



Features

- ◆ High efficiency switching power supplies
- ◆ Easy installation into standard flush boxes
- ◆ Fully encapsulated plastic housing
- ◆ Dust and waterproof to IP 67
- ◆ Protection class II
- ◆ Safety approval to IEC/EN 60950-1
EN 50178, EN 60335-1, UL 1310 class 2
- ◆ Approved for mounting onto wood or materials with unknown flammability
- ◆ Ready to meet ErP directive
- ◆ Universal input range 93 to 264 VAC
- ◆ Regulated output voltage (models from 3.3 to 24 VDC)
- ◆ Operating temp. range -25°C to +50°C
- ◆ Short circuit and overload protection
- ◆ 3-year product warranty



(Mounted in standard flush box)

The TIW series is a new range of small size DC-power supplies which have been designed particularly for applications in home and office installations.

The compact modules cases fit in the standardized in-wall flush boxes or also can be mounted on walls. For connection there are models available with flying wires. The power supplies comply fully with the safety and EMC standards requested for commercial and residential class II installations. Typical applications are powering of electric devices used in home automation and in security systems like i.e. DC-motors, controllers, indicators, etc.

Models

| Order Code | Output Power max. | Output Voltage | Output Current | Efficiency |
|------------|-------------------|----------------|----------------|------------|
| TIW 06-103 | 4 W | 3.3 VDC | 1.2 A | 75 % |
| TIW 06-105 | 5 W | 5.0 VDC | 1.0 A | 75 % |
| TIW 06-106 | 6 W | 6.0 VDC | 1.0 A | 80 % |
| TIW 12-112 | 12 W* | 12 VDC | 1.0 A | 80 % |
| TIW 12-115 | 12 W* | 15 VDC | 0.8 A | 80 % |
| TIW 12-124 | 12 W* | 24 VDC | 0.5 A | 80 % |
| TIW 24-112 | 24 W* | 12 VDC | 2.0 A | 83 % |
| TIW 24-124 | 24 W* | 24 VDC | 1.0 A | 85 % |

* If these models are used with 115 VAC input voltage, a 25% load reduction must be applied.

Input Specifications

| | | |
|---|---|--|
| Input voltage range | – nominal – ranges – output power derating for 12 & 24 W models | 115 – 230 VAC 93 – 264 VAC (universal input) 0.45 %/V below 187 VAC down to 132 VAC 1 %/V below 115 VAC |
| Input frequency | | 47 – 63 Hz |
| No load power consumption (acc. ErP directive EC No.278/2009) | | < 300 mW |
| External input fuse required (recommended values) | | 2 to 6 A slow blow resp. characteristic C |
| Harmonic limits | | EN 61000-3-2, Class A |

Output Specifications

| | | |
|--------------------------------------|--|-------------------------------|
| Voltage set accuracy | | ±3 % max. |
| Regulation | – Input variation – Load variation (0–100%) | 1 % max. 2 % max. |
| Ripple and noise (20 Mhz Bandwidth) | | <200 mVp-p |
| Start-up time | | <1s |
| Hold-up time | – $V_{in} = 115 \text{ VAC}$ – $V_{in} = 230 \text{ VAC}$ | 5 ms typ. 20 ms typ. |
| Overload protection by current limit | TIW 06-xxx & TIW 24-xxx models: TIW 12-xxx models: | <2.5 A <3.5 A |
| Short circuit protection | | foldback (automatic recovery) |

General Specifications

| | | |
|--|---|---|
| Operating Temperature (Ambient) | | –25°C to +50°C Please take heat sources (such as lamps) nearby into consideration for ambient temperature of the power supply |
| Over temperature protection | | built in (for safety reason only) |
| Preventive fire protection | | VDE 710-14 |
| Protection class | | class II as per IEC/EN 61140 |
| Safety standards | – CB test certificate – BV certificate – CSA certificate of compliance – Certification documents | IT safety household appliance safety of transformers lamp controlgear electronic equipment for power installation IT safety class 2 power units |
| Electromagnetic compatibility (EMC), emissions | – Conducted RI suppression on input – Radiated RI suppression | IEC 60950-1:2005(2nd)+A1:2009+A2:2013, EN 60950-1:2006+A1:2010+A2:2013+A11:2009+A12:2011 IEC/EN 60335-1, VDE 710-14 IEC/EN 61558-2-16, IEC/EN 61558-2-8 used in conjunction with IEC/EN 61558-1 IEC/EN 61347-2-13 used in conjunction with IEC/EN 61347-1 IEC 62103 (1st Ed.), EN 50178:1997 UL 60950-1(2nd Ed.)+Am1:2011, CAN/CSA-C22.2 No.60950-1-07+Am1:201 UL 1310 (6th Edition), CAN/CSA-C22.2 No.223-M91(R2008) www.tracopower.com/overview/tiw |
| Electromagnetic compatibility (EMC), immunity | – Electrostatic discharge (ESD) – Radiated RF field immunity – Electrical fast transient / burst immunity – Surge immunity | EN 61000-6-2-1, IEC 61204-3 EN 61000-4-2 4 kV / 8 kV, class B EN 61000-4-3 10 V/m, class A EN 61000-4-4 2 kV / 0.5 kV, class B+A see next page |

