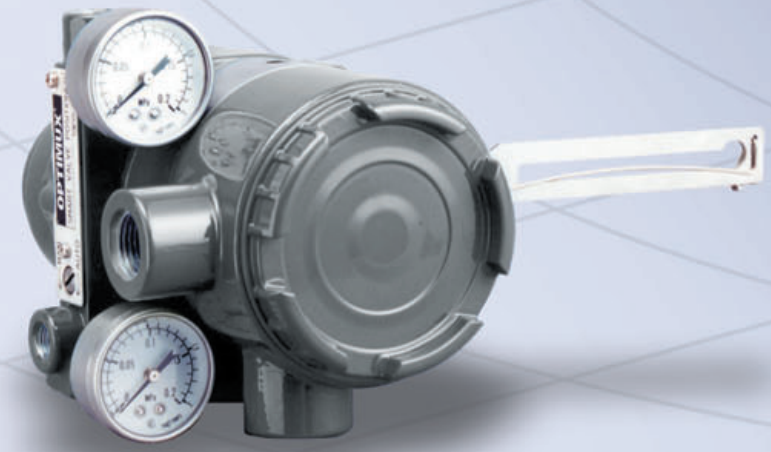
Flow Control Products

HPP3000 Series

HART® Smart Valve Positioner



OPTIMUX®

Leading Technologies for Control

HPP3000 HART® Smart Valve Positioners Introduction

Optimux is proud to incorporate Yamatake's HART® Smart Valve Positioners to its Control Valve product family. Yamatake pioneered the introduction of smart positioners technology in the market, and continues to be a world leader with state-of-the-art, innovative field instrumentation.

The HPP3000 Series are high performance microprocessor based current-to-pneumatic positioners which also include additional model options such as FOUNDATION™ Fieldbus, and standard 4-20 mA smart positioners featuring split range characteristics.

When our positioner receives a signal from a control device, it modulates the air supply to the control valve actuator, providing an accurate valve position that is proportional to the control signal. The accuracy of our Smart Valve Positioners drives the best processing performance from any control valve.

This positioner series incorporate features such as: Automatic configuration, multiple communications capabilities, and self-diagnostics that contributes to increase productivity and efficiency of industrial plant operations, and to lower maintenance costs.

When installed in combination with Optimux extensive portfolio of linear and rotary control valves, we deliver the highest levels of control accuracy and responsiveness in the industry.

There are two basic models of the HPP3000 Series:

• HPP3000

This model uses HART® communications to provide bi-directional digital communication, including valve position, and other diagnostics information. Among other unique features the HPP3000 has an Auto-Setup program that automatically configures SVP parameters in the field.

• HPP3000 Improved Anti-vibration Feature

This model features an accessory that allows the positioner to be mounted remotely from the valve, as to provide simplified maintenance or to withstand high vibrations.

Figure 1: HPP3000 Standard Model

HPP3000 HART® Smart Valve Positioners
Features & Advantages

Improves Process Control

Highly accurate and resistant to vibration, the HPP3000 improves control valve performance, allowing tighter control thus reducing process waste while increasing product quality, and throughput.

Improves Productivity

Easy-to-use fully automatic set-up and calibration with diagnostics makes these tasks easier and less prone to errors.

Spare Parts Reduction

Single universal model applies to most valve applications reducing spare parts stocks requirements.

Easy to Adjust

Externally accessible switch for auto set-up, auto configuration, and auto calibration adjustable with a simple screwdriver.

Communication Protocols

FOUNDATION™ Fieldbus , DE® models are also available.

Configurable Valve Output

Allows for user-definable and customized flow characterization for unique control applications.

Positive Shut-off Configuration

By cutting off unnecessary output pressure to actuator at specific points, it assures valve's original shut-off performance continuously.

Smart Configuration

Easily performed by our SCF Smart Field Communicator, or a standard HART® 275 Communicator.

