

Flucon, India's only company who manufactures
full range of Valve Automation Products
Process Control Instruments
Valve Automation



Transducers

Series FC500

Electro-Pneumatic (I/P - E/P)

Current / Voltage to Pressure



Description

The Flucon series FC500 transducers are ideally used to convert current or voltage input signal to a linearly proportional pneumatic output pressure. This versatile instrument is rugged and reliable force balance transducers for use in both process control and industrial applications, for standard process control applications which typically utilise 3 to 15 psig output and industrial & high pressure application which typically utilise pressure output up to 120 psig. Flucon series FC500 transducers combines low cost, high accuracy and minimum air consumption with field proven technology. Versatile design features and rugged, compact housing with a choice of CMRI and ATEX* approved versions for explosion proof or intrinsically safe operation when used with a suitable barrier.

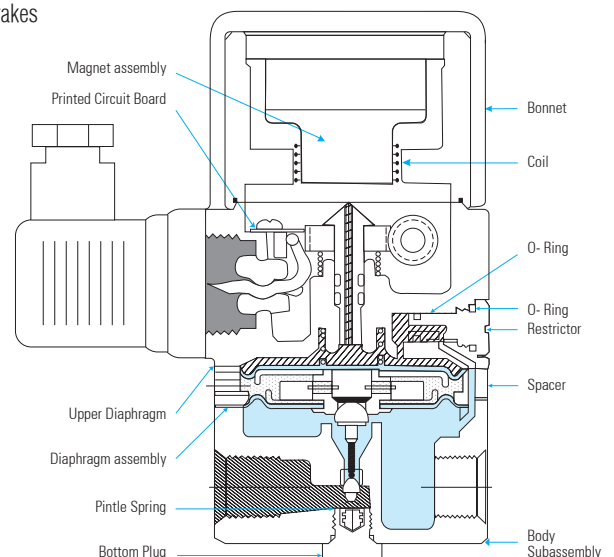
Integrated Characteristics

- Compact Design.
- Low Air Consumption.
- Integral Volume Booster - flow capacity up to 20 SCFM is boosted by the built in volume booster.
- Field Reversible - Output provides inversely proportional to input signal.
- Flexible Adjustments of Zero & Span.
- Standard Process Inputs.
- Split Ranging.
- NEMA 4X (IP65) Enclosure.
- Savings in Investments.

Application

The Flucon 500FC series transducers converts electrical signal to a pneumatic output which can be used to operate the followings:

- Valve, Valve-Actuators,
- Damper and Louver Actuators
- Valve Positioners
- Air-Cylinders
- Relays
- Clutches
- Web Tensioners and Brakes



Specifications	Low Output Range (up to 30 psig)	High Output Range (up to 120 psig)
Supply Pressure Range (Min./Max.)	Minimum - 21 kPa (3 psig) above maximum output Maximum -700 kPa (100 psig)	Minimum = 35 kPa (5 psig) above maximum output Maximum -1050 kPa (150 psig)
Supply Pressure Sensitivity	0.15% of span per 10kpa (0.1% of span per psig at mid range)	.005% of span per 7.0 kPa (1.0 psig)
Terminal Based Linearity	1.0% of span	1.5% of span typical 2.0% max.
Repeatability	0.5% of span	1.0% of span
Hysteresis	1.0% of span	1.0% of span
Response Time	Depends on pressure range - typ. less than 0.25 sec. for 3-15 psig units	Depends on pressure range - typ.
Flow Rate	7.6 m ³ /hr (4.5 SCFM) at 175 kPa (25 psig) supply 20.0 m ³ /hr (12.0 SCFM) at 700 kPa (100 psig) supply	40.8 m ³ /hr (24.0 SCFM) at 1050 kPa (150 psig) supply
Relief Capacity	3.4 m ³ /hr (2 SCFM) at 35 kPa (5 psig) above 140 kPa (20 psig) set point	11.9 m ³ /hr (7 SCFM) at 35 kPa (10 psig) above 140 kPa (20 psig) set point
Maximum Air Consumption	0.3 m ³ /hr (0.15 SCFM) at midrange typical	0.15 m ³ /hr (0.08 SCFM) at midrange typ.
Media	Oil free, clean dry air filtered to 40 microns.	
Temp. Range (Operating)	-30C to 60C (-20F to 140F)	
Port Sizes	1/4" NPT (Pneumatic) DIN 43650 connector (Electric)	1/4" NPT (Pneumatic) DIN - 43650 connector (Electric)
Weight	2.2 lbs. (1.0 kg) approx.	

