



### 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
- ◆ Universal input range 93 to 264 VAC
- ◆ Regulated output voltage  
(models from 3.3 to 24 VDC)
- ◆ Operating temp. range  $-25^{\circ}\text{C}$  to  $+50^{\circ}\text{C}$
- ◆ 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	<ul style="list-style-type: none"> <li>– nominal</li> <li>– ranges</li> <li>– output power derating for 12 &amp; 24 W models</li> </ul>	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)		2.0 A slow blow
Harmonic limits		EN 61000-3-2, Class A

### Output Specifications

Voltage set accuracy		±3 % max.
Regulation	<ul style="list-style-type: none"> <li>– Input variation</li> <li>– Load variation (0–100%)</li> </ul>	1 % max. 2 % max.
Ripple and noise (20 Mhz Bandwidth)		<200 mVp-p
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		–25°C to +50°C
Over temperature protection		built in
Reliability, calculated MTBF according to IEC 61709		<a href="http://www.tracopower.com/products/tiw-mtbf.pdf">www.tracopower.com/products/tiw-mtbf.pdf</a>
Humidity (non condensing)		5 – 95 % rel. H max.
Hold-up time	<ul style="list-style-type: none"> <li>– Vin = 115 VAC</li> <li>– Vin = 230 VAC</li> </ul>	5 ms typ. 20 ms typ.
Start-up time		<1s
Safety standards	<ul style="list-style-type: none"> <li>– safety of information technology equipment</li> <li>– Standard for Class 2 Power Units</li> <li>– Electronic equipment for use in power installations</li> <li>– Safety of household and similar electrical appliances</li> </ul>	IEC/EN 60950-1, UL Std. 60950-1 (2nd Edition) +Am1:2011, CAN/CSA-C22.2 No. 60950-1-07 +Am1:2011 UL 1310 (6th Edition), CAN/CSA-C22.2 No. 223-M91(R2008) Outputs EN 50178 EN 60335-1
Safety approvals	<ul style="list-style-type: none"> <li>– CB report according IEC/EN 60950-1</li> <li>– GS certification (for other standards)</li> <li>– BG certificate</li> <li>– CSA certificate</li> </ul>	<a href="http://www.tracopower.com/products/tiw-cb.pdf">www.tracopower.com/products/tiw-cb.pdf</a> <a href="http://www.tracopower.com/products/tiw-gs.pdf">www.tracopower.com/products/tiw-gs.pdf</a> <a href="http://www.tracopower.com/products/tiw-bg.pdf">www.tracopower.com/products/tiw-bg.pdf</a> <a href="http://www.tracopower.com/products/tiw-csa.pdf">www.tracopower.com/products/tiw-csa.pdf</a>
Electromagnetic compatibility (EMC), emissions	<ul style="list-style-type: none"> <li>– Conducted RI suppression on input</li> <li>– Radiated RI suppression</li> </ul>	EN 61000-6-3 EN 55022 class B EN 55022 class B
Electromagnetic compatibility (EMC), immunity	<ul style="list-style-type: none"> <li>– Electrostatic discharge (ESD)</li> <li>– Radiated RF field immunity</li> <li>– Electrical fast transient / burst immunity</li> <li>– Surge immunity line – ground</li> <li>– Surge immunity line – line</li> <li>– Surge immunity output</li> <li>– Immunity to conducted RF disturbances</li> <li>– Mains voltage dips and interruptions</li> </ul>	EN 61000-6-2-1, IEC 61204-3 EN 61000-4-2 4 kV / 8 kV EN 61000-4-3 3 V/m EN 61000-4-4 1 kV / 0.5 kV EN 61000-4-5 2 kV EN 61000-4-5 1 kV EN 61000-4-5 0.5 kV EN 61000-4-6 3 V EN 61000-4-11 30 % /10 mS, 60 % /100 mS

