-264 Vac (85-264Vac @ 85% of rated output power)
Input Line Frequency: 47-63Hz
Input Current:< 0.6A RMS @ 90Vac Full Load
Inrush Current: 60A Typical, Cold Start @ 25°C at 230Vac
No load power < 100mW
Efficiency: >85%, 4 Point Avg Efficiency
Turn on-delay: 1 Second Typical @ 115Vac

Input Line Protection: MOV Transient protected.
Hold-up Time: 8ms Typical at nominal input voltage and full load
Leakage current: <100uA
Isolation: 3000VAC

OUTPUT
Number of Ports: One

Data Rates: Compliant to PoE+, 10/100/1000 Mbits/second Ethernet Speed

Power Injection Method: For IEEE 802.3af Midspan, 4&5 for V+ and 7&8 for Common

Port Voltage: 56Vdc nom at pins 4&5 to 7&8

Port Current: 0 to 320mA max for pins 4&5 to 7&8

Port Power: 18W max from pins 4&5 to 7&8

Port Voltage Regulation: Complies with IEEE 802.3af requirements

Port Voltage Ripple: Complies with IEEE 802.3af requirements

Port Voltage Transient Performance: Complies with IEEE 802.3af requirements

Port Overload Protection: Complies with IEEE 802.3af Requirements. Output will shutdown during overload and auto recover when overload is removed.

Port Short Circuit Protection: Complies with IEEE 802.3af Requirements. Output will shutdown during short circuit and auto recover when short is removed.

Port Power Disconnection Method: Automatic Disconnect if < 10mA minimum load detected per IEEE 802.3af standard.

User Interface: Green LED Status Indicator, States as Follows:
- No Light: No Powered Device detected at end of ethernet cable
- Flashing at 1.5Hz: Detection (hand-shaking) in-Process, with Powered Device
- Continuous Light: Good Connection with Powered Device
- Flashing at 10Hz: Over Current Condition

ENVIRONMENTAL
Temperature: Operating, -10C to 40C
Storage, -30C to 80C
Humidity: 0% to 95% Relative Humidity, Non-Condensing
Altitude: Operating, Up to 5000M

MECHANICALS / ENCLOSURE
Housing: High impact plastic, 94V0 polycarbonate, non-vented
Markings: Label and/or Pad Printed and/or Molded in the case
Dimensions: 104*54*40 mm (w/o MTG Flange)
Weight: 0.35 Lb, 155 gr.
AC Input mechanical options: Desktop C6, C8, C14 or C18 IEC Inlet.
Hybrid option (Desktop or Changeable Blade Wall Plug-in) Class I or Class II input

Data and Data+Power Connector: Fully Shielded RJ45

D) EMISSIONS and IMMUNITY
Emission: Complies with FCC Class B Part 15, EN55022 Class B
Immunity: Complies with the following;
EN610000-6-2 (Industrial Level Immunity Compliance, extended levels shown in parenthesis)
EN 61000-4-2 ESD (+/-18KV Air, +/-8KV Contact, criteria A) (+/-20KV Air, +/-10KV Contact, criteria B)
EN 61000-4-3 Radiated Immunity
EN 61000-4-4 EFT (+/-2.5KV, criteria A) (+/-4KV, criteria B)
EN 61000-4-5 Surge (+/-2KV Line-Line, +/-4KV Line to Gnd, criteria A)
EN 61000-4-6 Conducted Susceptibility
EN 61000-4-11 Voltage Dips and Interrupts
EN 61000-3-2 Harmonics, Class A

REGULATORY COMPLIANCE
Compliant Safety Standards: See listings at end of this drawing for specifics

IEEE 802.3af: Product tested per the requirements of IEEE 802.3af

INTEROPERABILITY: Product's interoperability performance verified with various third party PoE enabled systems. See table below.

SPECIAL OPTIONS
1. Custom Markings
2. High Rel PCB laminate with Plated through Holes for IPC610 Class 2 Compliance
3. Special Housing Color
4. 48V or 54V Output Voltage, contact factory for availability
5. Reduced output power rating

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18W PoE Injector, Ethernet InterOperability and Compatibility Testing

Injector tested: *Model GT-96180-1856*, rated 18W output, 56Vdc, IEEE802.3-2003 af Compliant

Note, assuming 80% eff splitter, max Pout = 14.4W (14.4/18 = 0.8)

Splitter Model Used	Splitter Description	Splitter O/P Power Rating	Splitter Load During Testing
GlobTek GT-91087	5V, af type	8W	7.5W
PowerDSIne PD-AS-601/5	5V, af type	10W	
Linksys POEES5	5V, af type	10W	
Axis 5008-001-02	5V, af type	10W	
PowerDSIne PD-AS-701/12	12V, at type	24W	14W
Phihong POE21-120-R	12V, at type	21W	
Cisco 7970 Series Phone	IP Phone, af type	Input to Phone rating 48V, 0.38A	

