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Model:GT-96180-18VV-T3A-SP

October 7, 2022

## GT-96180-18VV-T3A-SP

### Information

Model Number

GT-96180-18VV-T3A-SP

Description

GT-96180-18VV-T3A-SP, ICT/ITE Power Supply, 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) , 18-56V in 0.1V increments, Approvals: CB 62368; EAC; UKCA; ETL 62368; cETLus 62368-1; Morocco; S-Mark 62368; IRAM; CE; China RoHS; Class I; Level VI; LPS 60950; RoHS; Ukraine; VCCI; WEEE; cULus; PSE; LPS 62368; ETL; S-Mark 60950; Patent US9838207B2; RCM; CB 60335;

Model Picture



Agency Documents

<http://www.globtek.info/certs/GT-96180-POE/>

CE EC-Declaration

[https://www.globtek.com/pdf/ec\\_declaration/a00a000000FiJiyEAF](https://www.globtek.com/pdf/ec_declaration/a00a000000FiJiyEAF)

RoHS/RoHS2 Declaration

[https://www.globtek.com/pdf/rohs\\_cert/a00a000000FiJiyEAF](https://www.globtek.com/pdf/rohs_cert/a00a000000FiJiyEAF)

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**

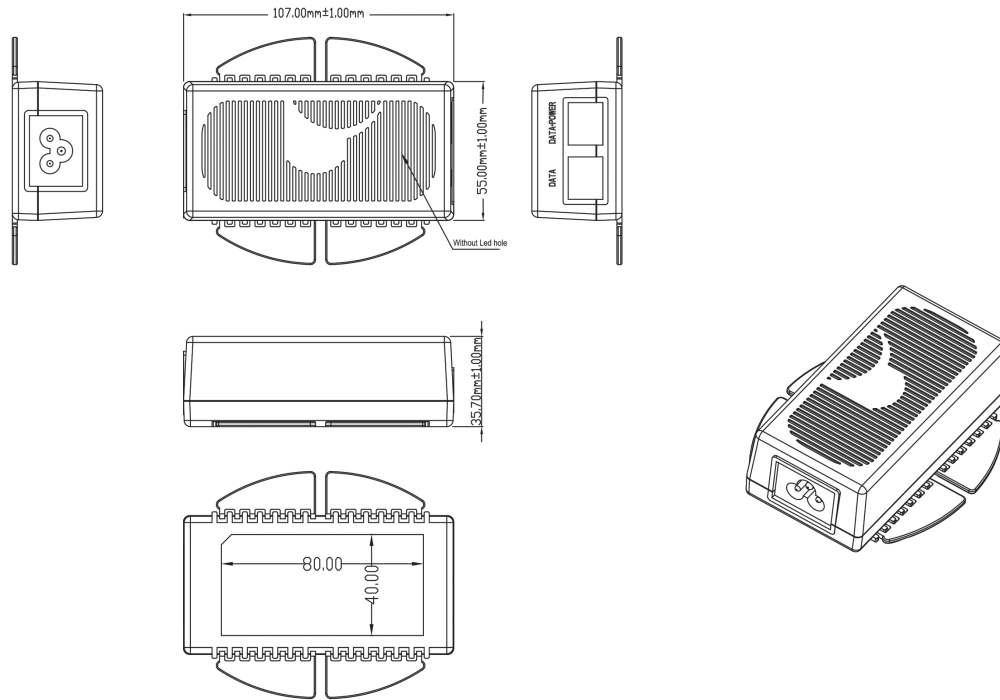
Type	Desktop/External
Technology	Single Port Power Over Ethernet Midspan (IEEE802.3af PoE PSE)
Category	ICT/ITE Power Supply
Input Voltage	100-240V~, 50-60 Hz
I/P Amps (A)	0.6A
Wattage (W)	18.0
Vout Range (V)	18-56
Efficiency Level	USA DOE Level VI / Eco-design Directive 2009/125/EC, (EU) 2019/1782
Ingress 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
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## SPECIFICATIONS

GlobTek's GT-96180-1856 Active Power over Ethernet Midspan Injector offers a cost effective and reliable solution for remote powering of wireless LAN Access Points, voice over IP (VoIP) phones, security cameras, RFID readers and other IP terminals up to 18W, using existing network infrastructure. This injector is configured to provide 18W of power per port over two pairs (Mode B) 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 Base-T data rates
- Universal input power from 100V<sub>AC</sub> to 240V<sub>AC</sub>
- Unique patented green design: Compliant to DoE Efficiency level VI requirement
- Full protection for over-voltage and over-current
- Compact 104 x 54 x 40 mm (w/o mounting 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 Voltage:** 90-264 V<sub>AC</sub> (85-264V<sub>AC</sub> @ 85% of rated output power)

