

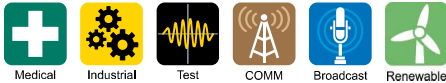
600-1200W Single Output Modular Power Supplies

Features

- ◆ Full Medical Isolation (MoPP)
- ◆ Suitable for B and BF Rated Equipment
- ◆ Low Speed, Low Audible Noise Fans
- ◆ Dual Fusing
- ◆ High Current 5V/2A Standby
- ◆ Class B Conducted & Radiated EMI
- ◆ PMBus™ Communications Option
- ◆ 7 Year Warranty



Key Market Segments & Applications



Specifications

Model		QS
Input Voltage Range	VAC	90-264Vac. QS5H limited to 700W output power below 180Vac input
Input Frequency Range	Hz	47 - 63Hz (440Hz with reduced PFC)
Inrush Current	A	QS5 & QS5H <40A, QS7 <45A at 25°C and 264Vac (cold start)
Touch Current	µA	<100µA
Leakage Current (maximum)	µA	<300µA
Power Factor Correction	-	> 0.95 (at 100% load), Meets EN61000-3-2, Class A and Class C
Efficiency	-	Up to 91%, model dependent
Temperature Coefficient	%/°C	<0.016%/°C
Overcurrent Protection	-	Hiccup, auto recovery
Overvoltage Protection	-	Latching. Output shut down, cycle AC to reset
Overtemperature Protection	-	Converter: auto restart (fan off); Output modules: cycle AC to reset
Hold up time	ms	QS5: 10ms, QS7: 20ms minimum at full load
Ripple and Noise	%	1%. 0 - 70°C, > 20% load
Line regulation	%	<0.1%
Load Regulation	%	<1% (<3.5% for QS5H-1080-12 & QS7-1080-12)
Remote Sense Compensation	-	Yes, 0.5V compensation., not to exceed maximum output adjustment
Remote On/Off	-	Output: Via isolated opto-coupler diode, Converter: See optional standby/signals
AC Fail Signal	-	See optional standby/signals
DC Good Signal	-	Via isolated opto-coupler transistor
Remote on/off	-	Output only: Inhibit. Converter & Ouput: See options section
PMBus™ Interface	-	See optional standby/signals
Standby Voltage	-	See optional standby/signals
Operating Temperature	°C	-40°C start up; -20 to +70°C, derate linearly to 50% load from 50 to 70°C
Storage Temperature	°C	-30 to +70°C
Humidity (Non condensing)	%RH	5 - 95%RH
Cooling	-	QS5/QS5H: One variable, low speed internal fan. QS7: Two variable, low speed internal fans
Audible Noise	-	QS5/QS5H ("S" Input option): 40.3 dBA @ 25°C / 54.9 dBA @ 50°C. QS5/QS5H ("I" Input option): 36.9 dBA @ 25°C / 51 dBA @ 50°C. QS7: 43.6 dBA @ 25°C / 57.3 dBA @ 50°C, per BS ISO 3744:2010
Withstand Voltage	-	Input to Output: 4kVAC (production tested to 4.3kVDC) (2xMoPP), Input to Ground: 1.5kVAC (1xMoPP), Output to Ground: 1.5kVAC (1xMoPP). Output to Output / Signals 200Vdc
Vibration	-	Conforms to EN60068-2-6, IEC68-2-6, MIL-STD-810G, Method 514.6, Pro I
Shock	-	Conforms to EN60068-2-27, EN60068-2-47, IEC68-2-27, IEC68-2-47, JIS C0041-1987, MIL-STD-810G, Method 516.6, Pro I, IV
Safety Agency Certifications	-	IEC/UL/CSA/EN UL 60950-1, IEC/UL/CSA/EN 60601-1, ANSI/AAMI ES60601-1 & CE Mark. IEC/EN61010 included in 60950 report
Altitude	m	5,000m, operational and storage
Emissions	-	EN61000-6-3:2007, EN60601-1-2:2015 4th Edition, EN55011B, EN55032B, Class B radiated and conducted
Immunity	-	EN61000-6-2:2005, EN60601-1-2:2015
Size (W x H x D)	in, mm	QS5: 5 x 2.5 x 10.6", 127 x 63.3 x 270mm. QS7: 6.9 x 2.5 x 10.6", 176 x 63.3 x 270mm
Weight	g	See Installation Manual
Warranty	Yrs	Seven Years

