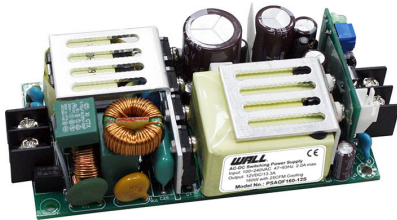
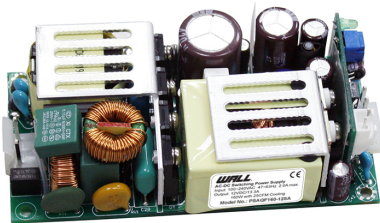


Terminal Block Type (Standard)



Size: 4.67 x 2.05 x 1.14 inches
(118.5 x 52.1 x 29.0 mm)

Molex Series 8673 Type ("A" Suffix)



Size: 4.27 x 2.05 x 1.14 inches
(108.5 x 52.1 x 29.0 mm)

FEATURES

- RoHS Compliant
- Isolation Class I
- High Efficiency up to 91.5%
- 4.0" x 2.0" Open Frame Package
- < 0.5W No Load Input Power
- Single Outputs
- 12V (Aux) / 0.3A
- Meets EN55022 Class B
- Universal Input Range: 90~264VAC (120~370VDC)
- Active PFC Function, PF > 0.95 at 230VAC
- 160 Watts Output Power with 25CFM Fan
- 100 Watts Output Power with Free Air Convection
- -25°C~+70°C Operating Temperature Range
- Short Circuit, Over Power, Over Voltage, and Over Temperature Protection
- CE, UL60950-1 Safety Approvals

DESCRIPTION

The PSAQF160 series of AC/DC switching power supplies provides 100 Watts of output power with free air convection and 160 watts with 25CFM fan in an ultra compact 4.0" x 2.0" open frame package. This series consists of 12V, 15V, 24V, and 48VDC single output models with a universal input voltage range of 90-264VAC (120~370VDC). Some features include up to 91.5% high efficiency, < 0.5W no load input power, and power factor > 0.95 at 230VAC. This series is also protected against short circuit, over power, over voltage, and over temperature conditions. The PSAQF160 series is RoHS compliant and meets EN55022 Class B requirements.

MODEL SELECTION TABLE

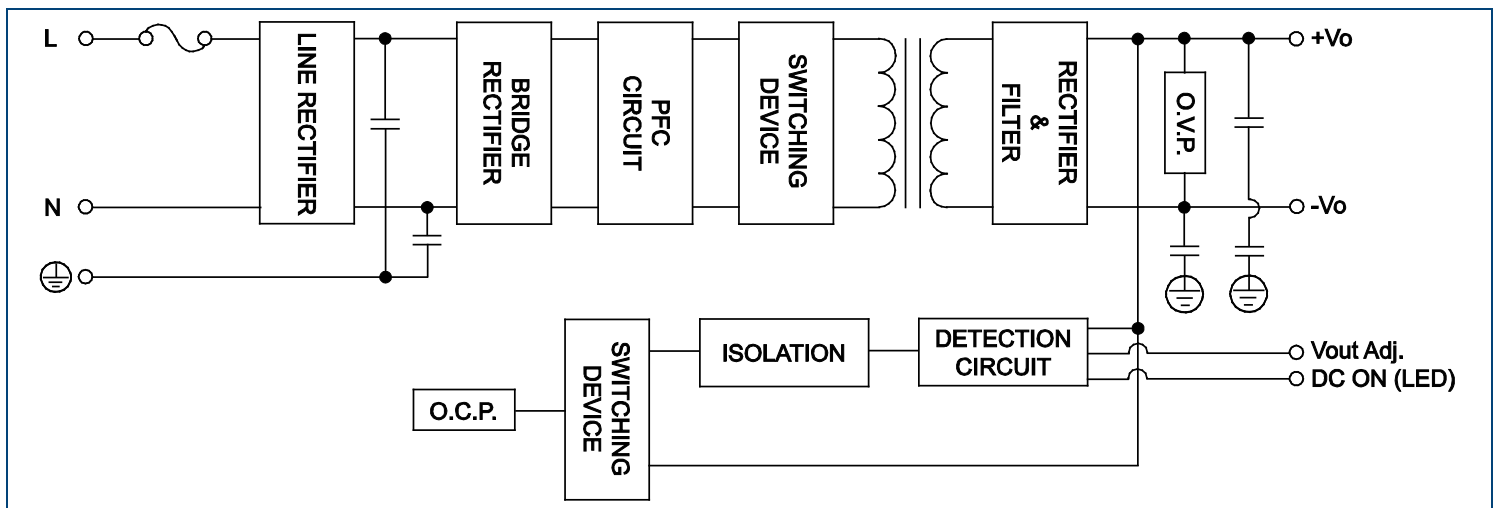
Model Number ⁽¹⁾	Input Voltage	Output Voltage	Output Current		Output Power ⁽³⁾		Ripple & Noise ⁽²⁾	Maximum Capacitive Load	Efficiency
			Convection	25CFM Fan	Convection	25CFM Fan			
PSAQF160-12S (A)	90~264 VAC (120~370 VDC)	12 VDC	8.4A	13.3A	100W	160W	130mVp-p	3000µF	90%
PSAQF160-15S (A)		15 VDC	6.7A	10.6A	100W	160W	150mVp-p	2000µF	90%
PSAQF160-24S (A)		24 VDC	4.2A	6.6A	100W	160W	240mVp-p	360µF	90%
PSAQF160-48S (A)		48 VDC	2.1A	3.33A	100W	160W	480mVp-p	180µF	91.5%

