AC/DC 75W Enclosed Switching Power Supply

SLI75-20BxxR2 Series

DIN rail TS-35/7.5 or 15 mountable

CE RoHS

FEATURES

- Universal 90 - 264VAC or 120 - 373VDC Input voltage
- Accepts AC or DC input (dual-use of same terminal)
- Operating ambient temperature range: -30℃ to +70℃
- The efficiency is up to 90%
- High I/O isolation test voltage up to 4000VAC
- Low ripple & noise
- Output short circuit, over-current, over-voltage, over-temperature protection
- Ultra slim design with 30mm width: suitable for small chassis and narrow space installation
- Withstand 300VAC surge input for 5S
- CISPR32/EN55032 Class B compliant
- Operating altitude up to 5000m
- Meets regulates for harmonic current(IEC61000-3-2), available for lighting application
- Safety according to IEC/EN/UL62368, IEC/EN/UL60335, GB4943, UL508

SLI75-20BxxR2 is SCHMID-M AC-DC converter series featuring a cost-effective, energy efficient green power supply solution for standard DIN-rail mounting. The products offer a high level of stability and immunity to noise for industrial control equipment, machinery, and other industrial equipment in a variety of harsh environments. These light weight AC-DC converters have an extremely compact design and the standard rail (30mm) installation for space saving. With good EMC performance, compliant with international IEC/EN/UL62368, IEC/EN/UL60335, GB4943, UL508 standards for EMC and safety.

Selection Guide

Certification	Part No.	Output Power(W)	Nominal Output Voltage and Current (Vo/Io)	Output Voltage Adjustable Range(V)	Efficiency at 230VAC (%) Typ.	Max. Capacitive Load (μF)
CE	SLI75-20B12R2	75	12V/6.3A	12-14	86	6000
	SLI75-20B24R2		24V/3.2A	24-28	89	1500
	SLI75-20B48R2		48V/1.6A	48-53	90	1000

Input Specifications

Item	Operating Conditions		Min.	Typ.	Max.	Unit
Input Voltage Range	AC input		90	--	264	VAC
	DC input		120	--	373	VDC
Input Voltage Frequency			47	--	63	Hz
Input Current	115VAC		--	--	2	A
	230VAC		--	--	1	
Inrush Current	115VAC	Cold start	--	25	--	
	230VAC		--	45	--	
Leakage Current	240VAC		<3.5mA			
Hot Plug			Unavailable			

AC/DC 75W Enclosed Switching Power Supply

SLI75-20BxxR2 Series

Output Specifications

Item	Operating Conditions		Min.	Typ.	Max.	Unit
Output Voltage Accuracy	Full load range	12V	--	±2.0	--	%
		24V/48V	--	±1.0	--	
Line Regulation	Rated load		--	±0.5	--	
Load Regulation	0% - 100% load		--	±1.0	--	
Ripple & Noise*	20MHz bandwidth (peak-to-peak value)	12V	--	--	80	mV
		24V	--	--	120	
		48V	--	--	150	
Temperature Coefficient			--	±0.03	--	%/℃
Minimum Load			0	--	--	%
Hold-up Time	115VAC		12	--	--	ms
	230VAC		60	--	--	
Short Circuit Protection	Recovery time < 3s after the short circuit disappear.		Constant current, continuous, self-recovery			
Over-current Protection			105%-150% Io, constant current mode, automatic recover after fault condition is removed			
Over-voltage Protection	12V		⩽17V(Output voltage turn off, re-power on for recover)			
	24V		⩽33V(Output voltage turn off, re-power on for recover)			
	48V		⩽60V(Output voltage turn off, re-power on for recover)			
Over-temperature Protection			Output voltage turn off, re-power on for recover			

Note：*The "Tip and barrel method" is used for ripple and noise test, please refer to AC-DC Converter Enclosed Switching Power Supply Application Notes for specific information.

General Specifications

Item		Operating Conditions		Min.	Typ.	Max.	Unit
Isolation Test	Input - ⏚	Electric strength test for 1min., leakage current <10mA		2000	--	--	VAC
	Input-output			4000	--	--	
	Output - ⏚			500	--	--	
Insulation Resistance	Input - ⏚	At 500VDC		50	--	--	MΩ
	Input - output			50	--	--	
	Output - ⏚			50	--	--	
Operating Temperature				-30	--	+70	℃
Storage Temperature				-40	--	+85	
Storage Humidity		Non-condensing		10	--	95	%RH
Switching Frequency				--	65	--	kHz
Power Derating		Operating temperature derating	-30℃ to -10℃	2.0	--	--	%/℃
			+45℃ to +70℃	2.0	--	--	
		Input voltage derating	90VAC -100VAC	2.0	--	--	%/VAC
Safety Standard				Meet IEC/EN/UL62368/IEC/EN/UL60335/GB4943/UL508			
Safety Class				CLASS I			
MTBF		MIL-HDBK-217F@25℃		>300,000 h			

