

IMP Series



1...12 Watt DC-DC Converters

Input voltage range up to 72 V DC
1, 2 or 3 outputs up to 30 V DC
1500 V DC I/O electric strength test voltage

- Wide input range
- Short circuit protection
- Low cost

Selection chart

Output 1 U_o nom I_o nom [V DC] [mA]	Output 2 U_o nom I_o nom [V DC] [mA]	Output 3 U_o nom I_o nom [V DC] [mA]	Type Input voltage 4.5...5.5 V DC	Type Input voltage 10...36 V DC	Type Input voltage 18...72 V DC	Opt.
3.3 1500 3.3 3000	- - - -	- - - -	5 IMP 6-03-7 -	24 IMP 6-03-7 24 IMP 12-03-7	48 IMP 6-03-7 48 IMP 12-03-7	- -
5 200 5 500 5 1000 5 2400	- - - - - - - -	- - - - - - - -	5 IMP 1-05-7 - 5 IMP 6-05-7 -	- 24 IMP 3-05-7 24 IMP 6-05-7 24 IMP 12-05-7	- 48 IMP 3-05-7 48 IMP 6-05-7 48 IMP 12-05-7	S S - -
12 84 12 250 12 500 12 1000	- - - - - - - -	- - - - - - - -	5 IMP 1-12-7 - 5 IMP 6-12-7 -	- 24 IMP 3-12-7 24 IMP 6-12-7 24 IMP 12-12-7	- 48 IMP 3-12-7 48 IMP 6-12-7 48 IMP 12-12-7	S S - -
15 66 15 200 15 400 15 800	- - - - - - - -	- - - - - - - -	5 IMP 1-15-7 - 5 IMP 6-15-7 -	- 24 IMP 3-15-7 24 IMP 6-15-7 24 IMP 12-15-7	- 48 IMP 3-15-7 48 IMP 6-15-7 48 IMP 12-15-7	S S - -
+5 100 +5 250 +5 500 +5 1200	-5 100 -5 250 -5 500 -5 1200	- - - - - - - -	5 IMP 1-0505-7 - 5 IMP 6-0505-7 -	- 24 IMP 3-0505-7 24 IMP 6-0505-7 24 IMP 12-0505-7	- 48 IMP 3-0505-7 48 IMP 6-0505-7 48 IMP 12-0505-7	S S - -
+12 42 +12 125 +12 125 +12 250 +12 500	-12 42 -12 125 12 125 -12 250 -12 500	- - - - - - - - - -	5 IMP 1-1212-7 - - 5 IMP 6-1212-7 -	- 24 IMP 3-1212-7 24 IMP 3-12-12-7 24 IMP 6-1212-7 24 IMP 12-1212-7	- 48 IMP 3-1212-7 48 IMP 3-12-12-7 48 IMP 6-1212-7 48 IMP 12-1212-7	S S - - -
+15 33 15 100 +15 100 +15 200 +15 400	-15 33 15 100 -15 100 -15 200 -15 400	- - - - - - - - - -	5 IMP 1-1515-7 - - 5 IMP 6-1515-7 -	- 24 IMP 3-15-15-7 24 IMP 3-1515-7 24 IMP 6-1515-7 24 IMP 12-1515-7	- 48 IMP 3-15-15-7 48 IMP 3-1515-7 48 IMP 6-1515-7 48 IMP 12-1515-7	S - S - -
5 250 5 1500 5 1500	5 250 +12 200 +15 160	- - -12 200 -15 160	- - -	24 IMP 3-05-05-7 24 IMP 12-051212-7 24 IMP 12-051515-7	48 IMP 3-05-05-7 48 IMP 12-051212-7 48 IMP 12-051515-7	- - -

Board Mountable

IMP Series

Input

Input voltage	continuous range, 5 V (IMP 1, IMP 6)	4.5...5.5 V DC
	continuous range, 24 V	10...36 V DC
	continuous range, 48 V	18...72 V DC
Reverse voltage protection	shunt diode	

Output

Output voltage setting accuracy	$U_{i \text{ nom}}, I_{o \text{ nom}}$	$\pm 2\% U_{o \text{ nom}}$
Minimum load	recommended	20% $I_{o \text{ nom}}$
Line regulation	$U_{i \text{ min}}...U_{i \text{ max}}, I_{o \text{ nom}}$	$\pm 1\% U_{o \text{ nom}}$
Load regulation	$U_{i \text{ nom}}, 0...100\% I_{o \text{ nom}}$, regulated outputs	2% $U_{o \text{ nom}}$
	tracking outputs	max. 6% $U_{o \text{ nom}}$
Output voltage switching noise	$U_{i \text{ nom}}, 20...100\% I_{o \text{ nom}}$, peak-peak, total	max. 3% $U_{o \text{ nom}}$
Efficiency	$U_{i \text{ nom}}, I_{o \text{ nom}}$	up to 83%

