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Model:GT-96180-1856-T3A-AP

May 20, 2019

## GT-96180-1856-T3A-AP

### Information

Model Number GT-96180-1856-T3A-AP

Description GT-96180-1856-T3A-AP, PoE, Active Power Injector, Desktop/External, 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) , 56V in 0.1V increments, Approvals: CB 62368; EAC; WEEE; VCCI; Ukraine; China RoHS; RoHS; Level VI; CE; Class I; PSE; cETLus 60950; S-Mark 60950; Patent US9838207B2; RCM; CB 60335;

Model Picture



Agency Documents <http://www.globtek.info/certs/GT-96180-POE/>  
CE [https://www.globtek.com/pdf/ec\\_declaration/a0Oa000000jSN0EAN](https://www.globtek.com/pdf/ec_declaration/a0Oa000000jSN0EAN)  
EC-Declaration  
RoHS/RoHS2 Declaration [https://www.globtek.com/pdf/rohs\\_cert/a0Oa000000jSN0EAN](https://www.globtek.com/pdf/rohs_cert/a0Oa000000jSN0EAN)  
REACH Declaration [https://www.globtek.com/pdf/iso\\_certificates/REACH.pdf](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**

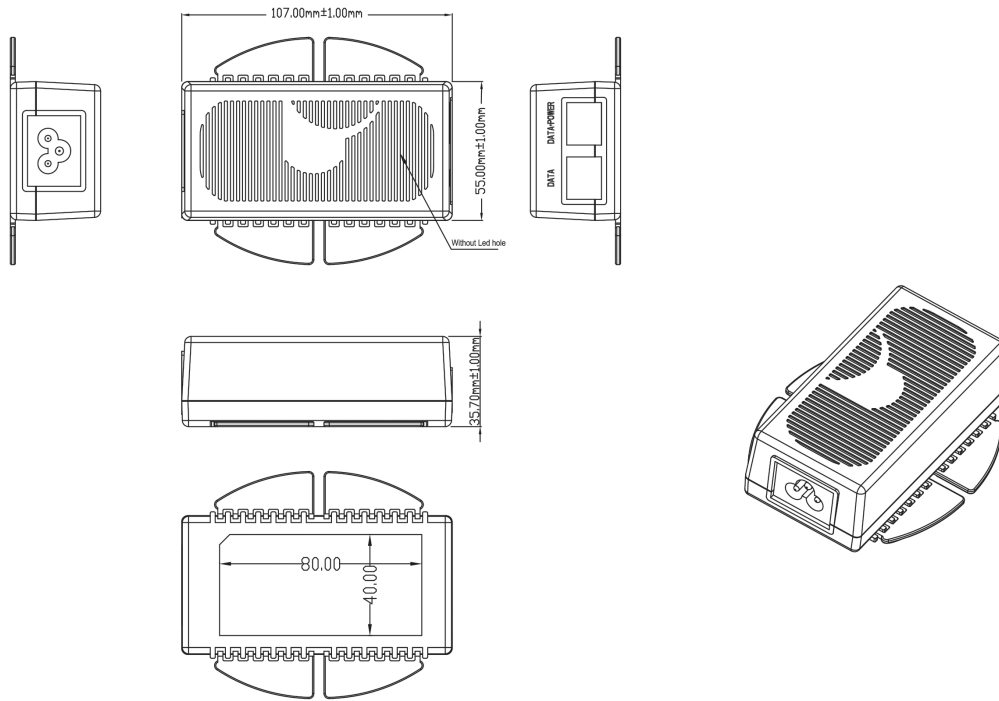
|                    |   |
|--------------------|---|
| Type               | Desktop/External  |
| Technology         | Single Port Power Over Ethernet Midspan (IEEE802.3af PoE PSE) |
| Category           | PoE, Active Power Injector                                    |
| Input Voltage      | 100-240V~, 50-60 Hz   |
| I/P Amps (A)       | 0.5A  |
| Wattage (W)        | 18.0  |
| Vout Range (V)     | 56  |
| Efficiency Level   | VI  |
| Ingress Protection |   |
| Size (mm)          | 107*55*36   |

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ENCLOSURE



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**RATING TABLE**

| Model Number         | Voltage | Amps(A) | Watts(W) | RFQ                 |
|----------------------|---------|---------|----------|---------------------|
| GT-96180-1856-T3A-AP | 5 V     | 0.321   | 17.98    | <a href="#">RFQ</a> |

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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

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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 Mb/s 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

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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;

EN61000-6-2 (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    |



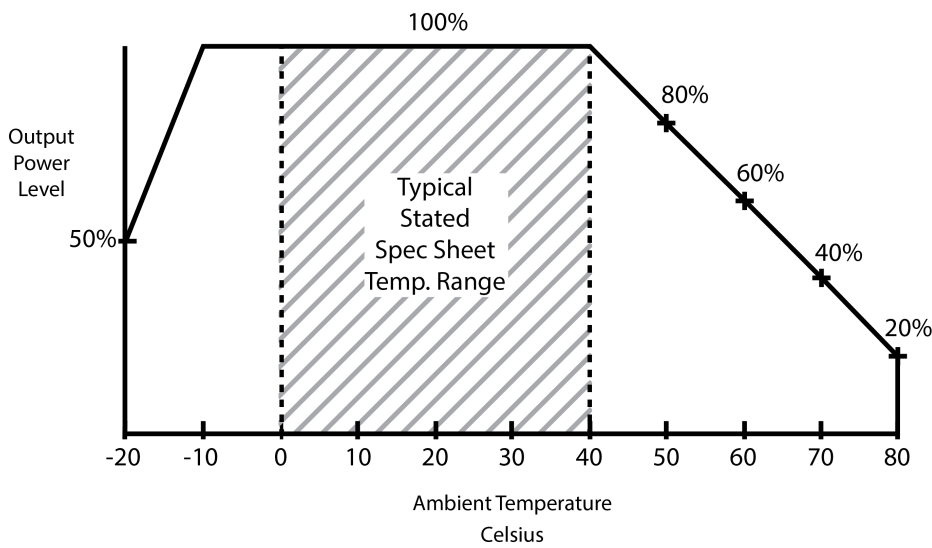
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DERATING CURVE

