238 Pillow Street
Butler, PA 16001
724-283-4681
724-283-5939 (fax)
www.bwieagle.com

PRODUCT INFORMATION BULLETIN

TAC-MONITOR
Proportional Speed Monitor
MODEL 22-8100-36000

DESCRIPTION

BWI Eagle's highly accurate PROPORTIONAL SPEED MONITOR converts rotary shaft speed (RPM) into analog 4-20mA output. This allows "true-slip" monitoring during the critical ramp-up period of conveyors. The TAC-MONITOR interfaces directly with the customer's PLCs. Remote sensors may be located up to 2 miles from the modular control unit.

INSTALLATION

Disconnect AC power before proceeding with installation

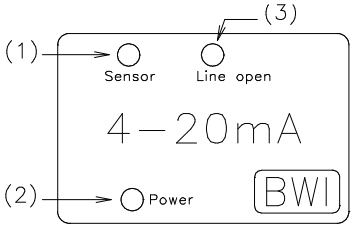
1. Mount the TAC-MONITOR socket inside an existing control panel or other suitable protective enclosure

2. Make the following connections on the socket:

TERMINAL	CONNECTION
1	Sensor - Common (-)
2	Sensor - Positive (+)
3 - 4	No Connection
5 - 6	120 VAC
7	No Connection
8	4-20mA Output - Common (-)
9	4-20mA Output - Positive (+)
10 - 11 - 12	No Connection

3. Install EAGLE PROXIMITY SENSOR at roller or shaft. See sensor installation section.

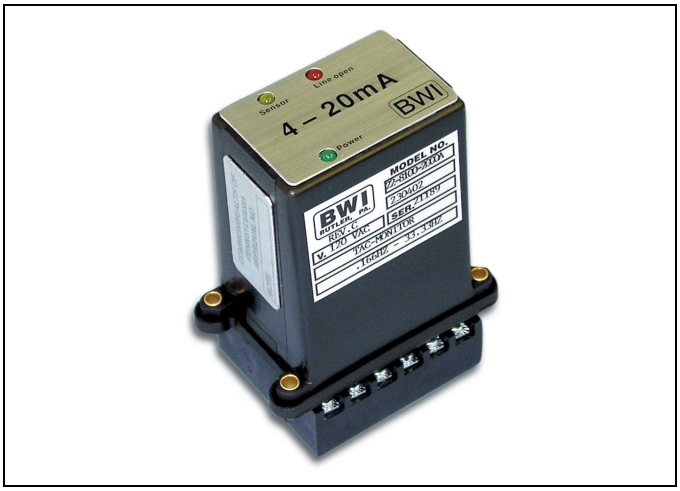
LED INDICATORS



1. SENSOR LED - Pulses at the rate of speed being received by the sensor

2. POWER LED - Indicates that power is applied to unit

3. LINE OPEN - When illuminated, indicates the 4-20mA output line is open or the line resistance is greater than 500 ohm.



SPECIFICATIONS

AC Input	120 VAC 10 W	
Fuse Protected	1 amp	
Input Frequency Range	.166hz – 600.00 Hertz	
Output	Proportional 4-20mA D.C.	
Linearity	Better than 1%	***See Note***
Accuracy	Better than 1%	
Repeatability	Better than .5%	
Enclosure	ABS Plastic	

Note – For maximum accuracy, please allow 10 to 15 minute warm-up period after initial 120VAC is applied.

REPLACEMENT AND OPTIONAL PARTS

DESCRIPTION	PART NUMBER
Control Module	22-8102-36000
Mounting Socket	22-8003
Threaded PVC Proximity Sensor	10-7139
I.S. Threaded PVC Prox Sensor	10-7039
I.S. Zener Barrier	10-7072

TAC-MONITOR

Proportional Speed Monitor

MODEL 22-8100-36000

APPLICATION INFORMATION

MODEL 22-8100-36000

This model has an INPUT FREQUENCY RANGE of .166hz to 600.00hz. By installing 1 (one) target on the roller or shaft, the following formula can be used to convert to RPM's:

INPUT FREQUENCY * 60 = RPM

Examples:

.166hz * 60 = 9.96 RPM
300.08hz * 60 = 18,004.80 RPM
600.00hz * 60 = 36,000.00 RPM

This model has a factory set span of 599.834hz (600.00hz - .166hz). Multiplying 599.834hz * 60 will give the span in RPM's.

599.834hz * 60 = 35,990.00 RPM

Dividing 35,990.00 / 160 will give the RPM resolution for each .1mA increment.

35,990.00 / 160 = 224.94 RPM per .1mA output

By adding additional targets to the roller or shaft, a lower RPM range can be obtained. The following examples will show how to calculate the speed range for 4 (four) targets.

INPUT FREQUENCY * 60 / 4 TARGETS = ACTUAL RPM

Examples:

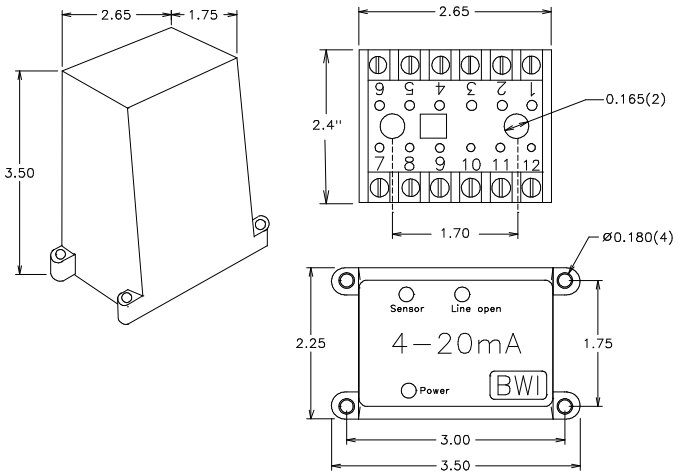
.166hz * 60 / 4 = 2.49 RPM
300.08hz * 60 / 4 = 4501.20RPM
600.00hz * 60 / 4 = 9000 RPM

CONCLUSION: By changing the number of targets on the roller or shaft, different speed ranges can be obtained from the same model.

Examples:

1 Target = 9.96 RPM to 36,000 RPM
2 Targets = 4.98 RPM to 18,000 RPM
4 Targets = 2.49 RPM to 9000 RPM

DIMENSIONS



DOCUMENT DATE: 11-Aug-04

238 Pillow Street
Butler, PA 16001
(724) 283-4681
Fax (724) 283-5939
www.bwieagle.com