

FasTrak



*Engineering
GREAT Solutions*

**Smart positioner with high-capacity,
high-precision digital-pneumatic
valve controller**

FasTrak Smart Positioner

FasTrak is a high-capacity, high-precision digital-pneumatic valve controller that replaces a conventional positioner. It has an excellent dynamic performance and high flow ($C_v = 2$). Configuration and calibration is carried out with a HART™ device or by self calibration. FasTrak is compatible with double and single acting actuators, with or without a spring, a piston or a diaphragm.

Key features

> High Flow Precision Control

The unique design allows high speed performance in large volume actuators without additional amplification (e.g. booster or quick exhaust)

> Control Algorithms & Hardware

Self calibration on double acting piston, diaphragm, rotary actuator with or without spring; patented adjustable independent control parameter to open and close stroke

> Strong Shaft Design

Not sensitive to radial and axial external load caused by mounting and linkages

> Environmental Protection

The IP66 protection and unique exhaust protection system makes it suitable to be installed in harsh environments where there is tropical rain, dust, sand, salt.

> Embedded Features

- 4-20 mA position feedback
- Digital inputs for configurable trips
- Digital outputs configurable for limit switches and/or alarm

> Communications

- 4-20 mA control and power with HART™ communication protocol
- High speed serial connection

> Software Interface

Dedicated software (RCFT) to set, customize, control and monitor high dynamic performance

> Certifications & Approvals

- **CE** EUROPEAN DIRECTIVE
- Intrinsically safe (Ex ia) / Explosion proof (Ex d [ia]) according to:



ATEX (2014/34/EU)



IECEX



CSA/cUS



TR CU



INMETRO

Compatible with a variety of actuators

High precision repeatability



FasTrak is available in stainless steel 316 with explosion proof barrier

Benefits

- > No need for an amplification device in most applications
- > Superior control capacity of amplification device when installed
- > High flow with quick, precise complete control capability
- > Powerful self calibration software with the ability to totally personalise the parameters
- > Wide set of configurable embedded features
- > Robust design with a full metal housing

Technical specifications

Connection

Power	2 wire from signal min 3.5 mA, 12/30 Vdc (Ex ia) min 3.5 mA, 19/24 Vdc (Ex d)
Electrical connections	Signal ½" NPT (or metric M20x1.5 on request) Auxiliary input / output ½" NPT (or metric M20x1.5 on request)
Pneumatic connections	½" NPT female
Communication protocol	HART™ TTL RS232

Input

Signal	4-20 mA with HART™ protocol Configurable split range
On off	Nr 2 configurable digital (optocoupler 24Vdc)

Output

Position	4-20 mA passive loop
On off	Nr 2 configurable digital (optocoupler 24Vdc)

Stroke Movement

Feedback angle of rotation	30°/120° (<30° with lower resolution)
Adjustable speed	Range 0/300 seconds, individually configurable for each direction
Characteristic curve	Linear Equal percentage Configurable
Control parameter	Individually configurable for each direction
Travel control	Minimum and maximum settable stroke limits Adjustable thrust on seat

Air Supply

Instrument air	Free of oil, water and dust to ISO 8573-1 - Class 3
Supply pressure	2.5±10 bar
Air consumption	CV=2 1.5 Nm³/h at 6 bar CV=0.3 0.5 Nm³/h at 6 bar

Performance Data (for angle > 90°) According to IEC 61514-2

Hysteresis + deadband	±0.15%
Repeatability	±0.15%
Sensitivity	±0.1%
Linearity	±0.3%
Influence of ambient temperature	0.3% for every 10°C
Air capacity	Up to 180 Nm³/h at 6 bar (CV 2.3)

Environmental Capabilities

Ambient	Protection IP66 NEMA 4X Operation temperature -40° to +80°C -55° to +80°C for TR CU
Humidity	Up to 100%
Vibrations	Up to 2g (ISA S75.13)
CE mark	CE conformity and EMC

Materials

	Aluminium
	Stainless steel feedback shaft
	Fully stainless steel 316

Weight

	Aluminium (Ex ia) 3.25 kg
	Aluminium (Ex d) 4.11 kg
	Stainless steel 316 (Ex ia) 8.82 kg
	Stainless steel 316 (Ex d) 10.78 kg

