Aero Support Ltd, P.O. Box 483, Farnham, Surrey, GU9 8WS, U.K.

1-828 Radial Displacement Vibration Transmitter

Applications

- Turbine / Generator Sets
- Fans or Blowers
- Motors
- Gearboxes
- Bearing Caps

Features

- 4-20 mA output proportion to mils peak to peak displacement
- Compatible with major probe types
- DIN Rail mountable
- Probe failure detect modes
- BNC buffered output and Gap voltage

Description

The 1-828 series radial displacement transmitters continue the successful line of vibration transmitters designed and manufactured by CEC. These single channel signal conditioners interface with proximity transducers like the 3300, 3300XL and 7200 series or probe types with similar specifications.

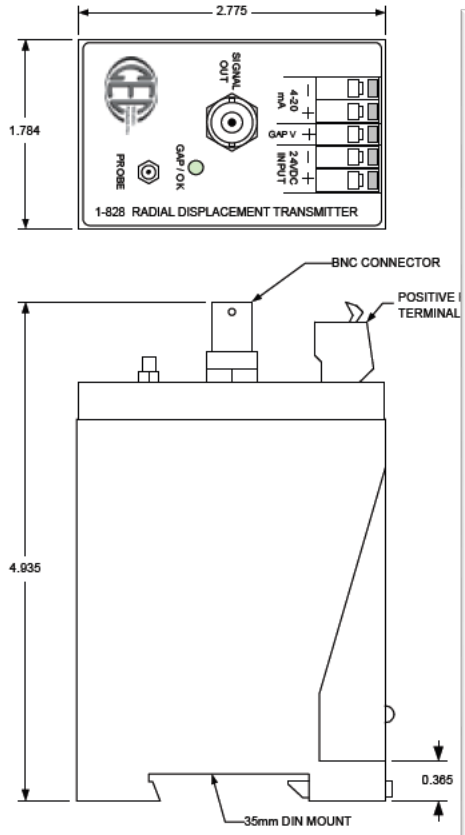
Each unit provides a calibrated 4-20 mA output that is proportional to the radial peak to peak displacement vibration sensed by the transducer and extension system. The probe Gap and buffered dynamic signal are easily accessed via the front panel BNC.

Probe failure conditions are quickly identified via the multi-coloured status LED and the 4-20 mA output. This unique feature allows for instant feedback of the probe system condition during installation or machine operation.

Performance Specifications

Frequency Response:	5 – 4 kHz (5 – 4 kHz (-3dB)
Input:	Ref. 3300, 3300XL, 7200 series or equivalent
Outputs:	
Current:	4-20 mA proportional to 5 mils or 10 mils peak to peak displacement ranges (see table 1)
Buffered Signal (GAP V)	Buffered sensor signal, short circuit protected, BNC connector
Operating Linear Range:	0 to 16 VDC corresponding to a gap of 10 to 90 mils.
Isolation:	500 VDC case to circuit
Power Supply:	18 - 32 VDC @ 250 mA
Maximum Load Resistance:	1K ohms
Range:	5 to 10 mils (see table)
Sensitivity:	
Scale	-200 mV/mil
Accuracy	±5% at 77°F
Temperature Coefficient	±3.5% per 100°F temperature increase from 77°F
Linearity	±1 mil of best fit straight line

Target Material:	4140 stainless steel or Incoloy 901 (see table)
Probe Failure Detect:	
Probe to close to target	Output goes below 2.5 mA if the gap is less than 10 mils
Probe not connected or too far from target	Output goes to 20.5 mA if gap is greater than 90 mils
Operating Temperature:	-40° -40°F to +150°F
Relative Humidity:	To 95% non-condensing
Shielding:	Yes, see case material
Dimensions:	See Figure
Weight:	8 ounces
Mounting:	35 mm DIN rail
Case Material:	PVC with interior zinc overspray
Terminals:	Tension Loaded Contacts
BNC Connector:	Cover Provided



Example: *Ordering Guide*

CEC Part Number: 1 - 828 - AAA - BB - C D E

Proximity Probe Transmitter

Input Type (5mm or 8mm tip)

		Probe Type	Target Material	System Length
A	A05	3300	Incoloy	5m
	A09	3300	Incoloy	9m
	A14	3300	Incoloy	14m
	B05	3300	4140 S.S.	5m
	B07	3300	4140 S.S.	7m
	B09	3300	4140 S.S.	9m
	B14	3300	4140 S.S.	14m
	C05	7200	Incoloy	5m
	C09	7200	Incoloy	9m
	D05	7200	4140 S.S.	5m
	D09	7200	4140 S.S.	9m
	D14	7200	4140 S.S.	14m

4-20 mA Output range (Full Scale)

B	05	0 - 5 mils
	10	0 - 10 mils

High Pass Filter

C	1	5 Hz
	2	10 Hz
	3	15 Hz
	4	20 Hz
	5	30 Hz
	6	50 Hz

Low Pass Filter

D	0	None
	1	500 Hz
	2	1 kHz
	3	2 kHz
	4	4 kHZ

Private Label Indicator

E	Use a single letter to represent special marking, otherwise leave blank.

Example: P/N 1 - 828 - B09 - 10 - 2 2

The example unit's input is from a 3300 type proximity probe with a total sysytem length of 9 meters and a target material of 4140 S.S. The output is 4-20 mA scaled from 0 to 10 mils, peak-peak. The filtering includes a combination of a 10 Hz high pass and 1000 Hz low pass filters.

Hazardous Area Rating

North American

CSA C/US — Class I, Division 2, Groups A, B, C and D
Temp Code T3C; Amb. Temp -40°C to 65°C

European

ATEX — II 3 G Ex nA II T3