

## Data sheet

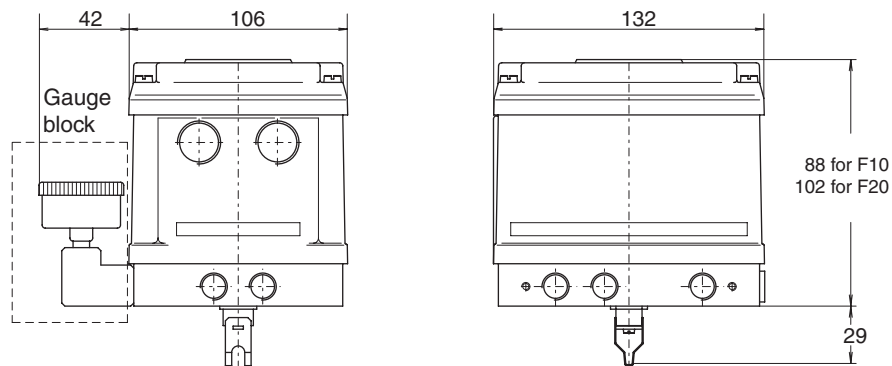
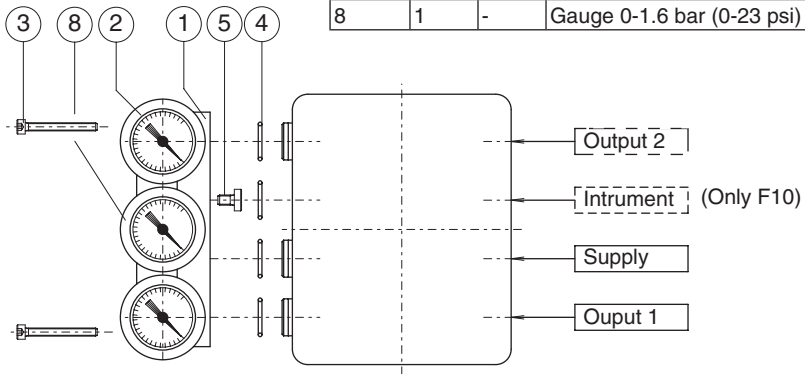
Sheet No.: 6.201 Rev. A

Date: November 2009

## POSIFLEX POSITIONER WITH GAUGE BLOCK

G1/G2

Pos.	Qty		Description
	G1	G2	
1	1	1	Gauge block (universal)
2	2	3	Gauge 1-10 bar (0-160 psi)
3	2	2	Socket screw M4x35
4	4	4	O-ring 15.3x1.78
5	1	1	Blanking plug M5
6	1	1	Hex. socket key 2.5 mm
7	1	1	Hex. socket key 3.0 mm
8	1	-	Gauge 0-1.6 bar (0-23 psi)



### Description

Gauge block kits are available in two forms: G1 kits have two output gauges for the actuator operating pressure and one gauge for the incoming instrument pressure. G1 gauge blocks are for basic F10 pneumatic positioners.

G2 kits have two output gauges and one gauge for the incoming supply pressure. G2 gauge blocks are for electro/pneumatic positioner, type F20.

Both kits are suitable for double acting or single acting positioners. When used on a single acting actuator only one of the two output gauges will show a pressure. If required the inactive gauge may be replaced with a (G 1/8") blanking plug and the removed gauge stored to be used as a spare.

The gauges are heavy duty type with stainless steel housings and are graduated in metric (bar) and Imperial (psi) units.

### Construction

Gauge blocks are normally attached to the positioner base at the opposite side to the air supply and output ports. Alternatively they may be fitted to the air inlet face, this way is more suitable for linear actuators.

### Specification

Gauges	: G1	G2
- Input	: 0 to 1.6 bar	0 to 10 bar
	: 0 to 30 psi	0 to 160 psi
- Output	: 0 to 10 bar	0 to 10 bar
	: 0 to 160 psi	0 to 160 psi
- Connections	: G 1/8"	
- Housing	: Stainless steel	
Temperature	: -20° to +80°C	
Gauge block	: Aluminium Alloy	
Finish	: Anodised	