**Input Line Frequency:** 47-63Hz

**Input Current:** <0.6A RMS @ 90V<sub>AC</sub>, @ full load

**Inrush Current:** 60A (typ.), cold start @ 25°C at 230V<sub>AC</sub>

**No load Power:** <100mW

**Efficiency:** >85% (typ.), 4-point average efficiency, @ full load/230 V<sub>AC</sub>

**Turn on-delay:** 1 second typical @ 115V<sub>AC</sub>

**Input Line Protection:** MOV transient protected

**Hold-up time:** 8ms typical at nominal input voltage and full load

**Leakage current:** <100µA

**Isolation:** 3000 V<sub>AC</sub>

### **OUTPUT**

**Number of Ports:** 1

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

**Power Injection Method:**

IEEE 802.3af "Midspan" Mode B, using pins 4 & 5 (DC+) and 7 & 8 (DC-)

*Mode A configuration, using pins 1 & 2 and 3 & 6 available upon special request*

Please read our article [Power over Ethernet \(PoE\) Mode A vs. Mode B](#) for more information.

**Port Voltage:** 56V<sub>DC</sub> (nom.), measured between pins 4 & 5 and 7 & 8

**Port Current:** 0 to 320mA (max.)

**Port Power:** 18W (max.)

**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. Port will shut down during overload and auto recover when overload is removed.

**Port Short Circuit Protection:** Complies with IEEE 802.3af Requirements. Port will shut down 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 with four possible states:

1. No light: No powered device detected at end of Ethernet cable
2. Flashing at 1.5Hz: Detection (hand-shaking) in-process with Powered Device (PD)
3. Continuous light: Good connection with Powered Device (PD)
4. Flashing at 10Hz: Over current condition

### **B) ENVIRONMENTAL**

**Temperature (Operating)**: -10°C to 40°C

**Temperature (Storage)**: -30°C to 80°C

**Humidity**: 0% to 95% relative humidity, non-condensing

**Altitude**: Operating, up to 5000m

### **C) MECHANICAL / ENCLOSURE**

**Housing**: High impact plastic, 94V-0 polycarbonate, non-vented

**Markings**: Label, pad printed, and/or laser-etched onto the case

**Dimensions**: 104x54x40mm (w/o mounting flange)

**Weight**: 0.35lb (159g)

#### **AC Input Mechanical Options:**

Desktop with C6, C8, C14 or C18 IEC Inlet.

Hybrid housing (Desktop or inter-changeable blade wall plug-in), Class I or Class II input

**Data and Data+Power Connector**: Fully Shielded RJ45

### **D) EMISSIONS AND IMMUNITY**

**Emissions**: 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

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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. Reduced output power rating
3. High reliability PCB laminate with plated through holes for IPC610 Class 2 compliance
4. Special housing colors
5. 48V to 54V output voltage, contact GlobTek for availability

**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

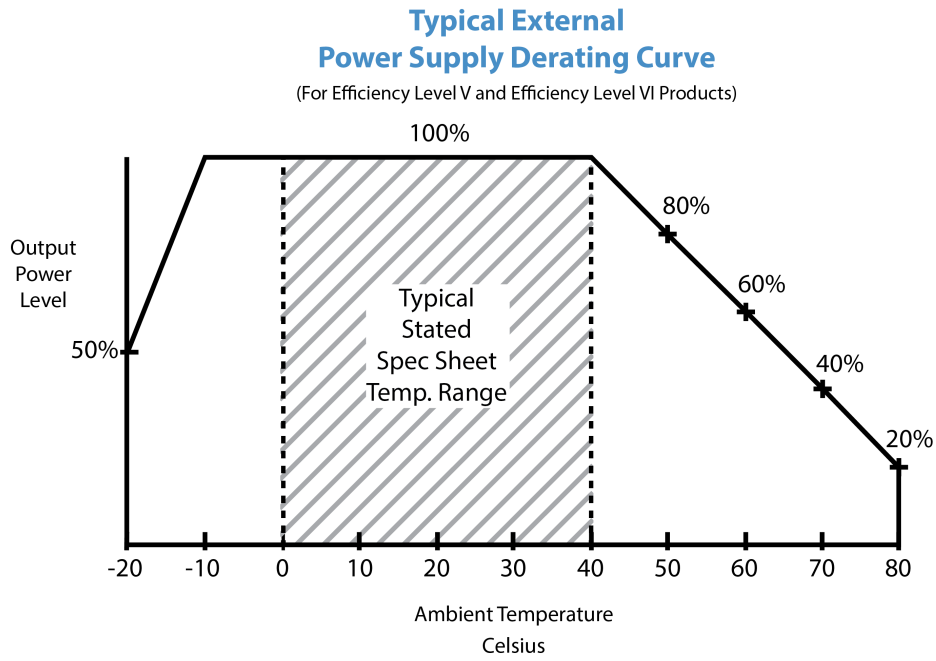


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# DERATING CURVE



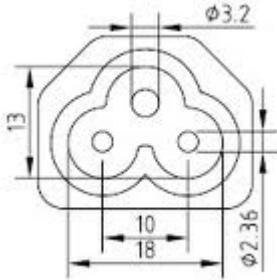
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**INPUT CONFIGURATION**

