TekSet Rental S.r.l.

via GIUSEPPE DI VITTORIO 9
20037 PADERNO DUGNANO (MI) ITALY
CONTACT US: (+39) 0291082905 - WWW. TEKSET.IT

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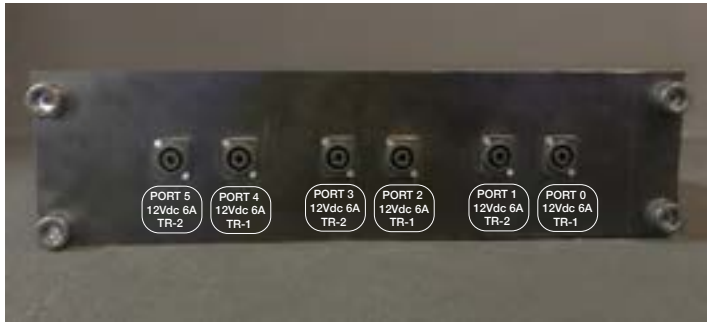
Informazioni

BLACK BOX è un'unità di alimentazione e controllo per la gestione di sistemi led dinamici.

Convertitore di segnali da Artnet a SPI per 1.020 pixel suddivisi su 6 porte alimentate.
Sistema custom by Tekset.



Dimensioni:

- 50 x 36 x 13 h cm

Peso

- 16 kg

Dati Elettrici:

- 100/250 Vac 50/60 Hz
- 400 mA standbay / 7A at full output load

Segnale di controllo:

- Artnet

Chipset controllabili:

- UCS 1903
- WS 2811
- WS 2812

Alimentazione Led:

- 12Vdc 44Amp

SCHEMA ELETTRICO

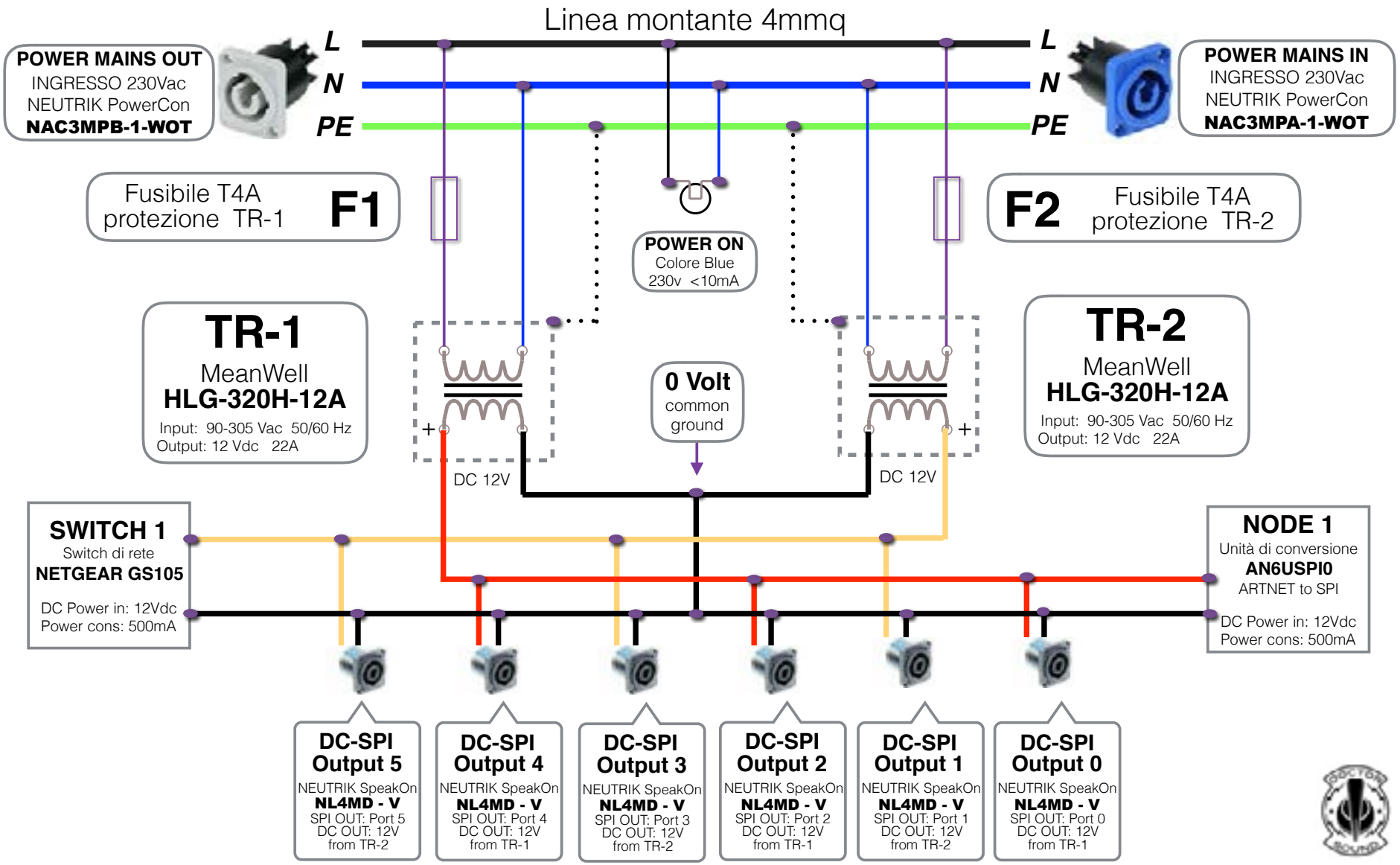
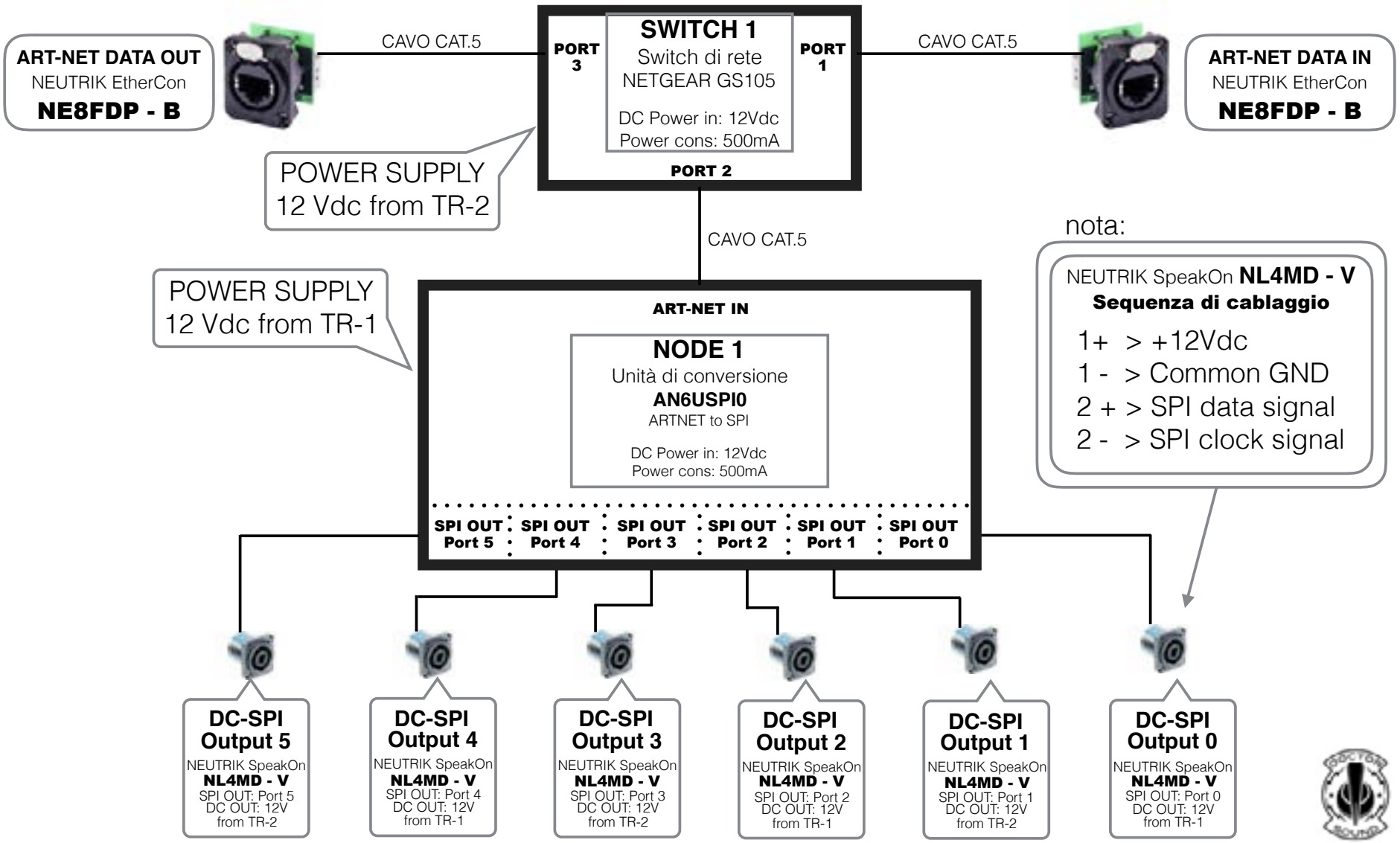


