

■ Features

- Power Rating 3-5W
- Universal AC/DC input
- Efficiency up to 88%
- Includes EMI filter and rectification circuit
- Protections of high insulation voltage, OCP, SCP, OVP, and OTP
- Comply as ROHS standard, UL1950, IEC950 safety
- Comply as EN55032 Class B
- Control circuit of inrush input and fast dynamic response
- 5-year warranty



*Product images are for illustrative purposes only and may vary from actual design.

■ Applications

- Military communication
- Industrial applications
- Traffic lights

■ Model List*(See part number scheme for model number details)

Model Number	Input Voltage Range Typ./ (Range)	Output Power	Output Voltage	Output Current	Efficiency
SPACZ003-XXX-1051	165Vac/(85-265Vac) 220Vac /(176-265Vac) 380 Vac/(100-460Vac)	3W	5V	0.6A	82%
SPACZ003-XXX-1091		3W	9V	0.33A	82%
SPACZ003-XXX-1121		3W	12V	0.25A	84%
SPACZ003-XXX-1151		3W	15V	0.2A	85%
SPACZ003-XXX-1241		3W	24V	0.13A	88%
SPACZ003-XXX-1052		3W	±5V	0.3A/0.3A	82%
SPACZ003-XXX-1122		3W	±12V	0.13A/0.13A	85%
SPACZ003-XXX-1152		3W	±15V	0.1A/0.1A	88%
SPACZ003-XXX-10505E		3W	5V/5V	0.4A/0.2A	82%
SPACZ003-XXX-10512E		3W	5V/12V	0.4A/0.08A	84%
SPACZ003-XXX-10515E		3W	5V/15V	0.2A/0.13A	84%
SPACZ003-XXX-10524E		3W	5V/24V	0.2A/0.04A	87%
SPACZ003-XXX-105053		3W	5V/±5V	0.4A/0.1A/0.1A	82%
SPACZ003-XXX-105123		3W	5V/±12V	0.4A/0.04A/0.04A	84%
SPACZ003-XXX-105153		3W	5V/±15V	0.4A/0.03A/0.03A	85%
SPACZ003-XXX-105243		3W	5V/±24V	0.4A/0.02A/0.02A	87%
SPACZ005-XXX-1051		5W	5V	1A	82%
SPACZ005-XXX-1091		5W	9V	0.56A	82%
SPACZ005-XXX-1121		5W	12V	0.42A	84%
SPACZ005-XXX-1151		5W	15V	0.35A	85%
SPACZ005-XXX-1241	5W	24V	0.22A	88%	
SPACZ005-XXX-1052	5W	±5V	0.5A/0.5A	82%	

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■ Model List(cont.)

SPACZ005-XXX-1122		5W	±12V	0.21A/0.21A	84%
SPACZ005-XXX-10505E		5W	5V/5V	0.8A/0.2A	82%
SPACZ005-XXX-10512E		5W	5V/12V	0.6A/0.2A	83%
SPACZ005-XXX-10515E	165Vac/(85-265Vac)	5W	5V/15V	0.6A/0.15A	83%
SPACZ005-XXX-10524E	220Vac/(176-265Vac)	5W	5V/24V	0.6A/0.1A	86%
SPACZ005-XXX-105053	380 Vac/(100-460Vac)	5W	5V/±5V	0.8A/0.1A/0.1A	83%
SPACZ005-XXX-105123		5W	5V/±12V	0.6A/0.1A/0.1A	84%
SPACZ005-XXX-105153		5W	5V/±15V	0.6A/0.08A/0.08A	85%

