

Leading Technologies for Control

TRIMTECK[®]
OPTIMUX[®]

HPP Series

HPP4500[™] **HART**[®] Smart Valve Positioner



www.trimteck.com

Flow Control Products

HPP4500™ HART® Smart Valve Positioners

Introduction

Our new HPP4500 microprocessor equipped, current-to-pneumatic digital positioner is a reliable, accurate and robust positioner which offers as a standard many features and technical characteristics traditionally offered as options by other digital positioner's manufacturers.

The HPP4500 offers as a standard, Hart® communication, 4-20mA Feedback Signal and a LCD display that allows programming and set up without the need of a Hart® communicator.

The HPP4500 was designed to accurately position your control valve and to operate it efficiently at the lowest liters per minute (LPM) air consumption: Bellow 3 LPM @ 100 psi. This feature alone represents considerable potential savings in compressed air plant capacity.

The HPP4500 incorporates all the smart features you would expect from a state-of-the-art digital positioner: Auto setup and calibration, flow characteristics customization in 16 points, tight shut-close and Shut-open settings, self diagnostics, PID parameters selection, A/M switch, 4-20mA signal feedback, split range 4-12mA or 12-20mA, and others.

When the HPP4500 receives a signal from a Hart® or regular 4-20mA control instrument, it modulates the air supply to the control valve actuator, thus providing accurate valve position, which is proportional to the 4-20mA control signal. The accuracy and responsiveness of the HPP4500 greatly contributes to obtain the best performance from any control valve, within a process control loop, or as a stand-alone application.

HPP4500™ Features & Advantages

EASY TO USE

• Auto Setup

The Auto-setup function is a fully automatic configuration internal program which optimizes the HPP4500 to fit the unique operating characteristics of the actuator and valve in which it is installed on. During the Auto-setup cycle the HPP4500 recognizes, measures and stores in its memory key performance parameters such as hysteresis, air volume required by the actuator, valve packing friction and others and configures itself for an optimal performance.

• Flexibility in Installation

The HPP4500 is available to be mounted in Linear or Rotary valves. Stroke levers, fork levers and direct NAMUR mounting are available within the same model.

• High reliability

The Tight shut-off and shut-open functions assure positive seal between the plug and seat or a fully open position upon the 4-2mA command signal.

• Single Model for Multiple Applications

The HPP4500 settings can be changed without replacing any parts. A single model can be easily modified to suit any application.

– Flow characteristics: Linear, Equal Percentage, Quick Open or customized for any type of characterization by using 16 individual points.

– Actuator type: Double or single acting actuator.

• Hart Communication

Any available Hart® communicator can be used for calibration, configuration and diagnostics.

