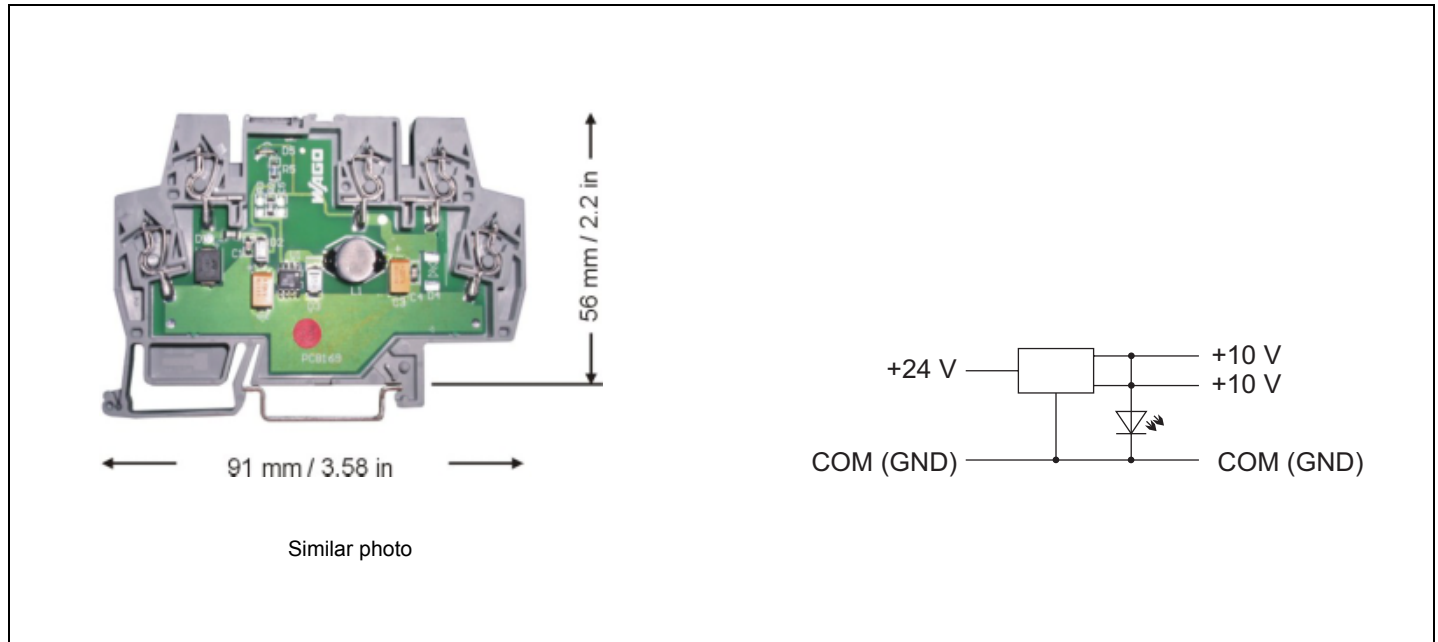


# Electronic Terminal Block with DC-DC Converter

1/1

Step Down Converter DC 24 V / DC 10 V

Data sheet



Description	Item-No.	Pack.-unit pcs																																																				
DC/DC Converter 24 V / 10 V ; 0.5 A	859-802	1																																																				
<ul style="list-style-type: none"> <li>End plate 859-525 included and attached.</li> <li>Mounting on DIN 35 rail.</li> </ul> <p>Application:</p> <p>When industrial controls that typically require DC 24 V are used in conjunction with industrial sensors operating at DC 10 V, often interface devices are required. This module can cost effectively produce DC 10 V at up to 500 mA from a 24 V source.</p>	<p><b>Technical Data</b></p> <table border="1"> <tr><td>Input nominal voltage <math>U_N</math></td><td>DC 24 V</td></tr> <tr><td>Input voltage range</td><td>DC 15-30 V</td></tr> <tr><td>Output voltage</td><td>DC 10 V</td></tr> <tr><td>Output voltage range</td><td>DC 10 V <math>\pm</math> 2 %</td></tr> <tr><td>Max. output current</td><td>500 mA</td></tr> <tr><td>Max. line regulation</td><td>0.5 % (from DC 15-30 V, full load)</td></tr> <tr><td>Max. load regulation</td><td>0.7 % (no load to full load, DC 24 V in)</td></tr> <tr><td>Efficiency</td><td>85 % (DC 24 V in, full load)</td></tr> <tr><td>Output noise and ripple</td><td>20 mV P-P (at bandwidth 20 MHz)</td></tr> <tr><td>Switching frequency</td><td>200 kHz (nominal)</td></tr> <tr><td>Isolation</td><td>Non-isolated</td></tr> <tr><td>Input polarity protection</td><td>Yes</td></tr> <tr><td>Minimum load requirements</td><td>None</td></tr> <tr><td>Max. Transient recovery time</td><td>500 <math>\mu</math>s (Recovery time for a step load change of 25 % to 75 % of full load)</td></tr> <tr><td>Max. start-up time</td><td>3 ms (DC 24 V in, full load)</td></tr> <tr><td>Max. hold-up time</td><td>500 <math>\mu</math>s (DC 24 V in, full load)</td></tr> <tr><td>Input protection</td><td>TVS Diode</td></tr> <tr><td>Output short circuit protection</td><td>Momentary (Output can be shorted for 1 minute without damaging the device)</td></tr> <tr><td>Temperature coefficient</td><td>100 ppm/<math>^{\circ}</math>C typ.