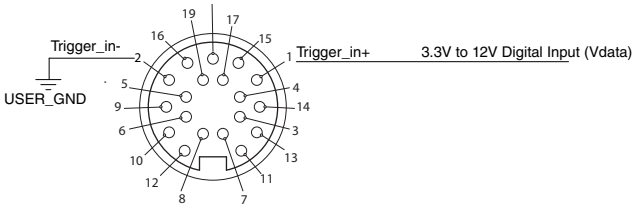
Digital Inputs

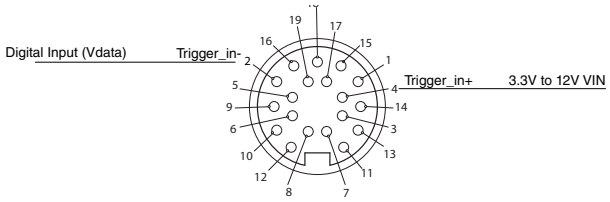
Every Gocator sensor has a single optically-isolated input. To use this input without an external resistor, supply 3.3 - 12 V to Pin 1 and GND to Pin 2.

Active High



If the supplied voltage is greater than 12 V, connect an external resistor in series to Pin 1.
The resistor value should be R = [(Vin-1.2V)/10mA]-680.

Active Low

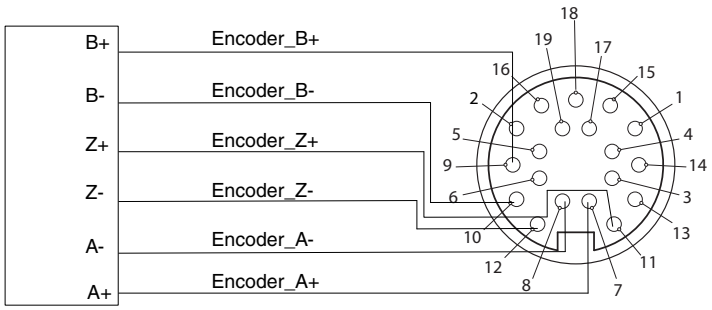


To assert the signal, the digital input voltage should be set to draw a current of 3 mA to 32mA from Trigger_In+. The current that passes through Trigger_In+ is I = (Vin – 1.2 – Vdata) / 680. To reduce noise sensitivity, we recommend leaving a 20% margin for current variation (i.e. uses a digital input voltage that draws 4mA to 25mA).

Function	Pins	Min Voltage	Max Voltage	Min Current	Max Current	Min Pulse Width
Trigger_in	1, 2	3.3 V	24V	3 mA	32 mA	20 us

Encoder Input

Encoder input is provided by an external encoder and consists of 3 RS-485 signals. These signals are connected to Encoder_A, Encoder_B and Encoder_Z.



Function	Pins	Common Mode Voltage		Differential Threshold Voltage			Max Data Rate
		Min	Max	Min	Typ	Max	
Encoder_A	7, 8	-7 V	12 V	-200 mV	-125 mV	-50 mV	1 MHz
Encoder_B	9, 10	-7 V	12 V	-200 mV	-125 mV	-50 mV	1 MHz
Ecnoder_Z	11, 12	-7 V	12 V	-200 mV	-125 mV	-50 mV	1 MHz

Gocator only supports differential RS485 signalling. Both + and - signals must be connected.

Serial Output

Serial RS-485 output is connected to Serial_out as shown below.

Function	Pins
Serial_out	13, 14