

IMR Series

3...15 Watt DC-DC Converter



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

- Low cost
- Short circuit proof
- Efficiency up to 82%

Selection chart

Output 1 $U_{o \text{ nom}}$ $I_{o \text{ nom}}$ [V DC] [mA]	Output 2 $U_{o \text{ nom}}$ $I_{o \text{ nom}}$ [V DC] [mA]	Output 3 $U_{o \text{ nom}}$ $I_{o \text{ nom}}$ [V DC] [mA]	Type Input voltage ¹ 9...18 V DC	Type Input voltage 18...36 V DC	Type Input voltage 36...72 V DC
3.3 1500 3.3 3000	- - - -	- - - -	12 IMR 6-03-2 12 IMR 15-03-2	24 IMR 6-03-2 24 IMR 15-03-2	48 IMR 6-03-2 48 IMR 15-03-2
5 500 5 1000 5 3000	- - - - - -	- - - - - -	12 IMR 3-05-2 12 IMR 6-05-2 12 IMR 15-05-2	24 IMR 3-05-2 24 IMR 6-05-2 24 IMR 15-05-2	48 IMR 3-05-2 48 IMR 6-05-2 48 IMR 15-05-2
12 250 12 500 12 1250	- - - - - -	- - - - - -	12 IMR 3-12-2 12 IMR 6-12-2 12 IMR 15-12-2	24 IMR 3-12-2 24 IMR 6-12-2 24 IMR 15-12-2	48 IMR 3-12-2 48 IMR 6-12-2 48 IMR 15-12-2
15 200 15 400 15 1000	- - - - - -	- - - - - -	12 IMR 3-15-2 12 IMR 6-15-2 12 IMR 15-15-2	24 IMR 3-15-2 24 IMR 6-15-2 24 IMR 15-15-2	48 IMR 3-15-2 48 IMR 6-15-2 48 IMR 15-15-2
+5 250 +5 50	-5 250 -5 50	- - - -	12 IMR 3-0505-2 12 IMR 6-0505-2	24 IMR 3-0505-2 24 IMR 6-0505-2	48 IMR 3-0505-2 48 IMR 6-0505-2
+12 125 +12 250 +12 625	-12 125 -12 250 -12 625	- - - - - -	12 IMR 3-1212-2 12 IMR 6-1212-2 12 IMR 15-1212-2	24 IMR 3-1212-2 24 IMR 6-1212-2 24 IMR 15-1212-2	48 IMR 3-1212-2 48 IMR 6-1212-2 48 IMR 15-1212-2
+15 100 +15 200 +15 500	-15 100 -15 200 -15 500	- - - - - -	12 IMR 3-1515-2 12 IMR 6-1515-2 12 IMR 15-1515-2	24 IMR 3-1515-2 24 IMR 6-1515-2 24 IMR 15-1515-2	48 IMR 3-1515-2 48 IMR 6-1515-2 48 IMR 15-1515-2
5 2000 5 2000	+12 200 +15 200	-12 200 -15 200	12 IMR 15-051212-2 12 IMR 15-051515-2	24 IMR 15-051212-2 24 IMR 15-051515-2	48 IMR 15-051212-2 48 IMR 15-051515-2

¹ 12 IMR 3 and 12 IMR 15 types: output current $I_{o \text{ nom}}$ see: Application Note - Output Data

Input

Input voltage	continuous range, 12 V	9...18 V DC
	continuous range, 24 V	18...36 V DC
	continuous range, 48 V	36...72 V DC
Protection	reverse input voltage, current limitation	

Output

Efficiency		up to 82 %
Minimum load	recommended	20 % $I_{o\ nom}$
Line regulation	$U_{i\ min}...U_{i\ max}$, $I_{o\ nom}$	$\pm 1\ %$
Load regulation	$U_{i\ nom}$, 0...100 % $I_{o\ nom}$, single output models	2 %
	dual output models (traching)	5 %
	triple output models (traching)	6 %
Ripple and noise	$U_{i\ nom}$, (20...100 %) $I_{o\ nom}$	2 % $U_{o\ nom}$

Protection

Overload protection	$U_{i\ nom}$, full load	125 % $P_{i\ nom}$
No-load protection		

Safety

I/O electric strength test	per EN 60950	500 V DC
Electromagnetic interference	conducted per EN 55022 with external filter	class B

Environmental

Operating temperature	$U_{i\ nom}$, $I_{o\ nom}$	-10...50 °C
Storage temperature	non operational	-40...100 °C
Relative humidity	non condensing	95 %
MTBF	per MIL-HDBK-217F, N2	>3'000'000 h

Options

Extended temperature range	-25...71 °C, ambient, operating, IMR 3, IMR 6	-7
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IMR Series

