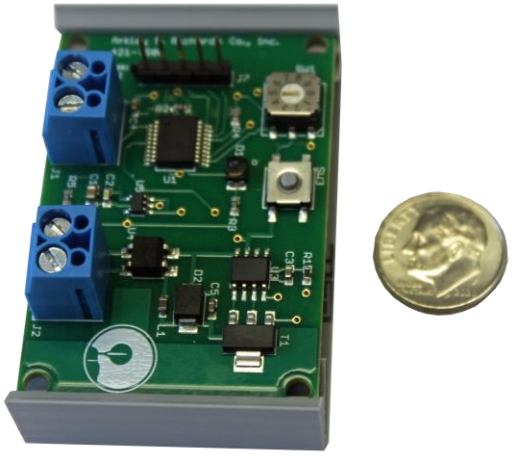
421-TS100 Micro 4-20mA Wind Speed Transmitter
(Switch Pulse Output Anemometers)

The 421-TS100 Wind Speed Micro Transmitter is a two-wire loop powered signal conditioner used to convert the switch pulse signal generated by Richards Industrial Anemometers with a switch pulse output to a robust 4-20mA transmission signal. The 421-TS100 transmitter is compatible with all Richards C5 and C5C series anemometers with reed switch contact closure outputs. This transmitter is designed with multiple user selections for wind speed spans ranging from; 0-100 mph, 0-150 mph, and 0-200 mph depending on the anemometer model. Different models of anemometers can be used simply by changing the position of the sensor selection rotary switch conveniently located on the top of the circuit board. The transmitter has a total of 9 selections for different anemometers and their corresponding transfer functions. Current selections available are shown in the table below.



Actual Size

Micro Transmitter Output (4-20mA) Example
4-20mA Signal Measuring Span (0 mph to 100 mph, 0 m/s to 44.704 m/s)
Maximum Speed at Full Scale 20mA Signal (100 mph or 44.704 + m/s)

Electrical Technical Data (Two Wire Loop Powered)
Power 12-24 VDC (Polarity is not important)

Circuit Board Physical Dimensions and Mounting
Length (2.185 inches or 55.499 mm)
Width (1.50 inches or 38.1 mm)
Height (.67 inches or 17.018 mm)
Mounting Hole Locations (1.99 inches x 1.29 inches, 50.546 mm x 32.766 mm)
Hole Size (.125 inches x 4, 3.18 mm x 4)
Mounting System (Snaptrack, 2.19 inches PVC channel)

Terminal Block Electrical Connections
Input Terminal Block at Location J1 Connect the Two Wires from The Anemometer Blue Single (+) And Black Single (-)
Current Loop Terminal Block at Location J2 Connect 12-24 VDC (Polarity is not important)

Environmental Specifications
Operating Temperature Range -58°F to 230°F (-50°C to 110°C)

421-TS100 Transmitter Rotary Switch Selections Available

Rotary Switch Position	Anemometer Model Number	Transfer Function (mph)	Wind Speed Scale
0 (Default)	C5C-1263-1-SP	V [mph] = .7136 x f [Hz] + 1.62	0 - 100 mph
1	C5C-1265-1-SP	V [mph] = .9200 x f [Hz] + .760	0 - 100 mph
2	C5C-1266-1-SP	V [mph] = .9670 x f [Hz] + 1.270	0 - 100 mph
3	C5C-1263-2-SP	V [mph] = .7200 x f [Hz] + 1.5183	0 - 100 mph
4	C5C-1265-2-SP	V [mph] = .9404 x f [Hz] + .8147	0 - 100 mph
5	C5C-1266-2-SP	V [mph] = .9408 x f [Hz] + .9118	0 - 100 mph
6	C5C-1265-2-SP	V [mph] = .9404 x f [Hz] + .8147	0 - 150 mph
7	C5-1263-2-SP	V [mph] = .7158 x f [Hz] + 1.61	0 - 200 mph
8	C5C-1263-2-SP	V [mph] = .7200 x f [Hz] + 1.5183	0 - 250 mph
9	-	-	-