100BaseT/1000 Base T network digital transmission testing

(During testing ethernet communications is passed thru Injector and then Splitter and then to a computer)

Injector tested: *Model GT-96180-1856*, rated 18W output, 56Vdc, IEEE802.3-2003 af Compliant

Injector is Gigabit designed and tested, to 100 Base T and 1000 Base T

Splitter Model Used	Splitter Description	P/F	Notes:
Axis 5008-001-02	100 Base T rating	P	Limited bandwidth splitter
PowerDSIne PD-AS-701/12	1000 Base T rating	P	Full bandwidth splitter

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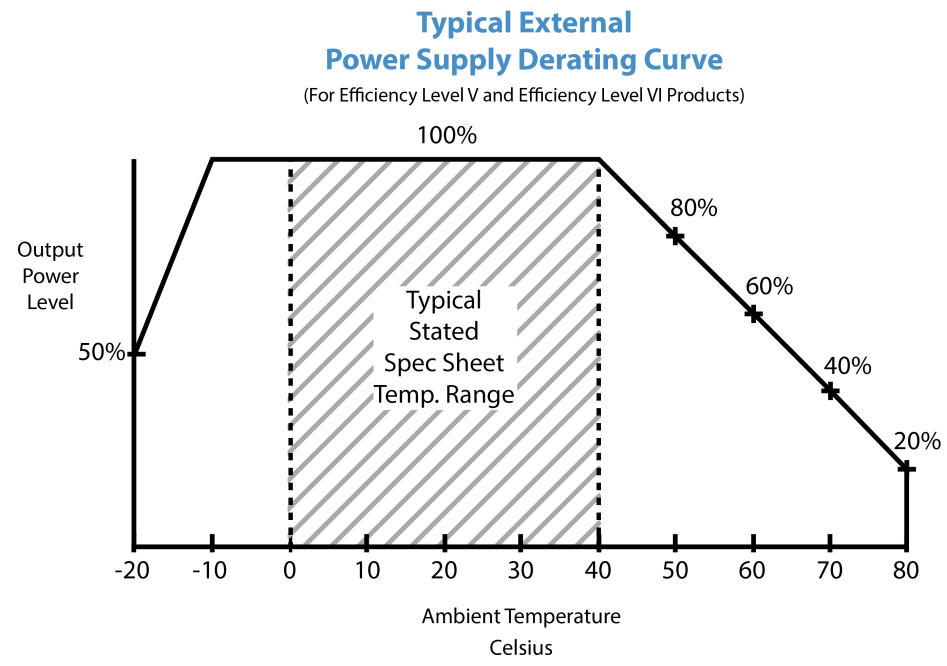
DERATING CURVE



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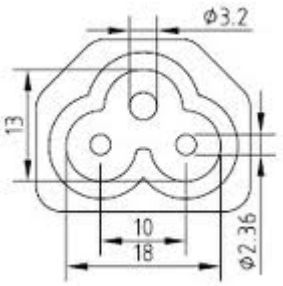
Input Configuration

DescriptionIEC 60320/C6 AC Inlet Connector, Class I, Earth Ground (aka "Mickey Mouse")

Blade Insertion Instructions
R-Blade Style Instruction Video

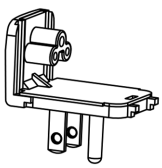


Mates with IEC 60320/C5 Plug
This series of Interchangeable Blade products may be used with Proprietary Interchangeable Blades as described below or with standard international power cords.

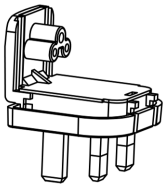
Optional INPUT BLADES: R-Socket: below are available blades configurations which are "not included" (unless stated above); may be purchased separately, packaged with power supply, or as a separate "R-KIT" if specified

1. Class I model NEMA 5-15P, Class I AC power plug with 2 blades & ground pin, R-NA-3(R)
2. Australian AS 3112 configuration: SAA 3 pins Class I, R-SAA-3(R)
3. UK BS 1363 configuration: UK 3 pins (Ground) Class I, R-UK-3(R)
4. European CEE 7/7 configuration: European plug 2 PINS + ground, Class I, R-EU-3(R)
5. Desktop Insert

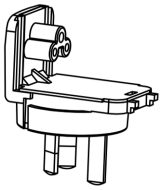
Kits
05. R-3-KIT: 1,2,3,4 above
06. R-3-KIT-INTL: 2,3,4 above



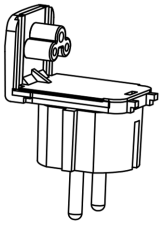
UL 3P
P/N: R-NA-3(R)
NORTH AMERICA
JAPAN



UK 3P
P/N: R-UK-3(R)
UNITED KINGDOM
HONG KONG
SINGAPORE



AUS 3P
P/N: R-SAA-3(R)
AUSTRALIA



EU 3P
P/N: R-EU-3(R)
EUROPE
SOUTH AMERICA

Below are standard cordsets which are "not included" (unless stated above); these can be purchased separately or package with the power supply. Contact your Sales Engineer if the style required is not shown below. Many more available in different lengths, colors or cable material.