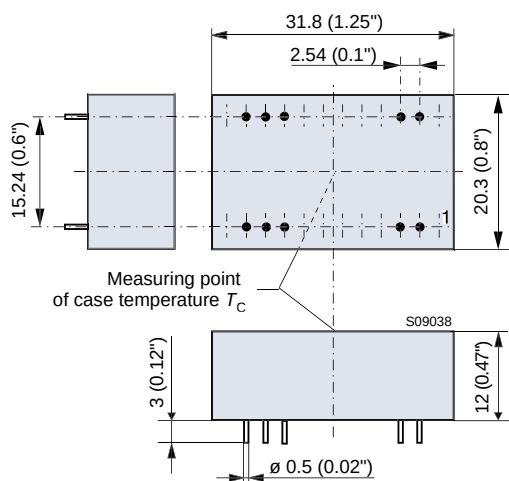
3...15 Watt DC-DC Converter

Mechanical data

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



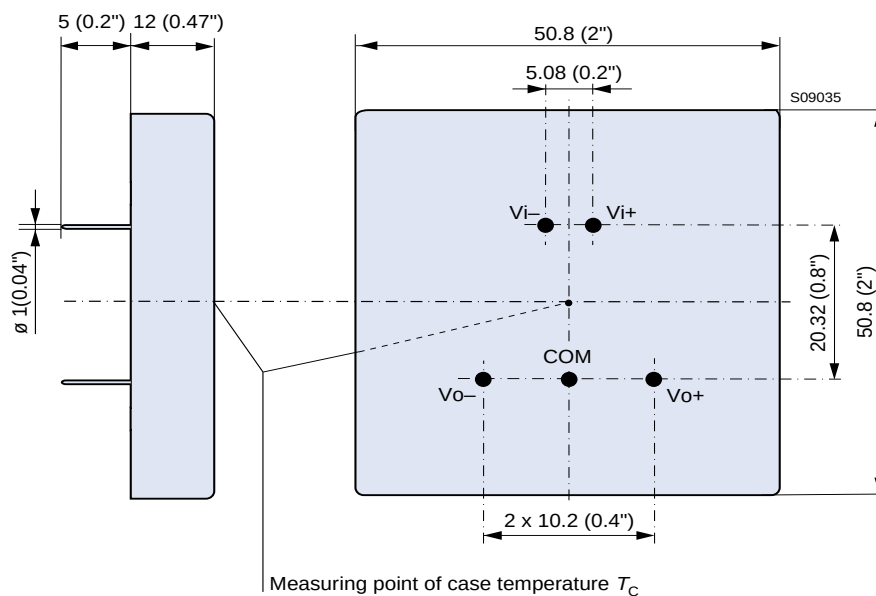
IMR 3



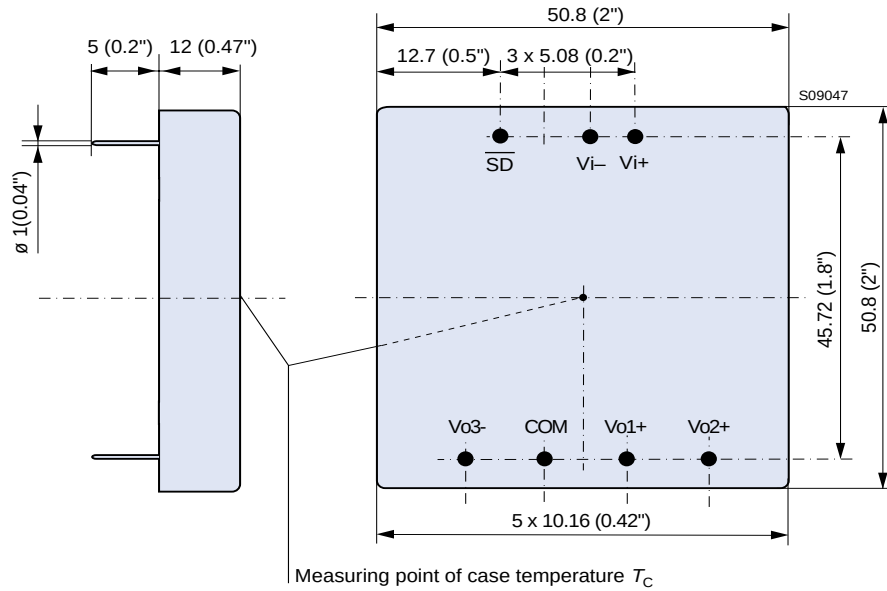
Pin allocation IMR 3

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

IMR 6



IMR 15



Accessories

DIN and chassis mounting bracket.