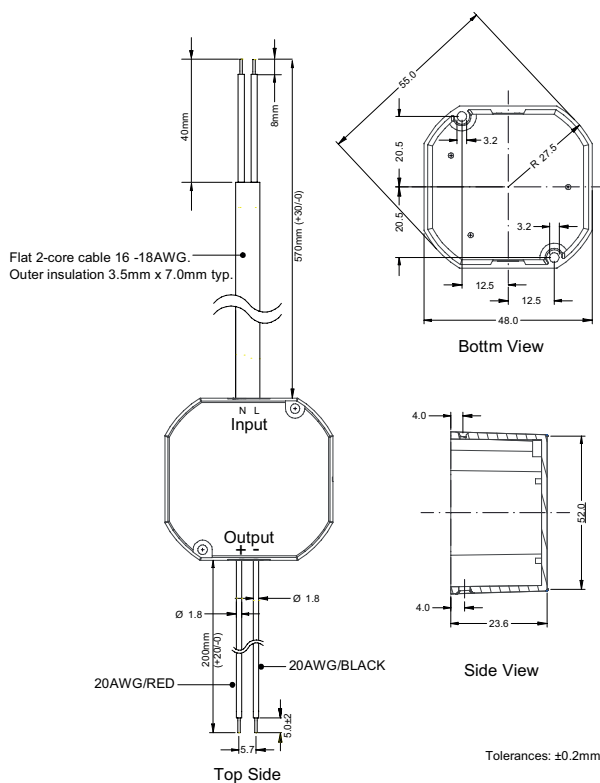
All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

**General Specifications**

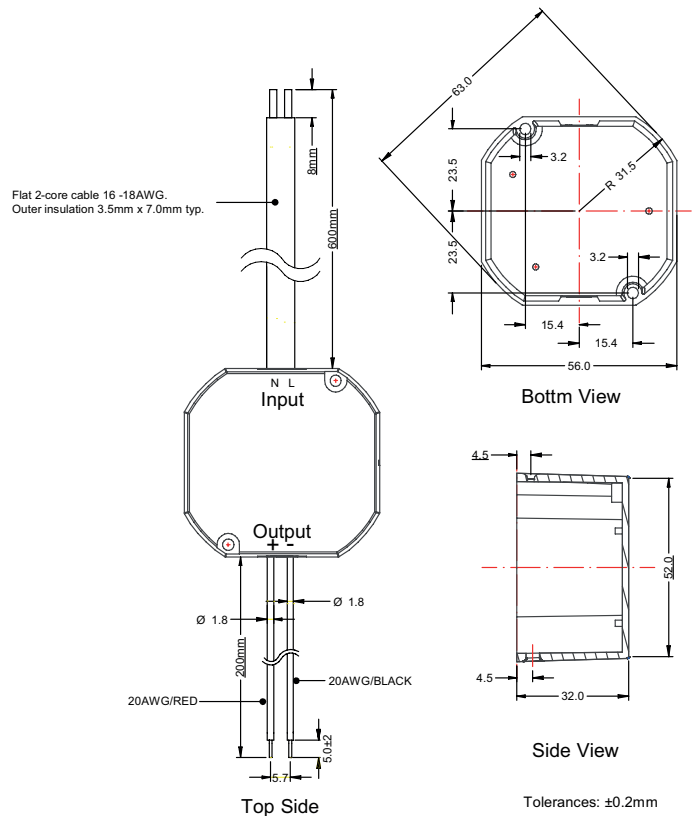
Protection class	class II as per IEC/EN 61140	
Casing material	plastic (UL 94V-0 rated)	
Casing protection	IP 67	
Environment	- Vibration acc. IEC 60068-2-6 - Shock acc. IEC 60068-2-27	Part 2, test Fe: Vibration (sinusoidal) Part 2, test Ea: Shock
Connection wires	- Input - Output	2 x 570 mm +30/-0 (black/white) AWG 18 2 x 200 mm +20/-0 (red/black) AWG 20
Environmental compliance	- Reach - RoHS	<a href="http://www.tracopower.com/products/tiw-reach.pdf">www.tracopower.com/products/tiw-reach.pdf</a> 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](http://www.tracopower.com)