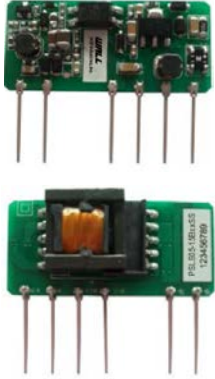


Standard Pins



Size: 1.65in x 0.73in x 0.54in

90 Degree Bent Pins (-F Suffix)



Size: 1.65in x 0.79in x 0.55in

**FEATURES**

- Wide Input Voltage Range: 85~264VAC/100~400VDC
- Ultra-Slim SIP Package with Optional 90° Bend
- Industrial Grade
- Isolation of 3000VAC
- Compact Size
- Over Voltage, Over Current and Short Circuit Protection
- RoHS Compliant
- IEC60950, UL60950, and EN60950 Safety Approvals

**DESCRIPTION**

The PSLS05 series of AC/DC converters offers up to 5 watts of output power in an ultra slim SIP package. This series consists of single output models with a wide input voltage range of 85~264VAC/100~400VDC. Each model in this series is industrial grade, has isolation of 3000VAC, and is RoHS compliant. This series also has IEC60950, UL60905, and EN60950 safety approvals and is RoHS compliant.

**MODEL SELECTION TABLE**

Model Number <sup>(1)</sup>	Input Voltage Range	Output Voltage	Output Current	Maximum Capacitive Load	Efficiency	Output Power
PSLS05-15B03SS	85-264VAC (100-400VDC)	3.3V	1A	2200µF	67%	3.3W
PSLS05-15B05SS		5V	1A	1500µF	74%	5W
PSLS05-15B09SS		9V	0.56A	680µF	75%	
PSLS05-15B12SS		12V	0.42A	470µF	76%	
PSLS05-15B15SS		15V	0.34A	330µF	77%	
PSLS05-15B24SS		24V	0.21A	100µF	79%	

**SPECIFICATIONS**

All specifications are based on 25°C, Humidity <75%, Nominal Input Voltage, and Rated Output Current unless otherwise noted. We reserve the right to change specifications based on technological advances.

SPECIFICATION	TEST CONDITIONS	Min	Typ	Max	Unit
<b>INPUT SPECIFICATIONS</b>					
Input Voltage Range	Conventional	100		240	VAC
	AC Input	85		264	
	DC Input	100		400	VDC
Input Frequency		47		63	Hz
Input Current	115VAC			0.2	A
	230VAC			0.1	
Inrush Current	115VAC		5		A
	230VAC		10		
Leakage Current	CY0 is 1nF/400VAC			0.25	mA
<b>OUTPUT SPECIFICATIONS</b>					
Output Voltage		See Table			
Voltage Accuracy	3.3V Model		±2	±3	%
	All Other Models		±1	±2	
Line Regulation	Full Load		±0.1	±0.5	%
Load Regulation	10%-100% Load		±1	±1.5	%
Output Power		See Table			
Output Current		See Table			
Maximum Capacitive Load		See Table			
Ripple & Noise	20MHz bandwidth (peak-peak value)		50	150	mV
Temperature Drift Coefficient			±0.02		%/°C
Stand-By Power Consumption				0.5	W
Min Load		0			%
Hold Up Time	115VAC Input		20		mS
	230VAC Input		80		
<b>PROTECTION</b>					
Short Circuit Protection		Continuous, Self-Recovery			
Over Current Protection		≥110%Io, Self-Recovery			
Over Voltage Protection		Zener Clamp Diode			

