

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

<sup>1</sup> 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	$U_{i\ min} \dots U_{i\ max}$ , $I_{o\ nom}$	$\pm 1\%$
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**

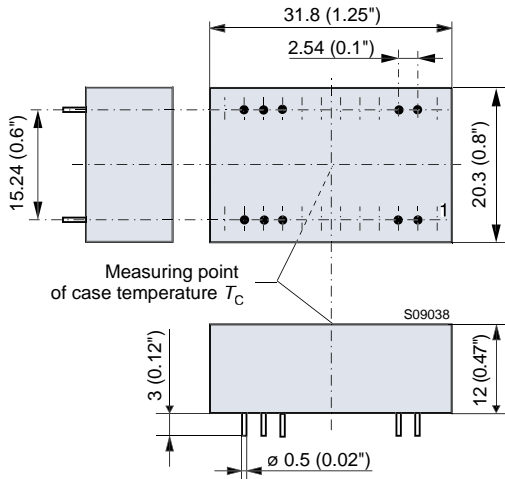
Extended temperature range	-25...71 °C, ambient, operating, IMR 3, IMR 6	-7
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**Mechanical data**

Tolerances  $\pm 0.3$  mm (0.012") unless otherwise indicated.



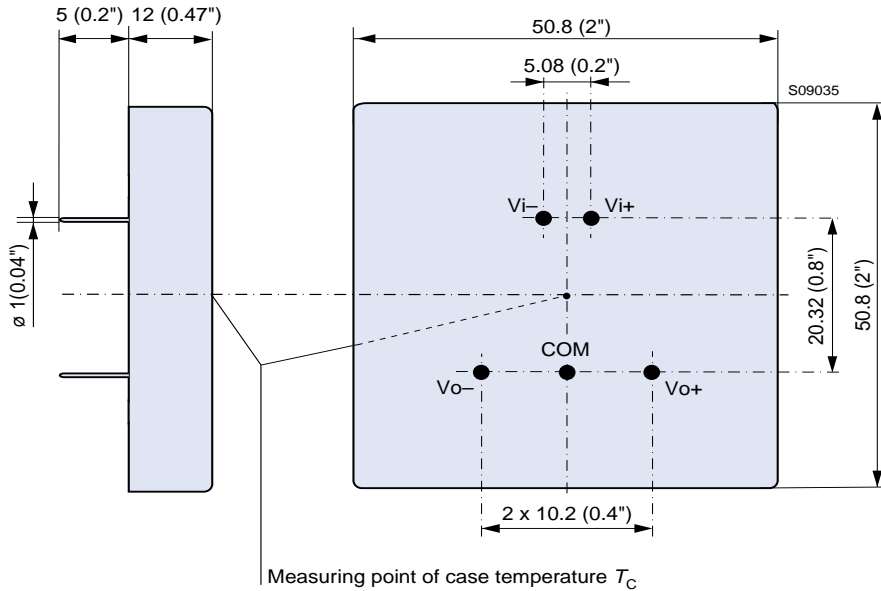
**IMR 3**



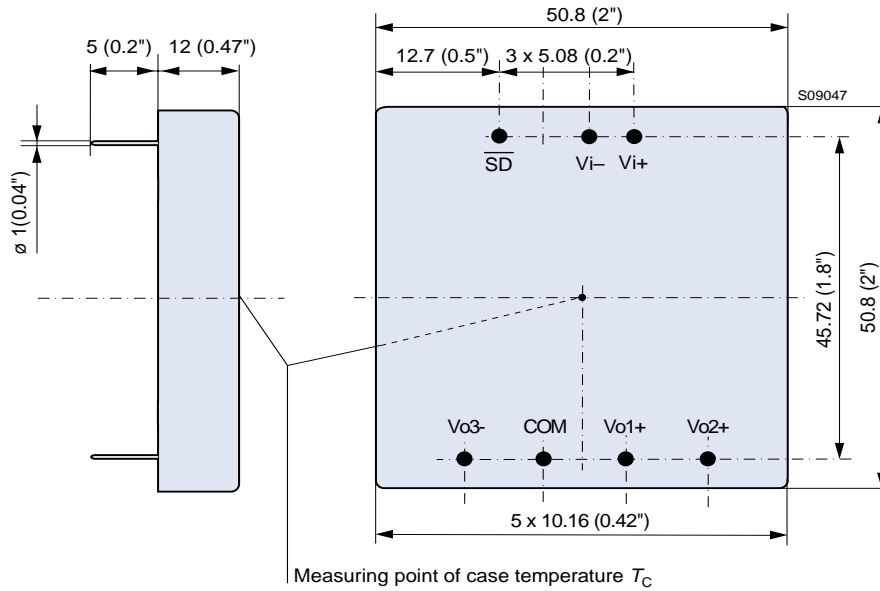
**Pin allocation IMR 3**

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.