### Identification

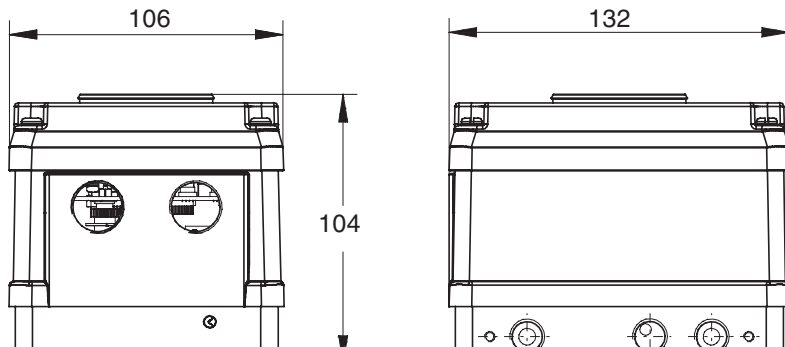
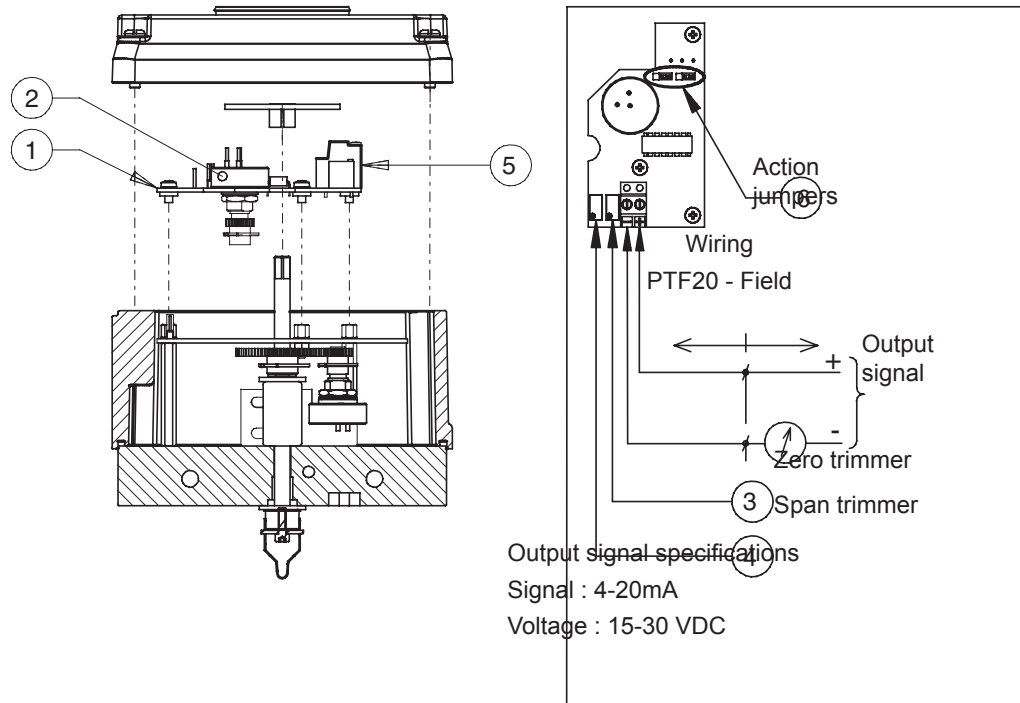
Factory Option	: Add "+G1" to the basic positioner number ie. F10+G1
Kit Option	: G1-F10

**Note:** When supplied as a kit option, all the components as shown are included, together with installation instructions.

## Data sheet

Sheet No.: 6.202.1 Rev. B

Date: March 2011



## POSIFLEX POSITIONER WITH 2-WIRE POSITION TRANSMITTER

### Description

PTF20 position transmitter is specially designed for F20 POSIFLEX positioners as a "plug-in" option and is available as kit or factory option. The PTF20 position transmitter provides a continuous 4-20 mA output signal in proportion to the mechanical position of the positioner. The two wire function is independent from the input signal.

### Construction

The PTF20 position transmitter card is directly mounted on top of the main board in the enclosure of the F20 positioner. The card (1) has its own feedback potentiometer (2), trimmers for zero (3) and span (4) adjustments and terminals (5) for the 2-wire-connections, which are used for power supply for the electronics as well as the output signal.

The trimmers for zero and span can be set throughout the complete range. This way split range and reverse acting is possible. The positioners indicator spindle provides the drive for the potentiometer. Jumpers (6) are provided to select the action (direct or reverse).

