

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



c **UL** US

- 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	Type	Options ^{1,2}
$U_{o \text{ nom}}$ [V DC]	$I_{o \text{ nom}}$ [mA]	$U_{o \text{ nom}}$ [V DC]	$I_{o \text{ nom}}$ [mA]	U_i [V DC]		
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

¹ For minimum order quantities and lead times contact Power-One.

² 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	$U_{i \text{ nom}}, 50\% I_{o \text{ nom}}, \text{single output models}$	$\pm 1\% U_{o \text{ nom}}$
	$U_{i \text{ nom}}, 50\% I_{o \text{ nom}}, \text{double output, main/aux. output}$	$\pm 1.5\% U_{o \text{ nom}}$
Minimum load	recommended for double output models	$10\% I_{o \text{ nom}}$
Line/load regulation	$U_{i \text{ min}}...U_{i \text{ max}}, 50\% I_{o \text{ nom}}, \text{single output models}$	$\pm 1\% U_{o \text{ nom}}$
Line regulation	$U_{i \text{ nom}}, 50\% I_{o \text{ nom}}, \text{double output models, main output}$	$\pm 1\% U_{o \text{ nom}}$
Load regulation	$U_{i \text{ nom}}, 10...100\% I_{o \text{ nom}}, \text{double output models}$	$\pm 3\% U_{o \text{ nom}}$
	tracking output	$\pm 3\% U_{o \text{ nom}}$
Output voltage switching noise	$U_{i \text{ nom}}, 0...100\% I_{o \text{ nom}}, \text{peak-peak, total}$	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	$U_{I \min} \dots U_{I \max}$, 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	$U_{i \text{ nom}}, I_{o \text{ nom}}$	$-40...71^\circ\text{C}$
Storage temperature	non operational	$-40...100^\circ\text{C}$
Relative humidity	non condensing	93 %
MTBF	$G_B 40^\circ\text{C}, \text{MIL-HDBK-217F, N2}$	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

IMS 7 Series

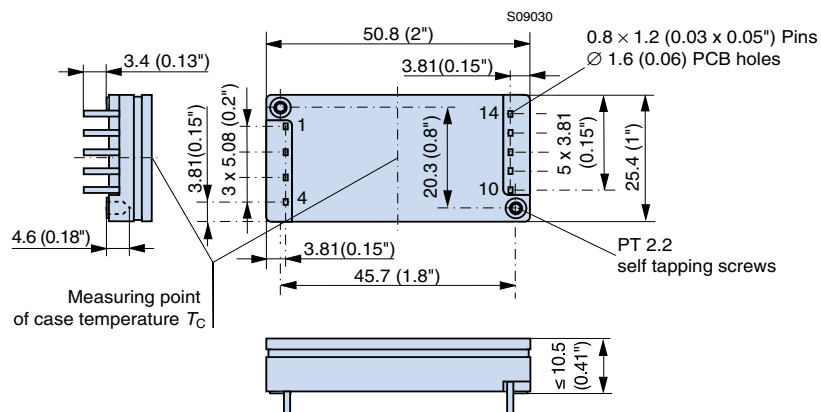
7 Watt DC-DC Converters

Mechanical data

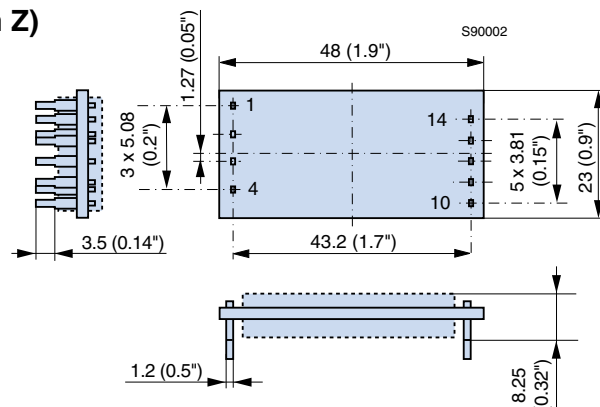
Tolerances ± 0.3 mm (0.012") unless otherwise indicated.



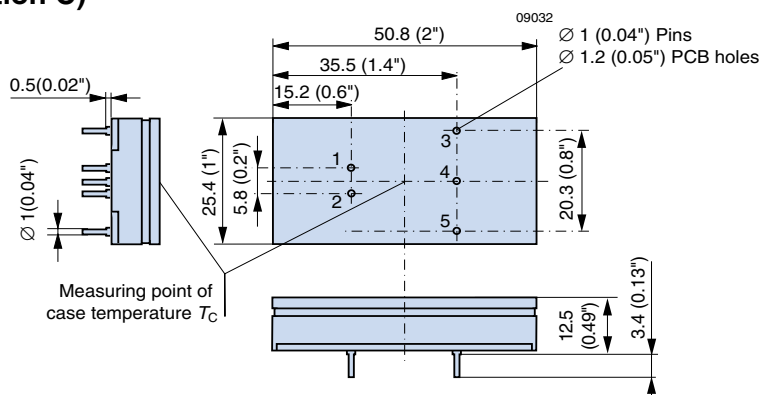
IMS 7



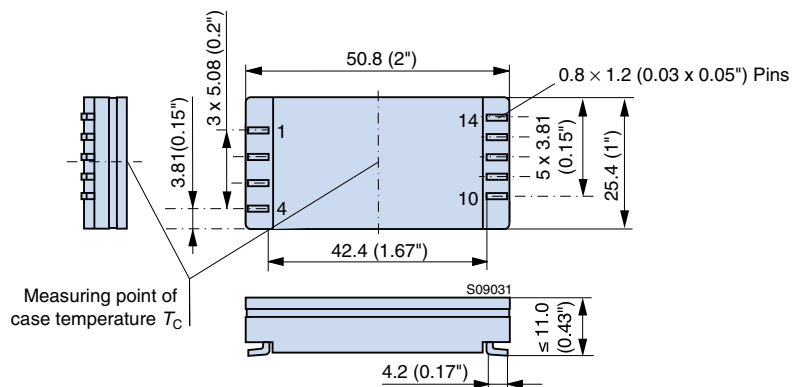
IMS 7 (option Z)



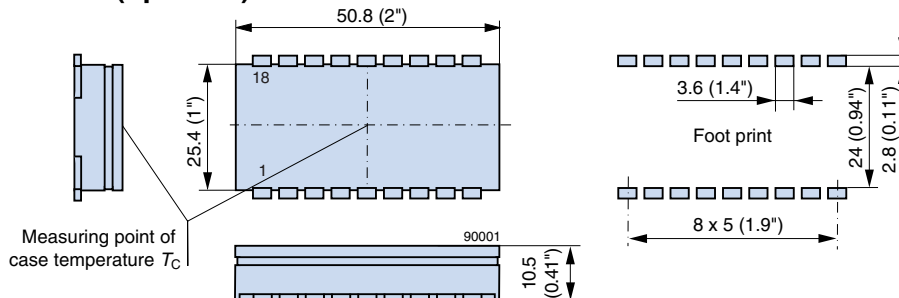
IMS 7 (option C)



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-