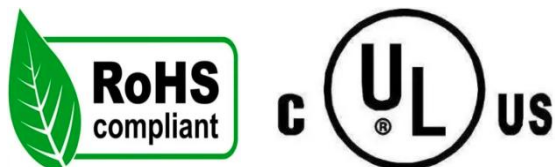




AC/DC Converter

TGC02E-K/277



Address: Building.E9 & E13,
Xingmeng Park Enterprises
Mansion, No.198, Mingzhu
Avenue, High-tech Zone, Hefei,
230088, China

Fax: 0551-65547975
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TGC02E-K/277

Features

Regulated Converter

- 85 to 305VAC input voltage range
- 4kVAC isolation strength
- Operating temperature: -40°C to +90°C
- Full load output power up to 80°C
- Low profile of 15.4mm
- Standby mode optimized for Ecodesigns
- EMC compliance EN55032 class "B"



Description

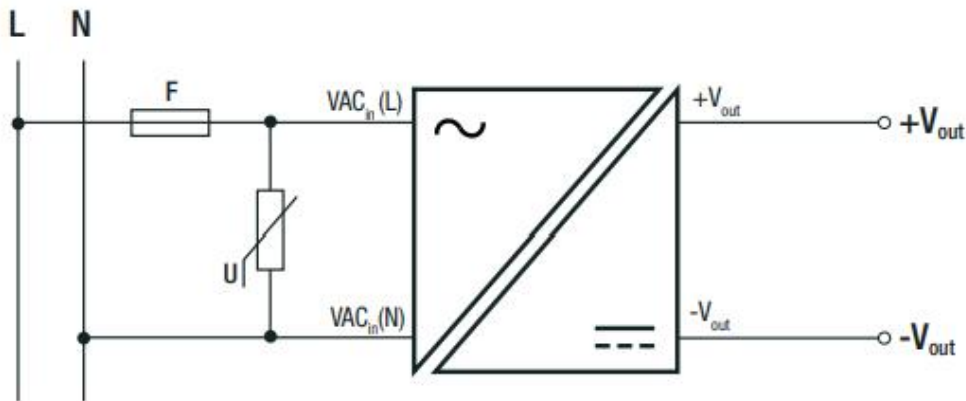
The cost-efficient TGC02E-K/277 AC/DC converter series has an input range of nominal 100VAC to an enhanced 277VAC, delivering an uncompromising 2 watts of output power with tightly regulated outputs from 3.3V to 24VDC. These low profile, encapsulated print-mountable modules in an industry-standard pinout deliver full output power from -40° C to +80° C and are certified for operation up to +90° C air ambient with output power reduced to 1.2W. This series of AC/DC modules holds international safety certifications for industrial, domestic, ITE, use with 4kVAC input to output isolation, they are suitable for worldwide applications in automation control, industry 4.0, IoT. Due to their LPS (Limited Power Source) and reinforced class II installation rating for floating outputs and their significantly wide margin to class B EMC compliance without external components, these are the easiest to use, versatile power modules in the industry..

Specifications (measured @ Ta= 25°C, nom. Vin, full load and after warm-up unless otherwise stated)

| BASIC CHARACTERISTICS | | | | |
|--|----------------------------|-----------------------|------|------------------------|
| Parameter | Condition | Min. | Typ. | Max. |
| Input Frequency Range | AC Input | 47Hz | | 63Hz |
| Minimum Load | | 0% | | |
| Power Factor | 115VAC 230VAC 277VAC | 0.55 0.45 0.4 | | |
| Start-up Time | | | 15ms | |
| Rise Time | | | 10ms | |
| Hold-up Time | 115VAC 230VAC 277VAC | 15ms 80ms 120ms | | |
| Internal Operating Frequency | 100% load at nominal Vin | | | 132kHz |
| Output Ripple and Noise ⁽⁴⁾ | 20MHz BW | 3.3, 5Vout others | | 120mVp-p 1% of Vout |

Notes: Note4: No proper operation with DC input voltage Note5: The products were submitted for safety files at AC-Input operation Note6: Refer to "Line Deratin

Protection Circuitm



| ENVIRONMENTAL | | | |
|-----------------------------|----------------------------------|-------------------------------|--|
| Parameter | Condition | | Value |
| Operating Temperature Range | @ natural convection 0.1m/s | refer to "Derating Graph (7)" | -40°C to +85/90°C |
| Maximum Case Temperature | | | +95°C |
| Temperature Coefficient | | | ±0.03%/K |
| Operating Altitude | | | 2000m |
| Operating Humidity | non-condensing | | 20% - 90% RH max. |
| Pollution Degree | | | PD2 |
| Vibration | | | 10-500Hz, 2G 10min./1cycle, period 60min. each along x,y,z axes |
| MTBF | according to MIL-HDBK-217F, G.B. | | +25°C |
| | | | +40°C |
| Design Lifetime | 230VAC/60Hz and full load +50°C | | >30 x 10 ³ hours |

Dimension Drawing (mm)

