

IMX 15, IMY 15 Series

15 Watt DC-DC Converters



Wide input voltage ranges up to 150 V DC
1 or 2 outputs up to 48 V DC
1500...4000 V DC I/O electric strength test



- Reinforced isolation for IMY-models
- Magnetic feedback
- Synchronous rectifier for 2.5, 3.3 and 5 V outputs
- Short circuit protection

Selection chart

Output 1		Output 2		Input voltage	Type	Options
U_o nom	I_o nom	U_o nom	I_o nom	U_i		(for availability consult sales point)
[V DC]	[mA]	[V DC]	[mA]	[V DC]		
2.5	4500	-	-	8.4...36	20 IMX 15-2.5-9RG	-8, i, L, C, Z
2.5	4500	-	-	16.8...75	40 IMX 15-2.5-9RG	-8, i, L, C, Z
3.3	4500	-	-	8.4...36	20 IMX 15-03-9RG	-8, i, L, C, Z
3.3	4500	-	-	16.8...75	40 IMX 15-03-9RG	-8, i, L, C, Z
3.3	4500	-	-	50...150	110 IMY 15-03-9RG	-8, i, L, C, Z
5	3500	-	-	8.4...36	20 IMX 15-05-9RG	-8, i, L, C, Z
5	3500	-	-	16.8...75	40 IMX 15-05-9RG	-8, i, L, C, Z
5	3500	-	-	50...150	110 IMY 15-05-9RG	-8, i, L, C, Z
5.1	2300	-	-	8.4...36	20 IMX 15-05-9R	-8, i, L, C, Z
5.1	2500	-	-	16.8...75	40 IMX 15-05-9R	-8, i, L, C, Z
5.1	2500	-	-	50...150	110 IMY 15-05-9R	-8, i, L, C, Z
+5.1	1350	+3.3	1350	8.4...36	20 IMX 15-0503-9R	-8, i, L, C, Z
+5.1	1500	+3.3	1500	16.8...75	40 IMX 15-0503-9R	-8, i, L, C, Z
+5.1	1500	+3.3	1500	50...150	110 IMY 15-0503-9R	-8, i, L, C, Z
5	1300	5	1300	8.4...36	20 IMX 15-05-05-9	-8, R, K, i, L, C, Z
5	1400	5	1400	16.8...75	40 IMX 15-05-05-9	-8, R, K, i, L, C, Z
5	1400	5	1400	50...150	110 IMY 15-05-05-9	-8, R, i, L, C, Z
12	650	12	650	8.4...36	20 IMX 15-12-12-9	-8, R, K, i, L, C, Z
12	700	12	700	16.8...75	40 IMX 15-12-12-9	-8, R, K, i, L, C, Z
12	700	12	700	50...150	110 IMY 15-12-12-9	-8, R, i, L, C, Z
15	500	15	500	8.4...36	20 IMX 15-15-15-9	-8, R, K, i, L, C, Z
15	560	15	560	16.8...75	40 IMX 15-15-15-9	-8, R, K, i, L, C, Z
15	560	15	560	50...150	110 IMY 15-15-15-9	-8, R, i, L, C, Z
24	320	24	320	8.4...36	20 IMX 15-24-24-9	-8, R, i, L, C, Z
24	350	24	350	16.8...75	40 IMX 15-24-24-9	-8, R, i, L, C, Z
24	350	24	350	50...150	110 IMY 15-24-24-9	-8, R, i, L, C, Z

Board Mountable

IMX 15, IMY 15 Series

Input

Input voltage range	20 IMX 15	8.4...36 V DC
	40 IMX 15	16.8...75 V DC
	110 IMY 15	50...150 V DC