Ordering Information

I/P Transducers 500FC

Part No.	Input	Output Range		Impedance ±1%
		psi	kPa	
FC 501	4-20 mADC	3-15	20-100	200Ω
FC 502	4-20 mADC	9-15	60-100	110Ω
FC 503	4-20 mADC	3-9	20-60	110Ω
FC 504	4-20 mADC	3-27	20-185	240Ω
FC 505	4-20 mADC	6-30	40-200	240Ω
FC 506	4-20 mADC	1 -17	7-117	270Ω
FC 507	10-50 mADC	3-15	20-100	90Ω
FC 508	10-50 mADC	3-27	20-185	105Ω
FC 509	10-50 mADC	6-30	40-200	105Ω
FC 510	4-20 mADC	2-60*	14-420	245Ω
FC 511	4-20 mADC	3-120*	20-830	280Ω
FC 512	0-60 mADC	2-120*	15-830	240Ω

E/P Transducers 500FC

FC 513	0-5VDC	3-15	20-100	625Ω
FC 514	0-5VDC	3-17	20-185	550Ω
FC 515	0-5VDC	6-30	40-200	560Ω
FC 516	1-9VDC	3-15	20-100	1010Ω
FC 517	1-9VDC	3-27	20-185	860Ω
FC 518	1-9VDC	6-30	40-200	860Ω
FC 519	0-5VDC	2-60*	14-120	520Ω
FC 520	0-10VDC	3-120*	20-830	825Ω

* Output shown is as calibrated at the factory. Large span adjustment capability allows recalibration to achieve output ranges from 20-240 kPa (3-35 psig) to 20-1000 kPa (3-145 psig).

** Approval Pending

NEMA-4X (IP65) Enclosure

Optional NEMA 4X enclosure rating allows for installation in splashdown or outdoor environments. Unit also meets the requirements of IEC standards IP65.

Intrinsically Safe

The Flucon-FC500 series has been tested and approved by CMRI, Dhanbad, India, for intrinsically safe Class IIa, IIb, and IIc, gas Groups C, D, E, F, and G when used with an apparatus meeting the entity requirements as mentioned hereunder.

$V_{max} = 29.9v$ $C_1 = 0$ C_1 is capacitance
 $I_{max} = 65mA$ $L_1 = 35mH$ L_1 is inductance

Installation should be done in accordance with Flucon interconnection drawing. This drawing is included in the Flucon-500FC series installation, operation and maintenance manual. The intrinsically safe approval is a standard feature of the Flucon-500FC series and applies only to units with a 4-20 mA input signal that are installed with the following barriers.

Barriers:

Leeds & Northrup
P/N. 316569 & 316747

R. Stahl, Inc.

P/N. 8901/33-293/000/79
9001/01-280-100- 10
9002/13-280-110-00

MTL, Inc.

P/N. 728, 787S, 4045

Pepperl & Fuchs, Inc.

P/N. KHD3-ICD/Ex132

The Flucon-500FC series is also CMRI, Dhanbad, approved as nonincendive for gas groups IIa, IIb and IIc and gas groups C,D,E,F & G. Barriers are not required for nonincendive rating application.

Options

Add proper letter onto end of part no.

G- Pressure Gauge : 2" face, back mounted
Dual scale.

W-NEMA 4X : Enclosure for
splashdown/outdoor
use.

Ex- : Explosion-proof**

2" Pipe mounting/DIN Rail mounting
available on request.

Note :

Consult factory for Electro-pneumatic
Positioner (current/voltage input), Pneumatic
to Pneumatic Valve Positioners, Position
Transmitters and Limit Switches.



Flucon Automation Inc.

USA: 903 Dashiell Street, Murfreesboro, TN 37129 USA • T +1-615 893 2668 | M +1 615 785 9040, +1 615 785 9023

India: E-104-05, GIDC, Electronics zone, Sector-26, Gandhinagar-382 026 India • T +91-79-2328 8531 / 32 | M +91-98250 49522

sales@fluconautomationinc.com | fluconautomationinc.com