DIAGRAMMA DISTRIBUZIONE SEGNALI DIGITALI



CERTIFICAZIONI MEAN WELL (A)

320W Single Output Switching Power Supply **HLG-320H series**

■ Features :
- Universal AC input / Full range (up to 305VAC)
- Built-in active PFC function
- High efficiency up to 95%
- Protections: Short circuit / Over current / Over voltage / Over temperature
- Cooling by free air convection
- OCP point adjustable through output cable or internal potentiometer
- IP67 / IP65 design for indoor or outdoor installations
- Type HL LED Driver for use in Class Ⅰ, Division 2 hazardous location luminaires
- Three in one dimming function (1~10Vdc or PWM signal or resistance)
- Suitable for LED lighting and street lighting applications
- Compliance to worldwide safety regulations for lighting
- Suitable for dry / damp / wet location
- 7 years warranty (Note.10)

SELV IP65 IP67 CBCE

HLG-320H-12 [A] Blank : IP67 rated. Cable for I/O connection.
A : IP65 rated. Output voltage and constant current level can be adjusted through internal potentiometer.
B : IP67 rated. Constant current level adjustable through output cable with 1~10Vdc or PWM signal or resistance.
C : Terminal block for I/O connection. Output voltage and constant current level can be adjusted through internal potentiometer.
D (option) : IP67 rated. Timer dimming function, contact MEAN WELL for details.