Output

Output voltage setting accuracy	$U_{i \text{ nom}}, 50\% I_{o \text{ nom}}$	$\pm 1\% U_{o \text{ nom}}$
Minimum load	recommended for double output models	$10\% I_{o \text{ nom}}$
Line/load regulation	$U_{i \text{ min}}...U_{i \text{ max}}, 50\% I_{o \text{ nom}}, \text{models R (magn. feedback)}$	$\pm 0.5\% U_{o \text{ nom}}$
Line regulation	$U_{i \text{ min}}...U_{i \text{ max}}, 50\% I_{o \text{ nom}}, \text{models without R}$	$\pm 1\% U_{o \text{ nom}}$
Load regulation	$U_{i \text{ nom}}, 10...100\% I_{o \text{ nom}}, \text{models without R, main outp.}$	$\pm 3\% U_{o \text{ nom}}$
	tracking output, models without R	$\pm 3\% U_{o \text{ nom}}$
Output voltage switching noise	$U_{i \text{ nom}}, 0...100\% I_{o \text{ nom}}, \text{peak-peak, total}$	max. $1...2\% U_{o \text{ nom}}$
Efficiency	$U_{i \text{ nom}}, I_{o \text{ nom}}$	up to typ 88 %

Control and protection

Remote shut down	TTL-compatible input	disabled with $\leq 0.7 \text{ V}$
Trim input for U_o		80...105 %
Input undervoltage lock-out		
Overload protection	$U_{i \text{ min}}...U_{i \text{ max}}, \text{fully protected, hiccup mode}$	
No-load protection	$U_{i \text{ min}}...U_{i \text{ max}}$	
Temperature protection		

Safety and EMC

Electric strength test voltage	I/O (20 and 40 IMX/110 IMY)	1500/4000 V DC
Type of insulation	I/O (20 and 40 IMX supplementary/110 IMY re-inforced)	
Electromagnetic interference	conducted (with external filter)	class B
	radiated	class A

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 %

Options

Extended temperature range	$-40...85^\circ\text{C}$ (derating above 71°C), ambient, operating	-8
Magnetic feedback	standard for all single output and -0503-models	R
Alternative pinout	connected outputs, for compatibility	K
Inhibit input (reverse logic)	TTL-compatible, disabled with $\geq 2.4 \text{ V}$ or open-circuit	i
SMD version	with PCB lid	L
C-pinout	connected outputs, no options possible	C
Open version	no housing, not lacquered	Z

IMX 15, IMY 15 Series

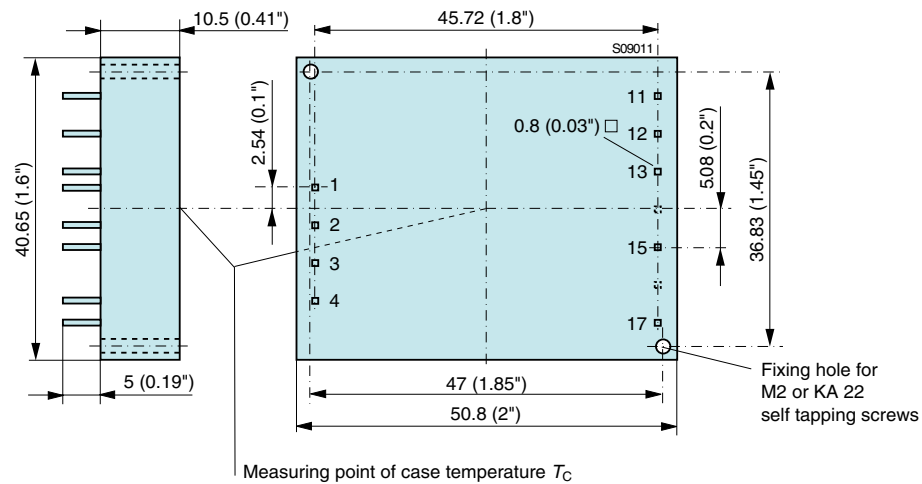
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Mechanical data

