

## 700-1500W Multiple Output Modular Power Supplies

### Features

- ◆ Full Medical Isolation (MOPP)
- ◆ Low Speed, Low Audible Noise Fan
- ◆ Up to 18 Outputs
- ◆ Industry Leading Flexibility
- ◆ 7 Year Warranty
- ◆ Suitable for B and BF Rated Equipment
- ◆ PMBus™ Communication Option



### Key Market Segments & Applications



Specifications		QM5	QM5H	QM7	QM8
Input Voltage Range	VAC	700W output: 90-264VAC 800W output: 150-264VAC	700W output: 90-264VAC 1200W output: 150-264VAC	1200W output: 90-264VAC 1500W output: 150-264VAC	1200W output: 90-264VAC 1500W output: 150-264VAC
Input Frequency Range	Hz	47 - 63Hz (440Hz with reduced PFC)			
Inrush Current	A	<40A at 25°C and 264Vac (cold start)		<45A at 25°C and 264Vac (cold start)	
Input Current (Max) 90/150VAC	A	9A / 6.2A	9A / 9.25A	15.7A / 11.8A	15.7A / 11.8A
Touch Current	µA	<100µA (with 4 or fewer modules) (1)			
Power Factor Correction	-	> 0.95 (at 100% load), Meets EN61000-3-2			
Efficiency	-	up to 91% , 240VAC & above 50% rated power, configuration dependent			
Overcurrent Protection	-	Hiccup/constant current style - Module dependent (1)			
Overvoltage Protection	-	Latching. Output shut down, cycle AC to reset (1)			
Overtemperature Protection	-	Converter: auto restart (fan off); Modules: individually protected			
Hold up time	ms	700W output: >16ms; 1200W output: >10ms	1200W output: >20ms; 1500W output: >16ms		
Leakage Current (maximum)	µA	L option: 300µA; R option: 150µA (264VAC, 63Hz)			
Remote Sense Compensation	-	Module dependent (1)			
Remote On/Off	-	Module & Converter option dependent (1)			
AC Fail Signal	-	Available with all Signal Option Types			
DC Good Signal	-	Open collector, standard on all output modules			
Remote on/off	-	Converter: Inhibit or Enable (Signal Option Type dependent). Modules: Inhibit.			
PMBus™ Interface	-	Power supply on/off, fan speed/warning, temperature read back/warning, run time and manufacturing data			
Standby Output	-	5V/250mA / 5V/2A / 12V/1A (Standby Option Type dependent)			
Operating Temperature	°C	-20 to +70°C, derate linearly to 50% load from 50 to 70°C; -40°C start up.			
Storage Temperature	°C	-40°C to +70°C (max 12 months)			
Humidity (Non condensing)	%RH	5 - 95%RH			
Cooling	-	One variable, low speed internal fan		Two variable, low speed internal fans	
Audible Noise	dBA	QM5F: 40.3 dBA @ 25°C / 54.9 dBA @ 50°C QM5I: 36.9 dBA @ 25°C / 51 dBA @ 50°C, per BS ISO 3744:2010		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: 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 60950-1, IEC/UL/CSA/EN 60601-1, ANSI/AAMI ES60601-1 & CE Mark. IEC/EN61010 included in 60950 report			
Altitude	m	5,000m			
Emissions	-	EN61000-6-3:2007, EN60601-1-2:2015 4th Edition, EN55011B, EN55032B, Class B radiated & conducted			
Immunity	-	EN61000-6-2:2005, EN60601-1-2:2015			
Size (W x H x D)	in mm	5 x 2.5 x 10.6" 127 x 63.3 x 270mm	5 x 2.5 x 10.6" 127 x 63.3 x 270mm	6.9 x 2.5 x 10.6" 176 x 63.3 x 270mm	7.9 x 2.5 x 10.6" 200 x 63.3 x 270mm
Weight	g	See Application Notes			
Warranty	yrs	Seven Years			