Full model selection
available on our website
www.imi-critical.com

Options & accessories

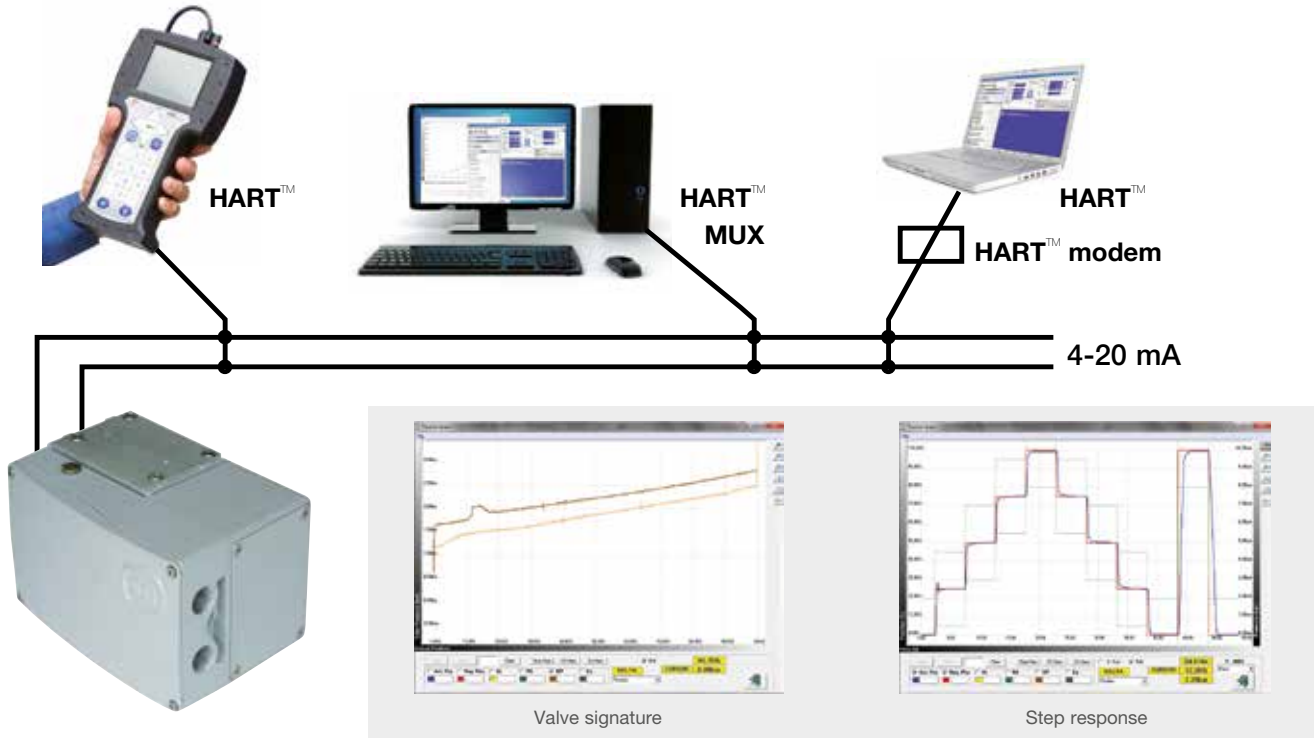
- > Remote feedback sensor
- > High speed communication kit
- > Universal linkage for:
 - linear long stroke actuator (70÷1500 mm)
 - VDI/VDE 3845 for rotary applications
 - lever for side yoke or top mounting application
 - customized application
- > High corrosion resistance version stainless-steel 316 case
- > Directly mounted pneumatic accessories:
 - gauges and lock up valve
- > Fail in place version
- > Collected or high silenced exhaust
- > Advanced diagnostic with option pack
- > Display and push button
- > Low air capacity version
- > Low bleed version



FT display version

Remote control software interface

- > User friendly interface with all key parameters shown on one screen
- > Tool for easy mechanical feedback alignment
- > Self calibration wizard
- > All parameters with full control via an interactive start up page
- > Graph tool for performance monitoring with configurable parameters
- > Events and errors report
- > Certified HART™ protocol communication 375/475 handheld compliant
- > Option Pack 1 Advanced diagnostic: Valve signature - Step response and other features
- > Option Pack 2 Advanced feature: Stability control - Soft approach to seat - Frequency response analysis and other features



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