

Group	Drives and Encoders	FW/HW/SW	HW
Series	S600	Date	04/19/07
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Drop X1 5V from 5.56V to within 5V ±5%

About the Content:

Application note contains instructions and a diagram of X1 Connector from S600 Drive to Encoder.

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Description

The encoder 5V supply on the S600 X1 connector (connector X1 pin 4) is specified to be 5V ±5%. Often this is higher than the maximum specified 5.25V, such as 5.5V. Many encoders have the same specification of 5V ±5% and cannot exceed this range without being damaged.

The solution is to add a diode that will drop the voltage without limiting current. A Silicon based diode will drop voltage by a nominal 0.6V (0.5V – 0.7V). A 1-amp diode will be sufficient in this case, such as the 1N4-00x.

Place the diode in series with the 5V supply, towards the end of the cable between the sense+ lead and the encoder. (*See diagram page 2)

Also recommended is to place a 150 Ω resistor between pins 11 and 3 (sine+ and sine-), and between pins 9 and 1 (cosine+ and cosine-).

Diagram

S600