AC/DC 75W Enclosed Switching Power Supply

SLI75-20BxxR2 Series

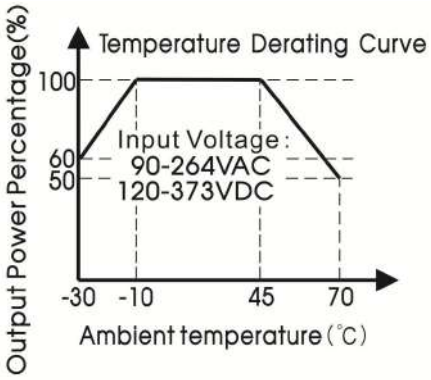
Mechanical Specifications

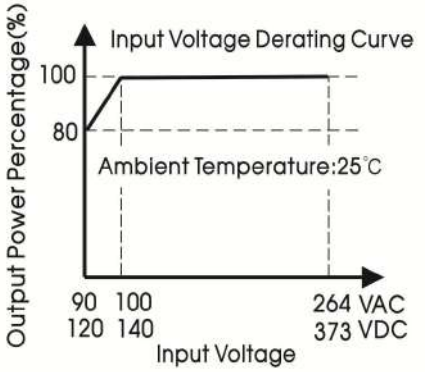
Case Material	Metal (AL5052, SGCC) and Plastic(PC940)
Dimensions	30.00 x 128.00 x 120.00mm
Weight	370g (Typ.)
Cooling Method	Free air convection

Electromagnetic Compatibility (EMC)

Emissions	CE	CISPR32/EN55032 CLASS B	
	RE	CISPR32/EN55032 CLASS B	
	Harmonic current	IEC/EN61000-3-2 CLASS A	
Immunity	ESD	IEC/EN 61000-4-2 Contact ±4KV /Air ±6KV	Perf. Criteria A
	RS	IEC/EN 61000-4-3 10V/m	perf. Criteria A
	EFT	IEC/EN 61000-4-4 ±2KV	perf. Criteria A
	Surge	IEC/EN 61000-4-5 line to line ±2KV/line to ground ±4KV	perf. Criteria A
	CS	IEC/EN61000-4-6 10 Vr.m.s	perf. Criteria A
	Voltage dips, short interruptions and voltage variations immunity	IEC/EN61000-4-11 0%, 70%	perf. Criteria B

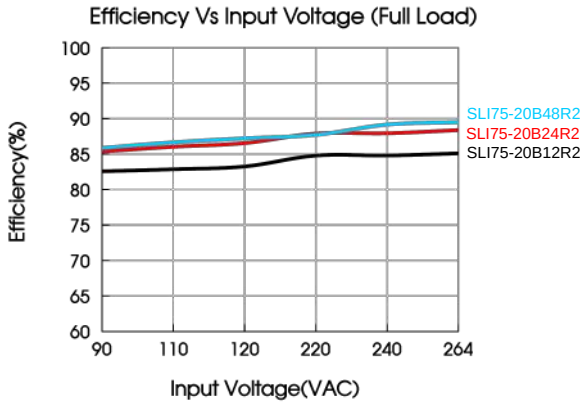
Product Characteristic Curve

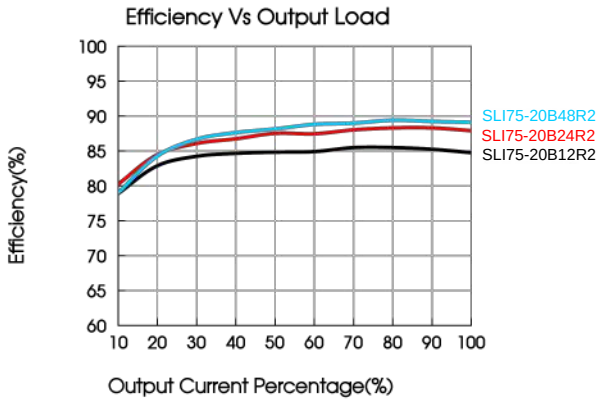




Note: ①With an input voltage between 90 -100VAC and a DC input between 120-140VDC the output power must be derated as per the temperature derating curves;

②This product is suitable for applications using natural air cooling; for applications in closed environment please consult SCHMID-M FAE.