Model Number	Recommended Outer Circuit		
	C1, C2, C3	C4	C5, C6
SPACZ003-XXX-1051	0.1uF/25V	470uF/16V	/
SPACZ003-XXX-1091	0.1uF/25V	330uF/25V	/
SPACZ003-XXX-1121	0.1uF/25V	330uF/25V	/
SPACZ003-XXX-1151	0.1uF/25V	330uF/25V	/
SPACZ003-XXX-1241	0.1uF/25V	220uF/35V	/
SPACZ003-XXX-1052	0.1uF/25V	330uF/16V	330uF/16V
SPACZ003-XXX-1122	0.1uF/25V	330uF/16V	330uF/16V
SPACZ003-XXX-1152	0.1uF/25V	220uF/25V	220uF/25V
SPACZ003-XXX-10505E	0.1uF/25V	470uF/16V	330uF/16V
SPACZ003-XXX-10512E	0.1uF/25V	470uF/16V	220uF/25V
SPACZ003-XXX-10515E	0.1uF/25V	470uF/16V	220uF/25V
SPACZ003-XXX-10524E	0.1uF/25V	470uF/16V	100uF/35V
SPACZ003-XXX-105053	0.1uF/25V	470uF/16V	220uF/16V
SPACZ003-XXX-105123	0.1uF/25V	470uF/16V	100uF/25V
SPACZ003-XXX-105153	0.1uF/25V	470uF/16V	100uF/25V
SPACZ003-XXX-105243	0.1uF/25V	470uF/16V	100uF/35V
SPACZ005-XXX-1051	0.1uF/25V	470uF/16V	/
SPACZ005-XXX-1091	0.1uF/25V	330uF/25V	/
SPACZ005-XXX-1121	0.1uF/25V	330uF/25V	/
SPACZ005-XXX-1151	0.1uF/25V	330uF/25V	/
SPACZ005-XXX-1241	0.1uF/25V	220uF/35V	/
SPACZ005-XXX-1052	0.1uF/25V	330uF/16V	330uF/16V
SPACZ005-XXX-1122	0.1uF/25V	330uF/16V	330uF/16V
SPACZ005-XXX-10505E	0.1uF/25V	470uF/16V	330uF/16V
SPACZ005-XXX-10512E	0.1uF/25V	470uF/16V	220uF/25V
SPACZ005-XXX-10515E	0.1uF/25V	470uF/16V	220uF/25V
SPACZ005-XXX-10524E	0.1uF/25V	470uF/16V	100uF/35V
SPACZ005-XXX-105053	0.1uF/25V	470uF/16V	220uF/16V
SPACZ005-XXX-105123	0.1uF/25V	470uF/16V	100uF/25V
SPACZ005-XXX-105153	0.1uF/25V	470uF/16V	100uF/25V

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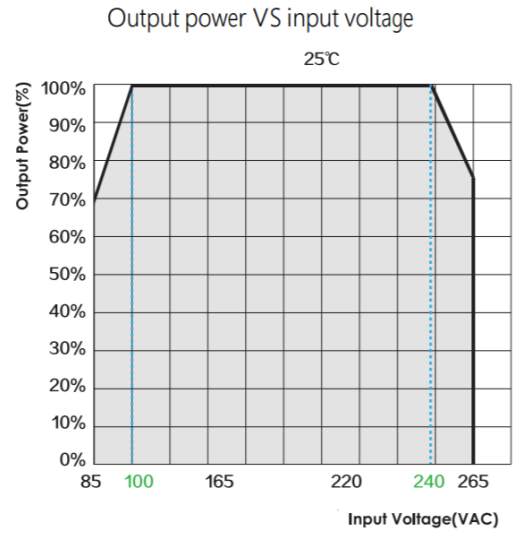
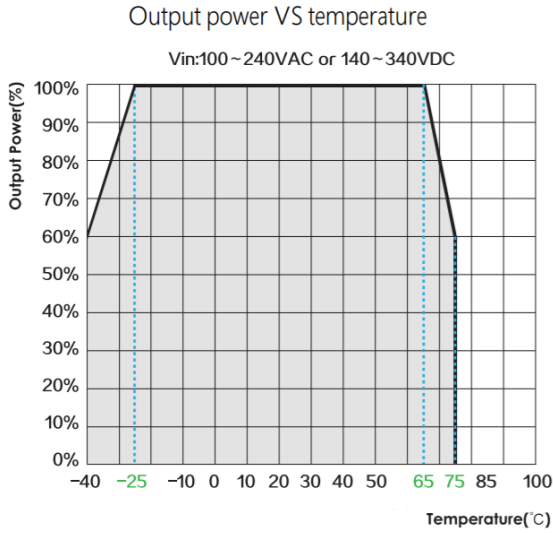
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■ Technical Data(cont.)