**SPECIFICATIONS**

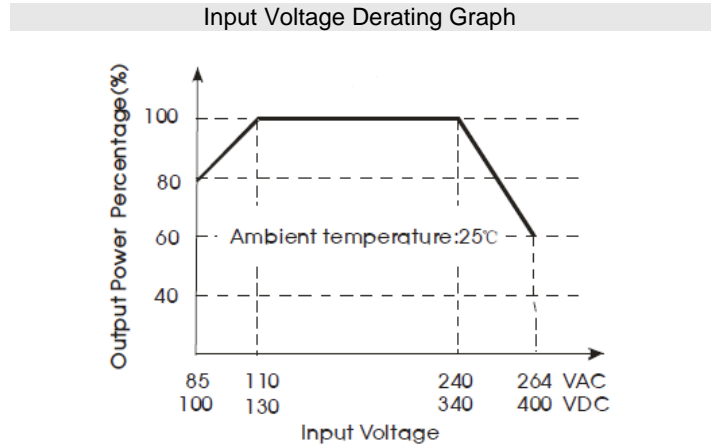
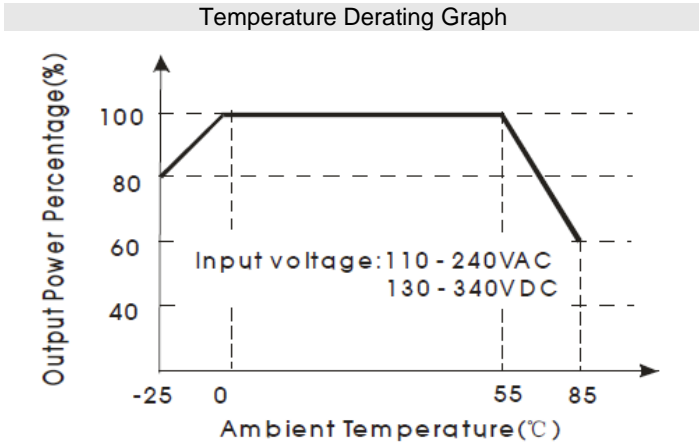
All specifications are based on 25°C, Humidity <75%, Nominal Input Voltage, and Rated Output Current unless otherwise noted.  
We reserve the right to change specifications based on technological advances.

SPECIFICATION	TEST CONDITIONS	Min	Typ	Max	Unit
<b>ENVIRONMENTAL SPECIFICATIONS</b>					
Operating Temperature		-25		+85	°C
Storage Temperature		-40		+105	°C
Storage Humidity				85	%RH
Welding Temperature	Wave-Soldering	260±5°C; time: 5~10s			
	Manual-Welding	360±10°C; time:3~5s			
Power Derating	-25°C~0°C	0.8			%°C
	+55°C~+85°C	1.33			
MTBF	MIL-HDBK-217F @25°C	300,000			Hours
<b>GENERAL SPECIFICATIONS</b>					
Efficiency	230VAC, % typ.	See Table			
Switching Frequency			100		kHz
Isolation Voltage	Input to Output (Test Time: 1min (leakage current setting value: 5mA)	3000			VAC
<b>PHYSICAL SPECIFICATIONS</b>					
Weight		0.25oz (7g)			
Dimensions (L x W x H)	Standard Pins	1.65in x 0.73in x 0.54in (42mm x 18.50mm x 13.65mm)			
	-F Suffix	1.65in x 0.79in x 0.55in (42mm x 20mm x 14mm)			
Cooling		Free Air Convection			
<b>SAFETY CHARACTERISTICS</b>					
Safety Approvals & Regulated Certification		IEC60950 EN60950 UL60950			
Certifications		Standard Pin Models Only			
Safety Class		Class II			
EMI	CE	CISPR22/EN55022 <sup>(2)</sup> CISPR22/EN55022 <sup>(3)</sup>			
	RE	CISPR22/EN55022 <sup>(2)</sup> <sup>(3)</sup>			
ESD	IEC/EN61000-4-2	Contact ±4kV			
RS	IEC/EN61000-4-3	10V/m			
EFT	IEC/EN61000-4-4	±2kV <sup>(2)</sup>			
	IEC/EN61000-4-4	±4kV <sup>(3)</sup>			
Surge	IEC/EN61000-4-5	Line to Line ±1kV <sup>(2)</sup>			
	IEC/EN61000-4-5	Line to Line ±1kV/line to ground ±2KV <sup>(3)</sup>			
CS	IEC/EN61000-4-6	3Vr.m.s. <sup>(3)</sup>			
PFM	IEC/EN61000-4-8	10A/m			
Voltage Dips, Short Interruptions, Voltage Variations Immunity	IEC/EN61000-4-11	0%-70%			