SPECIFICATION

MODEL		HLG-320H-12	HLG-320H-15	HLG-320H-20	HLG-320H-24	HLG-320H-30	HLG-320H-36	HLG-320H-42	HLG-320H-48	HLG-320H-54
OUTPUT	DC VOLTAGE	12V	15V	20V	24V	30V	36V	42V	48V	54V
	CONSTANT CURRENT REGION Note.4	6 ~ 12V	7.5 ~ 15V	10 ~ 20V	12 ~ 24V	15 ~ 30V	18 ~ 36V	21 ~ 42V	24 ~ 48V	27 ~ 54V
	RATED CURRENT	22A	19A	15A	13.34A	10.7A	8.9A	7.65A	6.7A	5.95A
	RATED POWER	264W	285W	300W	320.16W	321W	320.4W	321.3W	321.6W	321.3W
	RIPPLE & NOISE (max.) Note.2	150mVp-p	150mVp-p	150mVp-p	150mVp-p	200mVp-p	250mVp-p	250mVp-p	250mVp-p	350mVp-p
	VOLTAGE ADJ. RANGE Note.6	10.8 ~ 13.5V	13.5 ~ 17V	17 ~ 22V	21 ~ 26V	26 ~ 32V	32 ~ 39V	38 ~ 45V	43 ~ 52V	49 ~ 58V
	CURRENT ADJ. RANGE	Can be adjusted by internal potentiometer A type and C type only								
		11 ~ 22A	9.5 ~ 19A	7.5 ~ 15A	6.67 ~ 13.34A	5.35 ~ 10.7A	4.45 ~ 8.9A	3.8 ~ 7.65A	3.35 ~ 6.7A	2.97 ~ 5.95A
	VOLTAGE TOLERANCE Note.3	±3.0%	±2.0%	±1.5%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	LOAD REGULATION	±2.0%	±1.5%	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	SETUP, RISE TIME Note.8	2500ms,80ms/115VAC 500ms,80ms/230VAC at full load								
	HOLD UP TIME (Typ.)	15ms at full load 230VAC /115VAC								
INPUT	VOLTAGE RANGE Note.5	90 ~ 305VAC 127 ~ 431VDC								
	FREQUENCY RANGE	47 ~ 63Hz								
	POWER FACTOR (Typ.)	PF>0.98/115VAC, PF>0.95/230VAC, PF>0.94/277VAC at full load (Please refer to "Power Factor Characteristic" curve)								
	TOTAL HARMONIC DISTORTION	THD< 20% when output loading ≧ 50% at 115VAC/230VAC input and output loading ≧ 75% at 277VAC input								
	EFFICIENCY (Typ.) (230Vac)	91%	92.5%	93.5%	94%	94%	94.5%	95%	95%	95%
	EFFICIENCY (Typ.) (277Vac)	91.5%	93%	94%	94.5%	94.5%	95%	95%	95%	95%
	AC CURRENT (Typ.)	3.5A / 115VAC 1.65A / 230VAC 1.45A / 277VAC								
	INRUSH CURRENT(Typ.)	COLD START 70A(twidth=1010μs measured at 50% Ipeak) at 230VAC								
	MAX. No. of PSUs on 16A CIRCUIT BREAKER	1 unit (circuit breaker of type B) / 2 units (circuit breaker of type C) at 230VAC								
	LEAKAGE CURRENT	<0.75mA / 277VAC								
PROTECTION	OVER CURRENT Note.4	95 ~ 108%								
		Protection type : Constant current limiting, recovers automatically after fault condition is removed								
	SHORT CIRCUIT	Hiccup mode, recovers automatically after fault condition is removed								
	OVER VOLTAGE	14 ~ 17V	17.5 ~ 21V	22.5 ~ 27V	27 ~ 33V	33 ~ 37V	40 ~ 46V	46.5 ~ 53V	53.5 ~ 60V	59 ~ 65V
		Protection type : Shut down and latch off o/p voltage, re-power on to recover								
	OVER TEMPERATURE	Shut down and latch off o/p voltage, re-power on to recover								
ENVIRONMENT	WORKING TEMP.	-40 ~ +70℃ (Refer to "Derating Curve")								
	WORKING HUMIDITY	20 ~ 95% RH non-condensing								
	STORAGE TEMP., HUMIDITY	-40 ~ +80℃, 10 ~ 95% RH								
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 50℃)								
	VIBRATION	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes								
SAFETY & EMC	SAFETY STANDARDS Note.7	UL8750(type"HL"), CSA C22.2 No. 250.0-08, EN61347-1, EN61347-2-13 independent, IP65 or IP67 (except for HLG-320H C type), J61347-1, J61347-2-13 (except for HLG-320H C type) approved								
	WITHSTAND VOLTAGE	I/P-O/P:3.75KVAC I/P-FG:2KVAC O/P-FG:1.5KVAC								
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25℃/ 70% RH								
	EMC EMISSION	Compliance to EN55015, EN55022 (CISPR22) Class B, EN61000-3-2 Class C (≧50% load) ; EN61000-3-3								
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN61547, EN55024, light industry level (surge 4KV), criteria B								
OTHERS	MTBF	157.1K hrs min. MIL-HDBK-217F (25℃)								
	DIMENSION	252*90*43.8mm (L*W*H)								
	PACKING	1.88Kg; 8pcs/16Kg/0.92CUFT								

NOTE
1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
3. Tolerance : includes set up tolerance, line regulation and load regulation.
4. Please refer to "DRIVING METHODS OF LED MODULE".
5. Derating may be needed under low input voltages. Please check the static characteristics for more details.
6. A type and C type only.
7. Safety and EMC design refer to EN60598-1, subject CNS15233, GB7000.1, FCC part18.
8. Length of set up time is measured at cold first start. Turning ON/OFF the power supply may lead to increase of the set up time.
9. The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again.
10. Refer to warranty statement.
11. To fulfill requirements of the latest ErP regulation for lighting fixtures, this LED power supply can only be used behind a switch without permanently connected to the mains.