NOTES

1. Terminal block I/O connectors are standard; for Molex series 8673 I/O connectors please add the suffix "A" to the model number (Ex: PSAQF160-12SA).
2. Ripple & Noise are measured at 20MHz bandwidth and with 0.1µF and 47µF capacitors in parallel across the output.
3. Output Power: 100W max. with convection cooling and 160W max. with 25CFM forced air cooling.
4. This product is Listed to applicable standards and requirements by UL.

**Due to advances in technology, specifications subject to change without notice.*

BLOCK DIAGRAM



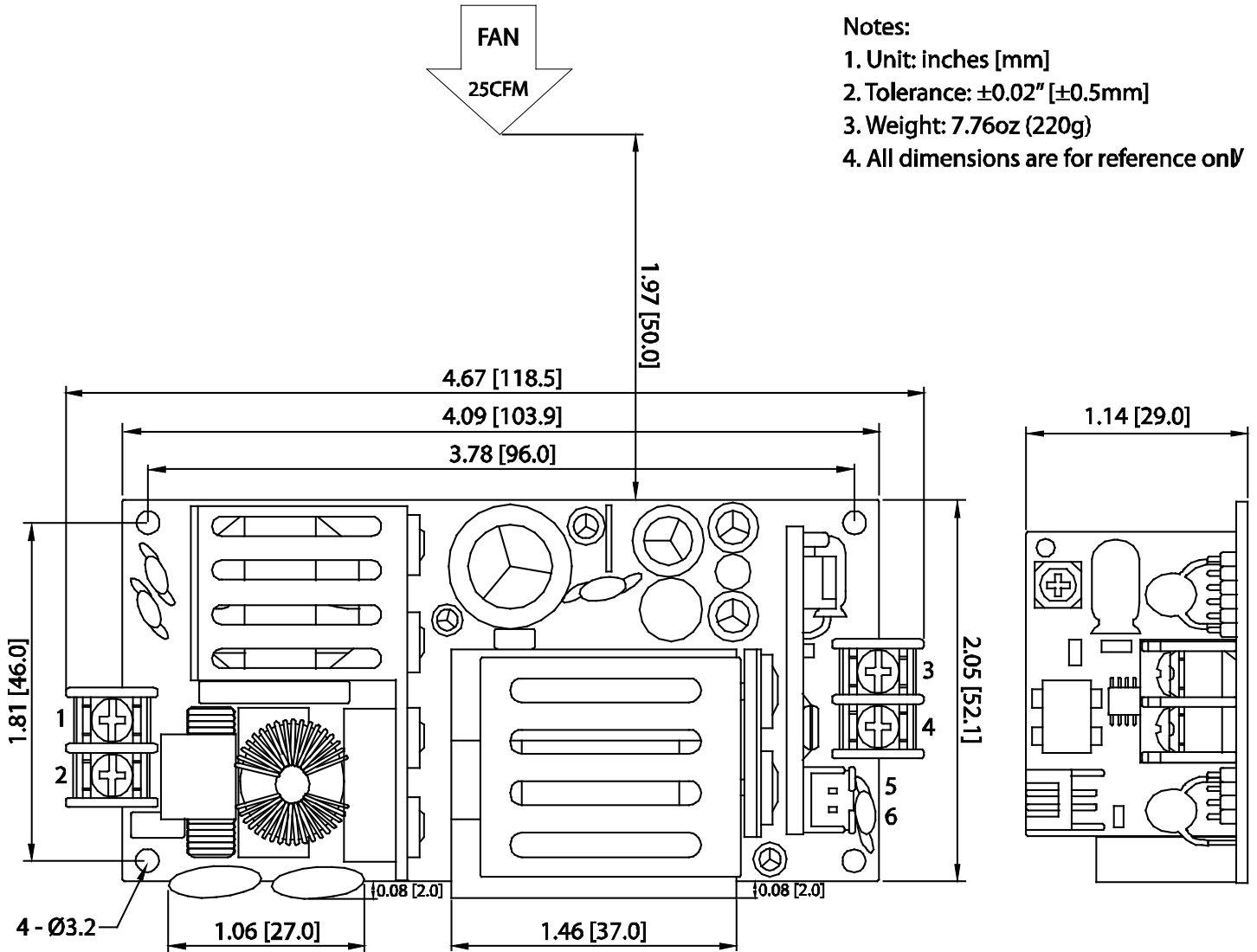
SPECIFICATIONS: PSAQF160 SERIES

All specifications are based on 25°C, Nominal Input Voltage, and Maximum Output Current unless otherwise noted.
We reserve the right to change specifications based on technological advances.

SPECIFICATION	TEST CONDITIONS	Min	Typ	Max	Unit
INPUT SPECIFICATIONS					
Input Voltage	AC input voltage range	90		264	VAC
	DC input voltage range	120		370	VDC
Input Frequency		47		63	Hz
Input Current	At 115 VAC and full load			2.0	A
	At 230 VAC and full load			1.0	
Inrush Current (< 2ms)	At 115 VAC and full load			35	A
	At 230 VAC and full load			70	
Power Factor	At 115VAC and full load	0.98			
	At 230 VAC and full load	0.95			
OUTPUT SPECIFICATIONS					
Output Voltage				See Table	
Voltage Adjustment Range		-4		+4	VDC
Voltage Accuracy		-2		+2	%
Output Current	With convection cooling			See Table	
	With 25CFM fan			See Table	
Line Regulation	110~240VAC	-1		+1	%