### Specification

Entries	: 2x M20x1.5 (option, 1/2" NPT)
Voltage	: 15 - 30 VDC. (external)
Temperature	: -20° C to +80° C
Output	: 4 - 20 mA
	: With full range adjustment for zero and range
Jumper setting	: Action (direct or reverse).
Housing	: Aluminium Alloy
Enclosure	: IP65
Finish	: Polyester powder coated

### Identification

Factory option	: Add '+PTF20' to the basic positioner number ie: F20+PTF20.
Kit option	: PTF20-F20.

### Option

Intrinsically safe (is part of intrinsically safe certificate of complete F20)

II 2 EEx ib IIC T4\*

TÜV certificate : TÜV 10 ATEX 379858

\* Tamb =

- Standard	: -20°C to +60°C @ T4
	: -20°C to +40°C @ T6
- Low Temp.	: -50°C to +60°C @ T4
	: -50°C to +40°C @ T6

**ELMatic™**

www.emerson.com/elomatic

Copyright © Emerson. The information in this document is subject to change without notice. Updated data sheets can be obtained from our website [www.emerson.com/elomatic](http://www.emerson.com/elomatic) or from your nearest Actuation Technologies Center:

America's: +1 281 477 4100 (fax 477 2809) Europe: +36 22 530 950 (fax +36 22 54 37 00) Asia Pacific: +65 650 14 600 (fax +65 626 80 028)

**EMERSON™**

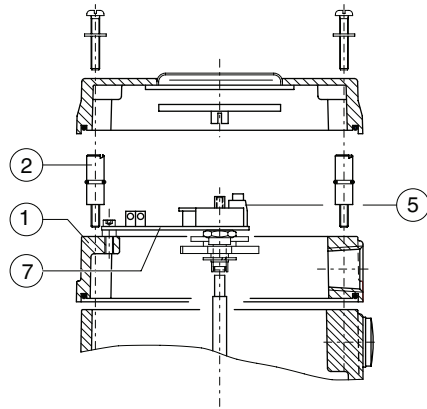
## Data sheet

Sheet No.: 6.202.2 Rev. A

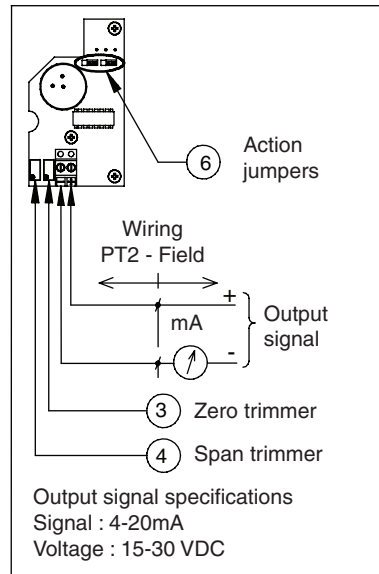
Date: November 2009

# POSIFLEX POSITIONER WITH TWO WIRE POSITION TRANSMITTER

PT2



Pos.	Qty.	Description
7	1	Position transmitter module
2	4	Spacer standoff screws



### Description

The PT2 position transmitter provides a continuous 4-20 mA output signal in proportion to the mechanical position of the positioner. The two wire function is independent from the input signal and has a separate electrical entry.

PT2 position transmitters may be used with Posiflex F10 (or F20) positioners and are available as kit or factory options.

The position transmitter module (1) is pre-assembled with its circuit board (7) and has a potentiometer, trimmers for zero (3) and range (4) adjustments and terminals (5) for the external power supply. Jumpers (6) are provided to select the action (direct or reverse).

### Construction

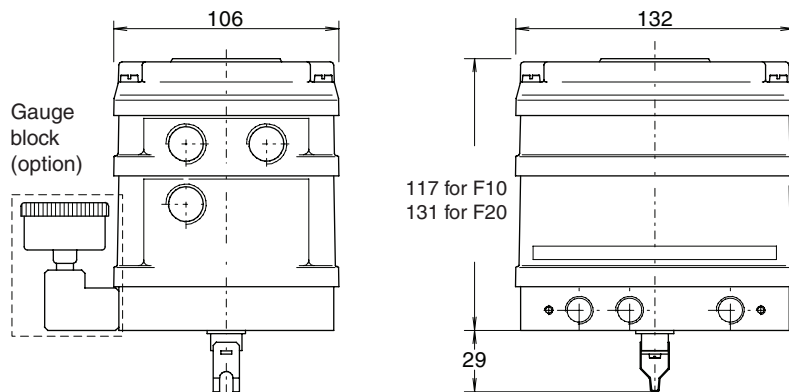
The PT2 module (1) is assembled to the basic positioner by inserting it between the base housing and the cover. The positioner indicator spindle provides the drive for the potentiometer (3).