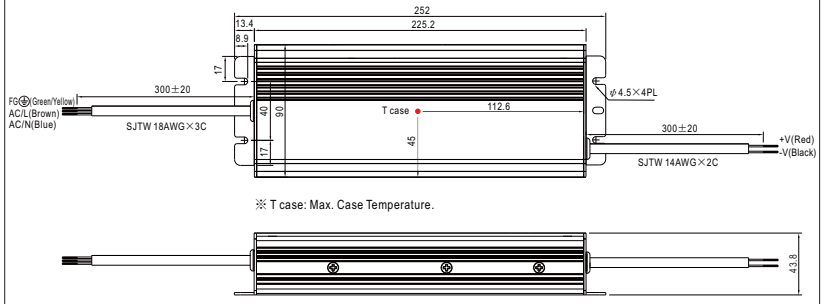
File Name:HLG-320H-SPEC 2015-08-19

320W Single Output Switching Power Supply **HLG-320H series**

■ **Mechanical Specification**

Case No.202A Unit:mm

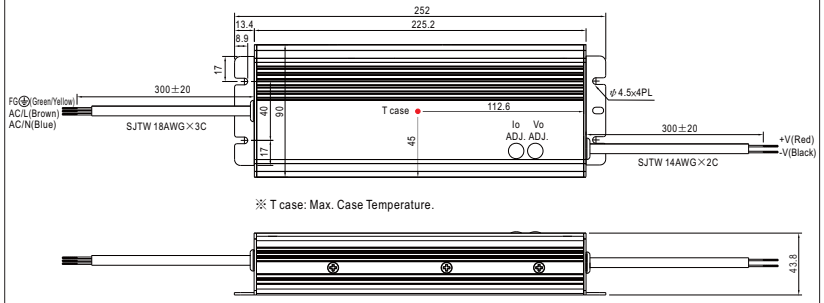
Blank:(HLG-320H)



※ T case: Max. Case Temperature.

※IP67 rated. Cable for I/O connection.

A Type:(HLG-320H-_A)



※ T case: Max. Case Temperature.

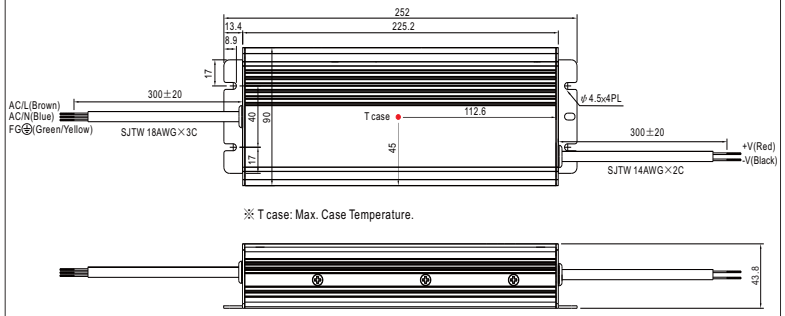
※ IP65 rated. Output voltage and constant current level can be adjusted through internal potentiometer.
(Can access by removing the rubber stopper on the case.)

CERTIFICAZIONI MEAN WELL

B

320W Single Output Switching Power Supply **HLG-320H series**

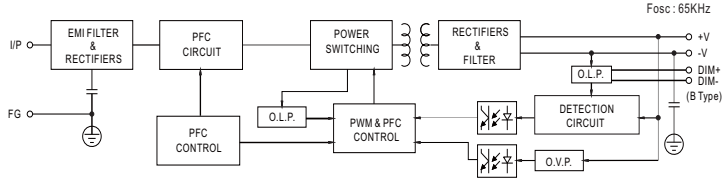
D Type(option):(HLG-320H-_D)



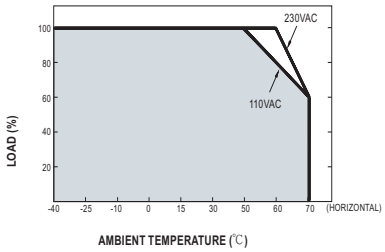
※ T case: Max. Case Temperature.

※ IP67 rated. Timer dimming function, contact MEAN WELL for details.

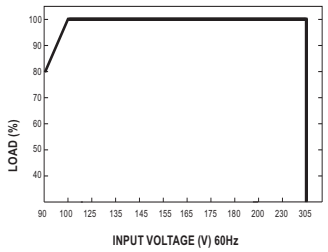
Block Diagram



Derating Curve

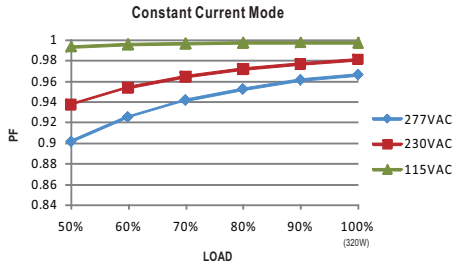


Static Characteristics



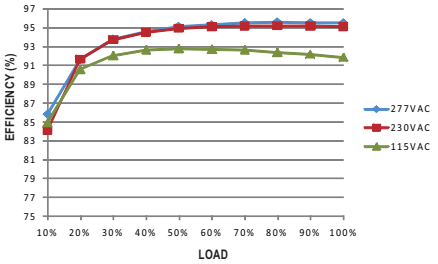
320W Single Output Switching Power Supply **HLG-320H series**

Power Factor Characteristic



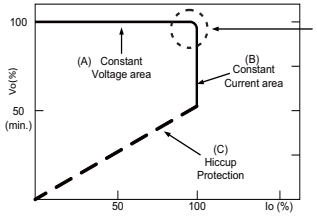
EFFICIENCY vs LOAD (48V Model)

HLG-320H series possess superior working efficiency that up to 95% can be reached in field applications.



