



# Electropneumatic Transducers (I/P)

## NCP1 Series



Part No. NCP1-20-315N



See for  
a wide variety of fitting options

NITRA® NCP1 Series electropneumatic transducers (I/P) convert a 4-20 mA current signal(I) from a PLC or other controller to a linear pneumatic output pressure(P). Used in paper and paper converting, food and drug, petrochemical, HVAC, textile, and energy management industries, the NCP1 Series provides highly reliable and repeatable operation of pneumatic valve positioners, valve actuators, air cylinders, damper and louver actuators, web tensioners, clutches and brakes. The NCP1 Series is available in several output pressure ranges and includes an integral volume booster for high flow applications.

The NCP1 transducer housing can be direct or bracket mounted, comes with additional output ports for use with a pressure gauge, a 1/2" NPT female conduit connection with wire leads, and is NEMA 4X (IP65) rated for installation in NEMA 4X (IP65) environments. The NCP1 Series comes standard with Factory Mutual (FM) approval for intrinsically safe applications.

### Features

- 4-20 mA input compatible with PLCs and other controllers
- Several output pressure ranges applicable for industrial pneumatic and process control applications
- Additional output ports for use with a pressure gauge
- 1/2" NPT female conduit connection with wire leads
- Direct or bracket mounting (bracket included)
- Zero and span adjustments
- Integrated volume booster
- Low air consumption
- Split ranging (3-15 psig model)
- FM Approved for Hazardous Locations
- Made in the USA



Made  
in the  
USA

NCP1 Series I/P Transducers					
Part Number	Price	Weight (lbs)	Input	Output Range	
				psig	bar
<b>NCP1-20-315N</b>		2.5	4-20 mA	3-15	0.2-1.0
<b>NCP1-20-327N</b>		2.5	4-20 mA	3-27	0.2-1.9
<b>NCP1-20-630N</b>		2.5	4-20 mA	6-30	0.4-2.0
<b>NCP1-20-260N</b>		2.5	4-20 mA	2-60*	0.14-4.0
<b>NCP1-20-3120N</b>		2.5	4-20 mA	3-120*	0.2-8.0

\* Output shown is as calibrated at the factory. Large span adjustment capability allows recalibration to achieve output ranges of 3-35 psig (0.2-2.4 bar) with 2-60 psig unit or 3-145 psig (0.2-10 bar) with 3-120 psig unit.



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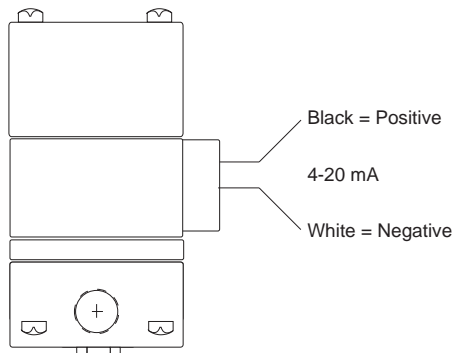
NCP1 Series I/P Transducers					
Part No.	NCP1-20-315N	NCP1-20-327N	NCP1-20-630N	NCP1-20-260N	NCP1-20-3120N
<b>Functional Specifications</b>					
<b>Input</b>	4-20 mA				
<b>Outputs (psig - bar)</b>	3-15* (0.2-1.0)	3-27 (0.2-1.8)	6-30 (0.4-2.0)	2-60 (0.14-4.0)	3-120 (0.2-8.0)
<b>Supply Pressure (psig - bar)</b>	18 min -100 max (1.2 min - 6.7 max)	30 min - 100 max (2.0 min - 6.7 max)	33 min - 100 max (2.2 min - 6.7 max)	65 min - 150 max (4.3 min - 10.0 max)	125 min - 150 max (8.3 min - 10.0 max)
<b>Air Consumption</b>	0.05 scfm (1.4 NI/min) midrange typical			0.07 scfm (2 NI/min) midrange typical	
<b>Flow Capacity</b>	4.5 scfm (127 NI/min) at 25 psig (1.7 bar) supply 12.0 scfm (340 NI/min) at 100 psig (6.8 bar) supply			20.0 scfm (566 NI/min) at 150 psig (10.5 bar) supply	
<b>Relief Capacity</b>	2 scfm (56.6 NI/min) at 5 psig (2.4 bar) above 20 psig (1.3 bar) setpoint			7 scfm (198 NI/min) at 10 psig (0.7 bar) above 20 psig (1.3 bar) setpoint	
<b>Temperature Limits</b>	-20°F to +140°F (-30°C to +60°C)				
<b>Impedance</b>	180 Ohms	220 Ohms	220 Ohms	225 Ohms	260 Ohms
<b>Performance Specifications**</b>					
<b>Linearity</b>	<± 0.75% of span			<± 1.5% of span typical, ± 2.0% max.	
<b>Hysteresis and Repeatability</b>	< 1.0% of span; < 0.5% of span			< 0.5% of span; < 0.5% of span	
<b>Supply Pressure Sensitivity</b>	<± 0.1% of span per psig (<± 0.15% of span per 0.1 bar)			<± 0.04% of span per 1.0 psig (0.07 bar)	
<b>Physical Specifications</b>					
<b>Pneumatic Port Sizes</b>	1/4" NPT female				
<b>Media</b>	Oil free, clean dry air filtered to 40 micron				
<b>Electrical Connections</b>	Conduit 1/2" NPT female with 12" wire leads				
<b>Mounting</b>	Direct or bracket (bracket included)				
<b>Housing</b>	Chromate-treated aluminum with epoxy paint. NEMA 4X (IP65)				
<b>Elastomers</b>	Buna-N				
<b>Trim</b>	Stainless steel; brass; zinc-plated steel				
<b>Environmental Ratings</b>	NEMA 4X / IP65				
<b>Approvals</b>	FM (Haz-Loc)***				

\* Can be recalibrated to provide 3-9 psig or 9-15 psig for split ranging applications.

