



- Efficiency up to 97%
- Low input-output differential voltage
- No derating over temperature

Selection chart

Output		Input voltage	Rated power	Efficiency	Type	Options
$V_{o\text{nom}}$ [VDC]	$I_{o\text{nom}}$ [A]	V_i [VDC]	$P_{o\text{tot}}$ [W]	η_{typ}		
24	20	29 - 80	480	94	PSK	-9, E, P, C, B, B1

Input

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

Output

Efficiency	$V_{i\text{nom}}, I_{o\text{nom}}$	up to 97%
Output voltage setting accuracy	$V_{i\text{nom}}, I_{o\text{nom}}$	±0.6% $V_{o\text{nom}}$
Output voltage switching noise	IEC/EN 61204, total	typ. 0.2%
Line regulation	$V_{i\text{min}} - V_{i\text{max}}, I_{o\text{nom}}$	typ. ±0.2%
Load regulation	$V_{i\text{nom}}, 0 - I_{o\text{nom}}$	typ. 0.15%
Minimum load	not required	0 A
Current limitation	rectangular U/I characteristic	typ. 110% $I_{o\text{nom}}$
Hold-up time	$V_{i\text{nom}}, I_{o\text{nom}}$, with ext. diode in input line, PSS	up to 7 ms

Protection

Input reverse polarity	built-in fuse	
Input undervoltage lockout		typ. 80% $V_{i\text{min}}$
Input transient protection	suppressor diode	
Output	no-load, overload and short circuit proof	
Output overvoltage	suppressor diode in each output	typ. 150% $V_{o\text{nom}}$
Overtemperature	switch-off with auto restart	T_C typ. 100°C

Control

Inhibit	TTL input, output enabled if left open	
R control	min. adjustable output voltage	0 V
	max. adjustable output voltage	up to 125% $V_{o\text{nom}}$
Output voltage indication	LED (except -2)	
Sense lines	compensation for voltage drop across load lines, PSS	
Test sockets	test sockets for check of output voltage	
Operation in parallel	current sharing feature (CS)	

Safety

Approvals	EN 60950, UL 1950, CSA C22.2 No. 950	
Protection degree	units without options	IP 20/30
Electric strength test voltage	I/case and O/case	500/750/1500 VDC

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, $V_{i\text{nom}}$, $I_{o\text{nom}}$, convection cooled	-10 to 50°C
Operating case temperature T_C	-2, $V_{i\text{nom}}$, $I_{o\text{nom}}$	-10 to 80°C
Storage temperature	-2, non operational	-25 to 100°C
Operating ambient temperature	-7, $V_{i\text{nom}}$, $I_{o\text{nom}}$, convection cooled	-25 to 71°C
Operating case temperature T_C	-7, $V_{i\text{nom}}$, $I_{o\text{nom}}$	-25 to 95°C
Storage temperature	-7, non operational	-40 to 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

Large and small cooling plate instead of standard heatsink		B/B1
Extended temperature range	-40 to 71°C, ambient, operating	-9
Electronic inrush current limitation		E
Output voltage adjustment	$\pm 8\%$ $V_{o\text{nom}}$, excludes feature R and vice versa	P
Thyristor crowbar on output		C

Accessories

Front panels 19" (Schroff/Intermas), 12 und 16 TE	
Mating H15 or H15 S4 connectors with screw, solder, fast-on or press-fit terminals	
Connector retention facilities	
Adapter kit for DIN-rail	

Pin allocation

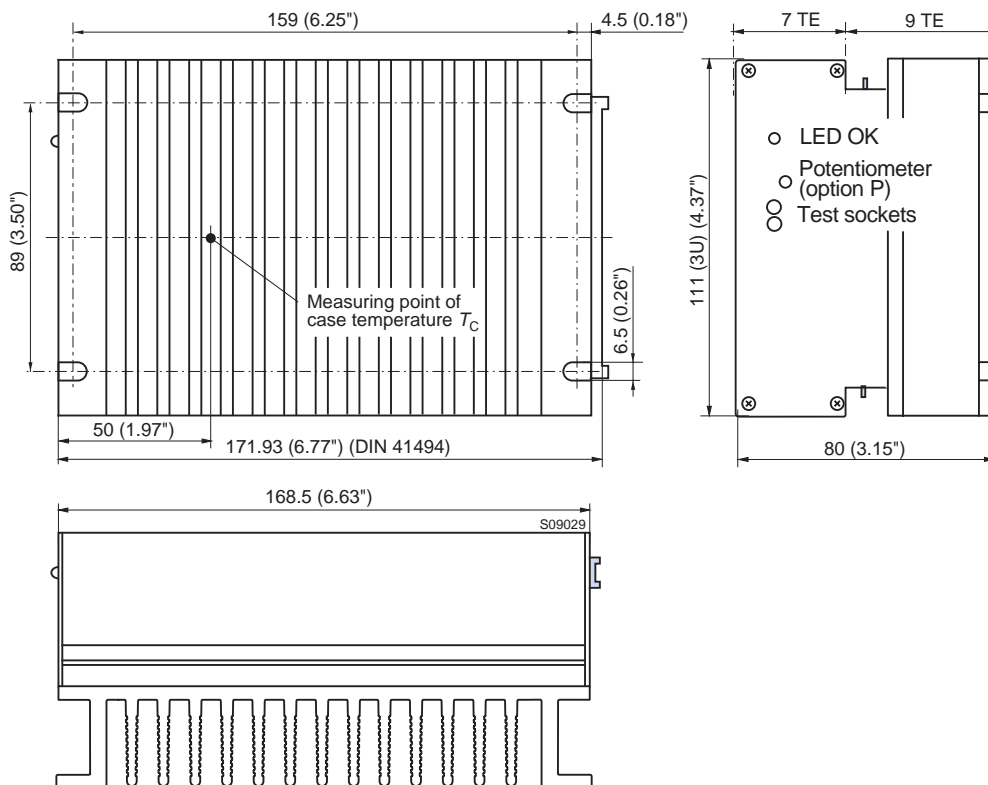
Electrical Determination	Type H15		Type H15 S4	
	Pin No.	Ident.	Pin No.	Ident.
Output voltage (positive)	4	Vo+	4/6	Vo+
Output voltage (positive)	6	Vo+		
Output voltage (negative)	8	Go-	8/10	Go-
Output voltage (negative)	10	Go-		
Crowbar trigger input (option C)	12	C	12	C
Inhibit input	14	i	14	i
R-input (output voltage programming) ¹	16	R	16	R
Sense line (negative)	18	S-	18	S-
Sense line (positive)	20	S+	20	S+
Current sharing control input	22	CS	22	CS
Protective ground (leading pin)	24	⊕	24	⊕
Input voltage (negative)	26	Gi-	26/28	Gi-
Input voltage (negative)	28	Gi-		
Input voltage (positive)	30	Vi+	30/32	Vi+
Input voltage (positive)	32	Vi+		