Figure 1:
 HPP4500™
 Auto Setup

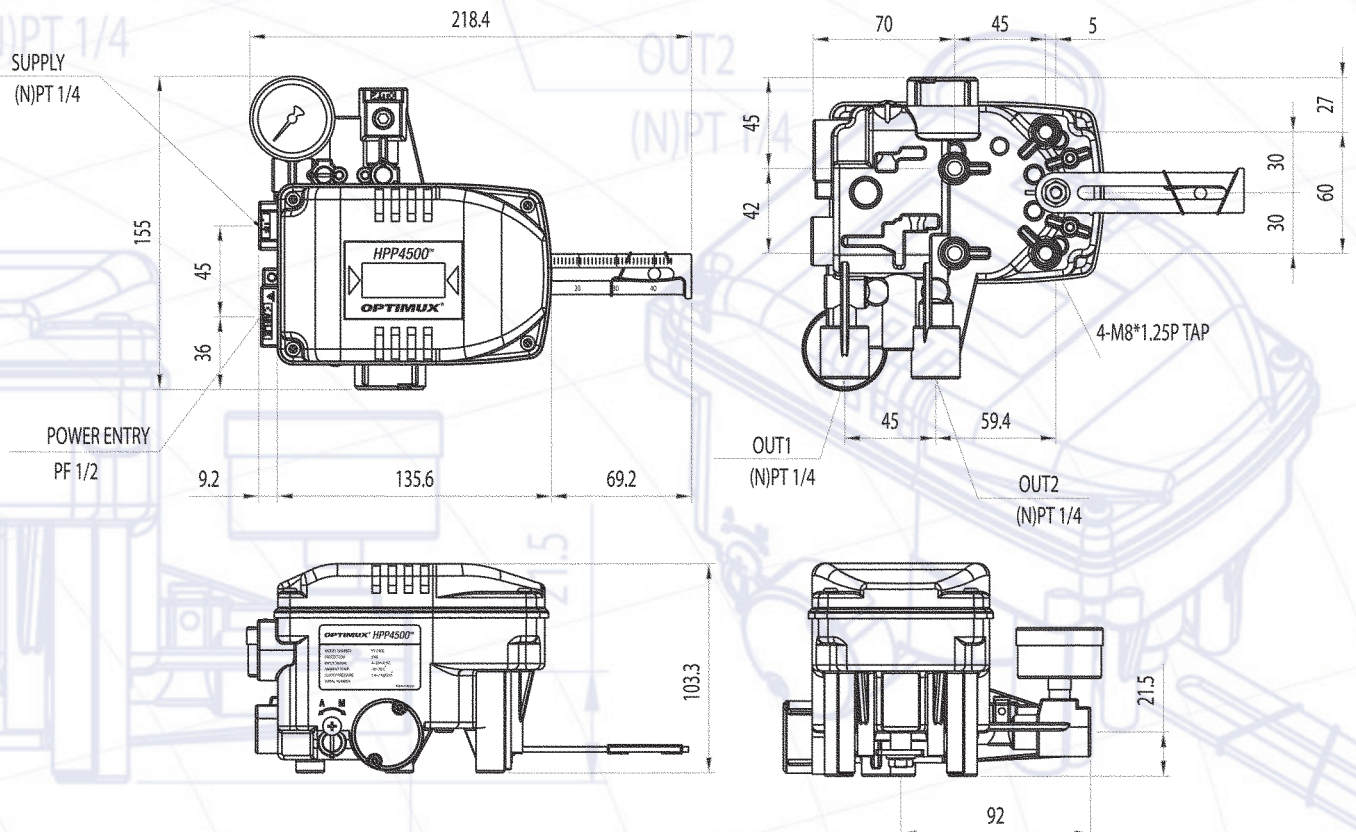


HPP4500™

Technical Specifications

Control Signal Input:	4-20mA DC
Minimum Current Signal:	3.8 mA
Output Characteristics:	Linear, equal percentage, quick open, configurable -16 Points
Power Requirements:	8.5 V
Impedance:	Max. 500 Ohms/20 mA Dc
Enclosure:	NEMA 4X, IEC IP66
Safety Certification:	Intrinsically Safe Ex ia IIC T6/T5
Digital Communications:	Hart®
Digital Display:	LCD
Air Supply Pressure:	20 to 100 psi / 130-700 kPa/ 1.4 to 7 Kg/cm ²
Air Consumption:	Bellow 2 LPM@20psi, Bellow 3 LPM@100psi
Flow Capacity:	70 LPM
Air Connection:	NPT 1/4
Gauge Connection:	NPT 1/8
Vibration Tolerance:	6 G
Feedback Signal:	4-20mA DC
Ambient Temperature:	- 22 F to 185 F (-30 C to 85 C)
Relative Humidity:	5 – 95% RH @ 40 C
Linearity:	+/- 0.5 F.S.
Hysteresis:	+/- 0.5 F.S.
Sensitivity:	+/- 0.2 F.S.
Repeatability:	+/- 0.3 F.S.
Weight:	3.3 Lbs (1.5 Kg.)

HPP4500™ Dimensions



HPP4500™

Selection Guide

HPP4500™ HART® Smart Valve Positioners

Code	Motion Type
L	Linear
R	Rotary

Code	Positioner Action
D	Direct
R	Reverse

Code	Hazardous Rating
F	Intrinsically Safe Ex ia IIC T6/T5*
N	Non-Explosion Proof

Code	Connections
N	Electrical Connection 1/2 NPT Air Pipe Connection 1/4 NPT Gauge Connection 1/8 NPT

Code	Supply Air Pressure
S	20-100 psi (0.14 – 0.7Mpa)

Code	Pressure Gauges
Y	0-160 psi / 0 – 11 Bar*

Code	Pressure & Filter Regulator
X	Not included
Y	Included

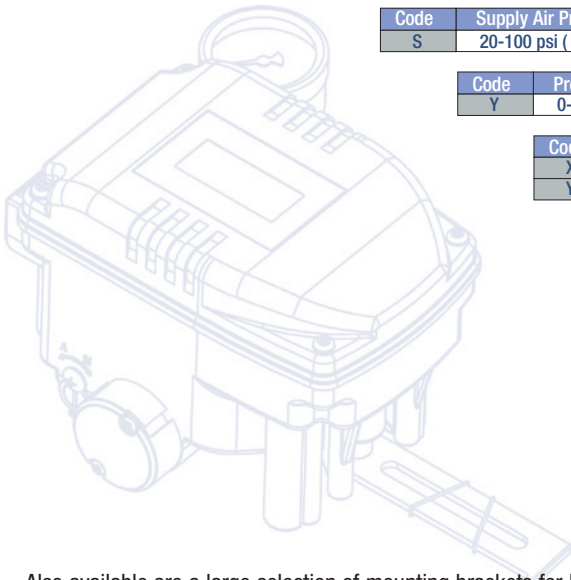
Code	Feedback Lever Type
1	10-40mm
2	20-70mm*
3	50-100mm
4	100-150mm

Code	Rotary
1	M6x34L
2	M6x63L
3	M8x34L
4	M6x63L
5	NAMUR*

Code	Communication
H	Hart®*

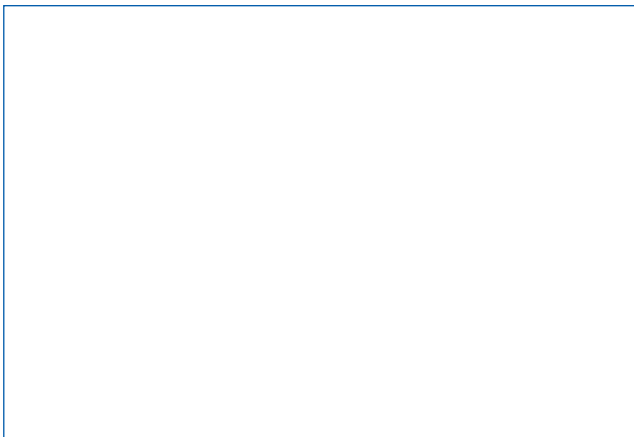
Code	Enclosure
A	Aluminum Diecasting/Epoxy Polyester Powder Coating
S	Stainless Steel

*Standard Offering



Also available are a large selection of mounting brackets for Fisher®, Masoneilan® and Neles® actuators. Mounting brackets for other valve actuators can be designed and manufactured upon request.

For more information, visit our website at www.trimteck.com



The information and specifications described in this brochure are considered accurate, however, they are intended for information purpose only and should not be considered as certified information. Considering that Optimux products are continuously improved and upgraded, specifications, dimensions, and information described herein are subject to change without notice. For further information or verification, consult your Optimux representative. Specific instructions for installation, operation, troubleshooting and maintenance of the HPP4500 are contained on the HPP4500 users manual.