</td></tr> <tr><td>Ambient operating temperature</td><td>-25 <math>^{\circ}</math>C...+55 <math>^{\circ}</math>C</td></tr> <tr><td>Terminal block width</td><td>6 mm / 0.236 in</td></tr> <tr><td>Wire connection</td><td>CAGE CLAMP<sup>®</sup></td></tr> <tr><td></td><td>0.08-2.5 mm<sup>2</sup> / AWG 28-14</td></tr> <tr><td>Stripped length</td><td>5-6 mm / 0.22 in</td></tr> <tr><td>Approvals</td><td>cUL<sub>US</sub> UL508 E175199</td></tr> <tr><td></td><td>cUL<sub>US</sub> UL1604 / CSA22.2 No.213 E198726</td></tr> </table>		Input nominal voltage $U_N$	DC 24 V	Input voltage range	DC 15-30 V	Output voltage	DC 10 V	Output voltage range	DC 10 V $\pm$ 2 %	Max. output current	500 mA	Max. line regulation	0.5 % (from DC 15-30 V, full load)	Max. load regulation	0.7 % (no load to full load, DC 24 V in)	Efficiency	85 % (DC 24 V in, full load)	Output noise and ripple	20 mV P-P (at bandwidth 20 MHz)	Switching frequency	200 kHz (nominal)	Isolation	Non-isolated	Input polarity protection	Yes	Minimum load requirements	None	Max. Transient recovery time	500 $\mu$ s (Recovery time for a step load change of 25 % to 75 % of full load)	Max. start-up time	3 ms (DC 24 V in, full load)	Max. hold-up time	500 $\mu$ s (DC 24 V in, full load)	Input protection	TVS Diode	Output short circuit protection	Momentary (Output can be shorted for 1 minute without damaging the device)	Temperature coefficient	100 ppm/ $^{\circ}$ C typ.	Ambient operating temperature	-25 $^{\circ}$ C...+55 $^{\circ}$ C	Terminal block width	6 mm / 0.236 in	Wire connection	CAGE CLAMP <sup>®</sup>		0.08-2.5 mm <sup>2</sup> / AWG 28-14	Stripped length	5-6 mm / 0.22 in	Approvals	cUL <sub>US</sub> UL508 E175199		cUL <sub>US</sub> UL1604 / CSA22.2 No.213 E198726
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