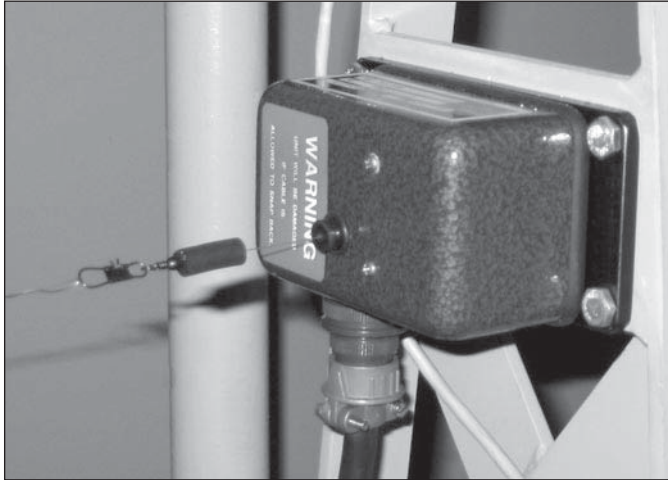




This document illustrates the main steps involved in the installation of VibroSystM equipment.

Keep in mind that only a general overview is presented, as this document is intended for planning purposes only. Concerns about safety issues or specific installation considerations are not included.

For safe operation and to ensure that your system functions at its optimum capability, the installation and adjustment process should be handled only by VibroSystM trained service specialists.



## DESCRIPTION

The Wicket-Gate Position Transducer measures the linear displacement of the servomotor stroke to know the opening position of the gates on hydrogenerators. Various models are available for different measuring ranges up to 12.7 m (500 in.); to be specified. The 4-20 mA analog output is connected to the ZOOM Processing Unit for integration of gate opening monitoring.

The transducer is attached to a fixed body (cylinder head) and the connecting cable to a moving element (end of stroke). A constant torque spring controls the cable tension while a cable extension rotates a precision potentiometer. The long-life stainless steel cable is replaceable.

## WICKET-GATE POSITION

### LINEAR DISPLACEMENT TRANSDUCER

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#### APPLICATIONS

- Measurement of servomotor stroke to monitor wicket-gate opening (position) on hydrogenerating machines
- Connection to VibroSystM ZOOM® System

#### FEATURES

- High precision linear displacement measurement
- Various models available for measuring ranges between 0-25 cm (0-10 in.) and 0-12.7 m (0-500 in.); commonly 0-50 cm (0-20 in.) supplied; To be specified by customer
- 4-20 mA analog output
- Long-life stainless steel replaceable cable 0.38 mm (0.015 in.) diameter
- Precision hybrid potentiometer
- Accuracy:  $\pm 0.15\%$  F.S. for ranges between 0-25 and 0-63 cm (0-10 to 0-25 in.);  $\pm 0.1\%$  F.S. for ranges above 0-72 cm (0-30 in.)
- External +24 Vdc power supply required via 4-20 mA signal loop



## WICKET-GATE POSITION TRANSDUCER GENERAL SPECIFICATIONS

### Operating

- Ranges 0–25 cm up to 0–12.7 m  
(0–10 in. up to 0–500 in.);  
To be specified by customer
- Common Ranges 0–50, 0–76, 0–101 cm  
(0–20, 0–30, 0–40 in.)
- Accuracy  $\pm 0.15\%$  full scale for ranges  
0–25 to 0–63 cm  
(0–10 to 0–25 in.),  
 $\pm 0.1\%$  full scale for ranges  
above 0–76 cm (0–30 in.)
- Resolution Infinite
- Output 4–20mA  $\pm 0.16$ mA at  
set points

### Power

- Input Voltage 14–40 VDC max.
- Input Current 3 to 30 mA max.
- Input/Output 2-wire loop powered
- Protection Reversed polarity

### Environmental

- Operating Temperature -18° to 93°C (0° to 200°F)
- Humidity 95% RH at 24°C (75°F)
- Vibration 20 g, 20–2 kHz

### Physical Characteristics

- Body Anodized and powder  
coated aluminum
- Cable Stainless steel  
0.38 mm (0.015 in.) dia.
- Tension Approx. 24 oz.
- Dimensions (common range models)
  - Width 13.3 cm (5.25 in.)
  - Height 5.7 cm (2.25 in.)
  - Depth 6.7 cm (2.63 in.)

VibroSystM reserves the right to change specifications to improve products without notification.  
ZOOM® is a registered trademark of VibroSystM Inc.