Load Regulation	Min load to max load	-1		+1	%
Output Power	With convection cooling			100	W
	With 25CFM fan			160	
Ripple & Noise				See Table	
Maximum Capacitive Load				See Table	
Hold-up Time	At 115VAC and 90% Vout	10			ms
Temperature Coefficient	0~70°C	-0.03		+0.03	%°C
	-25~0°C	-0.06		+0.06	
PROTECTION					
Short Circuit Protection				Automatic Recovery, Hiccup mode	
Over Voltage Protection				Zener diode clamp	
Over Power Protection				Automatic Recovery, Hiccup mode	
Over Temperature Protection				Automatic Recovery	
GENERAL SPECIFICATIONS					
Efficiency	At 230 VAC and full load			See Table	
Isolation Voltage	Input to Output	4242			VDC
	Input to Output	3000			VAC
	Input to FG	1500			
	Output to FG	500			
Leakage Current				0.5	mA
ENVIRONMENTAL SPECIFICATIONS					
Operating Temperature	With derating (see derating curve)	-25		+70	°C
Storage Temperature		-25		+85	°C
Humidity				95	% RH
Cooling				Free air convection	
Vibration	10~500Hz, 10 min/1cycle for 60 min. each test along the X, Y, Z axis		2		G
MTBF	25°C (MIL-HDBK-217F, Notice 1)	250,000			hours
PHYSICAL SPECIFICATIONS					
Weight				7.76oz (220g)	
Dimensions (L x W x H)	Terminal Block models (Standard)			4.67 x 2.05 x 1.14 in (118.5 x 52.1 x 29.0 mm)	
	Molex 8673 Models (Suffix "A")			4.27 x 2.05 x 1.14 in (108.5 x 52.1 x 29.0 mm)	
SAFETY & EMC					
Safety Approvals				CE, UL60950-1 ⁽⁴⁾	
EMI (Conducted & Radiated Emissions)	Conductive plane to be connected to safety earth			EN 55022 Class B	
EMS (Noise Immunity)				EN55024	

