

## IMS 7 Series

## 7 Watt DC-DC Converters



Wide input voltage ranges up to 75 V DC  
 1 or 2 outputs up to 48 V DC  
 1500 V DC I/O electric strength test voltage



- Magnetic feedback for single output models
- Short circuit protection
- Industry standard 2" x 1" case with 10.5 mm profile

### Selection chart

Output 1		Output 2		Input voltage $U_i$ [V DC]	Type	Options <sup>1,2</sup>
$U_{o\ nom}$ [V DC]	$I_{o\ nom}$ [mA]	$U_{o\ nom}$ [V DC]	$I_{o\ nom}$ [mA]			
3.3	1200	-	-	14...36	24 IMS 7-03-9	M, C, L, Z
3.3	1200	-	-	36...75	48 IMS 7-03-9	M, C, L, Z
5.1	1200	-	-	14...36	24 IMS 7-05-9	M, C, L, Z
5.1	1200	-	-	36...75	48 IMS 7-05-9	M, C, L, Z
12	600	-	-	14...36	24 IMS 7-12-9C	
12	600	-	-	36...75	48 IMS 7-12-9C	
15	480	-	-	14...36	24 IMS 7-15-9C	
15	480	-	-	36...75	48 IMS 7-15-9C	
5	700	5	700	14...36	24 IMS 7-05-05-9	M, C, L, Z
5	700	5	700	36...75	48 IMS 7-05-05-9	M, C, L, Z
12	300	12	300	14...36	24 IMS 7-12-12-9	M, C, L, Z
12	300	12	300	36...75	48 IMS 7-12-12-9	M, C, L, Z
15	240	15	240	14...36	24 IMS 7-15-15-9	M, C, L, Z
15	240	15	240	36...75	48 IMS 7-15-15-9	M, C, L, Z
24	150	24	150	14...36	24 IMS 7-24-24-9	M, C, L, Z
24	150	24	150	36...75	48 IMS 7-24-24-9	M, C, L, Z

<sup>1</sup> For minimum order quantities and lead times contact Power-One.

<sup>2</sup> Option M, C, L and Z exclude each other.

**Input**

Input voltage range	24 IMS 7	14...36 V DC
	48 IMS 7	36...75 V DC

**Output**

Output voltage setting accuracy	$U_{i\text{ nom}}$ , 50% $I_{o\text{ nom}}$ , single output models	$\pm 1\% U_{o\text{ nom}}$
	$U_{i\text{ nom}}$ , 50% $I_{o\text{ nom}}$ , double output, main/aux. output	$\pm 1.5\% U_{o\text{ nom}}$
Minimum load	recommended for double output models	10% $I_{o\text{ nom}}$
Line/load regulation	$U_{i\text{ min}}...U_{i\text{ max}}$ , 50% $I_{o\text{ nom}}$ , single output models	$\pm 1\% U_{o\text{ nom}}$
Line regulation	$U_{i\text{ nom}}$ , 50% $I_{o\text{ nom}}$ , double output models, main output	$\pm 1\% U_{o\text{ nom}}$
Load regulation	$U_{i\text{ nom}}$ , 10...100% $I_{o\text{ nom}}$ , double output models	$\pm 3\% U_{o\text{ nom}}$
	tracking output	$\pm 3\% U_{o\text{ nom}}$
Output voltage switching noise	$U_{i\text{ nom}}$ , 0...100% $I_{o\text{ nom}}$ , peak-peak, total	max. 1.5% $U_{o\text{ nom}}$
Efficiency	$U_{i\text{ nom}}$ , $I_{o\text{ nom}}$	up to 84%

**Control and protection**

Input protection	suppressor diode	
Overload protection	$U_{i\text{ min}}...U_{i\text{ max}}$ , any load fully protected, hiccup mode	
No-load protection	yes	
Remote shut down	TTL-compatible inhibit input	disabled with $\geq 2.4\text{ V}$
Trim input for $U_o$	yes	

**Safety and EMC**

Electric strength test voltage	I/O	1500 V DC
Electromagnetic interference		class B

**Environmental**

Operating ambient temperature	$U_{i\text{ nom}}$ , $I_{o\text{ nom}}$	-40...71°C
Storage temperature	non operational	-40...100°C
Relative humidity	non condensing	93%
MTBF	G <sub>B</sub> 40°C, MIL-HDBK-217F, N2	1'650'000 h

**Options**

SMD version	with pins	M
SMD version	with PCB lid	L
Open frame version		Z
C-pinout		C

**Accessories**

DIN and chassis mounting bracket
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# IMS 7 Series