Standard International IEC 320/C5 Cordsets

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Part Number / Link	Country	Plug	Connector	Length (mm)	Length (ft)
3021066F712(R)	N. American (Type B)	NEMA 5-15P	IEC 320/C5	1880	6
1191068F0712(R)	N. American (Type B)	NEMA 5-15P Hospital	IEC 320/C5	2459	8
2194262M0712(R)	Argentina (Type I)	IRAM 2073	IEC320/C5	2050	6.7
2064262M0712(R)	Australian (Type I)	AS3112 / 3 PRONG	IEC 320/C5	2000	6.6
204B4262M0712(R)	Brazil (Type N)	BRAZIL	IEC 320/C5	2000	6.6
6023592M5712(R)	China (Type I)	CCC GR2099	IEC 320/C5	2500	8
23144262M0712(R)	Europe (Type E)	CEE 7/7	IEC 320/C5	2050	6.6
2313K3432M0712(R)	Korea (Type F)	KS C 8305	IEC 320/C5	2000	6.6
205IN4262M0712(R)	India (Type D)	India IS 1293 (also known as IA16A3 or BS546)	IEC320/C5	2000	6.6
377C4262M0712(R)	Israel (Type H)	ISL	IEC320/C5	2050	6.7
23024262M0712(R)	Italy (Type L)	CEI 23-16/VII	IEC 320/C5	2000	6.6
3003316F0712(R)	Japan (Type B)	JIS 8303 / 3 PINS	IEC 320/C5	1830	6
3021066F0712ULPSE(R)	Japan / USA (Type B)	JIS 8303 / 3 PINS + NEMA 5-15P	IEC 320/C5	1830	6
2054262M0712(R)	S. Africa (Type D)	South Africa SABS164-1 (6A type plug)	IEC320/C5	2050	6.7
2084262M0712(R)	S.Africa (Type M)	South Africa SABS164-1 (16A type plug)	IEC 320/C5	2000	6.6
23214262M0712(R)	Switzerland (Type J)	SEV 1011 (EL 203)	IEC 320/C5	2000	6.6
3003316F0712(R)	Taiwan (Type B)	BSMI	IEC 320/C5	2000	6.6

6104262M0712(R)	UK, Hong Kong, Singapore, Gulf States (Type G)	BS1363	IEC 320/C5	2000	6.6

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Approvals

Logo	Description
No Logo Applicable	IEC 60335-1:2010 (Fifth Edition) incl. Corr. 1:2010 and Corr. 2:2011 + A1:2013
No Logo Applicable	CB for IEC 62368-1:2014 (Second Edition)
CE	CE Certification
C ETL US LISTED Intertek	Information Technology Equipment Safety Part 1: General Requirements (UL 60950-1 Issued: 2007/03/27, Ed: 2 Rev: 2014/10/14) Information Technology Equipment Safety Part 1: General Requirements (CSA C22.2 No. 60950-1 Issued: 2007/03/27 Ed: 2 (R2012) Amd.
30	CHINA SJ/T 11364-2014, China RoHS Chart: http://en.globtek.com/globtek-rohs.php
EAC	Declaration ДС № ЕАЭС N RU Д-US.КА01.В.10453_19 Custom Union of Russia, Belarus and Kazakhstan http://www.globtek.com/redirect/?loc=gost-certificate-eac-declaration
EFFICIENCY LEVEL VI	Efficiency: complies to section 301 of Energy Independence and Security Act (EISA) complies with Energy Star tier 2 (North America), ECP tier 2 (China), MEPS tier 2 (Australia), Code of Conduct (Europe)
Patent US9838207B2	Protected by US and international patents, US patent number US9838207B2
PS E GlobTek, Inc.	JAPAN TUV Rheinland-PSE GlobTek Inc to J60950-1(H26) , J55022(H22),J3000(H25).Please follow the procedure listed in the following link for proper import to Japan: http://en.globtek.com/importing-to-japan.php.
RoHS	Specifications of directive 2011/65/EU Annex VI (ROHS-2) with amendment 2015/863-EU (ROHS-3) http://www.ce-mark.com/Rohs%20final.pdf
S Intertek	S-Mark Certificate EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011+A2:2013 (http://www.intertek.com/marks/s/)
10276	Ukraine UKRSepro (Document: www.globtek.com/html/iso_certificates/GT_Ukraine.pdf)
VCCI	Japan: Voluntary Control Council for Interference (VCCI)
	WEEE: Complies with EU 2012/19/EU (http://ec.europa.eu/environment/waste/weee/index_en.htm) Mark is on the label or Molded in the case