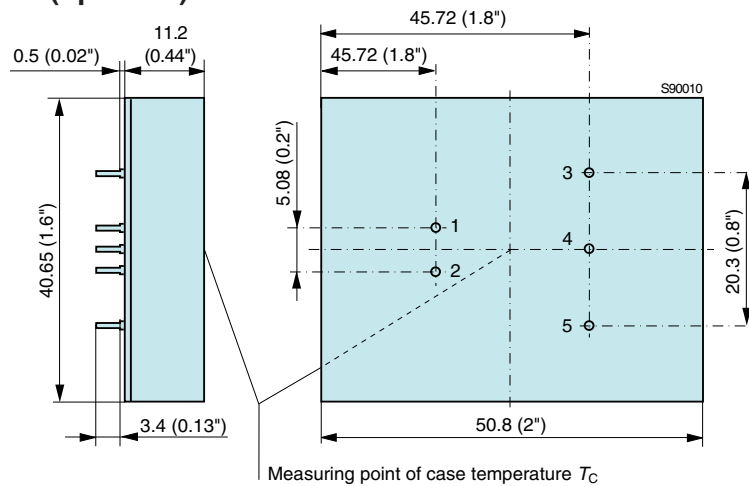
Tolerances ± 0.3 mm (0.012") unless otherwise indicated.



Standard and option K



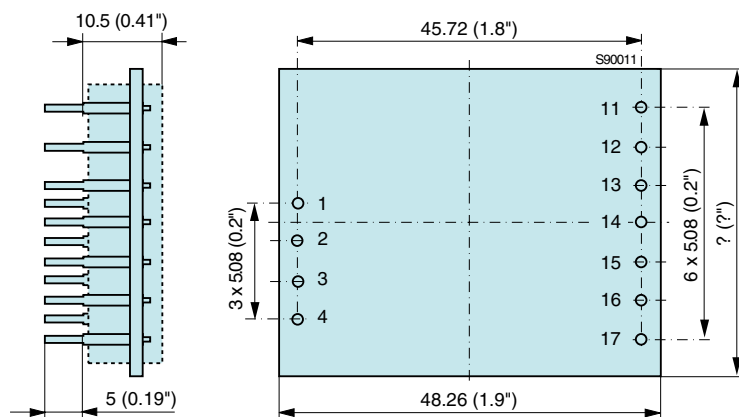
C pinout (option C)



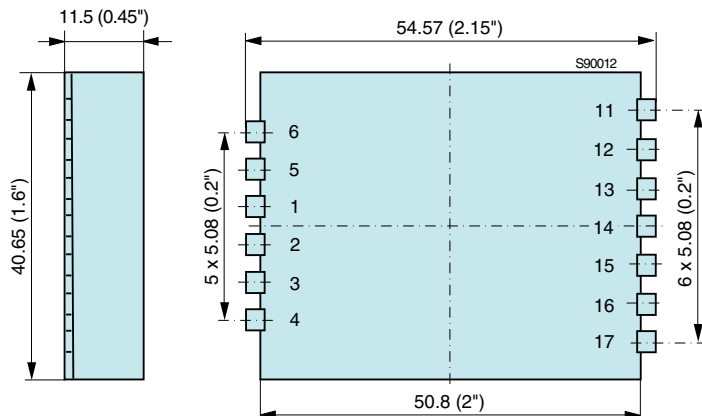
Board Mountable

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Open frame version (option Z)



SMC version (option L)



Pin allocation

Pin	single	Standard double	-0503-	Option K dual	Option C single	Option C dual	Option L and Z single	Option L and Z double
1	Vi+	Vi+	Vi+	Vi+	Vi+	Vi+	Vi+	Vi+
2	Vi-	Vi-	Vi-	Vi-	Vi-	Vi-	Vi-	Vi-
3	-	Trim	n.c.	-	Vo+	Vo+	n.c.	Trim
4	SD	SD	SD	SD	-	Go	SD	SD
5	-	-	-	-	Vo-	Vo-	n.c.	n.c.
6	-	-	-	-	-	-	n.c.	n.c.
11	-	Vo1+	Vo2+	Vo+	-	-	-	Vo1-
12	-	Vo1-	Go	-	-	-	-	Vo2-
13	Vo+	Vo2+	Vo1+	Go	-	-	Vo+	Vo1+
15	Vo-	Vo2-	Go	Vo-	-	-	Vo-	Vo2-
17	R	n.c./R	R	n.c.	-	-	R	n.c.