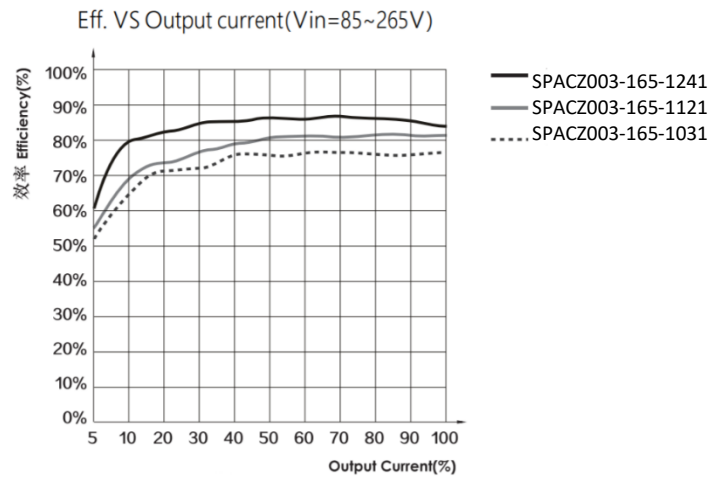
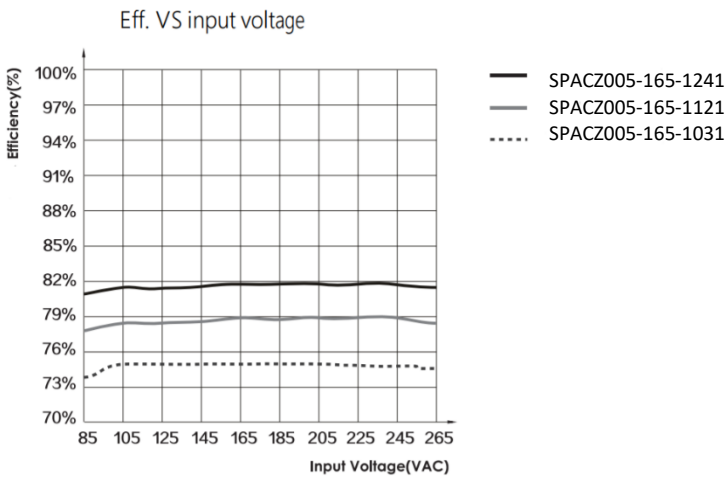
Input Voltage	85-265Vac(165Vac typ.) 176-265Vac(220Vac typ.) 100-460Vac(380Vac typ.)
Vol. tolerance	±1%
Vol. regulation	±0.2%
Load regulation	±0.5%
Aux. Vol. regulation	±1%
Ripple and noise	±1%
OCP Point	120%min.
Transient response	400µs
Frequency	100-300KHz(200KHz typ.)
Operating Temperature	-25°C to +85°C(military grade); -40°C to +85°C(industrial grade)
Case Temperature Max.	+85°C(military grade); +95°C(industrial grade)
Storage temperature	-40°C to +105°C(military grade); -55°C to +105°C(industrial grade)
Operating humidity	5%-90%RH non-condensation
Temperature coefficient	±0.02%/°C
Isolation Voltage	Input-output, leakage < 2mA@ 1 min; 2500Vac typ.
Isolation Voltage	Input-case, leakage < 2mA@ 1 min; 1500Vac typ.
Isolation Voltage	Output-case, leakage < 2mA@ 1 min; 500Vdc min.
Isolation Resistor	Input-output; 200MΩ
Vibration	10~55Hz; 5G
MTBF	5x10 ⁵ hrs(MIL-HDBK-217F2)
OCP	Universal input range; auto-recovery
Cooling	Convection cooling
Case material	Flame-retardant plastic or metal
Dimensions Single Output	39x25x22mm
Dimensions Triple Outputs	48.5x36x20.5mm
Dimensions EPU	55x45x20.5mm
Weight Single/Triple/EPU	42g/60g/78g

- All tests are conducted at ambient temperature 25°C, and by the standard input voltage and output current.
- Multiplexed output models, the outputs are all free-running, freedom of choice for desired load.
- Contact Autec Sales for all output models.

