

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	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% $I_{o \text{ nom}}$, 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	$U_{i \text{ min}} \dots U_{i \text{ max}}$, 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	$U_{i \text{ min}} \dots U_{i \text{ max}}$, 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_B 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

IMS 7 Series

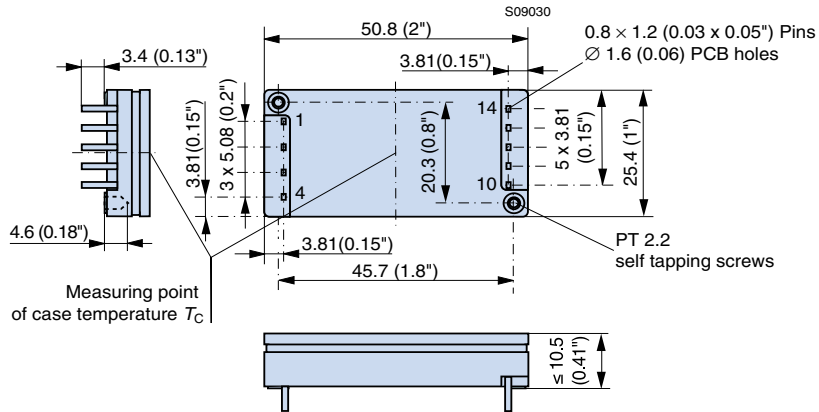
7 Watt DC-DC Converters

Mechanical data

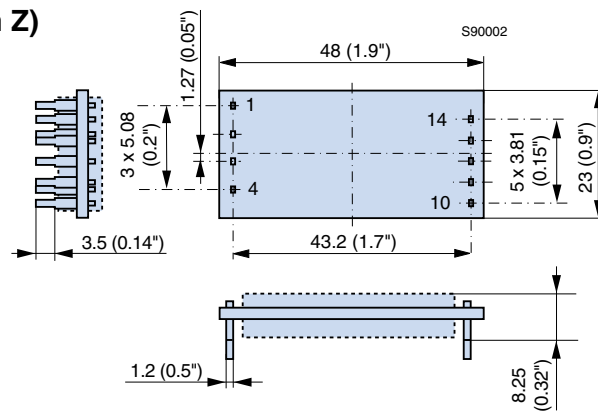
Tolerances ± 0.3 mm (0.012") unless otherwise indicated.



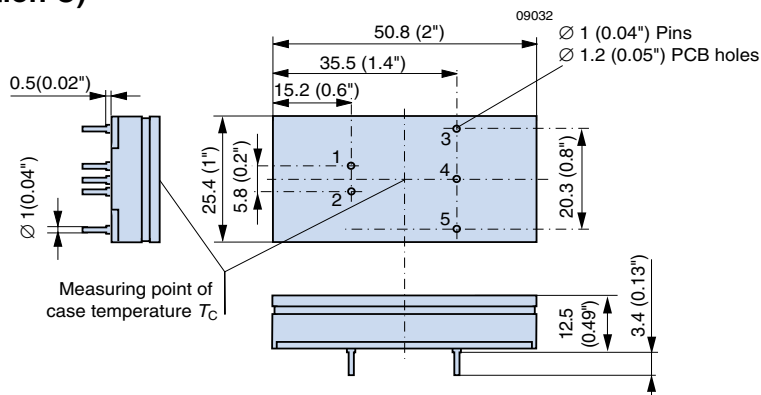
IMS 7



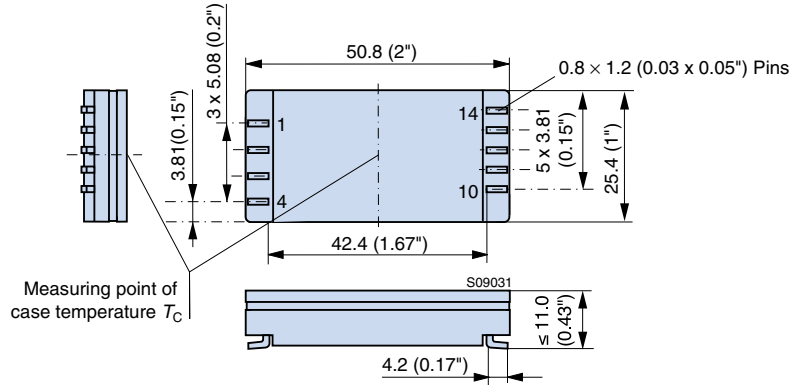
IMS 7 (option Z)



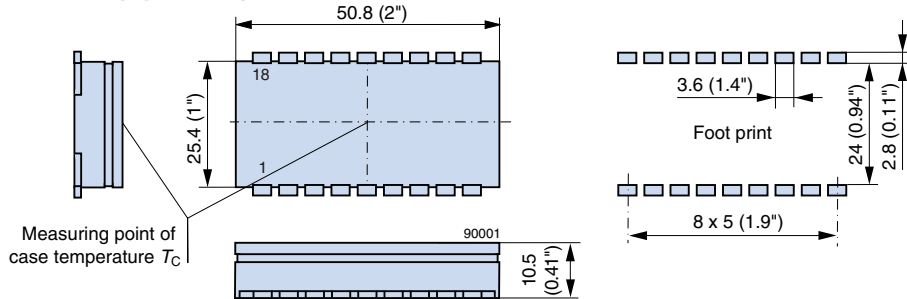
IMS 7 (option C)



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	V_{i+}	V_{i+}
2	V_{i-}	V_{i-}
3	i	i
4	n.c.	R (Trim)
10	V_{o-}	V_{o1-}
11	V_{o+}	V_{o1+}
12	V_{o-}	V_{o2-}
13	R	V_{o2+}
14	n.c.	n.c.

SMD version (option L)

Pin	Single output	Dual output
1	V_o	V_{o1}
2	G_o	G_o
3	n.c.	V_{o2}
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	V_{i-}	V_{i-}
18	V_{i+}	V_{i+}

C pinout (option C)

Pin	Single output	Dual output
1	V_{i+}	V_{i+}
2	V_{i-}	V_{i-}
3	V_{o+}	V_{o+}
4	no pin	G_o
5	V_{o-}	V_{o-}