



Surge Protective Device

Paperless Datasheet

Going green and protecting environment is manufacturers' responsibility. Each WatchfulEyE product has a link of downloading data sheet on its enclosure:

<http://datasheet.watchfuleyesolutions.com/US121066.html>

3D file download

http://www.watchfuleyesolutions.com/wth_rar/3D/WTH-SG_TL20GP.STEP.zip

Model & Ordering Code

Model	Ordering Code	LED Status Indicator	UPC/EAN Code
WTH-SG/TL20PG-320	US121065	NO	(0) 811914031826
WTH-SG/TL20PG-320L	US121066	YES	(0) 811914031833



WTH-SG/TL20PG-320



WTH-SG/TL20PG-320L

Certificates of Products



LISTED
E345944



RoHS

IEC61643-11



Surge Protective Device

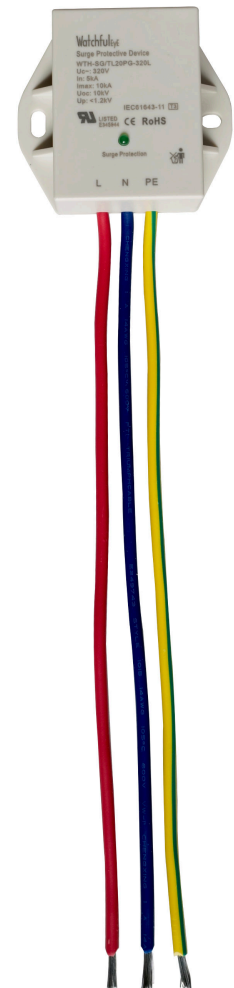
Description

WTH-SG/TL20PG-320(L) series surge protective device, with MOV+GDT surge protection structure on each line, there is no leakage current between line and ground, avoiding risk of aging or fire due to increased leakage current caused by surge protectors being long-term online. There's full protection mode between line and ground, the residual voltage between any two points is reduced to the lowest level.

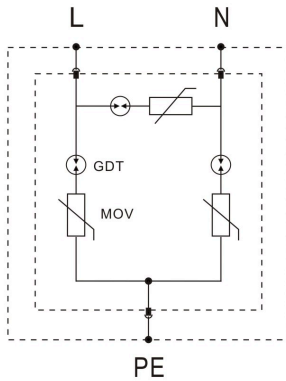
Applications: LED driver, precision instruments; for any other device which requires fine surge protection, its front terminal can also be directly soldered to the PCB board.

WTH-SG/TL20PG-320(L) Series Technical Data

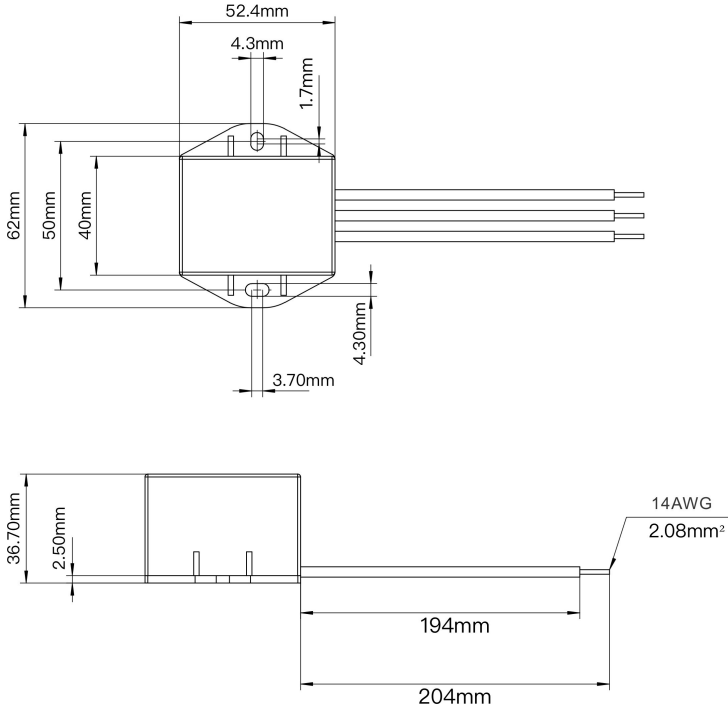
Nominal Voltage Rating	120V, 240V, 277V
Frequency	50/60Hz
LED Protection Level	Class I
Max. continuous operating voltage (Uc)	320V
Requirement Class to IEC/EN61643-11	Class III / Type 3
IEEE Category Rating	A
Nominal Discharge Current (In)	5kA
Max. Discharge Current (Imax, Per Line)	10kA
Open circuit voltage (Uoc)	10kV
Voltage protection level (Up)	1.2kV
Residual voltage Ures @4kV(1.2/50μs)	1.0kV
Protection Modes	L-PE, N-PE, L-N
Connection	Parallel
Protective Element	MOV+GDT
Follow Current (If)	NO
Response Time (tA)	<100ns
Leakage Current (at 75%U1mA)	None
Thermal Protection	YES
Protection Rating (IP Code)	IP 65 (Option: IP 67)
Back-up Fuse	NO
Surge Life at 1kA (8/20μs)	>2000 events
Temperature Range	- 40°F to 176°F (-40°C to 80°C)
Relative Humidity	0% to 95% noncondensing
Maximum Operating Altitude	10,000 feet (3000m)
Housing Material	Thermoplastic (UL94 V-0, f1)
Net Weight Per Unit	71g
Package Dimension (W×H×D)	62mm×53mm×37mm