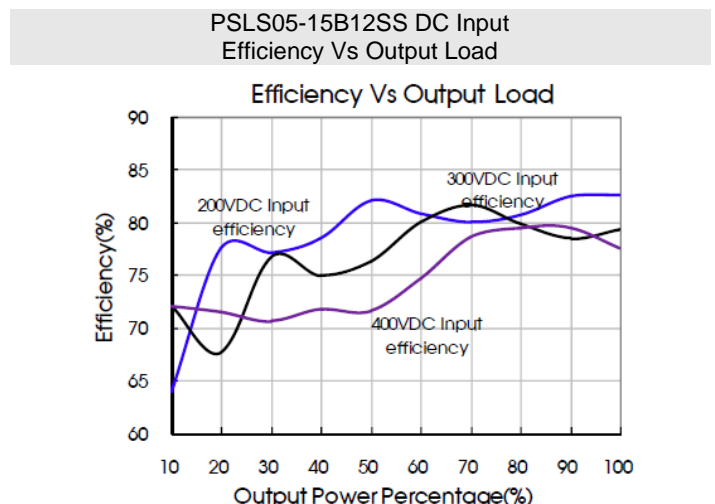
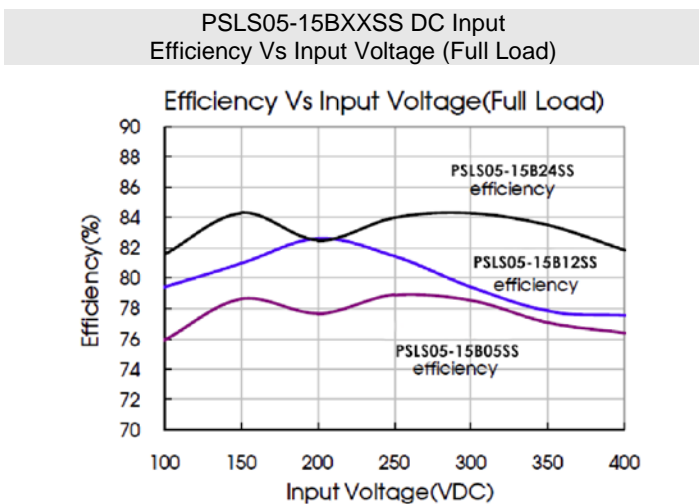
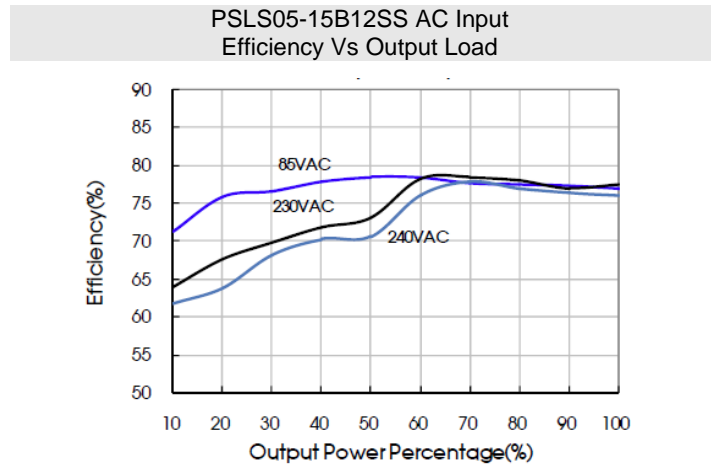
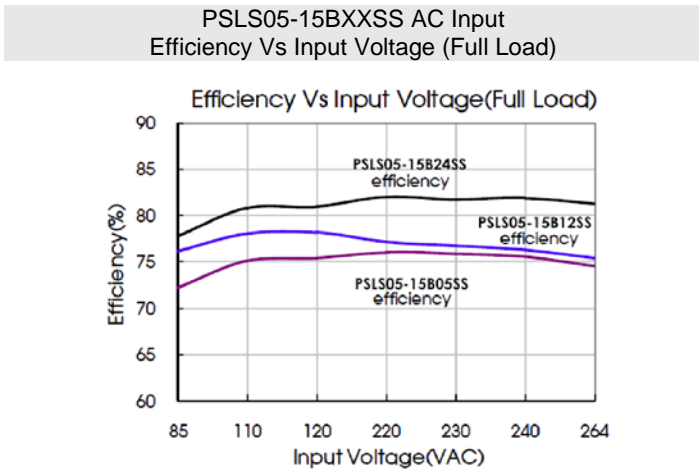
**NOTES**