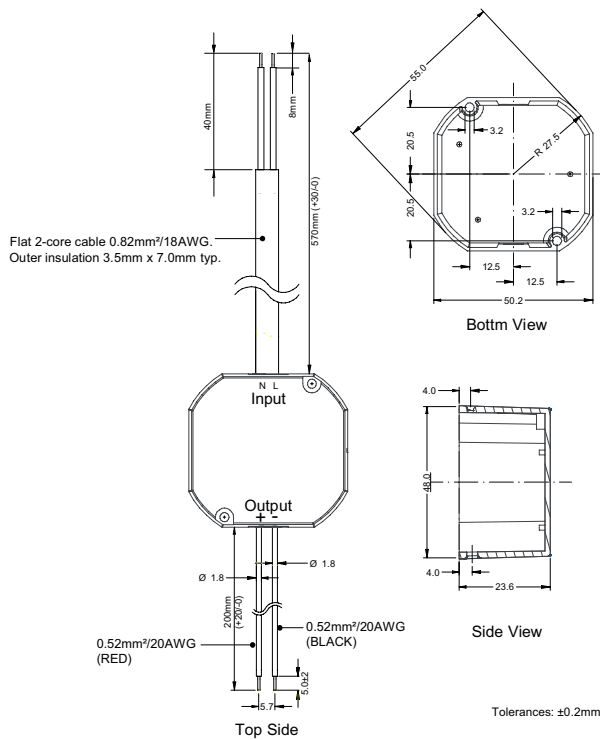
All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

General Specifications

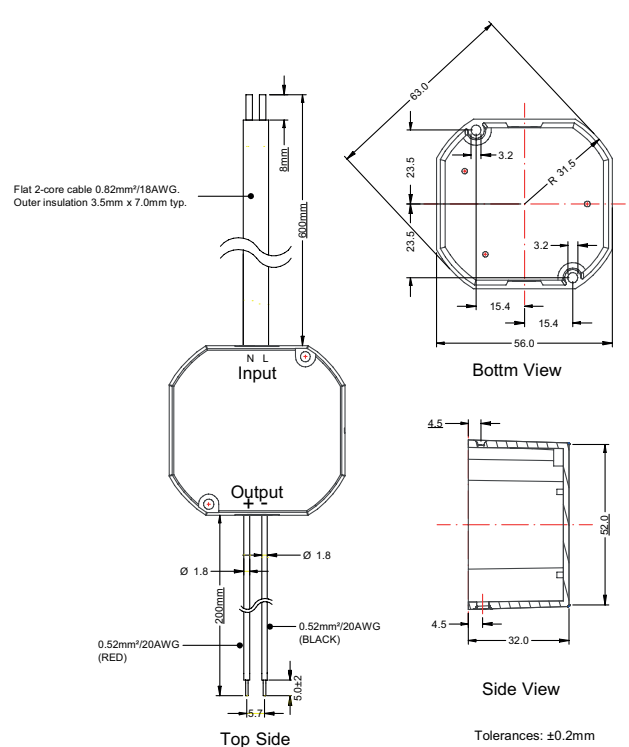
| | | | | |
|---|---|---|---------------|-----------|
| Electromagnetic compatibility (EMC), immunity | | EN 61000-4-5 | 2 kV, | class B+A |
| | - Surge immunity line – ground | EN 61000-4-5 | 1 kV, | class B+A |
| | - Surge immunity line – line | EN 61000-4-5 | 0.5 kV | |
| | - Surge immunity output | EN 61000-4-6 | 10 V, | class A |
| | - Immunity to conducted RF disturbances | EN 61000-4-11 | 30 % /10 mS, | class B |
| | - Mains voltage dips and interruptions | | 60 % /100 mS, | class B |
| Casing material | | plastic (UL 94V-0 rated) | | |
| Casing protection | | IP 67 | | |
| Reliability, calculated MTBF according to IEC 61709 | | www.tracopower.com/overview/tiw | | |
| Humidity (non condensing) | | 5 – 95 % rel. H max. | | |
| Environment | | - Vibration acc. IEC 60068-2-6 - Shock acc. IEC 60068-2-27 | | |
| | | Part 2, test Fe: Vibration (sinusoidal) Part 2, test Ea: Shock | | |
| Connection wires | | - Input - Output | | |
| | | 2 x 570 mm +30/-0 (black/white) AWG 18 2 x 200 mm +20/-0 (red/black) AWG 20 | | |
| Environmental compliance | | - Reach - RoHS | | |
| | | www.tracopower.com/overview/tiw RoHS directive 2011/65/EU | | |
| Weight | | - 24 Watt models: 100 g (3.8 oz) - other models: 80 g (2.7 oz) | | |

Outline Dimensions

TIW 6 & 12 Watt models:



TIW 24 Watt model:



Specifications can be changed without notice! Make sure you are using the latest documentation, downloadable at www.tracopower.com