DRIVING METHODS OF LED MODULE

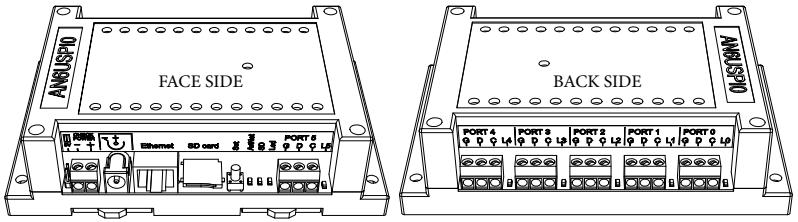
There are two major kinds of LED drive method "direct drive" and "with LED driver".
A typical LED power supply may either work in "constant voltage mode (CV) or constant current mode (CC)" to drive the LEDs.
Mean Well's LED power supply with CV+ CC characteristic can be operated at both CV mode (with LED driver, at area (A) and CC mode (direct drive, at area (B).



In the constant current region, the highest voltage at the output of the driver depends on the configuration of the end systems.
Should there be any compatibility issues, please contact MEAN WELL.

Typical LED power supply I-V curve

Manuale d'uso AN6USPI0 (A)



Components on board:

- Two connectors for power supply
- 10/100 Ethernet
- SDmicro flash card
- Control button «Set»
- Art-Net LED activity («Art-Net»)
- File system LED activity («SD»)
- Port LED activity («L0»...«L5»)
- Power LED («Led»)
- Six connectors for SPI output

Mechanical:

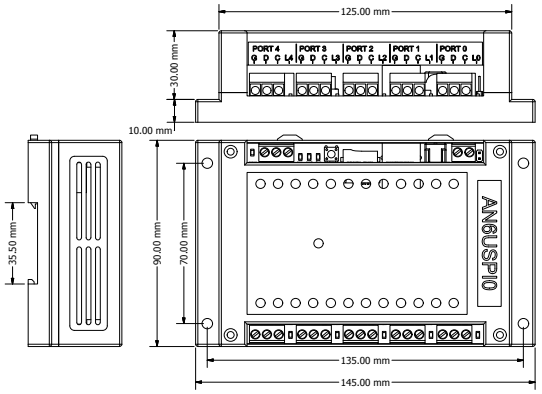
Weight: 170 grams. Installation on DIN rail 35 mm.

Electrical:

- Supply voltage 7V - 24V
- Supply 5V
- Supply current of the controller 500 mA
- SPI lines have overload protection
- Operation Range -40°C to +70°C

Features of firmware:

- Support led chip: WS2801,WS2811, WS2812, TM1803, TM1804,TM1809,TM1812,UCS1903, UCS1909, UCS1912, UCS2903.
- Ethernet protocol Art-Net III
- Up to six ports output. Up to 170 pixels per port.
- Web server for configuration net and Art-Net
- 50 fps. for video applications on every universe
- 8K buffer for receiving UDP packets
- 4K buffer for each universe.



1. Connect the power supply 7 - 24V and Ethernet

1.1 Power:

Power connection may be with any connectors. DC adapter should have output current 500mA. minimum. The supply voltage must be 7V - 24V. All connected devices must be grounded.

1.1.1 Power 5V:

If you need to use controller with 5V, you must close the switch. The controller will be burn if voltage is higher than 5 volts. We recommend to close the switch after checking the power supply's voltage.

1.2 Configure network:

These is the defaults settings:

IP: 2.0.0.2
MASK: 255.0.0.0
MAC: 12:45:78:98:34:76
Gateway IP: 192.168.0.1

These settings can be changed via the web server, or Art-Net software (Art-Net test Software).

IP: 2.0.0.2
MASK: 255.0.0.0

These settings can be changed only via the web server.

MAC: 12:45:78:98:34:76
Gateway IP: 192.168.0.1

1.3 Setup network default procedure:

a. Disable controller's power supply.
b. Push button «Set». Hold down the button.
c. Enable controller's power supply.
d. Wait two seconds.
e. Release the button «Set»

Manuale d'uso AN6USPI0 (B)

1.4 Example of network settings for the connected PC:

2. SDmicro card

2.1 Function:

a. Card necessary to store files of the web server and configuration.
The card format is: FAT16/32.
b. The directory structure is:

This structure you can not change. Not permitted to modify the files in WEB directory: «INDEX.HTM», «DEVCTR.HTM», «ARTP0B.HTM». Directory «CFG» file contains «AN_6_20.CFG». This file contains all the settings of the controller.
c. All the attributes of the files must be in the off position.
d. Replace a file «AN_6_20.GFG» on the base, makes the configuration as a default.

3. Conrol button «Set»

3.1 This button is used: Setup network default procedure
3.2 Start firmware upgrade.
a. Disable controller power supply.
b. Unpack and copy file «an6_00.img» to miniSD card, in the main directory . Insert the miniSD card to miniSD slot.
c. Push button «Set». Hold down the button.
d. Enable controller's power supply.
e. Wait for downloading of the image.
f. Delete «an6_00.img» file from the flash.