Auto-Setup

No PC or handheld communicator is required, just turn switch clockwise, and the Auto Setup Program will adjust positioner for optimum conditions and parameters adjustment:

- *Zero-span*
- *Actuator action and size*
- *Packings friction*
- *Upper an lower range*

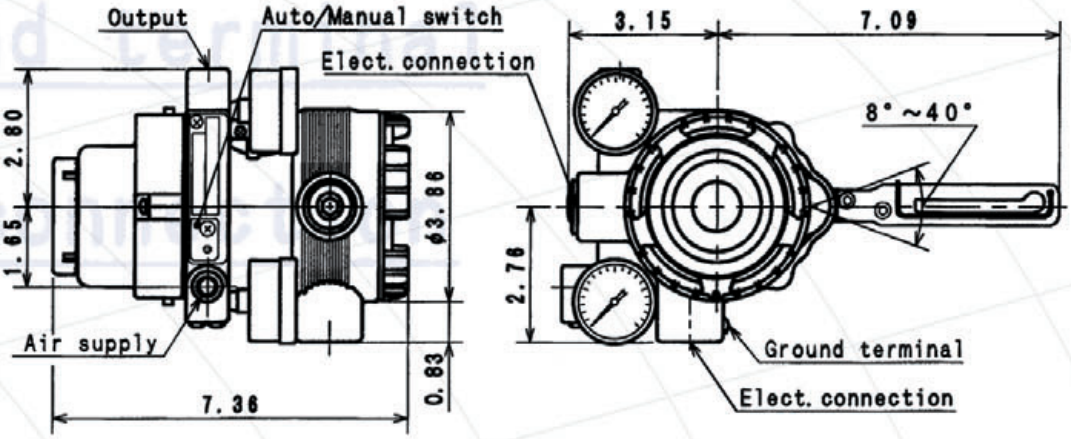
Figure 2: HPP3000 Remote Mounted Model

HPP3000

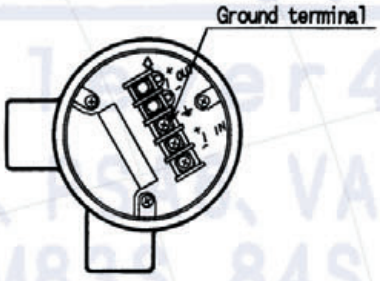
Technical Specifications

Control Signal Input:	**4-20 mA DC control signal (also provides power to unit)**
Output Characteristics:	**Linear, equal percentage, quick opening and custom configurable – 15 segments**
Power Requirements:	**3.85 mA DC not to exceed 24 mA DC**
Enclosure:	**NEMA 4 equivalent, IEC IP66 equivalent**
Approval Bodies:	**FM/CENELEC/NEPSI/CSA Explosion Proof/Intrinsically Safe (For specific models consult sales)**
Digital communications:	**HART®, DE®, FOUNDATION™ Fieldbus**
Air Supply Pressure:	**20 to 100 psi (130 to 700 kPa)**
Vibration Tolerance:	**2G at 5 to 400 Hz**
Ambient Temperature:	**-40° F to 175° F (-40° C to 80° C)**
Relative Humidity:	**10% – 90% RH**
Weight:	**5.5 Lbs. (2.5 Kg)**
Hysteresis:	**1.0% FS**
Repeatability:	**0.4% FS**
Sensitivity:	**0.025% of span**
Stem Travel Range:	**Feedback lever angle +/- 4° to 20°**

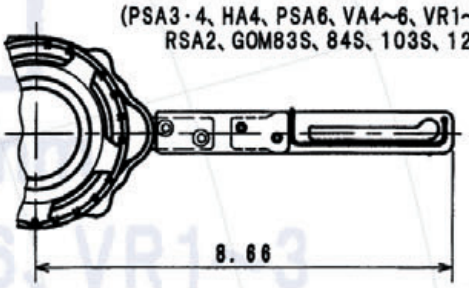
Dimensions



Terminal drawing
Terminal screw size:M4



Lever type
W/Ext. lever40mm
(PSA3·4、HA4、PSA6、VA4~6、VR1~3
RSA2、GOM83S、84S、103S、124S)