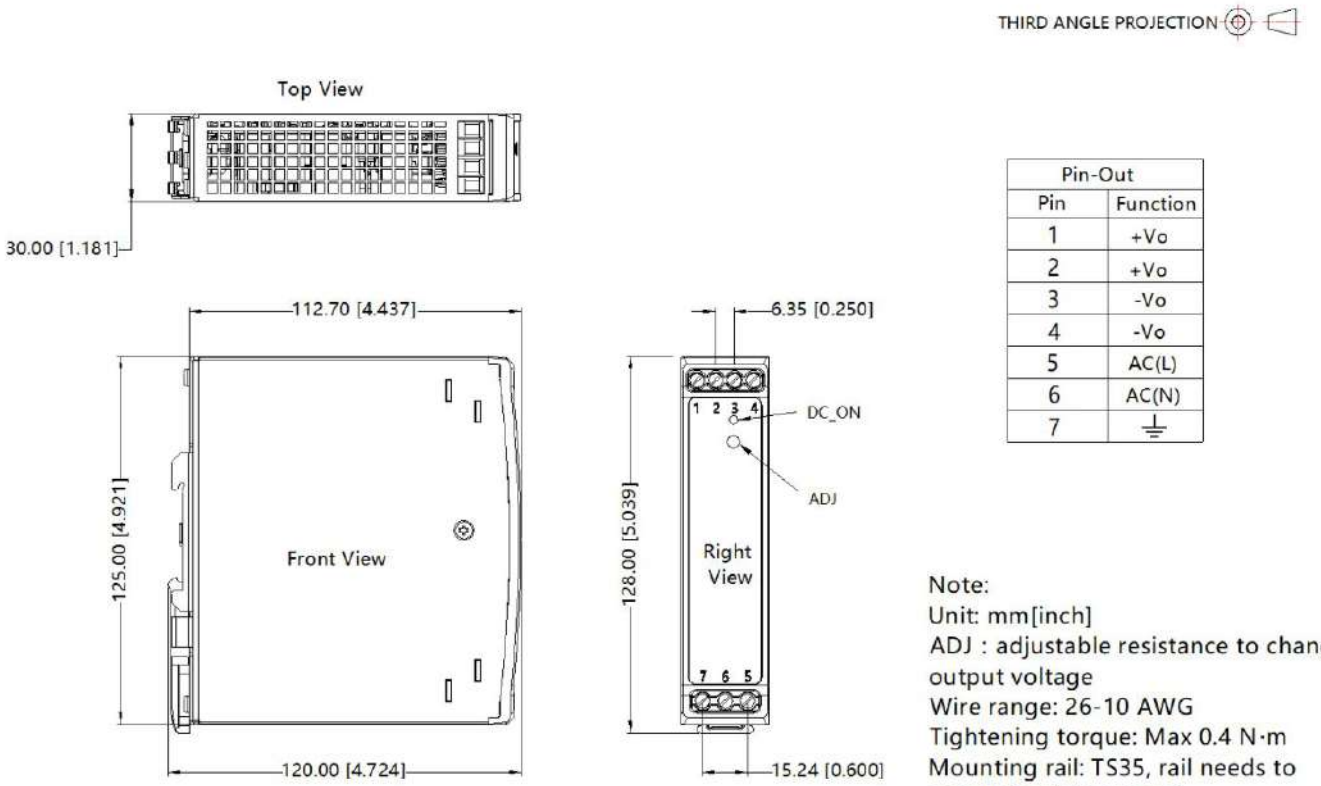




AC/DC 75W Enclosed Switching Power Supply

SLI75-20BxxR2 Series

Dimensions and Recommended Layout



Pin-Out	
Pin	Function
1	+Vo
2	+Vo
3	-Vo
4	-Vo
5	AC(L)
6	AC(N)
7	⏚

Note:
Unit: mm[inch]
ADJ : adjustable resistance to change output voltage
Wire range: 26-10 AWG
Tightening torque: Max 0.4 N·m
Mounting rail: TS35, rail needs to connect safety ground
General tolerances: ±1.00[±0.039]

Note:

1. Unless otherwise specified, parameters in this datasheet were measured under the conditions of Ta=25℃, humidity<75%RH with nominal input voltage and rated output load;
2. The room temperature derating of 5℃/1000m is needed for operating altitude greater than 2000m;
3. All index testing methods in this datasheet are based on our company corporate standards;
4. In order to improve the efficiency at high input voltage, there will be audible noise generated, but it does not affect product performance and reliability;
5. We can provide product customization service, please contact our technicians directly for specific information;
6. Products are related to laws and regulations: see "Features" and "EMC";
7. Our products shall be classified according to ISO14001 and related environmental laws and regulations, and shall be handled by qualified units.