■ Output power vs. Temperature/ Output Power vs. Input Voltage

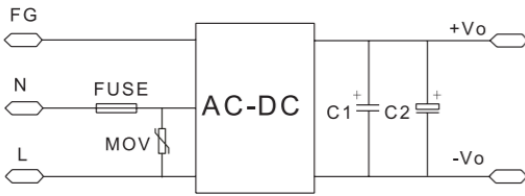


■ Eff. vs. Input Voltage/ Eff. vs. Output Current

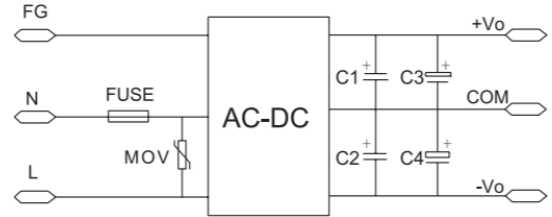


■ Application Circuit

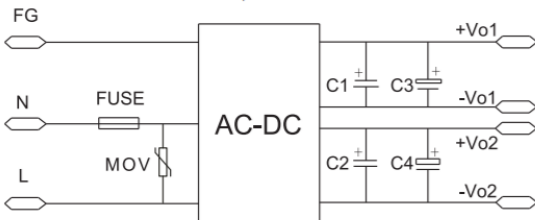
Single output circuit



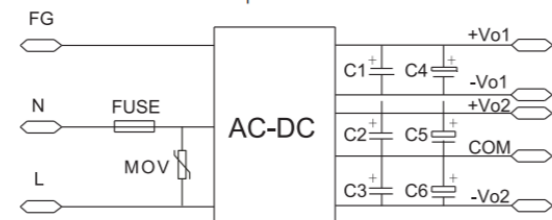
Double output circuits(shared GND)



Double output circuits(self-existent)



Three output circuits



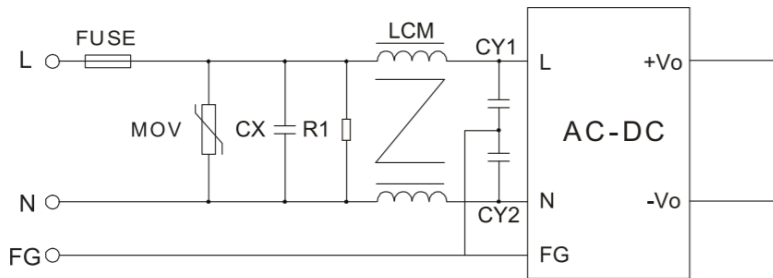
Output E-cap. C1 and C2 are high frequency and low impedance, and the voltage rating is $1.5 \cdot V_{out}$.

Output SMD C-cap. C3 and C4 are 0.1uF, and the voltage rating is $1.5 \cdot V_{out}$.

MOV is varistor, recommended to use 10D-561K to protect the module line surge.

Fuse: Recommended to use 2.0A/250V, slow operation type.

■ EMC recommended circuit



X-CAP CX: 0.1μF/275Vac

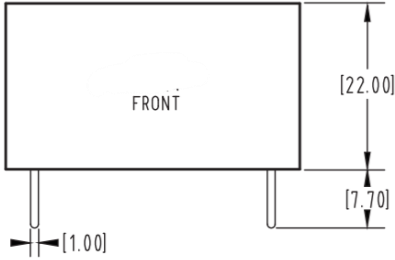
Y-CAP CY1, CY2: 1000pF/400Vac;

COMMON COIL LCM: 20-30mH;

MOV is varistor, recommended to use 10D-561K to protect the module line surge

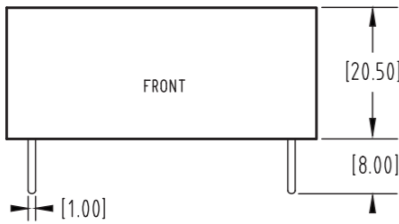
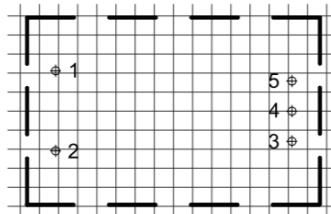
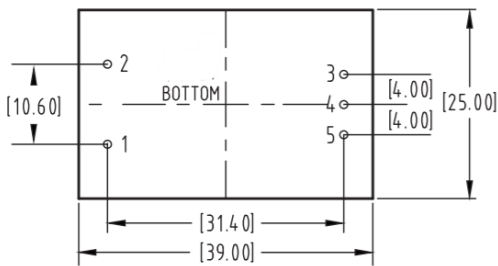
Fuse: Recommended to use 2.0A/250V, slow operation type.

■ Mechanical Diagrams



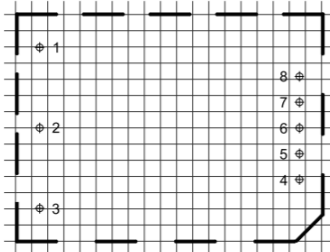
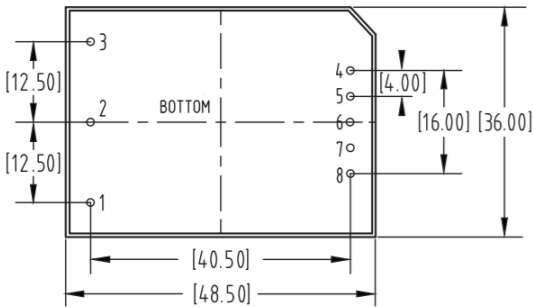
PCBA vertical view
grid distance: 2.54mm
size tolerance: +/-0.25mm
Pins tolerance: +/-0.1mm