Mechanical data

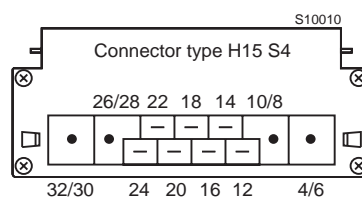
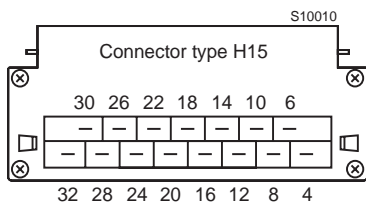
Tolerances ± 0.3 mm (0.012") unless otherwise indicated.



PSK

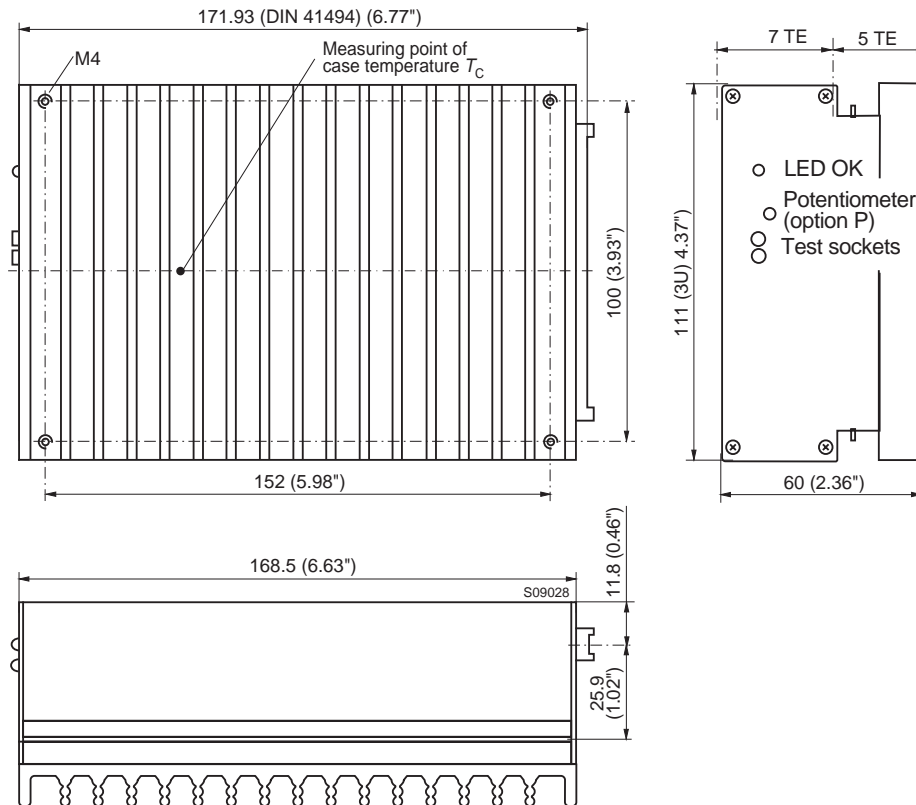


Pin allocation



H15 S4 connectors for 20 and 25 A types

PSS



NUCLEAR AND MEDICAL APPLICATIONS - Power-One products are not authorized for use as critical components in life support systems, equipment used in hazardous environments, or nuclear control systems without the express written consent of the respective divisional president of Power-One, Inc.

TECHNICAL REVISIONS - The appearance of products, including safety agency certifications pictured on labels, may change depending on the date manufactured. Specifications are subject to change without notice.