(1) See website for detailed specifications

Single Output Modules				
Module	V1 Voltage		Power	Slots Used
	Range	Current		
DM	2.8 - 3.8V	10A	35W	1
SB	3.3 - 3.63V	37A	122W	1
DM	4.25 - 5.75V	10A	50W	1
SB	5 - 5.5V	30A	150W	1
SC	5 - 5.5V	60A	300W	2
ZD	5 - 5.3V	80A	400W	3
ZF	5 - 5.3V	110A	550W	4
YC	6.6 - 7.48V	37A	276W	2
YC	10 - 11V	30A	300W	2
YF	10 - 11V	60A	600W	4
DM	11.9 - 16.1V	10A	120W	1
SB	12 - 13.2V	25A	300W	1
SC	12 - 13.2V	50A	600W	2
ZD	12 - 12.8V	65A	780W	3
ZF	12 - 12.8V	90A	1080W	4
SB	15 - 16.5V	20A	300W	1
ZC	15 - 16V	36A	510W	2
SB	18 - 19.8V	16.7A	300W	1
ZC	18 - 19.2V	30A	540W	2
YB	20.4 - 27.6V	9.8A	200W	1
DM	20.8 - 28.2V	5A	120W	1
SB	24 - 26.4V	12.5A	300W	1
SC	24 - 26.4V	25A	600W	2
ZD	24 - 25.6V	30A	720W	3
YF	24 - 26.4V	50A	1200W	4
YB	27.6 - 34.5V	7.25A	200W	1
SB	28 - 30.8V	10.7A	300W	1
ZC	28 - 30V	19.3A	504W	2
YC	30 - 33V	20A	600W	2
YC	36 - 39.6V	16.6A	600W	2
YB	40.8 - 55.2V	4.9A	200W	1
YC	48 - 52.8V	12.5A	600W	2
YF	48 - 52.8V	25A	1200W	4
SB	48 - 52.8V	6.25A	300W	1
SC	48 - 52.8V	12.5A	600W	2
ZD	48 - 51.2V	15A	720W	3
YB	55.2 - 62V	3.62A	200W	1
YC	56 - 61.6V	10.7A	600W	2
YF	72 - 79.2V	16.6A	1200W	4
YC	96 - 105.6V	6.25A	600W	2
YF	96 - 105.6V	12.5A	1200W	4

Output Module Signals
See Long Form datasheet output module specifications for Module Good, Module Inhibit, Remote Sense availability.

Dual Output Modules (all single slot)						
Maximum module power 200W (Total power from channel 1 + Channel 2)						
Module	V1 Voltage		V1 Power	V2 Voltage		V2 Power
	Range	Current		Range	Current	
DH	10.2 <sup>(1)</sup> - 13.8V	10A	120W	10.2 - 13.8V	10A	120W
DH	10.2 <sup>(1)</sup> - 13.8V	10A	120W	12.75 - 17.25V	8A	120W
DH	10.2 <sup>(1)</sup> - 13.8V	10A	120W	20.4 - 27.6V	5A	120W
DM	11.9 - 16.1V	10A	120W	2.8 - 3.8V	10A	35W
DM	11.9 - 16.1V	10A	120W	4.25 - 5.75V	10A	50W
DM	11.9 - 16.1V	10A	120W	11.9 - 16.1V	8.3A	100W
DM	11.9 - 16.1V	10A	120W	23.5 - 24.5V	4.16A	100W
DH	12.75 <sup>(2)</sup> - 17.25V	8A	120W	12.75 - 17.25V	8A	120W
DH	12.75 <sup>(2)</sup> - 17.25V	8A	120W	20.4 - 27.6V	5A	120W
DH	20.4 <sup>(3)</sup> - 27.6V	5A	120W	20.4 - 27.6V	5A	120W
DM	20.8 - 28.2V	5A	120W	2.8 - 3.8V	10A	35W
DM	20.8 - 28.2V	5A	120W	4.25 - 5.75V	10A	50W
DM	21.6 - 28.2V	5A	120W	23.5 - 24.5V	4.16A	100W
DH	23 <sup>(4)</sup> - 31V	4.4A	120W	23 - 31V	4.3A	120W

Note: For DH module voltages below 10.8V(1), 13.5V(2), 21.6V(3), and 24.4V(4), a minimum load of 1W must be applied to channel 1. See long form datasheet for max capacitive load ratings.