### Specification

Entries	: 2x M20x1.5 (option, 1/2" NPT)
Voltage	: 15 - 30 VDC. (external)
Temperature	: -20° C to +80° C
Output	: 4 - 20 mA
	: With full range adjustment for zero and range
	: Jumpers for action setting (direct / reverse)
Housing	: Aluminium Alloy
Enclosure	: IP65
Finish	: Polyester powder coated

### Identification

Factory option	: Add '+PT2' to the basic positioner number
	: ie. F10+PT2
Kit option	: PT2-F10



**ELMatic™**

www.emerson.com/elomatic

Copyright © Emerson. The information in this document is subject to change without notice. Updated data sheets can be obtained from our website [www.emerson.com/elomatic](http://www.emerson.com/elomatic) or from your nearest Actuation Technologies Center:

America's: +1 281 477 4100 (fax 477 2809) Europe: +36 22 530 950 (fax +36 22 54 37 00) Asia Pacific: +65 650 14 600 (fax +65 626 80 028)

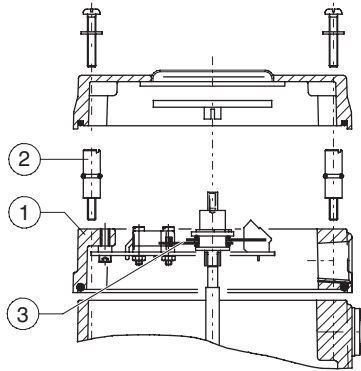
**EMERSON™**

# Data sheet

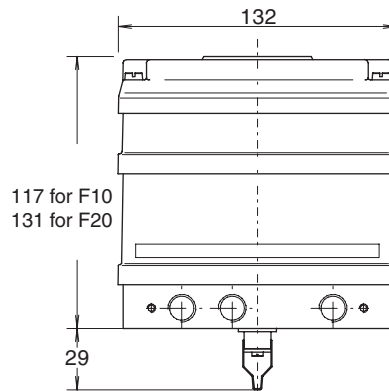
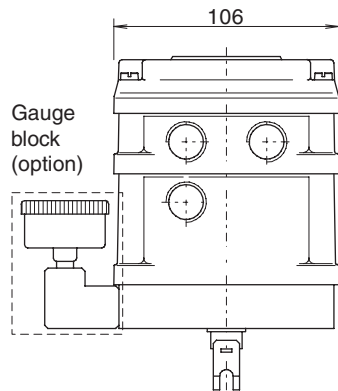
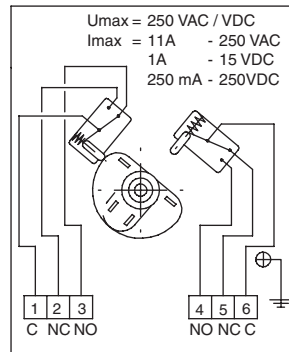
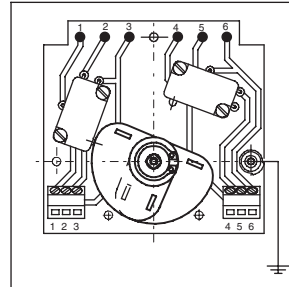
Sheet No.: 6.204 Rev. A  
Date: November 2009

## POSIFLEX POSITIONER WITH TWO MECHANICAL SWITCHES

S2



Pos.	Qty.	Description
1	1	S2 switch module
2	4	Spacer standoff screws



### Description

This positioner variation has the addition of two mechanical switches to provide an electrical indication at the end of stroke positions.

The switches are operated by two cams on an extension of the positioner indicator spindle and all mechanical parts are contained within the enclosure. Both switches are independently adjustable throughout the operating stroke, but are normally set to indicate at about 5° before each end position.

All three terminals of both switches are pre-wired to terminal blocks which are easily accessible when the positioner cover is removed. Two electrical entries are provided, one of which is fitted with a blanking plug.

S2 switch modules may be added to standard Posiflex F10 or F20 positioners and are available as kit or factory options.

### Construction

The S2 switch module (1) is assembled to the basic positioner by inserting it between the base housing and the cover. The positioner spindle provides the drive for the switch cams (3).