4. Art-Net LED activity

4.1 Displays the reception of the packets Art-Net and sACN.
4.2 Displays the flash memory operations of the processor.

5. File system LED activity

5.1 Displays the file system requests.
5.2 Displays errors of the image loading.

6. Port LED activity

6.1 Shows sendind port data.
6.2 Indicates the receiving data of the universe.

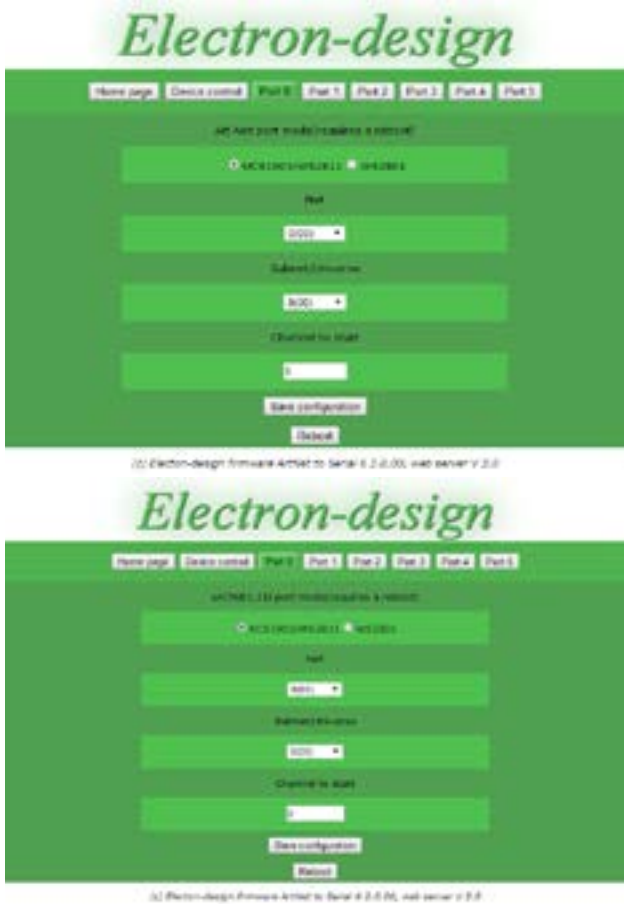
7. Device configuration

7.1 To enter you need to dial in your browser: http://2.0.0.2 (if address as default). Click on the button «Device control».
7.2 «ShortName» and «LongName» - uses in Art-Net mode.
7.3 «Source IP» - the main address of the controller. All Art-Net packets must be sent to this address.
7.4 «Gateway IP» in the LAN does not use.
7.5 «Subnet Mask»
7.6 «MAC address» - need to select a different address for different controllers.
7.7 «Virtual IP» - look «9. Port 5 and 6 configuration».
7.8 «Art-Net» and «sACN» - choose a protocol.
7.9 «Save configuration» -saving changes. Changes will be applied after a reset (button «Reboot») or power Off->On.
7.10 If you use ArtNet and you have more then 12 universes, you must configure the software for sending your data as UNICAST (to main IP of controllers).

Manuale d'uso AN6USPI0 Ⓒ

8. Port configuration

8.1 The upper switch is used to select the type of the chip.
8.2 In Art-Net mode, 0 - 255 combinations «Subnet/Universes»
8.3 In sACN mode you should not set Subnet/Universe as 0, only 1- 255 combinations.
8.4 Each port can operate in its different «net».



9. Port 5 and 6 configuration

9.1 Art-Net protocol has a single IP address for 4 ports. Ports 5 and 6 have a virtual IP address. This address is required for the automatic detection of ports 5 and 6.
9.2 Ports 5 and 6 always get messages to the IP address of the controller (to the main adress). If there are more than one controller in the system, then necessary a UNICAST data transmission. In this case, you must configure the port 5 and 6 manually.

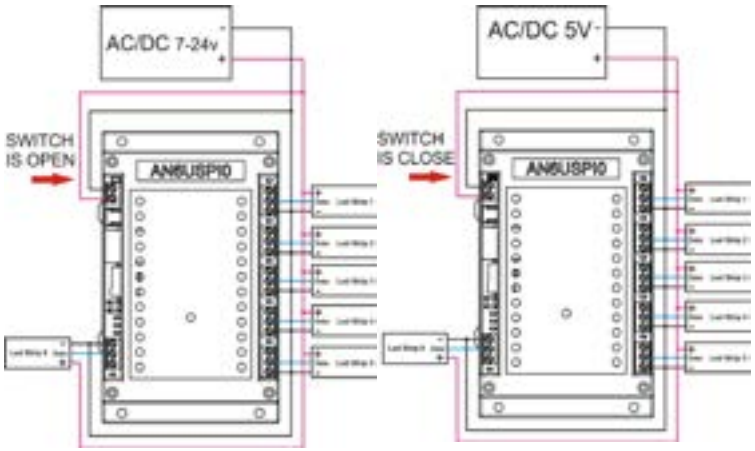
10. Firmware updates.

10.1 Procedure: watch on YouTube.
10.2 Download the latest firmware.

11. Universes and network. Multicontroller mode.

11.1 The maximum 12 of universes transmitted over the network as BROADCAST.
11.2 The maximum 400 of universes transmitted over the 100 Mbit network as UNICAST (Ar-Net III).
11.3 In the mode sACN, the number of universes in the network limited by the the network.

12. Connecting the power supply.



13. SPI port connectors.

13.1 Wires DATA or CLOCK must have a length less than 4.5 meters.
13.2 On PCB installed 33 ohm resistors for wires DATA and CLOCK.