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="#">2194262M0712(R)</a>	Argentina (Type I)	IRAM 2073	IEC320/C5	2050	6.7
<a href="#">2064262M0712(R)</a>	Australian (Type I)	AS3112 / 3 PRONG	IEC 320/C5	2000	6.6
<a href="#">204B4262M0712(R)</a>	Brazil (Type N)	BRAZIL	IEC 320/C5	2000	6.6
<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	6.6
<a href="#">2313K3432M0712(R)</a>	Korea (Type F)	KS C 8305	IEC 320/C5	2000	6.6
<a href="#">205IN4262M0712(R)</a>	India (Type D)	India IS 1293 (also known as IA16A3 or BS546)	IEC320/C5	2000	6.6
<a href="#">377C4262M0712(R)</a>	Israel (Type H)	ISL	IEC320/C5	2050	6.7
<a href="#">23024262M0712(R)</a>	Italy (Type L)	CEI 23-16/VII	IEC 320/C5	2000	6.6
<a href="#">3003316F0712(R)</a>	Japan (Type B)	JIS 8303 / 3 PINS	IEC 320/C5	1830	6
	Japan / USA	JIS 8303 / 3 PINS +			

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<a href="#">3021066F0712ULPSE(R)</a> (Type B)	NEMA 5-15P	IEC 320/C5 1830	6
<a href="#">2054262M0712(R)</a>	S. Africa (Type D) South Africa SABS164-1 (6A type plug)	IEC320/C5 2050	6.7
<a href="#">2084262M0712(R)</a>	S.Africa (Type M) South Africa SABS164-1 (16A type plug)	IEC 320/C5 2000	6.6
<a href="#">23214262M0712(R)</a>	Switzerland (Type J) SEV 1011 ( EL 203)	IEC 320/C5 2000	6.6
<a href="#">3003316F0712(R)</a>	Taiwan (Type B) BSMI	IEC 320/C5 2000	6.6
<a href="#">6104262M0712(R)</a>	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	CB for IEC 62368-1:2014 (Second Edition)
No Logo Applicable	IEC 60335-1:2010 (Fifth Edition) incl. Corr. 1:2010 and Corr. 2:2011 + A1:2013
	CE Mark: tested to comply with EN55022:2006/A1:2007 Class B, EN610003-2, EN610003-3 including EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6N EN61000-4-11; EMI: Complies with EN55011 CLASS B and FCC Part 15B - On label or Molded in case
	Audio/Video, Information And Communication Technology Equipment - Part 1: Safety Requirements [UL 62368-1:2014 Ed.2] Audio/Video, Information And Communication Technology Equipment - Part 1: Safety Requirements [CSA C22.2#62368-1:2014 Ed.2]
	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.
	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>
Conforms to UL STD. 62368-1 Certified to CSA STD C22.2 NO.62368-1	Conforms to UL STD. 62368-1 Certified to CSA STD C22.2 NO.62368-1
	UL60950-1, cULus to UL 60950-1 E170507
	Declaration ДС № EAЭС N RU Д-US.KA01.B.10453_19 Custom Union of Russia, Belarus and Kazakhstan <a href="http://www.globtek.com/redirect/?loc=gost-certificate-eac-declaration">http://www.globtek.com/redirect/?loc=gost-certificate-eac-declaration</a>

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	Indoor Use Only - Mark is on the label or Molded in the case
 DC-E-G71-0031 PRECAUCION: PARA USO EN EQUIPOS ELECTRONICOS SOLAMENTE	IRAM certificate to IEC 62368-1:2014
 Glob Tek, Inc.	JAPAN TUV R-PSE, Cert. No. JD 50314327, to J60950-1(H26) , J55022(H22),J3000(H25)[DC15?30V]. Please reference the following website for guidelines on PSE regulations: <a href="http://en.globtek.com/importing-ite-and-medical-power-supplies-ac-adaptors-to-japan/">http://en.globtek.com/importing-ite-and-medical-power-supplies-ac-adaptors-to-japan/</a>
EFFICIENCY LEVEL 	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)
LPS	Limited Power Source 60950
LPS	Limited Power Source 62368
	Morocco SDoC declaration <a href="http://www.globtek.info/certs/Morocco%20SDoC%20Declaration/">http://www.globtek.info/certs/Morocco%20SDoC%20Declaration/</a>
Patent US9838207B2	Protected by US and international patents, US patent number US9838207B2
 SAA-161679-EA	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) <a href="http://www.ce-mark.com/Rohs%20final.pdf">http://www.ce-mark.com/Rohs%20final.pdf</a>
 Intertek	S-Mark Certificate EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011+A2:2013 ( <a href="http://www.intertek.com/marks/s/">http://www.intertek.com/marks/s/</a> )

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	S-Mark Certificate EN 62368-1:2014 + A11 ( <a href="http://www.intertek.com/marks/s/">http://www.intertek.com/marks/s/</a> )
	UKCA Certification
	Ukraine UKRSepra (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> ) Mark is on the label or Molded in the case