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 $U_{o\,nom}$ [V DC]	Output 1 $I_{o\,nom}$ [mA]	Output 2 $U_{o\,nom}$ [V DC]	Output 2 $I_{o\,nom}$ [mA]	Output 3 $U_{o\,nom}$ [V DC]	Output 3 $I_{o\,nom}$ [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	-	-	-	-	5 IMP 6-03-7	24 IMP 6-03-7	48 IMP 6-03-7	-
3.3	3000	-	-	-	-	-	24 IMP 12-03-7	48 IMP 12-03-7	-
5	200	-	-	-	-	5 IMP 1-05-7	-	-	S
5	500	-	-	-	-	-	24 IMP 3-05-7	48 IMP 3-05-7	S
5	1000	-	-	-	-	5 IMP 6-05-7	24 IMP 6-05-7	48 IMP 6-05-7	-
5	2400	-	-	-	-	-	24 IMP 12-05-7	48 IMP 12-05-7	-
12	84	-	-	-	-	5 IMP 1-12-7	-	-	S
12	250	-	-	-	-	-	24 IMP 3-12-7	48 IMP 3-12-7	S
12	500	-	-	-	-	5 IMP 6-12-7	24 IMP 6-12-7	48 IMP 6-12-7	-
12	1000	-	-	-	-	-	24 IMP 12-12-7	48 IMP 12-12-7	-
15	66	-	-	-	-	5 IMP 1-15-7	-	-	S
15	200	-	-	-	-	-	24 IMP 3-15-7	48 IMP 3-15-7	S
15	400	-	-	-	-	5 IMP 6-15-7	24 IMP 6-15-7	48 IMP 6-15-7	-
15	800	-	-	-	-	-	24 IMP 12-15-7	48 IMP 12-15-7	-
+5	100	–5	100	-	-	5 IMP 1-0505-7	-	-	S
+5	250	–5	250	-	-	-	24 IMP 3-0505-7	48 IMP 3-0505-7	S
+5	500	–5	500	-	-	5 IMP 6-0505-7	24 IMP 6-0505-7	48 IMP 6-0505-7	-
+5	1200	–5	1200	-	-	-	24 IMP 12-0505-7	48 IMP 12-0505-7	-
+12	42	–12	42	-	-	5 IMP 1-1212-7	-	-	S
+12	125	–12	125	-	-	-	24 IMP 3-1212-7	48 IMP 3-1212-7	S
12	125	12	125	-	-	-	24 IMP 3-12-12-7	48 IMP 3-12-12-7	-
+12	250	–12	250	-	-	5 IMP 6-1212-7	24 IMP 6-1212-7	48 IMP 6-1212-7	-
+12	500	–12	500	-	-	-	24 IMP 12-1212-7	48 IMP 12-1212-7	-
+15	33	–15	33	-	-	5 IMP 1-1515-7	-	-	S
15	100	15	100	-	-	-	24 IMP 3-15-15-7	48 IMP 3-15-15-7	-
+15	100	–15	100	-	-	-	24 IMP 3-1515-7	48 IMP 3-1515-7	S
+15	200	–15	200	-	-	5 IMP 6-1515-7	24 IMP 6-1515-7	48 IMP 6-1515-7	-
+15	400	–15	400	-	-	-	24 IMP 12-1515-7	48 IMP 12-1515-7	-
5	250	5	250	-	-	-	24 IMP 3-05-05-7	48 IMP 3-05-05-7	-
5	1500	+12	200	–12	200	-	24 IMP 12-051212-7	48 IMP 12-051212-7	-
5	1500	+15	160	–15	160	-	24 IMP 12-051515-7	48 IMP 12-051515-7	-

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

Control and protection

Overload protection	$U_{i\,min}$, full load	125% $P_{i\,nom}$
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	$U_{i\,nom}$, $I_{o\,nom}$	–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

Accessories

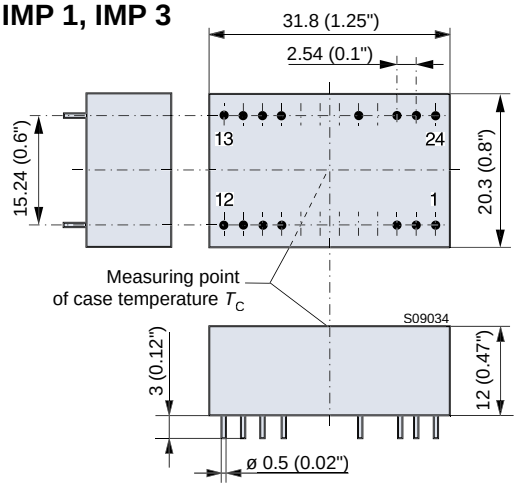
DIN and chassis mounting bracket

Mechanical data

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

European Projection

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–

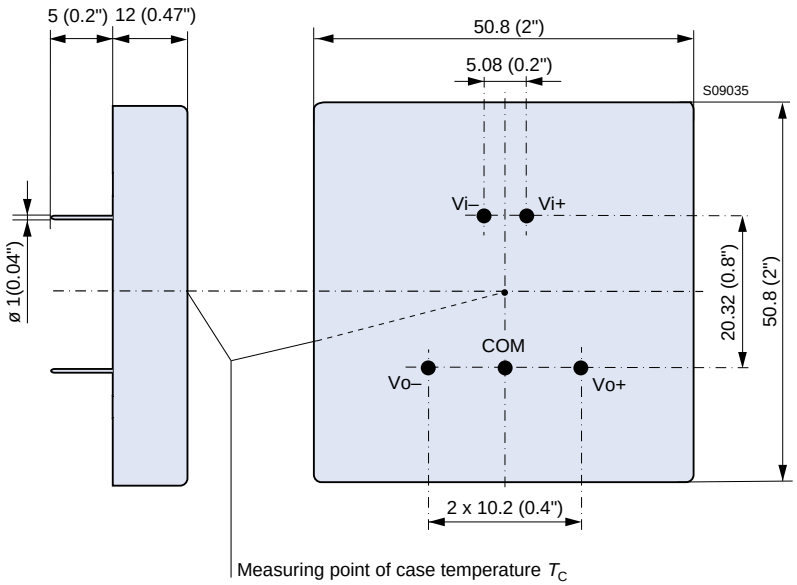
Industry standard pinout (option S)

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