Industrial Power Supplies

TIS SERIES

75-600 Watts



DIN Rail Mounting . Rugged for Industrial Use . Regulated and Low Ripple . High Efficiency . Optional Built-In UPS Module . Wall Mount Bracket Available

CE Marked - LVD & EMC

Specification

(All specifications are typical a	it no	minal input, full load and +25 °C unless otherwise stated)				
Input Voltage	•	93-132 V/187-264 V AC User selectable				
		187-264 V AC only TIS500 model				
Input Frequency	•	47-63 Hz				
Inrush Current	•	See Table				
Input Current	•	See Table				
Earth Leakage Current	•	300 μA typ. 75 W, 150 W & 600 W units, 600 μA typ. 300 W units				
Hold Up Time	•	30 ms minimum				
Output Voltage	•	See Table				
Output Adjustment	•	12 V models: 12-14 V DC, 24 V models: 24-28 V DC, 48 V models: 48-52 V DC				
Line Regulation	•	±0.2%				
Load Regulation	•	$\pm 1\%$ 75 W and 150 W models, $\pm 0.5\%$ 300 W and 600 W models for load				
		variation between 10 and 90%				
Ripple & Noise	•	<50 mV p-p 20 MHz band width				
Overload Protection	•	110% typically into constant current mode				
Overvoltage Protection	•	At 140% V out nominal				
Temperature Coefficient	•	±150 ppm max				
Efficiency	•	>85%				
Operating Temperature	•	-25 °C to +70 °C derate at 2%/°C above +50 °C				
Storage Temperature	•	-25 °C to +85 °C				
Relative Humidity	•	95%				
Isolation	•	3000 V AC input to output, 1 minute				
	•	2000 V AC input to case, 1 minute				
	•	500 V AC output to case, 1 minute				
Safety Class	•	Class 1 (IEC536)				
EMI/RFI	•	EN55022, EN555011 Class B conducted EMI				
Safety Approvals	•	EN60950, IEC950, UL1950 (File No. E181381)				
Immunity	•	To EN61000-4 sections -2, -3, -4, -6 and -8				
MTBF	•	75 W & 150 W >750,000hrs, 300 W & 600 W >370,000 hrs to MIL-HBK217F				
Switching Frequency	•	67 kHz (100kHz TIS 75 W models)				

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Output Voltage & Current Ratings								
Output	Output	Output	Input Current @ Full Load		Inrush Current Max.		Model	
Power max.	Voltage nom.	Current max.	115 V AC	230 V AC	115 V AC	230 V AC	Number	
75 W	12 V DC	6.0 A	1.2 A	0.6 A	16.5 A	33.0 A	TIS75-112	
75 W	24 V DC	3.0 A	1.2 A	0.6 A	16.5 A	33.0 A	TIS75-124	
75 W	48 V DC	1.5 A	1.2 A	0.6 A	16.5 A	33.0 A	TIS75-148	
150 W	24 V DC	6.0 A	2.4 A	1.2 A	35.0 A	70.0 A	TIS150-124	
150 W	48 V DC	3.0 A	2.4 A	1.2 A	35.0 A	70.0 A	TIS150-148	
300 W	24 V DC	12.0 A	4.6 A	2.4 A	35.0 A	70.0 A	TIS300-124	
300 W	48 V DC	6.0 A	4.6 A	2.4 A	35.0 A	70.0 A	TIS300-148	
500 W	24 V DC	20.0 A	-	2.4 A	-	70.0 A	TIS500-124	
600 W	24 V DC	24.0 A	9.5 A	4.7 A	70.0 A	80.0 A	TIS600-124	
600 W	48 V DC	12.0 A	9.5 A	4.7 A	70.0 A	80.0 A	TIS600-148	