**Typical External  
Power Supply Derating Curve**  
(For Efficiency Level V and Efficiency Level VI Products)



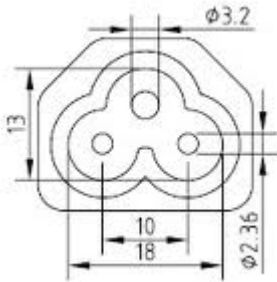
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**Input Configuration**

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



Mates with IEC 60320/C5 Plug

**Standard International IEC 320/C5 Cordsets**

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.












| Part Number / Link                   | Country  | Plug                           | Connector  | Length (mm) | Length (ft) |
|--------------------------------------|--|--------------------------------|------------|-------------|-------------|
| <a href="#">3021066F712(R)</a>       | N. American (Type B)                           | NEMA 5-15P                     | IEC 320/C5 | 1880        | 6           |
| <a href="#">1191068F0712(R)</a>      | N. American (Type B)                           | NEMA 5-15P Hospital            | IEC 320/C5 | 2459        | 8           |
| <a href="#">2064262M0712(R)</a>      | Australian (Type I)                            | AS3112 / 3 PRONG               | IEC 320/C5 | 2050        | 7           |
| <a href="#">204B4262M0712(R)</a>     | Brazil (Type N)                                | BRAZIL                         | IEC 320/C5 | 2050        | 7           |
| <a href="#">6023592M5712(R)</a>      | China (Type I)                                 | CCC GR2099                     | IEC 320/C5 | 2500        | 8           |
| <a href="#">23144262M0712(R)</a>     | Europe (Type E)                                | CEE 7/7                        | IEC 320/C5 | 2050        | 7           |
| <a href="#">2084262M0712(R)</a>      | S.Africa (Type M)                              | S.Africa                       | IEC 320/C5 | 2050        | 7           |
| <a href="#">23024262M0712(R)</a>     | Italy (Type L)                                 | CEI 23-16/VII                  | IEC 320/C5 | 2050        | 7           |
| <a href="#">3003316F0712(R)</a>      | Japan (Type B)                                 | JIS 8303 / 3 PINS              | IEC 320/C5 | 1830        | 6           |
| <a href="#">3021066F0712ULPSE(R)</a> | Japan / USA (Type B)                           | JIS 8303 / 3 PINS + NEMA 5-15P | IEC 320/C5 | 1830        | 6           |
| <a href="#">23214262M0712(R)</a>     | Switzerland (Type J)                           | SEV 1011 ( EL 203)             | IEC 320/C5 | 2050        | 7           |
| <a href="#">6104262M0712(R)</a>      | UK, Hong Kong, Singapore, Gulf States (Type G) | BS1363                         | IEC 320/C5 | 2050        | 7           |

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## Approvals

| Logo   | Description  |
|--|--|
| No Logo<br>Applicable  | IEC 60335-1:2010 (Fifth Edition) incl. Corr. 1:2010 and Corr. 2:2011 + A1:2013   |
| No Logo<br>Applicable  | CB for IEC 62368-1:2014 (Second Edition)   |
|                      | CE Certification   |
|                      | 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. 1   |
|                    | CHINA SJ/T 11364-2014, China RoHS Chart: <a href="http://en.globtek.com/globtek-rohs.php">http://en.globtek.com/globtek-rohs.php</a>   |
|                   | Declaration # EA3C N RU Д-US.AД75.B.01052 Custom Union of Russia, Belarus and Kazakhstan<br><a href="http://www.globtek.com/redirect/?loc=gost-certificate-eac-declaration">http://www.globtek.com/redirect/?loc=gost-certificate-eac-declaration</a>                        |
| <b>EFFICIENCY LEVEL VI</b>   | 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  |
| <br>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: <a href="http://en.globtek.com/importing-to-japan.php">http://en.globtek.com/importing-to-japan.php</a> . |
|                   | RCM certificate SAA-161679-EA; Australia and New Zealand Regulatory Compliance, Mark ( <a href="http://rcm.standards.org.au/rcmfaq/rcmfaq.htm">http://rcm.standards.org.au/rcmfaq/rcmfaq.htm</a> )   |
| RoHS   | Specifications of directive 2011/65/EU Annex VI (ROHS-2) with amendment 2015/863-EU (ROHS-3)<br><a href="http://www.ce-mark.com/Rohs%20final.pdf">http://www.ce-mark.com/Rohs%20final.pdf</a>  |
|                   | S-Mark Certificate EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011+A2:2013<br>( <a href="http://www.intertek.com/marks/s/">http://www.intertek.com/marks/s/</a> )  |
|                    | Ukraine UKRSepr (Document: <a href="http://www.globtek.com/html/iso_certificates/GT_Ukraine.pdf">www.globtek.com/html/iso_certificates/GT_Ukraine.pdf</a> )  |
|                    | Japan: Voluntary Control Council for Interference (VCCI)   |
|                    | WEEE: Complies with EU 2012/19/EU ( <a href="http://ec.europa.eu/environment/waste/weee/index_en.htm">http://ec.europa.eu/environment/waste/weee/index_en.htm</a> )<br>Mark is on the label or Molded in the case  |