MECHANICAL DRAWING

Terminal Block I/O Connector Models (Standard)

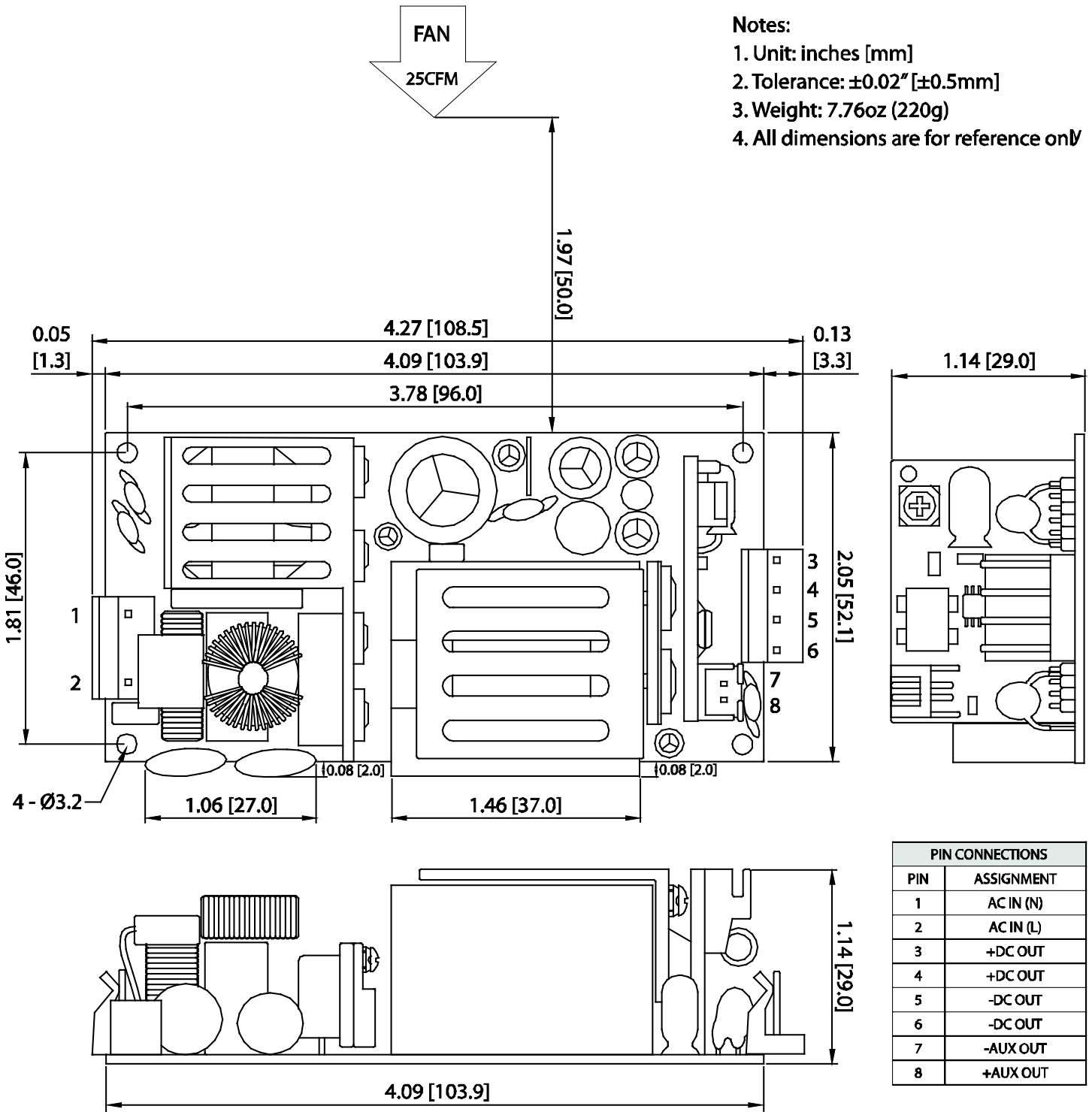


- Notes:
1. Unit: inches [mm]
 2. Tolerance: ± 0.02 " [± 0.5 mm]
 3. Weight: 7.76oz (220g)
