

PSC Series

6...12 A Switching Regulators



Input voltage up to 144 V DC
Single output of 3.3...36 V DC
No input to output isolation



- Efficiency up to 96%
- Low input-output differential voltage
- No derating over temperature

Selection chart

Output		Input voltage U_i [V DC]	Rated power $P_{o\ tot}$ [W]	Efficiency η_{typ} [%]	Type	Options
$U_{o\ nom}$ [V DC]	$I_{o\ nom}$ [A]					
3.3	12	8...40	39.6	77	PSC 3E122	iR-Package
5.1	10	8...80	51	79	PSC 5A10-7iR	-9, L, P, C, D
5.1	11	8...40	56.1	79	PSC 5A11-2	iR-Package
5.1	12	7...40	61.2	83	PSC 5A12-7iR	-9, L, P, C, D
12	6	18...144	72	89	PSC 126-7iR	-9, L, P, C, D
12	8	15...80	96	90	PSC 128-7iR	-9, L, P, C, D
12	9	15...40	108	90	PSC 129-2	iR-Package
15	6	22...144	90	90	PSC 156-7iR	-9, L, P, C, D
15	8	19...80	120	91	PSC 158-7iR	-9, L, P, C, D
15	9	19...40	135	91	PSC 159-2	iR-Package
24	6	31...144	144	94	PSC 246-7iR	-9, L, P, C, D
24	8	29...80	192	94	PSC 248-7iR	-9, L, P, C, D
24	9	29...60	216	94	PSC 249-2	iR-Package
36	6	44...144	216	95	PSC 366-7iR	-9, L, P, C, D
36	8	42...80	288	96	PSC 368-7iR	-9, L, P, C, D

Input

Input voltage	refer to selection chart
No load input current	≤50 mA

Output

Efficiency	$U_{i \text{ nom}}, I_{o \text{ nom}}$	up to 96%
Output voltage setting accuracy	$U_{i \text{ nom}}, I_{o \text{ nom}}$	±0.6% $U_{o \text{ nom}}$
Output voltage switching noise	IEC/EN 61204, total	typ. 0.4%
Line regulation	$U_{i \text{ min}} \dots U_{i \text{ max}}, I_{o \text{ nom}}$	typ. ±0.3%
Load regulation	$U_{i \text{ nom}}, 0 \dots I_{o \text{ nom}}$	typ. 0.3%
Minimum load	not required	0 A
Current limitation	rectangular U/I characteristic	typ. 110% $I_{o \text{ nom}}$
Operation in parallel	by current limitation	

Protection

Input reverse polarity	with external fuse (built-in fuse with option C installed)	
Input undervoltage lockout		typ. 80% $U_{i\min}$
Input transient protection	suppressor diode	
Output	no-load, overload and short circuit proof	
Output overvoltage	suppressor diode in each output	typ. 150% $U_{o\text{nom}}$

Safety

Approvals	EN 60950, UL 1950, CSA C22.2 No. 950	
Protection degree	IP 20	
Electric strength test voltage	I/case and O/case	500/750/1500 V DC

EMC

Electrostatic discharge	IEC/EN 61000-4-2
Electromagnetic field	IEC/EN 61000-4-3
Electr. fast transients/bursts	IEC/EN 61000-4-4
Surge	IEC/EN 61000-4-5
Conducted disturbances	IEC/EN 61000-4-6
Electromagnetic emissions	CISPR 22/EN 55022

Environmental

Operating ambient temperature	-2, $U_{i\text{ nom}}$, $I_{o\text{ nom}}$, convection cooled	-10...50°C
Operating case temperature T_C	-2, $U_{i\text{ nom}}$, $I_{o\text{ nom}}$	-10...80°C
Storage temperature	-2, non operational	-25...100°C
Operating ambient temperature	-7, $U_{i\text{ nom}}$, $I_{o\text{ nom}}$, convection cooled	-25...71°C
Operating case temperature T_C	-7, $U_{i\text{ nom}}$, $I_{o\text{ nom}}$	-25...95°C
Storage temperature	-7, non operational	-40...100°C
Damp heat	IEC/EN 60068-2-3	
Vibration, sinusoidal	IEC/EN 60068-2-6	
Shock	IEC/EN 60068-2-27	
Bump	IEC/EN 60068-2-29	
Random vibration	IEC/EN 60068-2-64	
MTBF	MIL-HDBK-217	

Options

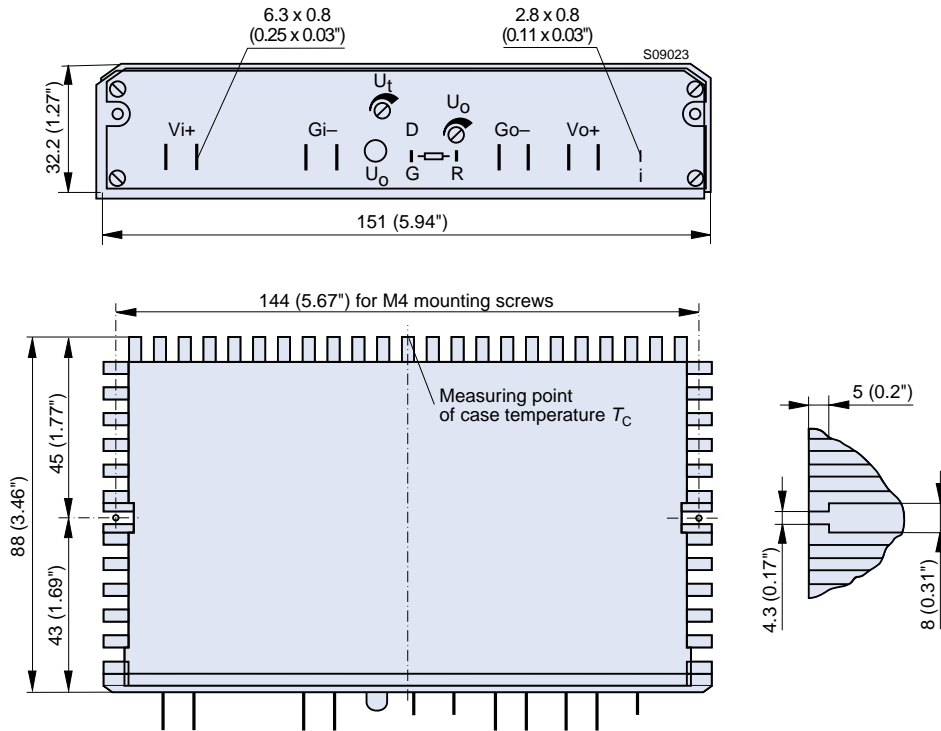
Extended temperature range	-40...71°C, ambient, operating	-9
Inhibit, TTL input, output(s) enabled if left open		i
Output voltage adjustment	0...108% $U_{o\text{ nom}}$	R
Additional internal input filter		L
Output voltage adjustment	$\pm 8\%$ $U_{o\text{ nom}}$	P
Thyristor crowbar on output		C
Input or output undervoltage monitoring		D/D1

Chassis Mountable

PSC Series

Mechanical data

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



Accessories

Isolation pads for easy and safe PCB mounting
Ring core chokes for ripple and interference reduction