Control and protection

Overload protection	$U_{i \text{ min}}$, full load	125% $P_{i \text{ nom}}$
No-load protection		
Remote shut down	positive logic (floating or high signal = on)	

Safety and EMC

Electric strength test voltage	I/O	1500 V DC
Electromagnetic interference	conducted with external filter	class B

Environmental

Operating ambient temperature	$U_{i \text{ nom}}, I_{o \text{ nom}}$	-25...71°C
Storage temperature	non operational	-40...100°C
Relative humidity	non condensing	95%
MTBF	MIL-HDBK-217F, N2	>3'700'000 h

Options

Industry standard pinout	IMP 1 and IMP 3	S
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Accessories

DIN and chassis mounting bracket		
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IMP Series

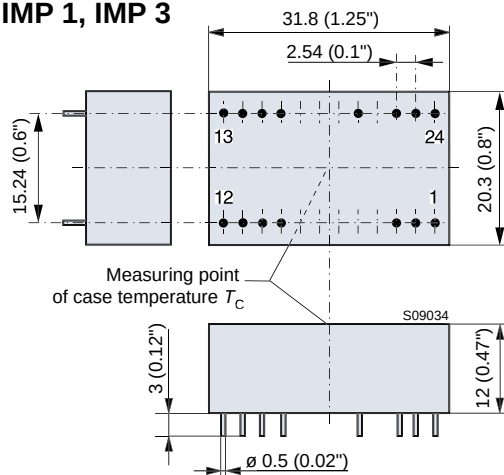
1...12 Watt DC-DC Converters

Mechanical data

Tolerances ± 0.3 mm (0.012") unless otherwise indicated.



IMP 1, IMP 3



Pin allocation IMP 1

Pin	Single output unit	Dual output unit
1	Vi+	Vi+
2	Vi+	Vi+
10	-	COM
11	-	COM
12	Vo-	-
13	Vo+	Vo-
15	-	Vo+
23	Vi-	Vi-
24	Vi-	Vi-

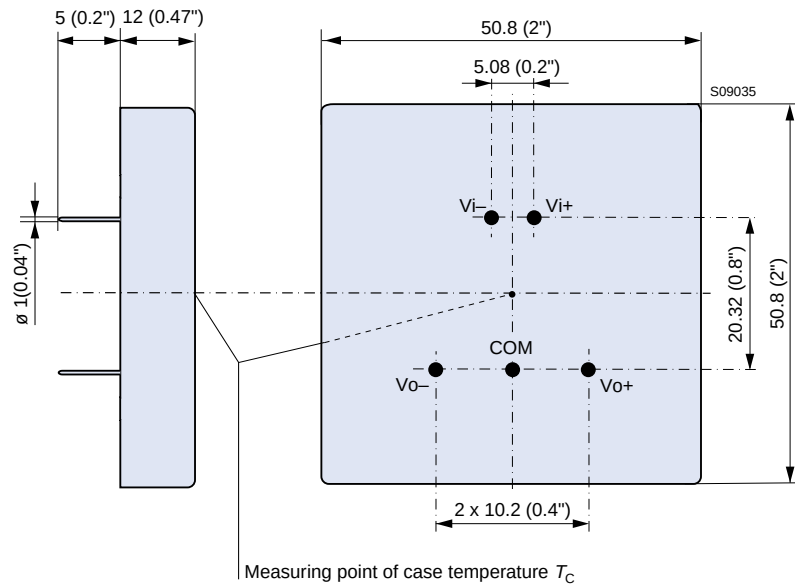
Industry standard pinout (option S)

Pin	Single output	Dual output
2	Vi-	Vi-
3	Vi-	Vi-
9	n.c.	COM
10	n.c.	n.c.
11	n.c.	Vo-
14	Vo+	Vo+
15	n.c.	n.c.
16	Vo-	COM
22	Vi+	Vi+
23	Vi+	Vi+

Alternative pinout IMP 3

Pin	Single output	Dual output	Double output
1	Vi+	Vi+	Vi+
2	Vi+	Vi+	Vi+
9	-	-	Go1
10	-	COM	-
11	-	COM	-
12	Vo-	-	Vo1
13	Vo+	Vo-	Vo2
15	-	Vo+	-
16	-	-	Go2
20	SD	SD	SD
23	Vi-	Vi-	Vi-
24	Vi-	Vi-	Vi-

IMP 6, IMP 12 with single or dual output



IMP 12 with triple output