 4. All dimensions are for reference on *V*

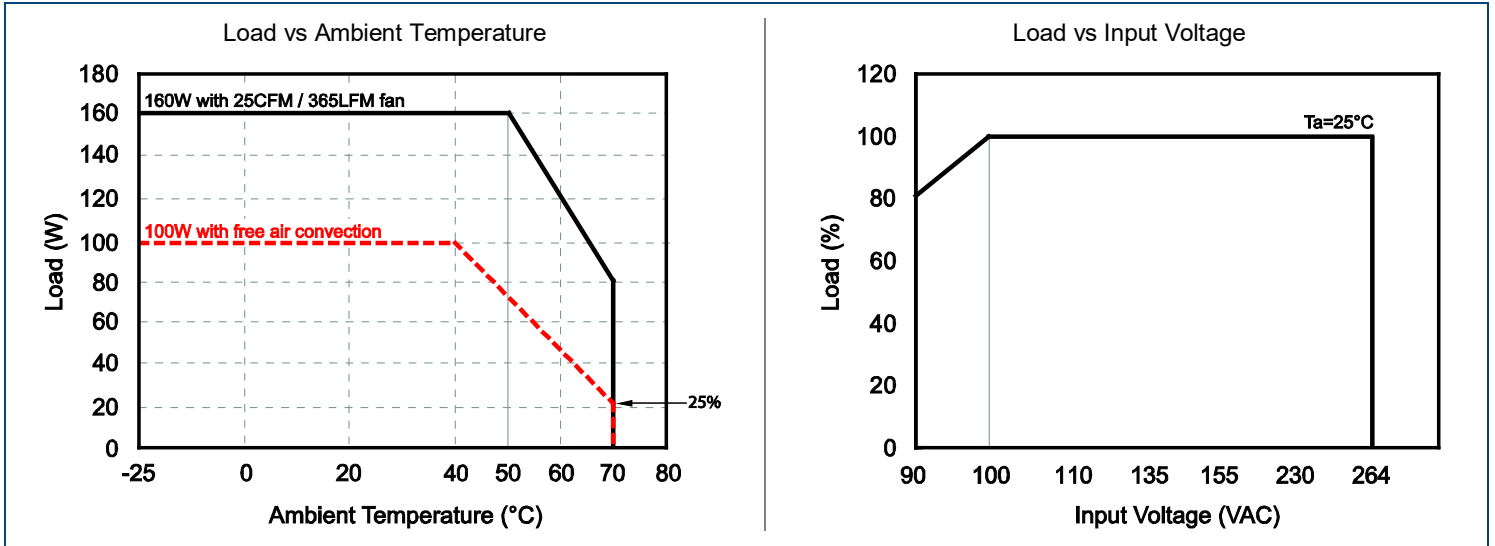
PIN CONNECTIONS	
PIN	ASSIGNMENT
1	AC IN (N)
2	AC IN (L)
3	+DC OUT
4	-DC OUT
5	-AUX OUT
6	+AUX OUT

