

Industrial AC-DC Converter



INO60/INU60/INB60 Series

www.powersolve.co.uk

Up to 63 Watts

Single, Dual, Triple & Quad Outputs

Features

- Wide Universal Input Voltage 81-280VAC (90-420VDC)
- Industry Standard 5 x 3" Footprint (PCB version)
- Available as Open PCB, U Channel or Fully Enclosed
- Full Safety Approvals
- EMC to FCC Part 15 Class B & CISPR-22 Class B
- Single Output versions available with any voltage from 3 to 48VDC
- Optional Power Fail Detect Signal
- Screw Terminal Connections (Molex type optional)



Electrical Specification

AC Input	81-280VAC, 47-400Hz
Input Current	1.6A max., low line, full load
Inrush Current	30A max., cold start, 230VAC input
Efficiency	80% typical
DC Outputs	See table
Line Regulation	0.5% typical, 1% max.
Load Regulation	See table
Over Voltage Protection	Single output models & Output 1 of Multi output models: 112-132% of Vout nominal
Over Current Protection	110-150% of nominal output power
Transient Response	5ms, full load to 50% load
Hold Up Time	16ms min., 110VAC input, full load output
Start Up Time	1 sec. typical, 2 sec. max.
Ripple & Noise	1% typical, 2% max.
Earth Leakage Current	0.45mA max.
Operating Temperature	-20 to 70°C, derate linearly from 100% load at 50°C to 50% load at 70°C
Storage Temperature	-40 to +85°C
Relative Humidity	95% non-condensing
EMC	FCC Part 15 Class B, CISPR-22 Class B
Safety Approvals	UL, cUL60950, TUV/GS(EN60950), CE

Industrial AC-DC Converter



www.powersolve.co.uk

Output Voltage and Current Ratings (Single Output Versions)

MODEL (OPEN PCB)	MODEL (U CHANNEL)	MODEL (ENCLOSED)	DC OUTPUT	TOTAL REGULATION	MAXIMUM OUTPUT POWER
INO60-3V3	INU60-3V3	INB60-3V3	3.3V/15.15A	5%	50W
INO60-05	INU60-05	INB60-05	5V/11A	5%	55W
INO60-09	INU60-09	INB60-09	9V/7A	3%	63W
INO60-12	INU60-12	INB60-12	12V/5.25A	3%	63W
INO60-15	INU60-15	INB60-15	15V/4.2A	3%	63W
INO60-18	INU60-18	INB60-18	18V/3.5A	3%	63W
INO60-24	INU60-24	INB60-24	24V/2.63A	2%	63W
INO60-36	INU60-36	INB60-36	36V/1.75A	2%	63W
INO60-48	INU60-48	INB60-48	48V/1.31A	2%	63W

Note: Single output models available with any voltage between 3V and 48V - Consult sales office for details

Output Voltage and Current Ratings (Single Output Versions)