HPP3000
Selection Guide

HPP3000 | HART® Smart Valve Positioners

Code	Hazardous ratings
F	Standard FM (Explosion proof CL I, Flame proof CL I, Dust ignition Proof CL II)
C	CE (Flame proof CENELEC), NEMA 4

Code	Enclosure finish
S	Standard (Baked acrylic)
B	Corrosion proof (Baked acrylic)
D	Silver finish (Baked Epoxy)

Code	Positioner action
D	Direct
R	Reverse

Code	Supply air pressure classification
5	Standard 20 to 100 psi (130 to 700 kPa)

Code	Pressure gauges
X	Not included
Y	Included

Code	Pressure regulator with filter
X	Not included
1	Model OPAFR Pressure regulator with filter

Code	Material of bracket and bolts	
X	Not selection	
C	Bracket: Steel-Zinc plated	Bolts: Stainless Steel
D	Bracket: Stainless Steel	Bolts: Stainless Steel

Code	Mounting brackets for actuators *
XX	Not included
25	For Optimux LA/RA 25 & 50 Actuators
100	For Optimux LA/RA 100 Actuators

Code	Options
Q	1/8 NPT Pressure gauge connection (This option must be selected)
Y	w/o Feedback lever
H	Filter (Screen for air-exhaust port)
W	Reversing relay for Double Acting Actuators (Needed for all Optimux LA/RA actuators)

HPP3000	F	S	D	5	Y	X	C	25	QW

Code	HPP3000 Cable (Length)
10	9.9 ft (3m)
16	16.5 ft (5m)
33	33.0 ft (10m)
66	66.0 ft (20m)

HPP3000	F	S	D	5	Y	X	C	25	QW	10

Remote mounted

* Note: Also available 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.

OPTIMUX®

HPP3000

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 HPP3000 are contained on the HPP3000 users manual.

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

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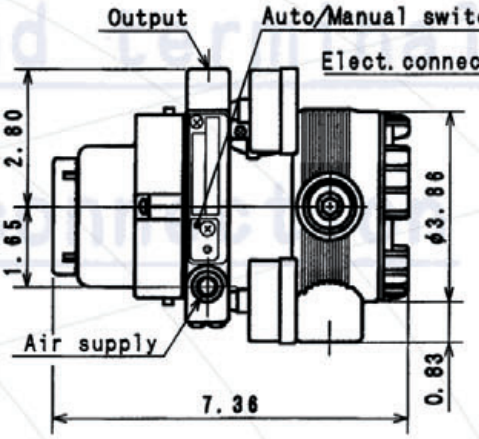

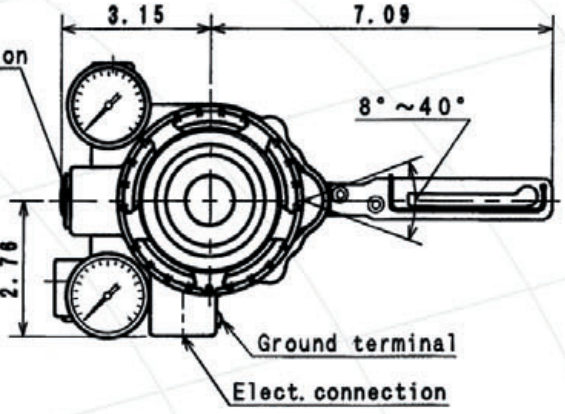

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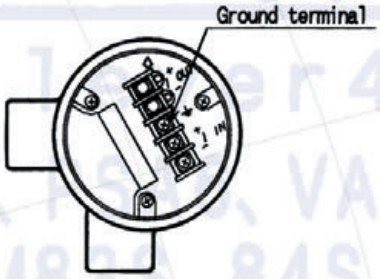

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