MECHANICAL DRAWING

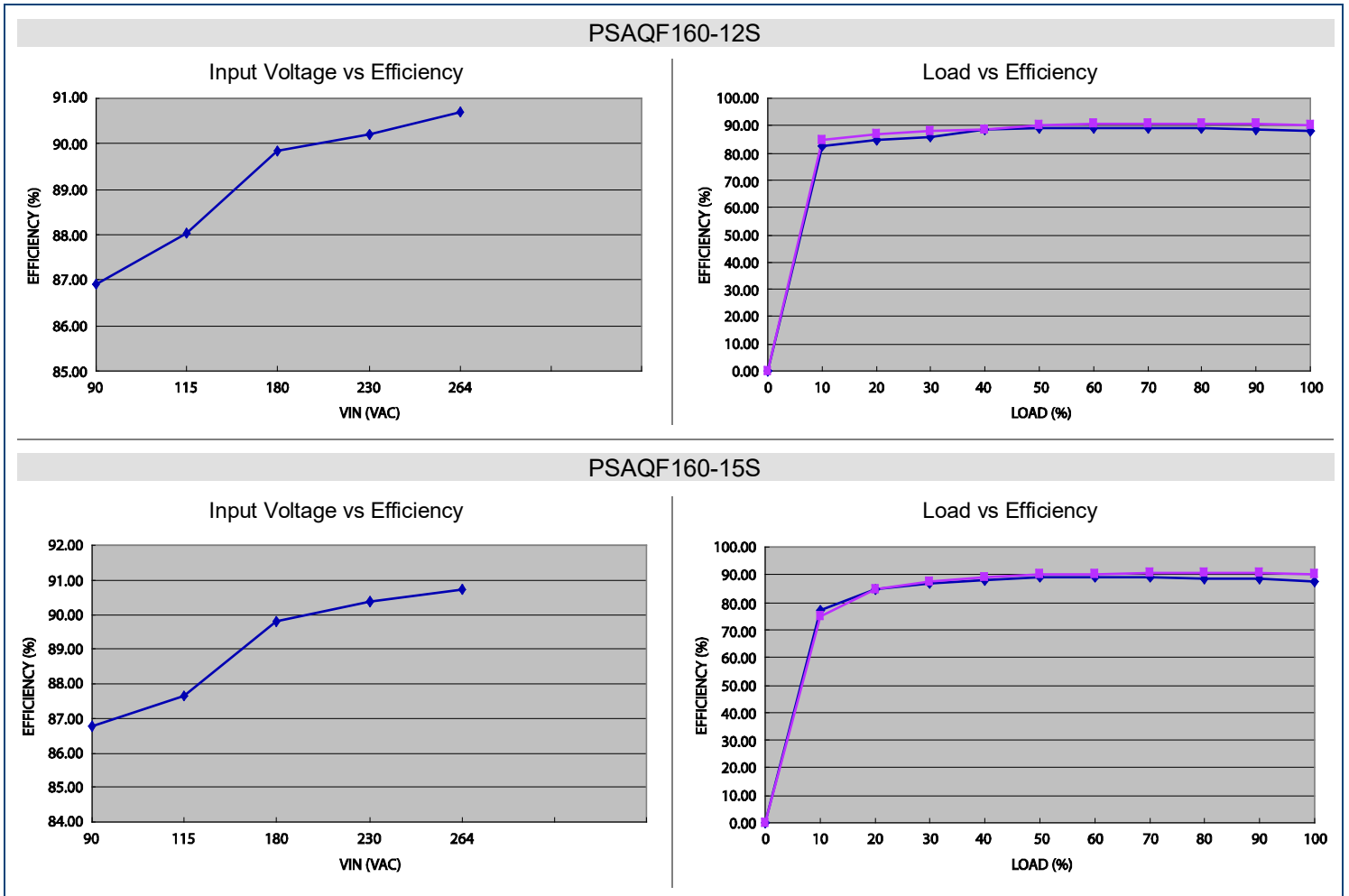
Molex Series 8673 I/O Connector Models ("A" Suffix)