MODEL (OPEN PCB)	MODEL (U CHANNEL)	MODEL (ENCLOSED)	OUTPUT 1	MAX. REG.	OUTPUT 2	MAX. REG.	OUTPUT 3	MAX. REG.	OUTPUT 4	MAX. REG.	MAX. POWER
INO60-3V312	INU60-3V312	INB60-3V312	+3.3V/1.4A-7A	7%	+12V/0.6A-3A	5%					59.1W
INO60-512	INU60-512	INB60-512	+5V/0.7A-7A	5%	+12V/0.3A-3A	5%					63W
INO60515	INU60-515	INB60-515	+5V/0.7A-7A	5%	+15V/0.3A-3A	5%					63W
INO60-524	INU60-524	INB60-524	+5V/0.7A-7A	5%	+24V/0.4A-2A	5%					63W
INO60-3V35	INU60-3V35	INB60-3V35	+3.3V/1.4A-7A	7%	+5V/0.5A-5A	5%					48.1W
INO60-524N	INU60-524N	INB60-524N	+5V/0.1A-5A	5%			-24V/0.2A-2A	5%			63W
INO60-3V31212	INU60-3V31212	INB60-3V31212	+3.3V/1.2A-6A	7%	+12V/0.6A-3A	5%	-12V 0A-0.8A	5%			63W
INO60-3V31212P	INU60-3V31212P	INB60-3V31212P	+3.3V/1.2A-6A	7%	+12V/0.6A-3A	5%	+12V 0A-0.8A	5%			63W
INO60-5125	INU60-5125	INB605125	+5V/0.6A-6A	5%	+12V/0.3A-3A	5%	-5V/0A-0.8A	5%			63W
INO60-5125P	INU60-5125P	INB60-5125P	+5V/0.6A-6A	5%	+12V/0.3A-3A	5%	+5V/0A-0.8A	5%			63W
INO60-51212	INU60-51212	INB60-51212	+5V/0.6A-6A	5%	+12V/0.6A-3A	5%	-12V/0A-0.8A	5%			63W
INO60-51212P	INU60-51212P	INB60-51212P	+5V/0.6A-6A	5%	+12V/0.6A-3A	5%	+12V/0A-0.8A	5%			63W
INO60-51515	INU60-51515	INB60-51515	+5V/0.6A-6A	5%	+15V/0.3A-3A	5%	-15V/0A-0.8A	5%			63W
INO60-51515P	INU60-51515P	INB60-51515P	+5V/0.6A-6A	5%	+15V/0.3A-3A	5%	+15V/0A-0.8A	5%			63W
INO60-52412	INU60-52412	INB60-52412	+5V/1.2A-6A	5%	+24V/0.4A-2A	5%	-12V/0A-0.5A	5%			63W
INO60-52412P	INU60-52412P	INB60-52412P	+5V/1.2A-6A	5%	+24V/0.4A-2A	5%	+12V/0A-0.5A	5%			63W
INO60-3V3125	INU60-3V3125	INB60-3V3125	+3.3V/1.2A-6A	7%	+12V/0.6A-3A	5%	-5V/0A-0.8A	5%			59.8W
INO60-3V3125P	INU60-3V3125P	INB60-3V3125P	+3.3V/1.2A-6A	7%	+12V/0.6A-3A	5%	+5V/0A-0.8A	5%			59.8W
INO60-3V3512P	INU60-3V3512P	INB60-3V3512P	+3.3V/0.5A-5A	7%	+5V/0.5A-5A	5%	+12V/0A-1A	5%			53.5W
INO60-3V3512	INU60-3V3512	INB60-3V3512	+3.3V/0.5A-5A	7%	+5V/0.5A-5A	5%	-12V/0A-1A	5%			53.5W
INO60-3V312125	INU60-3V312125	INB60-3V312125	+3.3V/1.2A-6A	7%	+12V/0.6A-3A	5%	-12V/0A-0.8A	5%	-5V/0A-0.8A	5%	63W
INO60-3V312125P	INU60-3V312125P	INB60-3V312125P	+3.3V/1.2A-6A	7%	+12V/0.6A-3A	5%	-12V/0A-0.8A	5%	+5V/0A-0.8A	5%	63W
INO60-3V31212P5	INU60-3V31212P5	INB60-3V31212P5	+3.3V/1.2A-6A	7%	+12V/0.6A-3A	5%	+12V/0A-0.8A	5%	-5V/0A-0.8A	5%	63W
INO60-3V31212P5P	INU60-3V31212P5P	INB60-3V31212P5P	+3.3V/1.2A-6A	7%	+12V/0.6A-3A	5%	+12V/0A-0.8A	5%	+5V/0A-0.8A	5%	63W
INO60-512125	INU60-512125	INB60-512125	+5V/0.6A-6A	5%	+12V/0.3A-3A	5%	-12V/0A-0.8A	5%	-5V/0A-0.8A	5%	63W
INO60-512125P	INU60-512125P	INB60-512125P	+5V/0.6A-6A	5%	+12V/0.3A-3A	5%	-12V/0A-0.8A	5%	+5V/0A-0.8A	5%	63W
INO60-51212P5	INU60-51212P5	INB60-51212P5	+5V/0.6A-6A	5%	+12V/0.3A-3A	5%	+12V/0A-0.8A	5%	-5V/0A-0.8A	5%	63W
INO60-51212P5P	INU60-51212P5P	INB60-51212P5P	+5V/0.6A-6A	5%	+12V/0.3A-3A	5%	+12V/0A-0.8A	5%	+5V/0A-0.8A	5%	63W
INO60-51212N12	INU60-51212N12	INB60-51212N12	+5V/1.2A-6A	5%	+12V/0.6A-3A	5%	-12V/0A-0.8A	5%	-12V/0A-0.8A	5%	63W
INO60-5121212P	INU60-5121212P	INB60-5121212P	+5V/1.2A-6A	5%	+12V/0.6A-3A	5%	-12V/0A-0.8A	5%	+12V/0A-0.8A	5%	63W
INO60-51212P12	INU60-51212P12	INB60-51212P12	+5V/1.2A-6A	5%	+12V/0.6A-3A	5%	+12V/0A-0.8A	5%	-12V/0A-0.8A	5%	63W
INO60-51212P12P	INU60-51212P12P	INB60-51212P12P	+5V/1.2A-6A	5%	+12V/0.6A-3A	5%	+12V/0A-0.8A	5%	+12V/0A-0.8A	5%	63W
INO60-5121224N	INU60-5121224N	INB60-5121224N	+5V/1.2A-6A	5%	+12V/0.6A-3A	5%	-12V/0A-0.8A	5%	-24V/0A-0.8A	5%	63W
INO60-5121224	INU60-5121224	INB60-5121224	+5V/1.2A-6A	5%	+12V/0.6A-3A	5%	-12V/0A-0.8A	5%	+24V/0A-0.8A	5%	63W
INO60-51212P24N	INU60-51212P24N	INB60-51212P24N	+5V/1.2A-6A	5%	+12V/0.6A-3A	5%	+12V/0A-0.8A	5%	-24V/0A-0.8A	5%	63W
INO60-51212P24P	INU60-51212P24P	INB60-51212P24P	+5V/1.2A-6A	5%	+12V/0.6A-3A	5%	+12V/0A-0.8A	5%	+24V/0A-0.8A	5%	63W
INO60-515155	INU60-515155	INB60-515155	+5V/0.6A-6A	5%	+15V/0.6A-3A	5%	-15V/0A-0.8A	5%	-5V/0A-0.8A	5%	63W
INO60-515155P	INU60-515155P	INB60-515155P	+5V/0.6A-6A	5%	+15V/0.6A-3A	5%	-15V/0A-0.8A	5%	+5V/0A-0.8A	5%	63W
INO60-51515P5N	INU60-51515P5N	INB60-51515P5N	+5V/0.6A-6A	5%	+15V/0.6A-3A	5%	+15V/0A-0.8A	5%	-5V/0A-0.8A	5%	63W
INO60-51515P5P	INU60-51515P5P	INB60-51515P5P	+5V/0.6A-6A	5%	+15V/0.6A-3A	5%	+15V/0A-0.8A	5%	+5V/0A-0.8A	5%	59.3W

