The optional Kinetrol I/P Controller is mounted in place of the standard diaphragm housing on the side of the positioner case. The positioner can still be mounted in any attitude and gives an angular output position which is proportional to the input current control signal between 4-20mA.

The 4-20mA signal is converted to an air pressure by a coil and magnet and flapper valve arrangement. This air pressure controls the positioner in the normal way.

Zero and range adjustment is done within the positioner in the same way as with a standard pneumatic positioner. No adjustment is necessary within the I/P Controller. The cover is removed only to connect the two wires - this is not necessary with the DIN plug option.

I/P Controller - Hazardous Area

Kinetrol offers various optional I/P converters which are explosion proof or intrinsically safe certified for use in ATEX Zones 1 & 2 or NEC and CSA CLASS I DIVISION 1. They are mounted directly onto Kinetrol AP positioners with integral air supply.

Certificated as follows

ATEX (Cat 2)	Explosion proof EExd II T6 Intrinsically safe EEx ia II C T4/T5/T6
NEC & CSA	FM explosion proof CLI/DIV1/GRP B C D FM Intrinsically safe CLI/DIV1/GRP A B C D E F G CSA explosion proof CLI/ DIV1/GRP B C G

Specification - Safe Area

Electrical Control Signal	4-20mA
Coil Impedance	20 ohms typical
Cable Entry	16mm conduit or gland (mini DIN plug, IP 65 with Pg9 cable gland, 6-8mm dia optional)
Air Supply	80 psi/5.5 bar nominal
Air Entry	$G^1/_8$ (fitted with 6mm pipe dia. push in connector
Linearity	1.5%*
Hysteresis	less than 1%*
Sensitivity/Deadband	less than 1%*
Supply Pressure Influence	0.2% per psi between 80 and 60 psi
Quiescent Air Consumption	3.5 l/min free air max
Working Temperature Range	-20°C to 80°C

Instrument quality dry clean air obligatory (Class 3.4.4 ISO 8573.1)

*These figures are typical when fitted to a Kinetrol positioner and actuator.

Specification - Hazardous Area

Electrical control Signal	4-20mA
Input Resistance	260 ohms at 20°C
Cable entry	EExd - M20 x 1.5 conduit entry FM/CSA - $^1/_2$ NPT conduit entry
Air Supply	80 psi/5.5 bar nominal
Air Entry	EExd (AP & MP) $G^1/_4$ (HP) $^3/_8$ NPT
Supply Pressure Regulation	20-150 psi/1.4 to 10 bar
Working Temperature	-40°C to 85°C

Instrument quality dry clean air obligatory (Class 3.4.4 ISO 8573.1)

ATEX TO CATEGORY 2 APPROVED