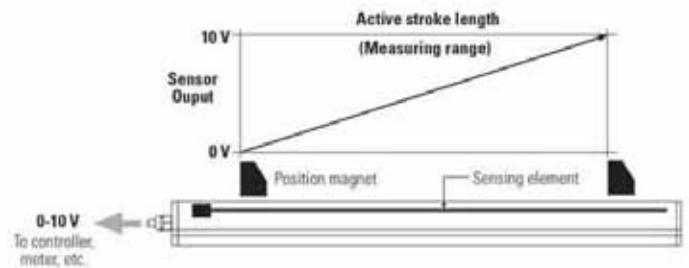
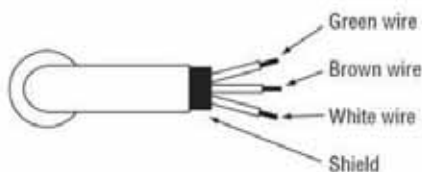


## PFA: Position Feedback Analog

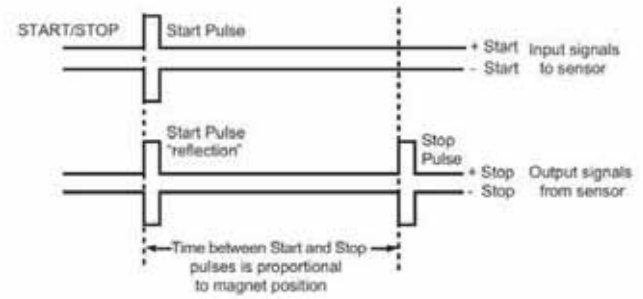


Parameters	Specification
Measured variable:	Displacement
Resolution:	Infinite restricted by output ripple
Non-Linearity:	$<\pm 0.03\%$ full scale, minimum $\pm 90 \mu\text{m}$
Repeatability:	$<\pm 0.005\%$ full scale
Outputs:	0-10 Vdc Controller input resistance $R_L > 5\text{k}\Omega$ >1.5kHz
Update frequency:	Temperature: $-40$ to $75^\circ\text{C}$ ( $-40$ to $+167^\circ\text{F}$ )
Operating Conditions:	Relative humidity: 90% no condensation Ingress protection: IP67 Shock test 50 g (single hit) IEC-Standard 68-2-27 Vibration rating: 5 g/10 -2000 Hz IEC-Standard 68-2-6 Electromagnetic emission: EN 50081-1
EMC test:	Electromagnetic immunity: EN 50082-2 EN 6100-4-2/3/4 Criteria A, CE qualified + 24 Vdc nominal (-15% or +20%)
Operating voltage:	Polarity protection: up to -30 Vdc Overvoltage protection: up to 36 Vdc Current drain: 50-140 mA (stroke length dependent) Dielectric withstand voltage: 500 Vdc (DC ground to machine ground)
Connection type:	Integral cable



### Wiring diagram

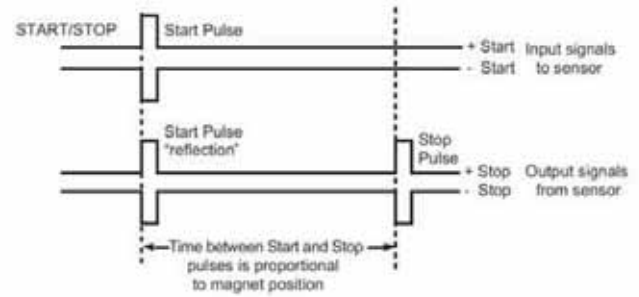
Wire color	Signal
Green	0 - 10 V
Brown	+24V Vdc (-15% / +20%)
White	DC Ground (0 V)
Shield	Connected to sensor housing (Appropriate grounding of cable shield is required.)



### PFD: Position Feedback Digital

Parameters	Specification
Measured variable:	Displacement
Resolution:	0.1, 0.01, 0.005mm (controller dependent)
Non-Linearity:	<±0.02% full scale, minimum ± 60 µm
Repeatability:	<±0.001% full scale
Outputs:	Start/Stop: RS-422 differential signal (serial parameter upload available for: measuring range, offset, gradient and status)
Update frequency:	Controller dependent
Operating Conditions:	Temperature: -40 to 75°C (-40 to +167°F) Relative humidity: 90% no condensation Ingress protection: IP67 if mating cable connector is correctly fitted. Shock test 50 g (single hit) IEC-Standard 68-2-27 Vibration rating: 5 g/10 -2000 Hz
EMC test:	IEC-Standard 68-2-6 Electromagnetic emission: EN 50081-1 Electromagnetic immunity: EN 50082-2
Operating voltage:	EN 6100-4-2/3/4 Criteria A, CE qualified + 24 Vdc nominal (-15% or +20%) Polarity protection: up to -30 Vdc Overvoltage protection: up to 36 Vdc Current drain: Start/Stop, 50-100 mA (stroke length dependent) Dielectric withstand voltage: 500 Vdc (DC ground to machine ground)
Connection type:	6-pin male D60 connector

### PFD: Position Feedback Digital



#### Sensor parameter upload

For applications using smart sensor interfaces, the PFD sensor can provide a sensor parameter upload ability. This feature can replace the manual task of entering sensor data from system start-up, or for system maintenance work, saving time and preventing possible entry errors.

The following sensor parameters are available for upload:

- Measuring range
- Offset
- Gradient (Inverse speed of sensing pulse)
- Status

These sensor specific parameters can be retrieved by the controller/interface card at any time, via the sensors Start/Stop signal lines.

The sensor parameter upload feature requires a RS-485/422 interface. The data format is serial, 4800 Baud, 8-bit data length. (Please consult factory for further details on parameter upload protocol.)

#### Sensor integral connector (D60 Male)

Pinout/wire color code (for extension cable)

Pin no.	Wire color	Function
<b>Digital-pulse outputs</b>		
1	Gray	(-) Stop
2	Pink	(+) Stop
3	Yellow	(+) Start
4	Green	(-) Start
5	Red or Brown	+24 Vdc (+20%, -15%)
6	White	DC Ground (for supply)

Integral D6 connector (male) as viewed from end of sensor



#### Cable connectors (field-installed D6 female)

Mates with sensor's integral connector

D6 Straight-exit connector  
part no. 560700



#### Note:

Appropriate grounding of cable shield is required at the controller end.

#### Attention:

A grounding lug is provided near the connector end of the sensor for a convenient connection to earth ground. Since the EP2 sensor's aluminum housing has an anodic coating the sensor mounting feet, (part no. 400802), do not provide proper grounding. A ground wire connection to the grounding lug is required.