Options: Power Fail Detect, Input & Output Molex Connectors - Consult sales office for details

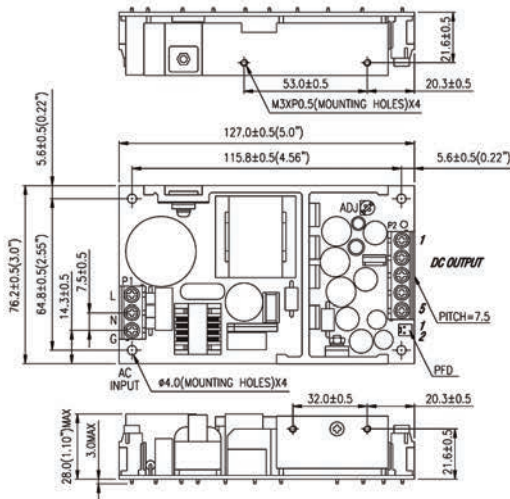
Industrial AC-DC Converter



www.powersolve.co.uk

Mechanical & Connection Details

INO60 Series

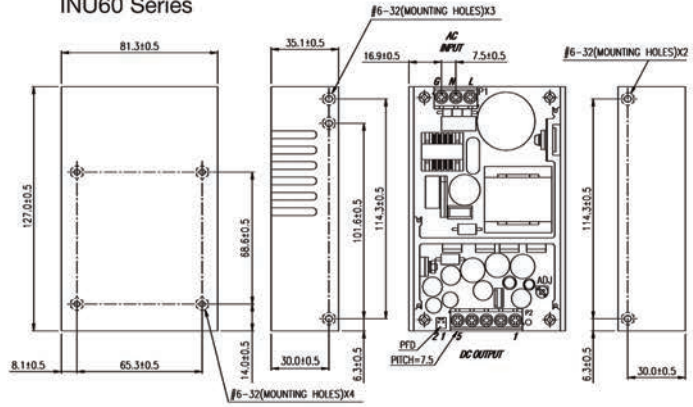


Mechanical Specification - INO60 Series

Note:

1. Dimensions are shown in inches or mm.
2. Weight: 300gs approx.

INU60 Series



Mechanical Specification - INU60 Series

Note:

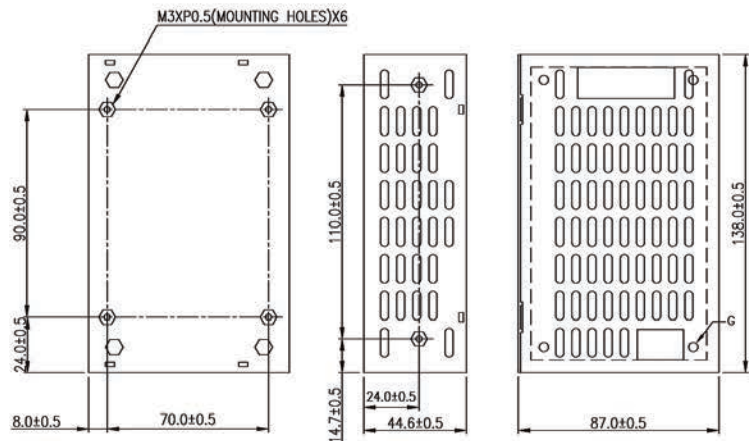
1. Dimensions are shown in inches or mm.
2. Weight: 425gs approx.

INB60 Series

Mechanical Specification - INB60 Series

Note:

1. Dimensions are shown in inches or mm.
2. Weight: 475gs approx.



Pin Connections

	1	2	PIN 3	4	5
Single Output	OUT	OUT	OUT	NC	NC
Dual Output	VO2	VO1	COM	VO3	NC
INO/INU/INB60-524N	NC	VO1	COM	VO3	NC
Triple Output	VO2	VO1	COM	VO3	NC
Quad Output	VO2	VO1	COM	VO3	VO4

PFD (Optional)

Other Connector	
1	2
OUT	RTN
OUT	RTN
OUT	RTN
OUT	RTN
OUT	RTN