1. Add -F to model name to indicate 90° bent pin model.
  2. See Fig. 1 for recommended circuit.
  3. See Fig. 2 for recommended circuit
  4. Module required dispensing fixed after assembled.
  5. This part is open frame, at least 6.4mm safety distance between the primary and secondary external components of the module is needed to meet the safety requirements.
  6. Customization is available.
- \*Due to advances in technology, specifications subject to change without notice.*

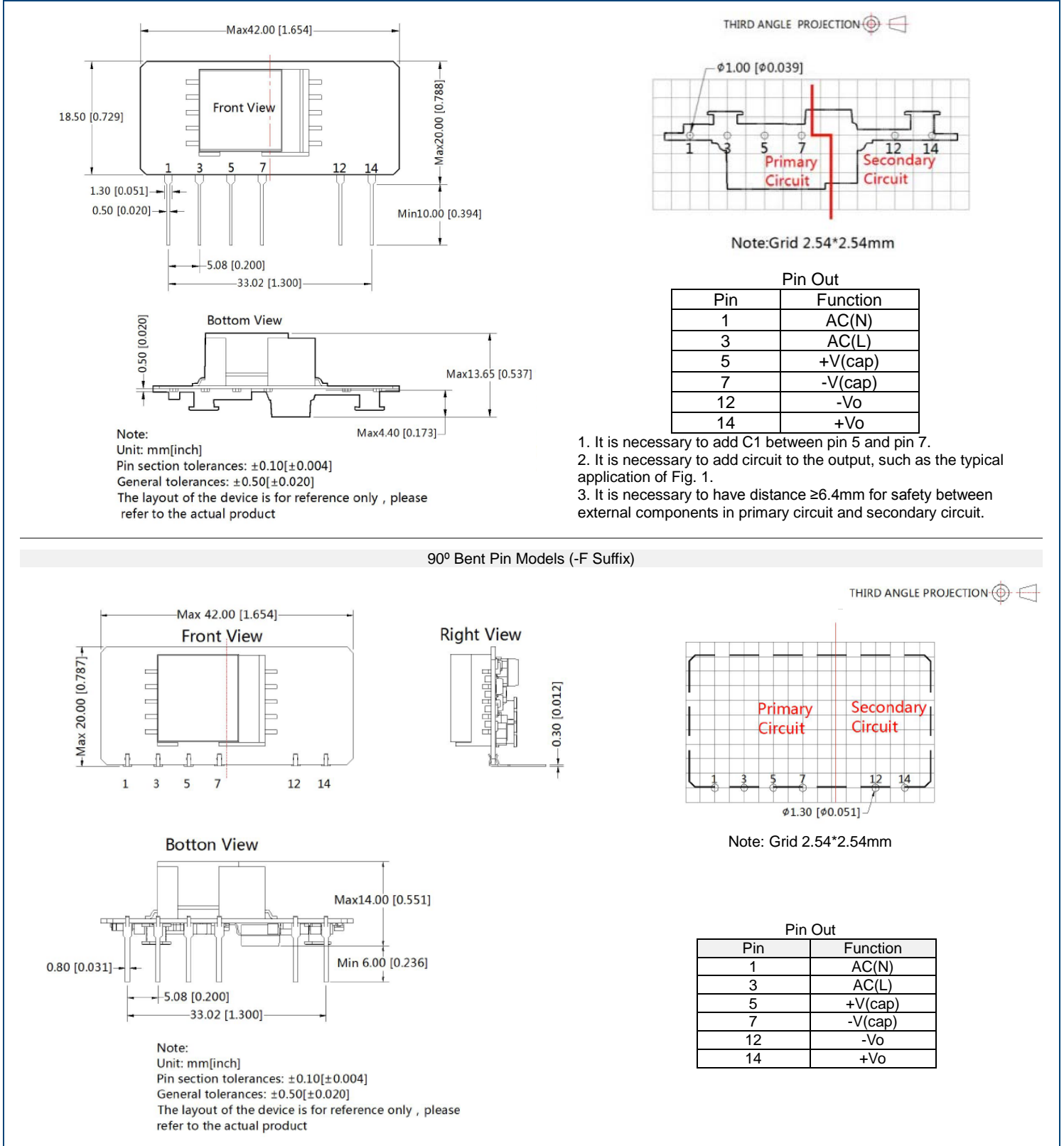
CHARACTERISTIC CURVES



- Note:
1. Input voltage should be derated based on temperature derating when it is 85~110VAC/240~264VAC/100-130VDC/340-400VDC
  2. This product is suitable for use in natural cooling environments. If in closed environment, please contact factory.



