



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 $+50^{\circ}\text{C}$
- ◆ Short circuit and overload protection
- ◆ 3-year product warranty



ErP
ready



(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 61000-6-3 EN 55022 class B, EN 55014-1 EN 55022 class B, EN 55014-1 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

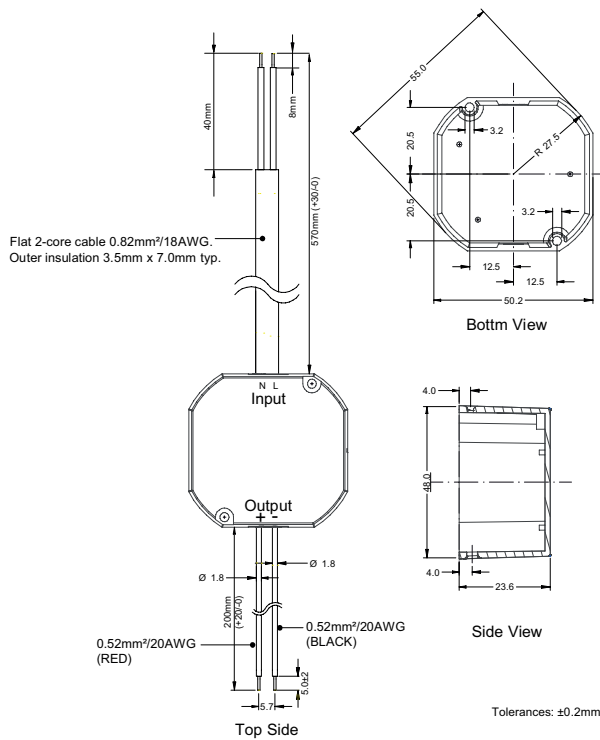
All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

General Specifications

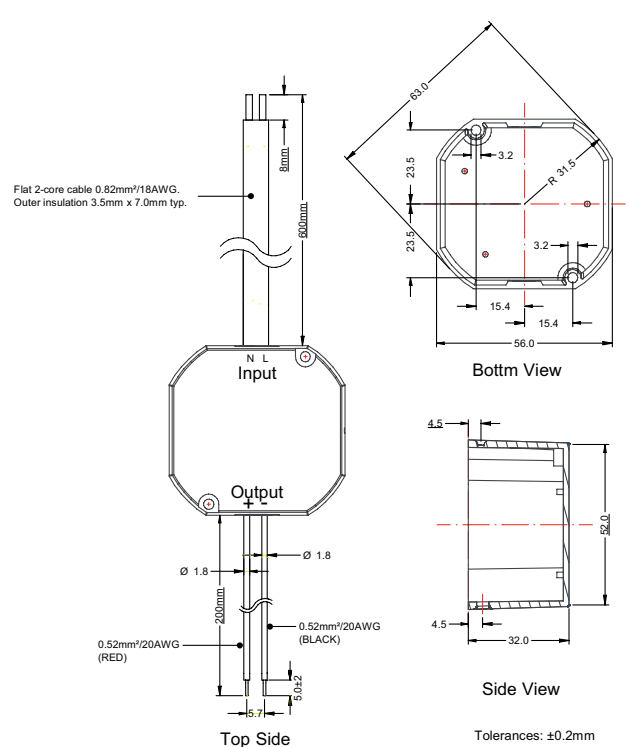
Electromagnetic compatibility (EMC), immunity		EN 61000-4-5	2 kV,	class B+A
	- Surge immunity line – ground	EN 61000-4-5	1 kV,	class B+A
	- Surge immunity line – line	EN 61000-4-5	0.5 kV	
	- Surge immunity output	EN 61000-4-6	10 V,	class A
	- Immunity to conducted RF disturbances	EN 61000-4-11	30 % /10 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