**Published:** 04.10.22 **Revised:**

**Web:** [www.vibrosystem.com](http://www.vibrosystem.com)

## VIBROSYST M

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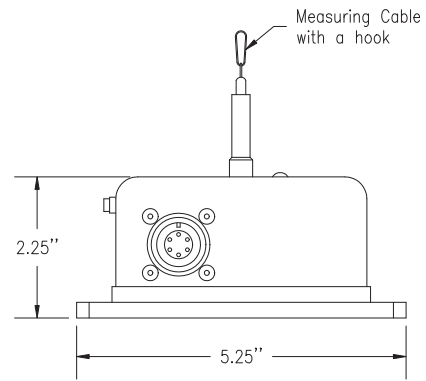
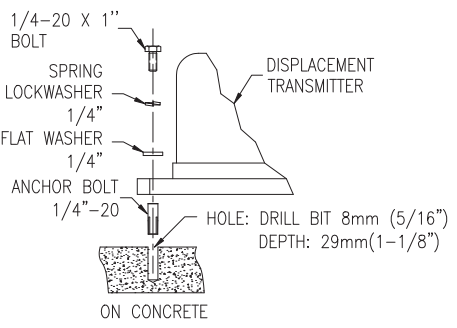
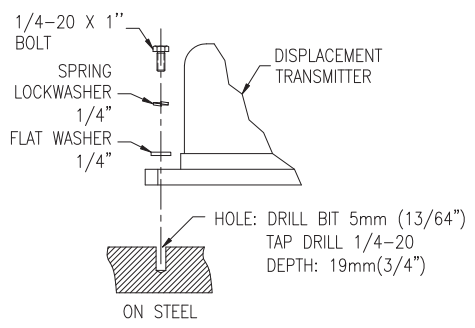
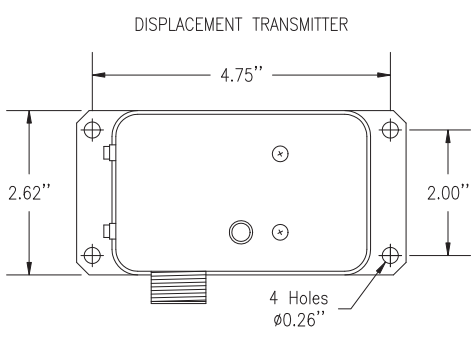
Phone: (450) 646-2157

1-800-663-8379 (U.S. toll free)

Fax: (450) 646-2164

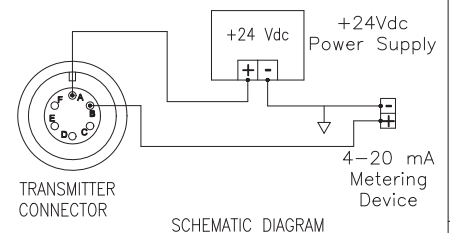
E-mail: [sales@vibrosystem.com](mailto:sales@vibrosystem.com)

Rév. du Produit	Rév. du Dessin	Date	Description	Dessiné par:	Conçu ou révisé par:	Vérifié par:
0	A	18/01/2007	Design initial	Yves Réhel	Yves Réhel	Yves Réhel



OUTPUT SIGNAL WIRING (4-20 mA loop with +24 Vdc)		
WIRE	FROM TRANSMITTER CONNECTOR	TO ZPU INPUT #1 to #9
POSITIVE LEAD (red)	A (+/PWR)	TERMINAL #6 or 12
NEGATIVE LEAD (black)	B (-)	TERMINAL #3 or 9
SHIELD	NONE	TERMINAL #1 or 7

24 Vdc SUPPLY  
 4-20 mA OUTPUT SIGNAL (500 ohms max.)  
 (SINGLE PAIR SHIELDED CABLE; WIRING BY OTHERS)



TITRE: Displacement Transmitter (4-20 mA)  
 Installation and connection details

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	X.XXX = ±0.125mm	X.XXX = ±0.005"	X.XXX = ±0.010"	Frac. = ±1/64"	Vérifié par: Yves Réhel	18/01/2007
X.XX = ±0.250mm	X.XX = ±0.015"	X.XX = ±0.015"		Approuvé par: Jean Pronovost	18/01/2007	
X.X = ±0.375mm	X. = ±0.020"	X. = ±0.020"		PUBLICATION EXTERNE: <input type="checkbox"/> INIT: _____		
X = ±0.500mm	Ang. = ±0.5°	Ang. = ±0.5°				

Echelle: PAS DE FACTEUR D'ÉCHELLE	Feuille: 1 de 1
No. Produit: 9400-0914A-100	No. Dessin: 9400-0914A-100-D01
Rev.: A	

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