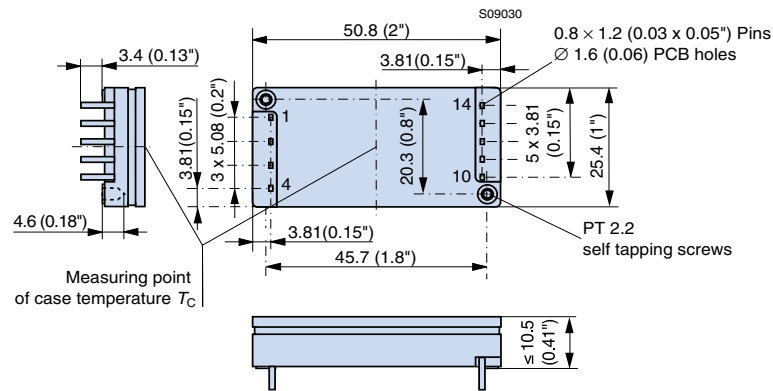
# 7 Watt DC-DC Converters

## Mechanical data

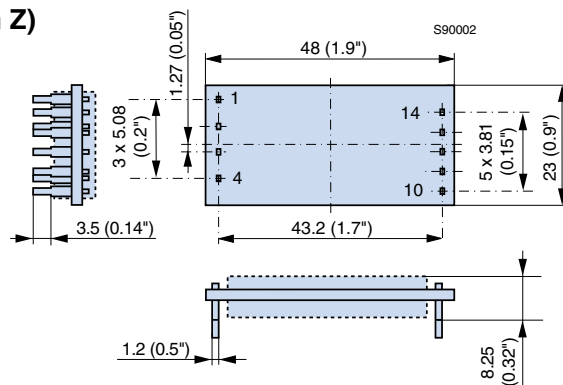
Tolerances  $\pm 0.3$  mm (0.012") unless otherwise indicated.



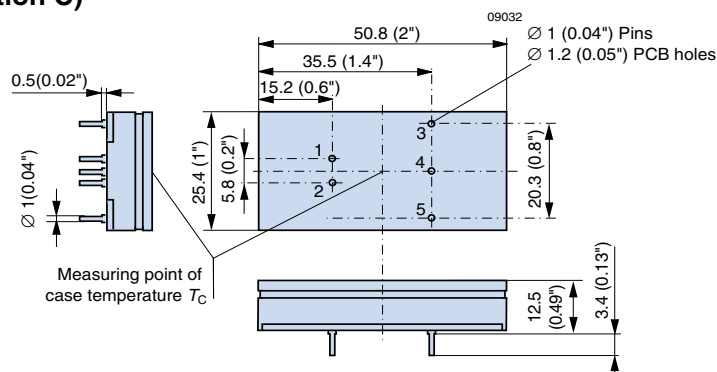
### IMS 7



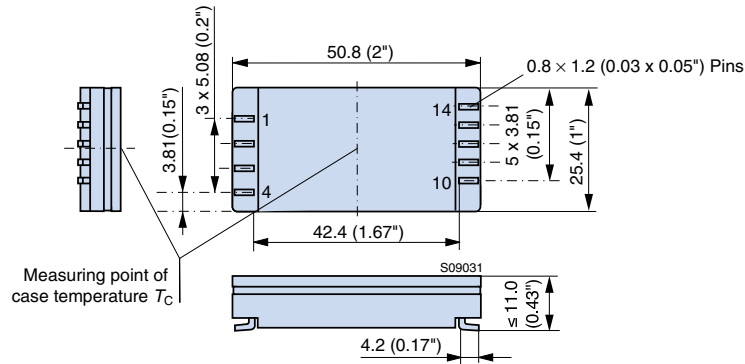
### IMS 7 (option Z)



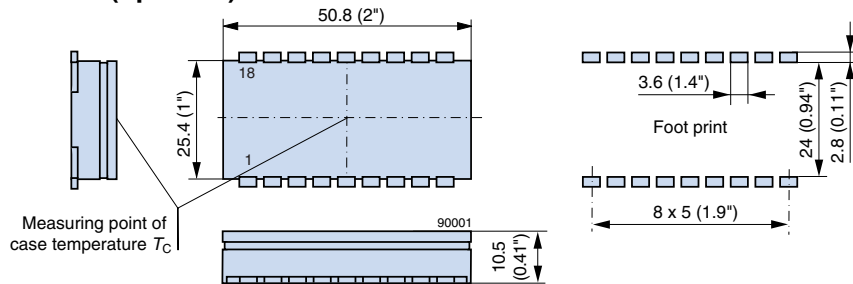
### IMS 7 (option C)



IMS 7 SMD version (option M)



IMS 7 SMD version (option L)



Pin allocation IMS 7, option M and Z

Pin	Single output	Dual output
1	Vi+	Vi+
2	Vi-	Vi-
3	i	i
4	n.c.	R (Trim)
10	Vo-	Vo1-
11	Vo+	Vo1+
12	Vo-	Vo2-
13	R	Vo2+
14	n.c.	n.c.

SMD version (option L)

Pin	Single output	Dual output
1	Vo	Vo1
2	Go	Go
3	n.c.	Vo2
4	n.c.	n.c.
5	n.c.	n.c.
6	n.c.	n.c.
7	n.c.	n.c.
8	n.c.	n.c.
9	n.c.	Trim
10	n.c.	n.c.
11	i	i
12	no pin	no pin
13	no pin	no pin
14	n.c.	n.c.
15	n.c.	n.c.
16	n.c.	n.c.
17	Vi-	Vi-
18	Vi+	Vi+

C pinout (option C)

Pin	Single output	Dual output
1	Vi+	Vi+
2	Vi-	Vi-
3	Vo+	Vo+
4	no pin	Go
5	Vo-	Vo-