\*\* The unit must be calibrated in the plane it is mounted in.

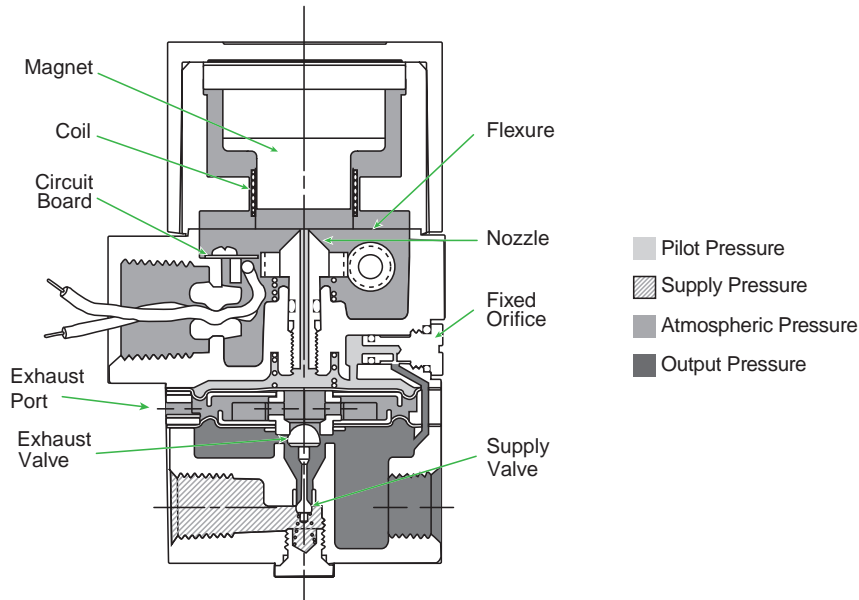
\*\*\* To obtain the most current agency approval information, see the Agency Approval Checklist section on the specific part number's web page.

### Wiring



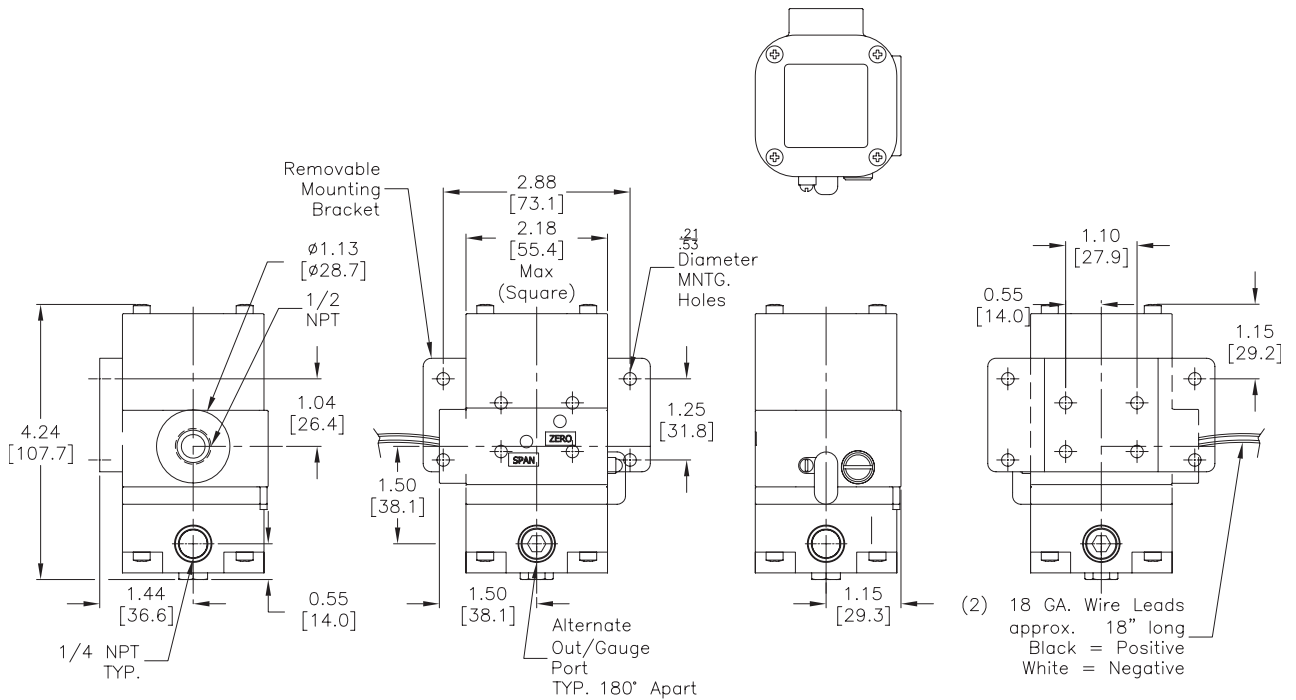
# Electropneumatic Transducers (I/P)

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### Dimensions

inches [mm]



See our Web site [www.nitra.com](#) for complete Engineering drawings.