DERATING

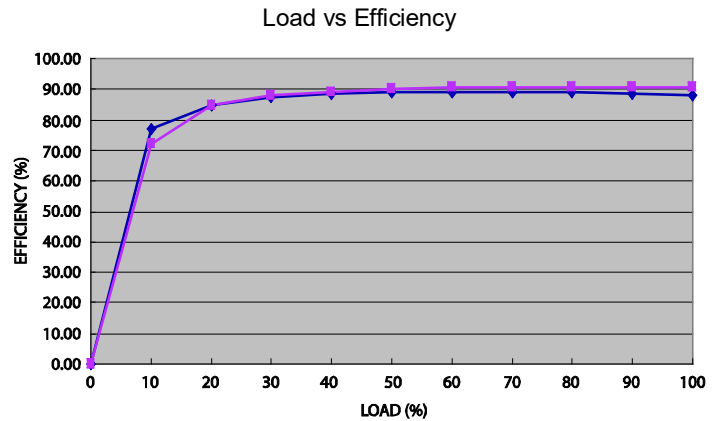
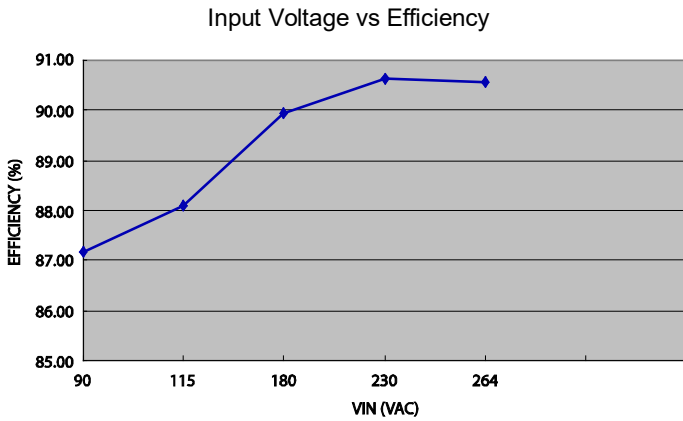


EFFICIENCY VS LOAD CURVES

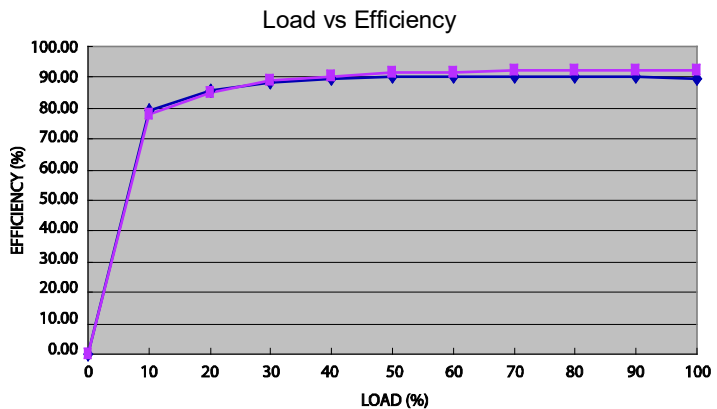
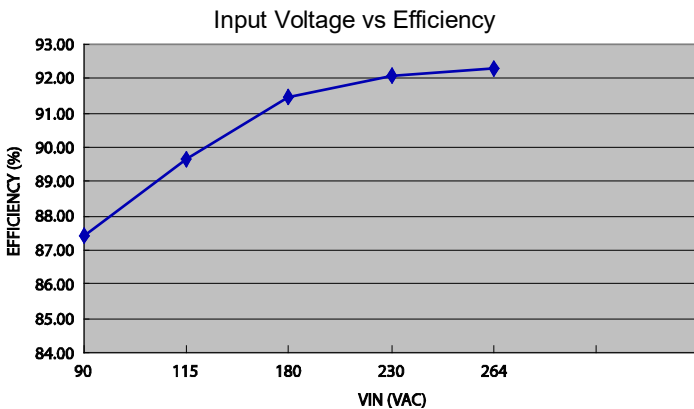


EFFICIENCY VS LOAD CURVES

PSAQF160-24S



PSAQF160-48S



COMPANY INFORMATION

Wall Industries, Inc. has created custom and modified units for over 50 years. Our in-house research and development engineers will provide a solution that exceeds your performance requirements on-time and on budget. Our ISO9001: 2015 certification is just one example of our commitment to producing a high quality, well-documented product for our customers.

Our past projects demonstrate our commitment to you, our customer. Wall Industries, Inc. has a reputation for working closely with its customers to ensure each solution meets or exceeds form, fit and function requirements. We will continue to provide ongoing support for your project above and beyond the design and production phases. Give us a call today to discuss your future projects.

Contact **Wall Industries** for further information:

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