Standby / Signals Options							
Option Type	Standby 1			Standby 2			PSU on/off
	Voltage	Max Current	Power	Voltage	Max Current	Power	
E5L	5V	250mA	1.25W	Not available			Enable
E5H	5V	250mA	1.25W	5V	2A	10W	Enable
E12H	5V	250mA	1.25W	12V	1A	12W	Enable
T5L	5V	250mA	1.25W	Not available			Inhibit
T5H	5V	250mA	1.25W	5V	2A	10W	Inhibit
T12H	5V	250mA	1.25W	12V	1A	12W	Inhibit
P5H	Not available			5V	2A	10W	*

\*see PMBus™ App Note

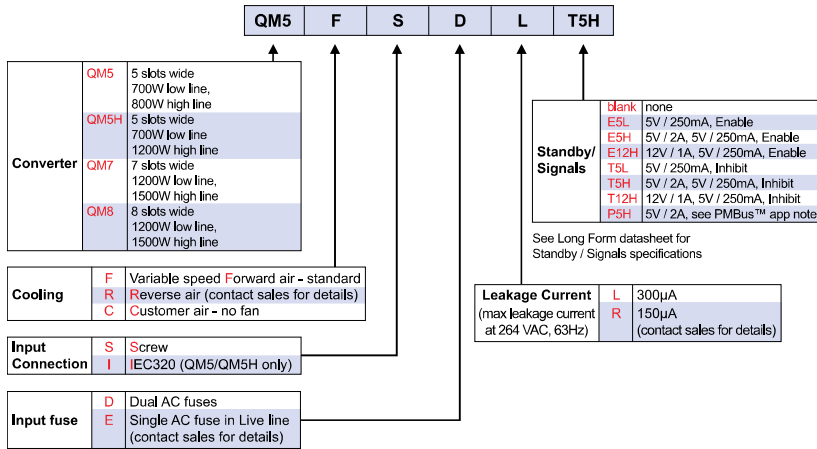
For Additional Information, please visit [us.tdk-lambda.com/lp/products/qm-series.htm](http://us.tdk-lambda.com/lp/products/qm-series.htm)



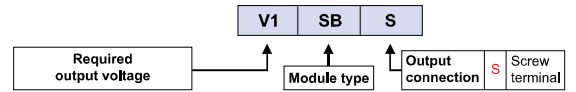
The extensive range of output modules and options make it possible to achieve almost any combination of Volts and Amps. Create your own QM configuration online at <https://config.emea.tdk-lambda.com/nv>. This method checks your configuration and offers the optimum solution.