Control options are stackable and fully modular so that combinations of position transmitters and switch modules can be assembled as required.

### Specification

#### Switches:

Type	: V3
Voltage	: 250 V AC / V DC
Current	: 11 A - 250 V AC
	: 1 A - 12 V DC
	: 250mA - 250V DC
Contacts	: Single pole, change over - Normally open and normally closed
Entries	: 2x M20x1.5 (option, 1/2" NPT)
Temperature	: -20° C to +80° C
Housing	: Aluminium Alloy
Finish	: Polyester powder coated
Enclosure	: IP65

#### Identification

Factory option	: Add '+S2' to the basic positioner number, ie. F10+S2
Kit option	: S2

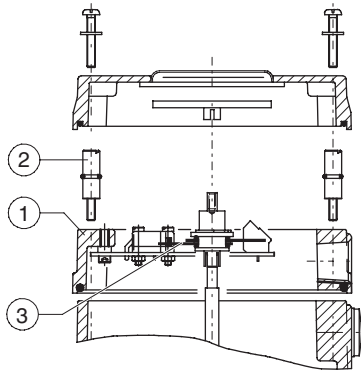
## Data sheet

Sheet No.: 6.205 Rev. A

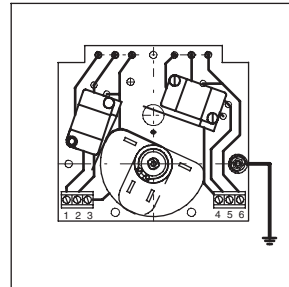
Date: November 2009

# POSIFLEX POSITIONER WITH TWO 3 WIRE INDUCTIVE SWITCHES

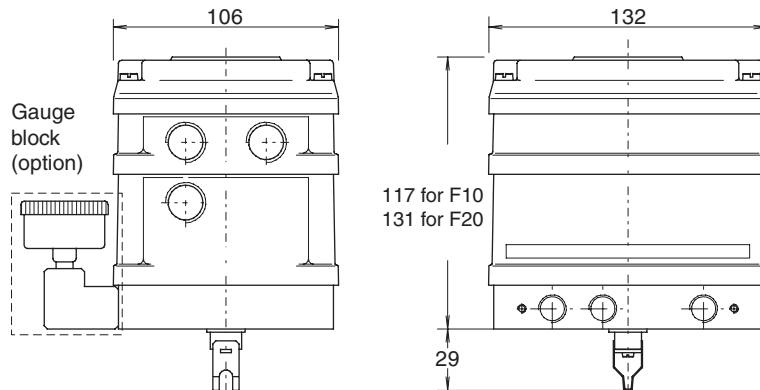
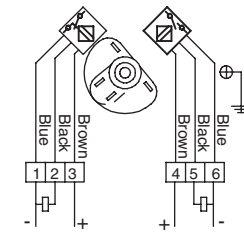
PNP



Pos.	Qty.	Description
1	1	PNP switch module
2	4	Spacer standoff screws



U = : 10-30 VDC  
Current : <100 mA



### Description

This positioner variation has the addition of two 3 wire inductive switches to provide indication at the end of stroke positions. These electronic switches are contact free and provide an exceptionally "clean" output signal, they are inductive proximity switches and incorporate their own solid state line amplifiers and so provide a direct switching current of up to 100 mA.

The switches are operated by two cams on an extension of the positioner indicator spindle and all mechanical parts are contained within the enclosure. Both switch points are independently adjustable throughout the operating stroke, but are normally set to indicate at about 5° before each end position.

Two electrical entries are provided, one of which is fitted with a blanking plug.

PNP switch modules may be added to standard Posiflex F10 or F20 positioners and are available as kit or factory options.

### Construction

The PNP switch module (1) is assembled to the basic positioner by inserting it between the base housing and the cover. The positioner spindle provides the drive for the switch cams (3).

Control options are stackable and fully modular so that combinations of position transmitters and switch modules can be assembled as required.