MECHANICAL DRAWINGS



DESIGN REFERENCE

**Typical Application Circuit**

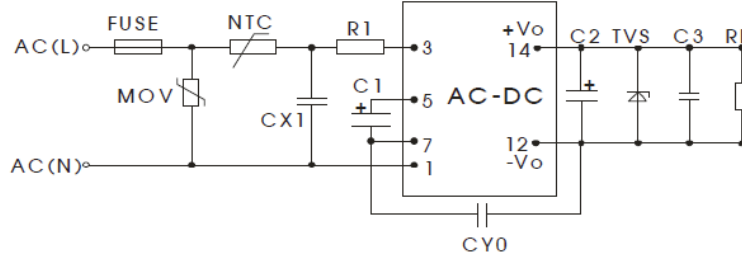


Fig. 1: Typical application circuit

Model	C1 (Required)	C2 (Required)	R1	C3	CX1	CY0	NTC	MOV	FUSE (Required)	TVS
PSLS05-15B03SS	10 $\mu$ F/400V	220 $\mu$ F/35V	12 $\Omega$ / 2W	100nF/ 50V	0.1 $\mu$ F/ 275VAC	1nF/ 400VAC	13D-5	S14K350	1A/250V	SMBJ7.0A
PSLS05-15B05SS										SMBJ12A
PSLS05-15B09SS		150 $\mu$ F								SMBJ20A
PSLS05-15B12SS										SMBJ30
PSLS05-15B15SS										
PSLS05-15B24SS										

- Note:
- C1: When AC input, C1 is used as filter capacitor, the value of C1 is recommended to be 10 $\mu$ F/400V. When DC input, C1 is used as EMC filter capacitor, the value of C1 is recommended to be 10 $\mu$ F/400C (when the input is above 370VDC, the recommended value of C1 is 10 $\mu$ F/450V)
  - Output filtering capacitor C2 is electrolytic capacitor, C2 is recommended to apply electrolytic capacitor with high frequency and low resistance. For capacitance and current of capacitor please refer to datasheet. Capacitance withstands voltage derating 80% or above. C3 is ceramic capacitor, which is used to filter high-frequency noise.

**EMC Solution-Recommended Circuit**

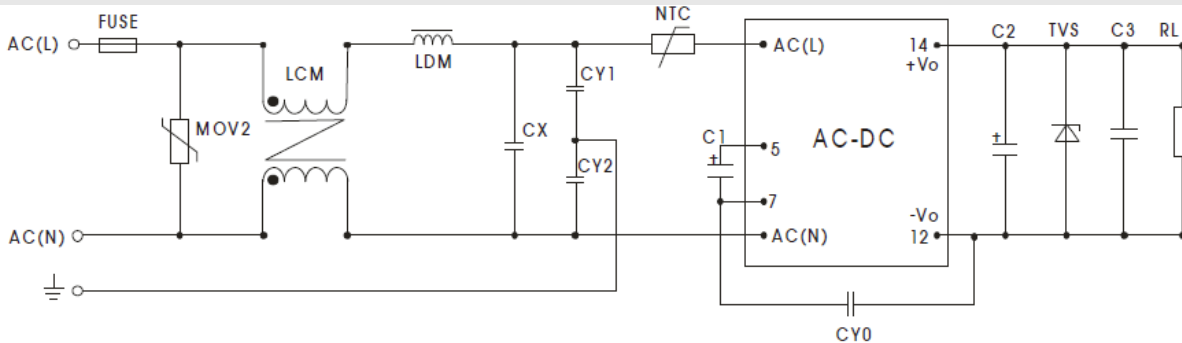


Fig 2: EMC application circuit with higher requirements

Components	Recommend Parameters
MOV2	S14K320
CY1, CY2	1nF/400VAC
CX	0.1 $\mu$ F/275VAC
LCM	3.5mH
LDM	330 $\mu$ H
NTC	13D-5
FUSE	1A/250V, slow fusing, required

Note: Recommended value of other components refers to typical application circuit

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## 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 ISO9001-2008 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.

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