## Converter / Output Module Configurations

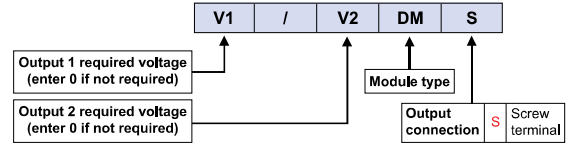
### Converter Configurations



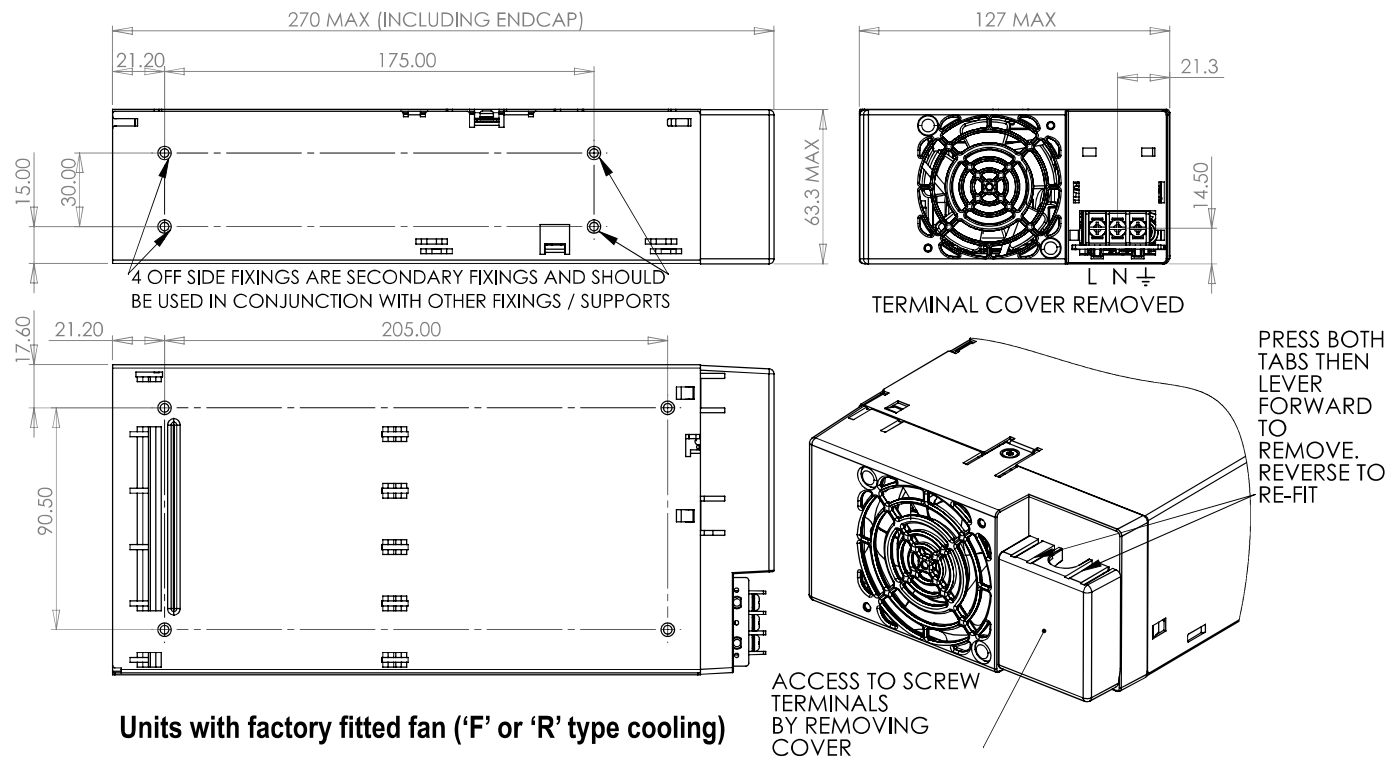
### Single Output Module Configurations



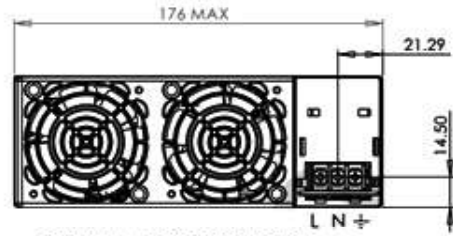
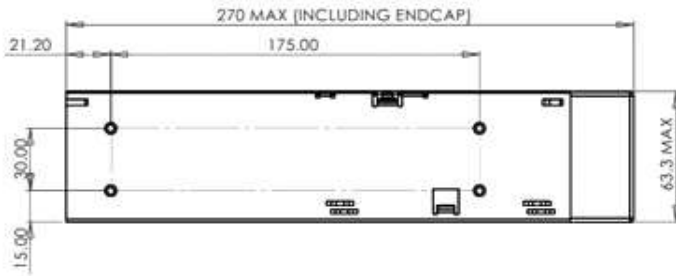
### Dual Output Module Configurations



