RX/TX Converter

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Features

The RX/TX Converter converts a Push-Pull or NPN encoder output to an RS422 compatible differential Line Driver output. In addition, it will also convert Line Driver/RS422 encoder output, to single ended signals (Push-Pull) for compatibility with certain PLC's.

Each converter has two independent channels:

Channel 1 is equipped with a differential Line Receiver on the input. It then converts these differential signals (A, A', B, B', Z, Z') to Push-Pull output signals (A, B, Z), with an amplitude equivalent to Vcc.

Channel 2 will convert single ended signals from a Push-Pull or NPN Open Collector encoder to Differential Line Driver signals. Differential Line Driver signals include complementary outputs A', B', and Z' which offer greater immunity to electrical noise, signal distortion, and interference,especially with long cable runs.

Applications

- To provide differential signals for data transmission over long distances between a push-pull, or NPN open collector transmitter and receiver.
- To enable devices with different output/input circuits to be connected.
- To properly terminate differential signals to eliminate/reduce signal distortions.

Ordering Information

(Specify stock # when ordering)

Differential = A,A', B,B', Z,Z'
Single Ended = A, B, Z

Stock #	Channel 1		Channel 2	
	INPUT	OUTPUT	INPUT	OUTPUT
	Differential Line Receiver-MAX3095	Single Ended Push Pull Output-7272	Single Ended-7272	Differential Line Driver-7272
100020-1	5 V	Vcc	5V, OC[1]	Vcc
100020-2	5 V	Vcc	5V, OC[1]	5V
100020-3	5 V	Vcc	5V [2]	Vcc
100020-4	5 V	Vcc	5V [2]	5V
100020-5	6-12V	Vcc	5V, OC[2]	Vcc
100020-6	6-12V	Vcc	5V, OC[1]	5V
100020-7	6-12V	Vcc	5V [2]	Vcc
100020-8	6-12V	Vcc	5V [2]	5V
100020-9	13-24V	Vcc	5V, OC[1]	Vcc
100020-10	13-24V	Vcc	5V, OC[1]	5V
100020-11	13-24V	Vcc	5V [2]	Vcc
100020-12	13-24V	Vcc	5V [2]	5V

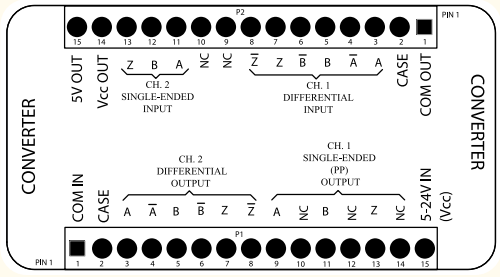
1 OC- Open Collector input designed with a 2k pull-up resistor for an open collector output encoder or device.
2 Inputs can be from devices with pull-up, push-pull or TTL type outputs.
3 Vcc should range between 5-24 VDC.

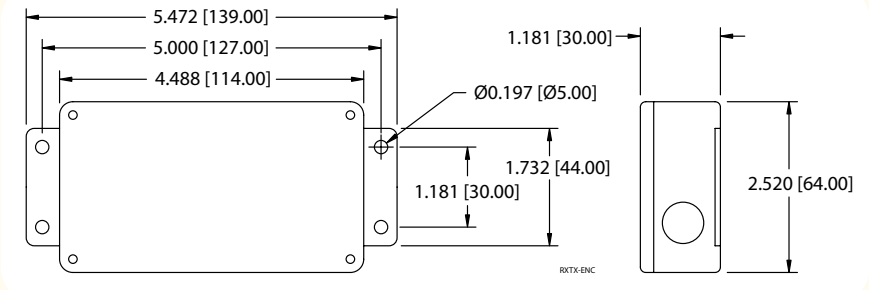
Specifications

Supply Source (Vcc).....5 to 24 VDC
Current Consumption .....20 mA max (plus encoder and output load requirements)
Max Frequency.....Up to 1 MHz
Enclosure .....IP54 (dust proof)
Earth Circuit .....Grounded to Case
Input Voltage.....Channel 1: 24 VDC Max Diff
Channel 2: 5 VDC Max
Output Voltage .....Channel 1: Vcc
Channel 2: 5 VDC or Vcc
Output Current .....30 mA/Channel Max

NOTES UNLESS OTHERWISE SPECIFIED

1. TERMINATE CABLE SHIELD/DRAIN WIRES TO THE CASE TERMINAL OF P1 AND P2, IF APPLICABLE. BARE CONDUCTORS MUST BE ELECTRICALLY INSULATED FROM THE CIRCUIT BOARD WITH A NONCONDUCTIVE SLEEVE SUCH AS HEAT SHRINK TUBING.
2. RECOMMENDED CABLE FOR DIFFERENTIAL/ COMPLEMENTARY ENCODER SIGNALS: LOW CAPACITANCE, TWISTED-SHIELDED PAIR: SEE ACCESSORIES SECTION FOR 4XXC CABLES/CONNECTORS. 4XXC CABLES MUST HAVE OUTER INSULATION STRIPPED OFF IN ORDER TO FIT THROUGH CABLE ENTRY GLANDS.
3. SEE CONFIGURATION ORDERING GUIDE FOR INPUT/OUTPUT VOLTAGE PER THE SELECTED RXTX MODEL NUMBER
4. P2-14 (Vcc) or P2-15 (5V) CAN BE USED TO POWER ENCODER.
5. P1-15 (5-24VDC IN (Vcc)) IS FOR CUSTOMER SUPPLIED POWER TO OPERATE RXTX.





All dimensions are in inches with a tolerance of ±0.005" or ±0.01" unless otherwise specified
Metric dimensions are given in brackets (mm)

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