Manuale d'uso AN6USPI0 (D)

14. DMX-Workshop

15. jinx configuration

16. Soft configuration

16.1 Madrix patch.
16.2 Freestyler connect.

Links:
Art-Net protocol.
Led DMX decoder.
Led DMX converter DMX to WS2801
Led DMX converter DMX to UCS1903,WS2811,WS2812(B)
Art-Net to DMX controller
FreeStyler
Madrix
Jinx

Certificati VDE connettori PowerCon™ (A)

VDE Prüf- und Zertifizierungsinstitut

GUTACHTEN MIT FERTIGUNGSÜBERWACHUNG

CERTIFICATE OF CONFORMITY WITH FACTORY SURVEILLANCE

Neutrik AG
Im alten Riet 143
9494 SCHAAN
LIECHTENSTEIN

ist berechtigt, für ihr Produkt /
is authorized to use for their product

Steckverbinder (COC)
Connector (COC)

die hier abgebildeten markenrechtlich geschützten Zeichen
für die ab Blatt 2 aufgeführten Typen zu benutzen /
the legally protected Marks as shown below for the types referred to on page 2 ff.

VDE REG.-Nr. 6360 oder/or VDE oder/or VDE-REG.-Nr. 6360
REG.-Nr. 6360

Geprüft und zertifiziert nach /
Tested and certified according to

DIN EN 61984 (VDE 0627):2009-11; IEC 61984:2009

Aktenzeichen: 2115300-1431-0001 / 160300
File ref.:
Ausweis-Nr. 40014741 Blatt 1
Certificate No. *Page*
Weitere Bedingungen siehe Rückseite und Folgeblätter /
further conditions see overleaf and following pages

Offenbach, 2005-07-18
(letzte Änderung/updated: 2013-04-25)

VDE Prüf- und Zertifizierungsinstitut GmbH
VDE Testing and Certification Institute
Zertifizierungsstelle / *Certification*

VDE Zertifikate sind nur gültig bei Veröffentlichung unter:
VDE certificates are valid only when published on:
http://www.vde.com/certificat
http://www.vde.com/certificate

VDE

VDE Prüf- und Zertifizierungsinstitut
Gutachten mit Fertigungsüberwachung

Ausweis-Nr. / Certificate No. 40014741 Blatt / page 2

Name und Sitz des Genehmigungs-Inhabers / *Name and registered seat of the Certificate holder*
Neutrik AG, Im alten Riet 143, 9494 SCHAAN, LIECHTENSTEIN

Aktenzeichen / *File ref.*: 2115300-1431-0001 / 160300 / CC3 / SV
letzte Änderung / *updated*: 2013-04-25 Datum / *Date*: 2005-07-18

Dieses Blatt gilt nur in Verbindung mit Blatt 1 des Gutachtens mit Fertigungsüberwachung Nr. 40014741.
This supplement is only valid in conjunction with page 1 of the Certificate of Conformity with factory surveillance No. 40014741.

Steckverbinder (COC)
Connector (COC)

Typ(en) / *Type(s)*:

1) NAC3FCA; NAC3FCA-JAPAN
2) NAC3MPA; NAC3MPA-WOT
NAC3MPA-1; NAC3MPA-1-WOT
3) NAC3FCB; NAC3FCB-JAPAN
4) NAC3MPB; NAC3MPB-WOT
NAC3MPB-1; NAC3MPB-1-WOT
5) NAC3MM
NAC3MM-1

Weitere Angaben *Further information*	Anlage Nr. 100A; 100B; 200A; 300A; 1000 *Enclosure No. 100A; 100B; 200A; 300A; 1000*
Hinweis	Steckverbinder NAC3.(FCA; FCB) mit Kabelabfangung (weiße Spannzange) 5 mm - 11 mm Durchmesser (schwarze Spannzange) 9,5 mm - 15 mm Durchmesser
Notice	*Connector NAC3.(FCA; FCB) with cable clamp* *(White clamping device) 5 mm - 11 mm Diameter* *(Black clamping device) 9,5 mm - 15 mm Diameter*

Fortsetzung siehe Blatt 3 /
continued on page 3

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Certificati VDE connettori PowerCon™ (B)

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Gutachten mit Fertigungsüberwachung

Ausweis-Nr. / Certificate No. 40014741 — Blatt / page 3

Name und Sitz des Genehmigungs-Inhabers / *Name and registered seat of the Certificate holder*
Neutrik AG, Im alten Riet 143, 9494 SCHAAN, LIECHTENSTEIN

Aktenzeichen / *File ref.* 2115300-1431-0001 / 160300 / CC3 / SIV
letzte Änderung / *updated* 2013-04-25
Datum / *Date* 2005-07-18

Dieses Blatt gilt nur in Verbindung mit Blatt 1 des Gutachtens mit Fertigungsüberwachung Nr. 40014741.
This supplement is only valid in conjunction with page 1 of the Certificate of Conformity with factory surveillance No. 40014741.

Anmerkung	Wenn der Anwendungsbereich des/der Steckverbinder(s) auf Grund der vielseitigen Anwendungsmöglichkeiten darüber hinaus zusätzliche Anforderungen verlangt, als in dieser Norm festgelegt, so sind diese Steckverbinder entsprechend ihrem Verwendungszweck und den dafür geltenden IEC/EN/VDE-Normen ergänzend zu beurteilen.
Remark	*In case the application of a connector determines additional requirements exceeding those specified in this standard, the said connector shall be assessed in line with this application in accordance with the relevant IEC/EN/VDE standard(s).*

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Section CC3

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Gutachten mit Fertigungsüberwachung

Ausweis-Nr. / Certificate No. 40014741 — Beiblatt / Supplement

Name und Sitz des Genehmigungs-Inhabers / *Name and registered seat of the Certificate holder*
Neutrik AG, Im alten Riet 143, 9494 SCHAAN, LIECHTENSTEIN

Aktenzeichen / *File ref.* 2115300-1431-0001 / 160300 / CC3 / SIV
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Datum / *Date* 2005-07-18

Dieses Beiblatt ist Bestandteil des Gutachtens mit Fertigungsüberwachung Nr. 40014741.
This supplement is part of the Certificate of Conformity with factory surveillance No. 40014741.