Models With Built-In Redundancy Module - Option RED

Output	Output	Output	Input Curren	t @ Full Load	Inrush Current Max.		Model
Power max.	Voltage nom.	Current max.	115 V AC	230 V AC	115 V AC	230 V AC	Number
300 W	24 V DC	12 A	4.6 A	2.4 A	35.0 A	70.0 A	TIS300-124RED
300 W	48 V DC	6 A	4.6 A	2.4 A	35.0 A	70.0 A	TIS300-148RED
600 W	24 V DC	24 A	9.5 A	4.7 A	70.0 A	80.0 A	TIS600-124RED
600 W	48 V DC	12 A	9.5 A	4.7 A	70.0 A	80.0 A	TIS600-148RED

Models With Built-In DC UPS Module - Option UDS

Output	Output	Output	Input Current @ Full Load		Inrush Current Max.		Model	
Power max.	Voltage nom.	Current max.	115 V AC	230 V AC	115 V AC	230 V AC	Number	
300 W	24 V DC	12 A	4.6 A	2.4 A	35.0 A	70.0 A	TIS300-124UDS	
600 W	24 V DC	24 A	9.5 A	4.7 A	70.0 A	80.0 A	TIS600-124UDS	

Models With Built-In Signals Module - Option SIG

					-		
Output	Output	Output	Input Current @ Full Load		Inrush Current Max.		Model
Power max.	Voltage nom.	Current max.	115 V AC	230 V AC	115 V AC	230 V AC	Number
150 W	24 V DC	6 A	2.4 A	1.2 A	35.0 A	70.0 A	TIS150-124SIG
150 W	48 V DC	3 A	2.4 A	1.2 A	35.0 A	70.0 A	TIS150-148SIG
300 W	24 V DC	12 A	4.6 A	2.4 A	35.0 A	70.0 A	TIS300-124SIG
300 W	48 V DC	6 A	4.6 A	2.4 A	35.0 A	70.0 A	TIS300-148SIG
600 W	24 V DC	24 A	9.5 A	4.7 A	70.0 A	80.0 A	TIS600-124SIG
600 W	48 V DC	12 A	9.5 A	4.7 A	70.0 A	80.0 A	TIS600-148SIG

NOTES:

 DC Auxiliary rails available for TIS300 - maximum power 15 watts, and TIS600 - maximum power 25 watts. Call technical sales for details.

Redundancy Module - Option RED

With this option a parallel operation of up to five units is possible. Decoupling diodes and current share lines allow to build true N + 1 redundant systems with active current sharing for all units. This function also includes an alarm relay to signal a single unit failure.

This option is available as standard for TIS300 and TIS600 models. A combination with other options is not possible.

For this option standard output connector is not used.



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Uninterruptible DC-System - Option UDS

Models TIS300124-UDS and TIS600124-UDS are equipped to build an uninterruptible DC-UPS system.

Additional to the standard 24 V DC output power supplies they provide a professional battery management system to charge and monitor an external battery. In case of a power failure the battery is switched automatically and without any interruption to the DC-output. If mains power is available again the battery is switched off. The hold-up time is limited only by battery capacity and load. Charge current and voltage can be adjusted to values as required by battery type. Power fail and low battery alarm signals are available via two independent relay contacts. During normal operation the battery status is monitored by periodically loading the battery for short time. If a cell resistance is high there is a relay alarm available. The battery is fully protected under any operational conditions. The power supply is short circuit protected even with battery-backup operation, however for safety reasons the battery should be fused with a fast blow fuse.

Battery mode can be activated by connection of Con1-Pin 7 and 8.

Complete external battery modules (7 Ah standard) are available on request - Contact Technical Sales



Signal Module - Option SIG

The option Signal module (SIG) provides three functions:

Remote ON/OFF
AC-Powerfail signal (PF)
DC-OK signal

The power supply can be controlled by remote ON/OFF signal. If pin 1 and 2 are connected together unit is ON, with disconnection unit is OFF. AC-Powerfail and DC-OK signals are available via isolated relay contacts. Please note option SIG is not available for TIS75 models.



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