(1) See website for detailed specifications

Standard Models

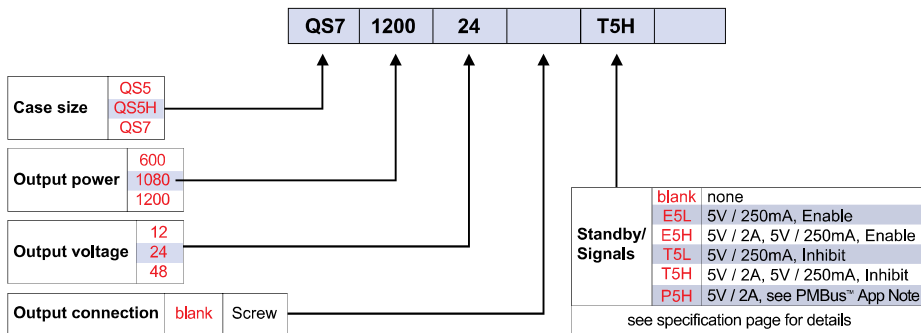
Output Voltage	Adjustment Range	Maximum Current	Maximum Output Power	Order Code	Base Model (Reference only)
12V	12-13.2V	50A	600W	QS5000YW	QS5-600-12
12V	12-12.8V	90A	1080W (2)	QS5000GX	QS5H-1080-12
12V	12-12.8V	90A	1080W	QS70008D	QS7-1080-12
24V	24-26.4V	25A	600W	QS50010M	QS5-600-24
24V	24-26.4V	50A	1200W (2)	QS5000HM	QS5H-1200-24
24V	24-26.4V	50A	1200W	QS70009B	QS7-1200-24
48V	48-52.8V	12.5A	600W	QS50011G	QS5-600-48
48V	48-52.8V	25A	1200W (2)	QS5000JP	QS5H-1200-48
48V	48-52.8V	25A	1200W	QS7000BK	QS7-1200-48

(2) Limited to 700W output power below 180Vac input

Other Variants (Input Connection, etc.)

The standard models listed are supplied with 'F' cooling, screw terminal inputs and outputs, dual AC fuses and 300µA earth leakage current. Other options are possible by selecting from the table below.

Converter Configurations



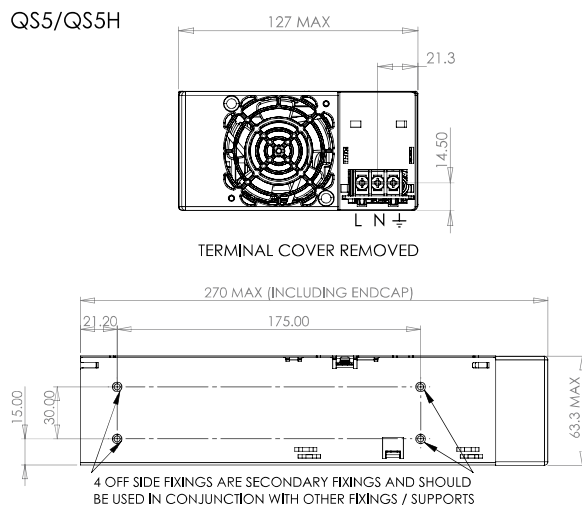
Contact TDK-Lambda to validate configuration and issue a part number.

Unit Options - blank for all defaults or all of

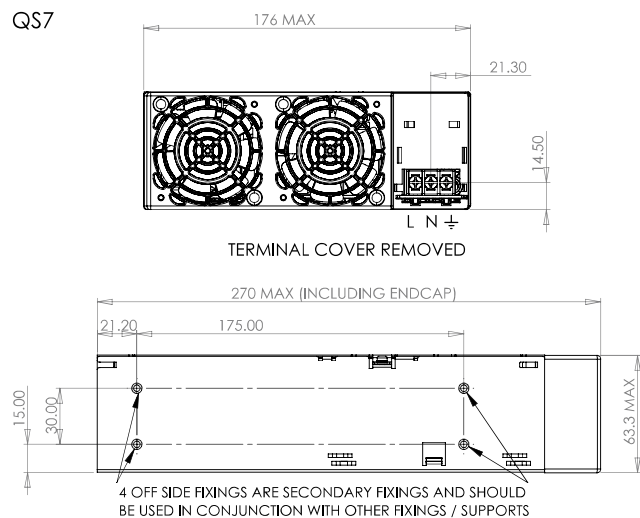
Cooling F	Input S	Fuse D	Leakage L
Cooling	F	Variable speed Forward air (default)	
Input connection	S	Screw (default)	
	I	IEC320 (QS5 and QS5H only)	
Input fuse	D	Dual AC fuses (default)	
Leakage Current (max at 240Vac, 63Hz)	L	300µA (default)	

Outline Drawings

QS5/QS5H



QS7



The extensive range of output modules and options make it possible to achieve almost any combination of Volts and Amps. Create your own QM configuration online at <https://config.emea.tdk-lambda.com>. This method checks your configuration and offers the optimum solution.

For Additional Information, please visit us.tdk-lambda.com/lp/products/qs-series.htm