## QM5 Outline Drawing with Factory Fitted Fan ('F' or 'R' type cooling)

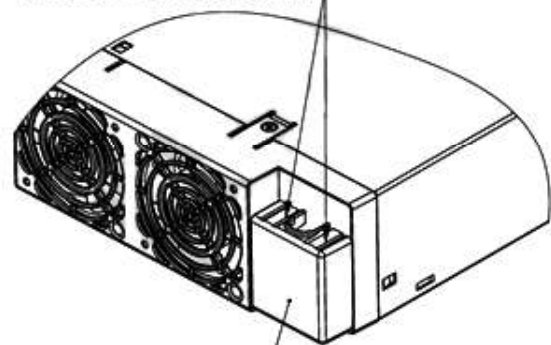


**QM7 Outline Drawing with Factory Fitted Fan ('F' or 'R' type cooling)**

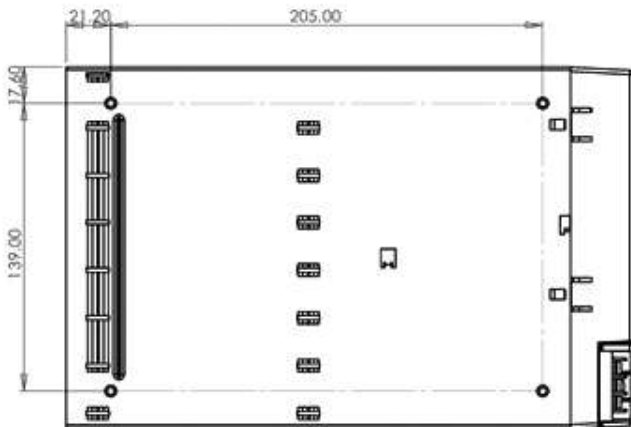


TERMINAL COVER REMOVED

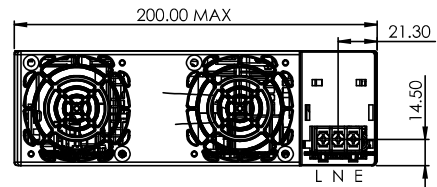
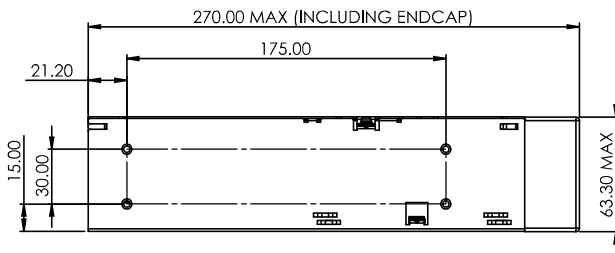
PRESS BOTH TABS THEN LEVER FORWARD TO REMOVE. REVERSE TO RE-FIT



ACCESS TO SCREW TERMINALS BY REMOVING COVER

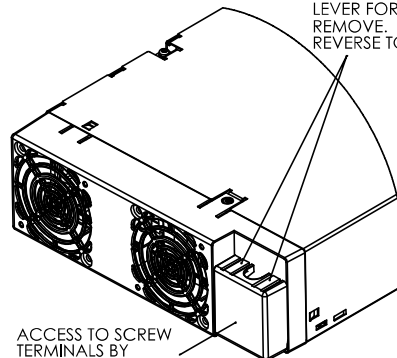


**QM8 Outline Drawing with Factory Fitted Fan ('F' or 'R' type cooling)**



TERMINAL COVER REMOVED

PRESS BOTH TABS THEN LEVER FORWARD TO REMOVE. REVERSE TO RE-FIT.



ACCESS TO SCREW TERMINALS BY REMOVING COVER