### Specification

#### Switches:

Type	: 3-Wire inductive PNP - NBB2-V3-E2
Voltage	: $U_v=10$ to 30 V DC
Output current	: Max. : 100 mA
Connections	: Terminals inside the casing
Entries	: 2x M20x1.5 (option, 1/2" NPT)
Temperature	: -20° to +80°C
Housing	: Aluminium Alloy
Finish	: Polyester powder coated
Enclosure	: IP65

### Identification

Factory Option	: Add "+PNP" to the basic positioner number; ie. F10+PNP
Kit Option	: PNP-F10

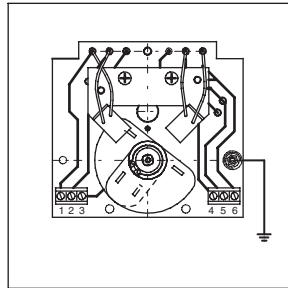
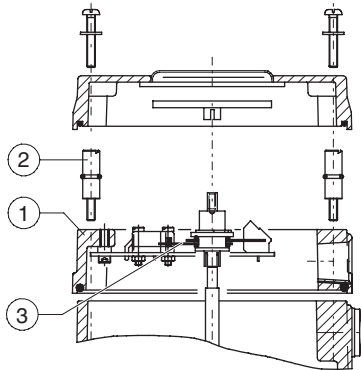
## Data sheet

Sheet No.: 6.206 Rev. A

Date: November 2009

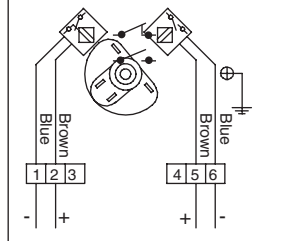
# POSIFLEX POSITIONER WITH TWO 2 WIRE INDUCTIVE SWITCHES

IS2

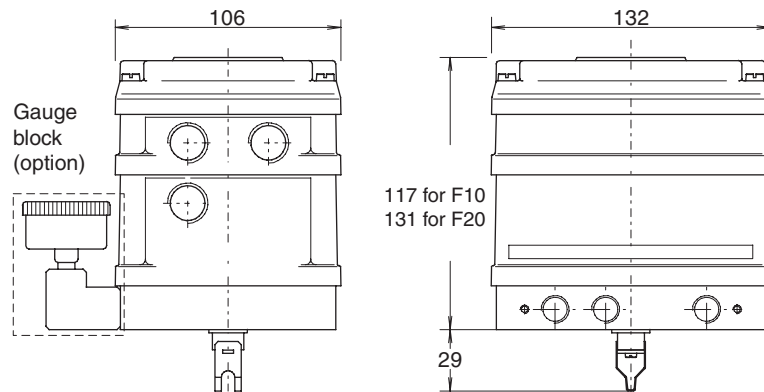


U = : 7-9 VDC / DIN19234

I<sub>output</sub> : < 1mA  
: > 3mA



Pos.	Qty.	Description
1	1	IS2 switch module
2	4	Spacer standoff screws



### Description

This positioner variation has the addition of two 2 wire inductive switches to provide indication at the end of stroke positions. These electronic switches are contact free and provide an exceptionally "clean" output signal, they are inductive proximity switches and their ultra low power enables them to be used in explosion hazardous areas when incorporated in intrinsically safe control circuits. They are certified EEx ia and may be used in zones 1 and 2 with all gas groups.

The switches are operated by two cams on an extension of the positioner indicator spindle and all mechanical parts are contained within the enclosure. Both switch points are independently adjustable throughout the operating stroke, but are normally set to indicate at about 5° before each end position.

IS2 switch modules may be added to standard Posiflex F10 or F20 positioners and are available as kit or factory options. Two electrical entries are provided, one of which is fitted with a blanking plug.

### Construction

The IS2 switch module (1) is assembled to the basic positioner by inserting it between the base housing and the cover. The positioner spindle provides the drive for the switch cams.

Control options are stackable and fully modular so that combinations of position transmitters and switch modules can be assembled as required.

### Specification

#### Switches:

Type	: Inductive, 2 wire, SJ 3.5 N
Voltage	: 7 to 9V DC (acc. to DIN 19234)
Output Un-switched	: > 3 mA
Switched	: < 1 mA
Protection	: Intrinsically safe
Marking:	II 2 EEx ib IIC T6
P&F Certificate	: PTB 99 ATEX2219X
Connections	: Terminals inside the casing
Entries	: 2x M20x1.5 (option, 1/2" NPT)
Temperature	: -20° to +80°C
Housing	: Aluminium Alloy
Finish	: Polyester powder coated
Enclosure	: IP65

### Identification

Factory Option	: Add "+IS2" to the basic positioner number ie. F10+IS2
Kit Option	: PNP-F10

**ELMatic™**

www.emerson.com/elomatic

Copyright © Emerson. The information in this document is subject to change without notice. Updated data sheets can be obtained from our website [www.emerson.com/elomatic](http://www.emerson.com/elomatic) or from your nearest Actuation Technologies Center:

America's: +1 281 477 4100 (fax 477 2809) Europe: +36 22 530 950 (fax +36 22 54 37 00) Asia Pacific: +65 650 14 600 (fax +65 626 80 028)

**EMERSON™**

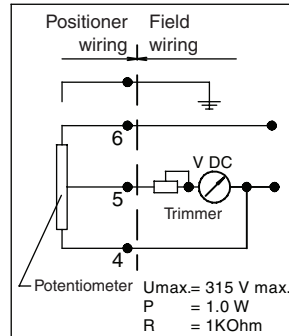
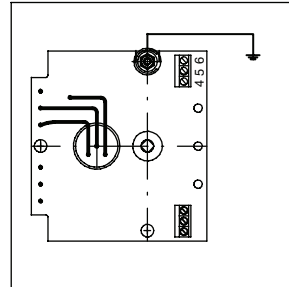
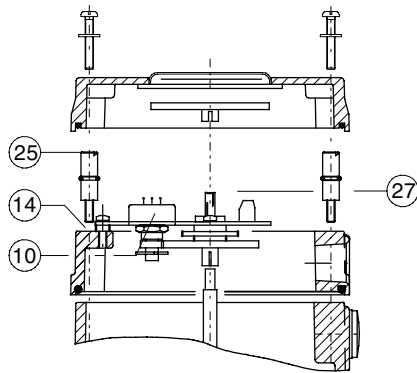
## Data sheet

Sheet No.: 6.207 Rev. A

Date: November 2009

## POSIFLEX POSITIONER WITH POTENTIOMETER

POT



Pos.	Qty.	Description
14	1	Position transmitter module
25	4	Spacer standoff screws

### Description

This positioner variation has the addition of a potentiometer to provide a continuous output signal in proportion to the mechanical position of the positioner.

The POT variation may be used with Posiflex F10 or F20 positioners and is available as a kit or factory option.

The POT module (14) is pre-assembled with its circuit board (10), potentiometer and terminals (27) for a direct connection to the control circuit. When connected as shown a voltage signal will indicate an analog position.

### Construction

The POT module is assembled to the basic positioner by inserting it between the base housing and the cover. The positioner indicator spindle provides the drive for the potentiometer.

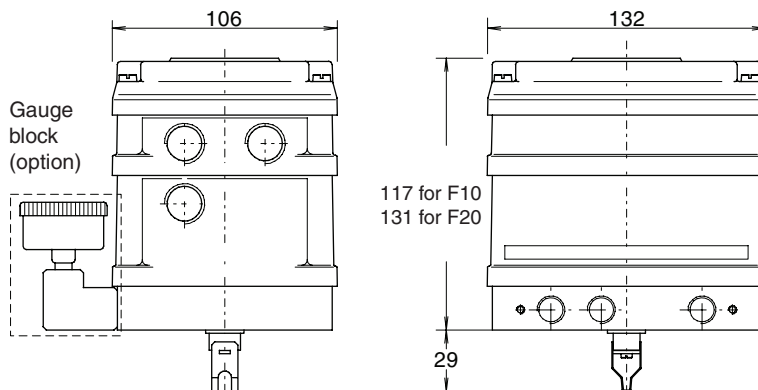
Control options are stackable and fully modular so that various combinations may be assembled as required.

### Specification

Entries	: 2x M20x1.5 (option, 1/2" NPT)
Temp.	: -20° to +80°C
Voltage	: Up to 315 V
Power	: 1.0 Watt
Resistance	: 1 K $\Omega$ ( $\pm 20\%$ )
Linearity	: 3%
Housing	: Aluminium Alloy
Finish	: Polyester powder coated
Enclosure	: IP65

### Identification

Factory Option	: Add "+POT" to the basic positioner number. ie. F10+POT
Kit Option	: POT-F10/F20



**ELMatic™**

www.emerson.com/elomatic

Copyright © Emerson. The information in this document is subject to change without notice. Updated data sheets can be obtained from our website [www.emerson.com/elomatic](http://www.emerson.com/elomatic) or from your nearest Actuation Technologies Center:

America's: +1 281 477 4100 (fax 477 2809) Europe: +36 22 530 950 (fax +36 22 54 37 00) Asia Pacific: +65 650 14 600 (fax +65 626 80 028)

**EMERSON™**