Steckverbinder (CDC)
Connector (CDC)

Fertigungsstätte(n)
Place(s) of manufacture

Referenz/Reference **30000646**	Neutrik AG Im alten Riet 143 FL-9494 SCHAAN
Referenz/Reference **30021743**	Neutrik UK Ltd. Westridge Business Park Colthey Way RYDE Isle of Wight PO33 1QT UNITED KINGDOM

VDE Prüf- und Zertifizierungsinstitut GmbH
VDE Testing and Certification Institute
Abteilung CC3
Section CC3

Manuale Net Gear GS 105

GS105
5-port Gigabit Ethernet Switch
10/100/1000 Mbps

Gigabit Power, 10/100 Simplicity

- *Help is there when you need it! NETGEAR provides 24x7 technical support* in English, with selected local language support during office hours.*

For a high-speed network on a small scale, nothing delivers likes this compact powerhouse. Equipped with five auto-speed-sensing 10/100/1000 Mbps UTP ports, this affordable switch gives your network the capacity to handle huge workloads. It moves very large files across your network instantly, and lets you painlessly integrate 10, 100, and 1000 Mbps devices on your network. Packed with ease-of-use features to simplify your networking experience, its trim design makes it an easy fit for a desk or mounted on a wall. The durable metal chassis protects interior working parts and the fan-less design results in silent operation. Matched with NETGEAR's thorough testing, the GS105 switch provides long-lasting performance you can count on.

Potent Moves huge files fast! Features five high-speed, auto-switching 10/100/1000 Mbps Ethernet connections. And because Gigabit Ethernet is a full duplex standard, you get up to 2000 Mbps on each port.

Capable Integrates 10, 100, and 1000 Mbps devices on the same network. Every port automatically senses the right speed and full/half duplex mode, and Auto Uplink™ technology automatically adjusts for straight-through or crossover cables.

Trim Sized to save space, this sturdy metal 5-port switch is compact and fits easily on a desk or mounts on a wall, making it ideal for home and small office environments.

Easygoing LEDs embedded in RJ-45 jacks make for easy monitoring. Provides noiseless operation. Supports PC or Mac® O/S.

NETGEAR
Everybody's Connecting.™

switch

Technical Specifications

- **Network Ports:**
  - 5 auto-speed sensing UTP ports
- **Forwarding Mode:**
  - Store-and-Forward
  - 256K On-Chip Packet Buffering
- **Performance:**
  - **Bandwidth:** 10 Gbps (non-blocking)
  - **Forward Rate (10 Mbps port):** 14,800 packets/sec
  - **Forward Rate (100 Mbps port):** 148,000 packets/sec
  - **Forward Rate (1000 Mbps port):** 1,480,000 packets/sec
  - **Network Latency (100 to 100 Mbps):** 20 µs (max)
  - **Network Latency (1000 to 1000 Mbps):** 10 µs (max)
  - **Queue Buffer Memory:** 12 kbytes per port
  - **MAC address database:** 8,000
  - **Mean Time Between Failure (MTBF):** 87,600 hours (~10 years)
- **Status LEDs:**
  - Power, Collision, Activity, and Duplex indicators for each port, Link and Speed indicators built into each RJ-45 port
- **AC Power:**
  - 14.4 W
  - 12VAC, 1.2A
- **Physical Specifications:**
  - **Dimensions (w x d x h):** 158 x 105 x 25 mm (6.22 x 4.13 x .98 in.)
  - **Weight:** 0.49 kg (1.08 lb)
- **Environmental Specifications:**
  - **Operating Temperature:** 0 to 40° C (32 to 104° F)
  - **Operating Humidity:** 10 to 90% noncondensing
- **Storage Specifications:**
  - -20 to 70° C (-4 to 158° F)
  - 10 to 95% Relative Humidity
- **Standards Compliance:**
  - IEEE 802.3i 10BASE-T Ethernet
  - IEEE 802.3u 100BASE-TX Fast Ethernet
  - IEEE 802.3z 1000BASE-T Gigabit Ethernet
  - Windows®, MAC OS, NetWare®, Linux®
- **Safety Agency Approvals:**
  - UL (UL 60950), CUL, C-Tick, CE Mark, TUV licensed (EN 60950)
- **Emissions:**
  - FCC Class A and VCCI Class A, CE Class A, MIC
- **Warranty:**
  - **Switch:** NETGEAR 5 year warranty
  - **Power adapter:** NETGEAR 2 year warranty

System Requirements

- UTP Category 5 cables or better
- Network card for each PC or server (e.g. GA302T)

Package Contents

- 5-port 10/100/1000 Mbps Gigabit Ethernet Switch GS105
- Wall-mount kit
- Power adapter
- Installation guide
- Warranty & Support information card

NETGEAR Related Products

- GA302T Copper Gigabit PCI Adapter
- GA622T Copper Gigabit Ethernet Adapter
- GS108 8-port 10/100/1000 Mbps Gigabit Ethernet Switch

NETGEAR

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* Free basic installation support provided for 90 days from date of purchase; optional premium support available.

D-GS105-1

CE N10947

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