PIN	SIGN
1	N
2	L
3	+Vo
4	NP
5	-Vo

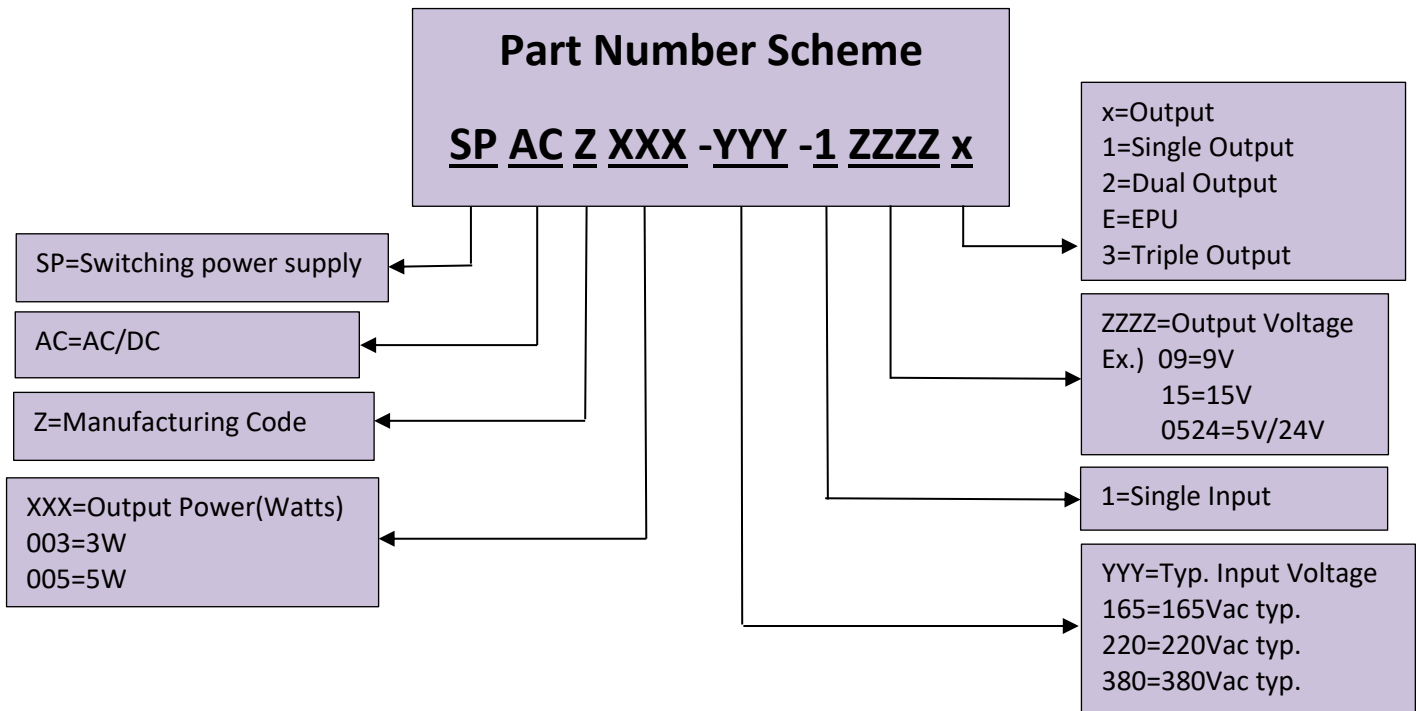


PCBA vertical view
grid distance: 2.54mm
size tolerance: +/-0.25mm
Pins tolerance: +/-0.1mm

PIN	SIGN	DOU	DOU	TRI
1	FG	FG	FG	FG
2	N	N	N	N
3	L	L	L	L
4	+Vo	+Vo	+Vo2	+Vo2
5	NP	NP	-Vo2	COM
6	NP	COM	NP	-Vo2
7	NP	NP	+Vo1	+Vo1
8	-Vo	-Vo	-Vo1	-Vo1



Unit:mm



***Product images are for illustrative purposes only and may vary from actual design.**
***Specifications are subject to change without notice. Autec is not responsible for issues arising from errors or omissions.**