Surge Protection Connection Diagram



Dimensions





Surge Protective Device

FAQ & Help (1/2)

1. What should I do if I can't find the paper manual in the product packaging?

Watchful Eye products is committed to going green with paperless data sheets. On the left side of each product enclosure is an engraved link with URL for downloading paperless data sheet and QR code of the website. If you need the paper data sheet, you can open the link and print the data sheet by yourself.



2. The advantages of LED status indicator?

If surge protection fails, the LED status indicator will be off, thus it can be seen intuitively, and the SPD can be replaced in time to avoid damage to the equipment caused by a second surge.

3. Can the length of the wire be customized?

Yes, the length of the wire can be customized, please specify in the order

4. Optional IP67, can I operate the order as following?

Please specify in the order (Note: IP67 refers to fully glue filling, which will increase the weight of the product)

5. Model WTH-SG/TL20PG-320 has no status indicator. What instruments can be used to test whether its surge protection function is normal or not?

Test with a Watchful Eye surge protector tester

6. Can you list more applications?

LED driver, network switches, computers, servers, air conditioners, refrigerators, inverters, precision instruments or other equipment which require fine surge protection, its front ends can also be integrated into the power supply module of the device or directly soldered to the PCB board during product production; further more, it can be directly connected in parallel in the terminal distribution box or wall switch

7. What is UL f1 standard for housing materials?

UL f1 standard requires housing materials be UV and acid rain resistant and can be used in outdoor environments

8. What are the advantages of MOV+GDT type surge protection?

No leakage current, slowing down the aging of MOV, avoiding the risk of burning or explosion caused by the increase of leakage current due to MOV aging.

9. What are the advantages of L-PE, N-PE, L-N full protection mode?

Finer protection, the residual voltage between each line is kept balanced, reducing the risk of surge voltage differences on equipment, which is crucial for precision instruments and other equipment, and key protection equipment in railways and other special industries, etc.



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FAQ & Help (2/2)

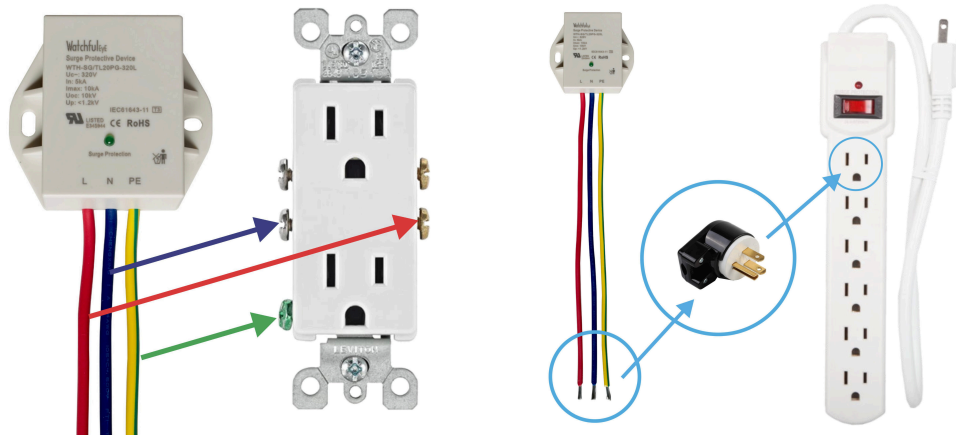
10. What are the specifications of the outgoing wires?
UL certified wires, specification: 14AWG (2.08mm²)

11. How long is the stripping length at the top of the wire?
Stripping length: 10mm

12. How are the three wires wired?

There are clear marking of wiring methods on the product, red wire: L wire (fire wire), blue wire: N wire (zero wire), yellow-green wire: PE (ground wire).

13. Application





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After-sale Services

Watchful Eye provides a 5-year quality warranty globally.

[I have a question](#)