

# Technical Data for IS-Pro Pressure Controllers

0.07 – 1500 PSI full scale in absolute, gauge, or differential pressure applications.

Standard specifications. Consult Alicat for our high-pressure, media-isolated (caustic gas resistant) versions.



+1 (888) 290-6060  
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CERTIFICATIONS	MARKING	CERTIFICATE
ATEX	II 1G Ex ia IIC T4 Ga T <sub>amb</sub> -20° C to +70° C	DEKRA 22ATEX0075X
IECEX	Ex ia IIC T4 Ga T <sub>amb</sub> -20° C to +70° C	IECEX DEK 22.0078 X

SENSOR AND CONTROL PERFORMANCE	
Pressure accuracy	Standard accuracy: ± 0.250% of full scale High-accuracy option: ± 0.125% of full scale
Repeatability (2σ)	± 0.08% of full scale
Steady state control range	0.01 – 100% of full scale (10,000:1 turndown ratio)
Temperature sensitivity	Zero shift: 0.02% full scale per °C from tare temperature Span shift: 0.02% full scale per °C from calibration temperature
Operating temperature range	-20 – 70°C
Valve function	Normally closed
Sensor response time	< 1 ms
Typical control response time	As fast as 30 ms (T63), valve size dependent and user-adjustable
Typical indication response time	< 10 ms
Typical warm-up time	< 1 s

MECHANICAL	
Sensor burst pressure	0.07 – 100 PSI models: 3× full scale range 500 – 1500 PSI models: 1.5× full scale range
Maximum common mode pressure for differential pressure models	≤ 100 PSID models: 200 PSIG 500 PSID models: 750 PSIG
Relative humidity range	0 – 95%, non-condensing
Ingress protection	IP66 rating Dust-tight and protected against strong jets of water
Mounting orientation sensitivity	None
Mounting holes	4× 6-32 UNC threaded ⌀ 0.276" [7.01 mm]
Process connections <sup>1</sup>	1/8" NPT female 1/4" NPT female

<sup>1</sup> Consult Alicat for available connection options, such as: compression, face seal, push-to-connect, BSPP, SAE, or Swagelok®-compatible (VCO® and VCR®).

Ex Document

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POWER AND COMMUNICATION	
Digital input and output options	RS-232 Serial and Modbus RTU, RS-485 Serial and Modbus RTU
Digital data update rate	40 Hz at 19200 baud
Analog input and output options	4 – 20 mA
Analog data update rate	1 kHz
Analog signal accuracy	± 0.1% of full scale additional uncertainty
Interactive display	Monochrome LCD with integrated touchpad and backlight; simultaneously displays pressure, setpoint, and valve drive %
Display update rate	10 Hz
Electrical connection options	DB-15
Power requirements	See DOC-IS-CONTROLDWG

STANDARD AVAILABLE RANGES <sup>2</sup>								
Model	1 PSI	5 PSI	15 PSI	30 PSI	100 PSI	500 PSI	1000 PSI	1500 PSI
ISPC-Series PSIA			√	√	√			
ISPC-Series PSIG	√	√	√	√	√			
ISPC-Series PSID	√	√	√	√	√			
ISPCS-Series PSIA			√	√	√	√	√	√
ISPCS-Series PSIG		√	√	√	√	√	√	√
ISPCS-Series PSID		√	√	√	√	√		

<sup>2</sup> For high pressure or aggressive gases, use media-isolated ISPCS pressure controllers. For use with water and other liquids, please contact Alicat.

WETTED MATERIALS: MEASUREMENT HEAD							
	Pressure range	Stainless steel	Heat-cured epoxy and silicone rubber, alumina, gold, silicon, glass	Polyamide	FKM	FFKM	EPDM
		316L					
ISPC-Series	1 – 100 PSI	√	√	√	Opt	Opt.	Opt.
ISPCS-Series <sup>3</sup>	5 – 1500 PSI	√	.		Opt	Opt	Opt.

WETTED MATERIALS: CONTROL VALVE					
Valve type	Stainless steels		Brass	FKM	FFKM
	300 series	430FR			
P01-P06, P07			√	√	.
S01-S05	√	√		.	√

<sup>3</sup> Not all valves are available at all pressure ranges. Consult Alicat for details.

# Technical Data for IS-Pro Pressure Controllers

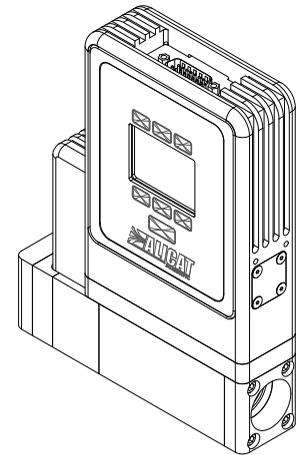
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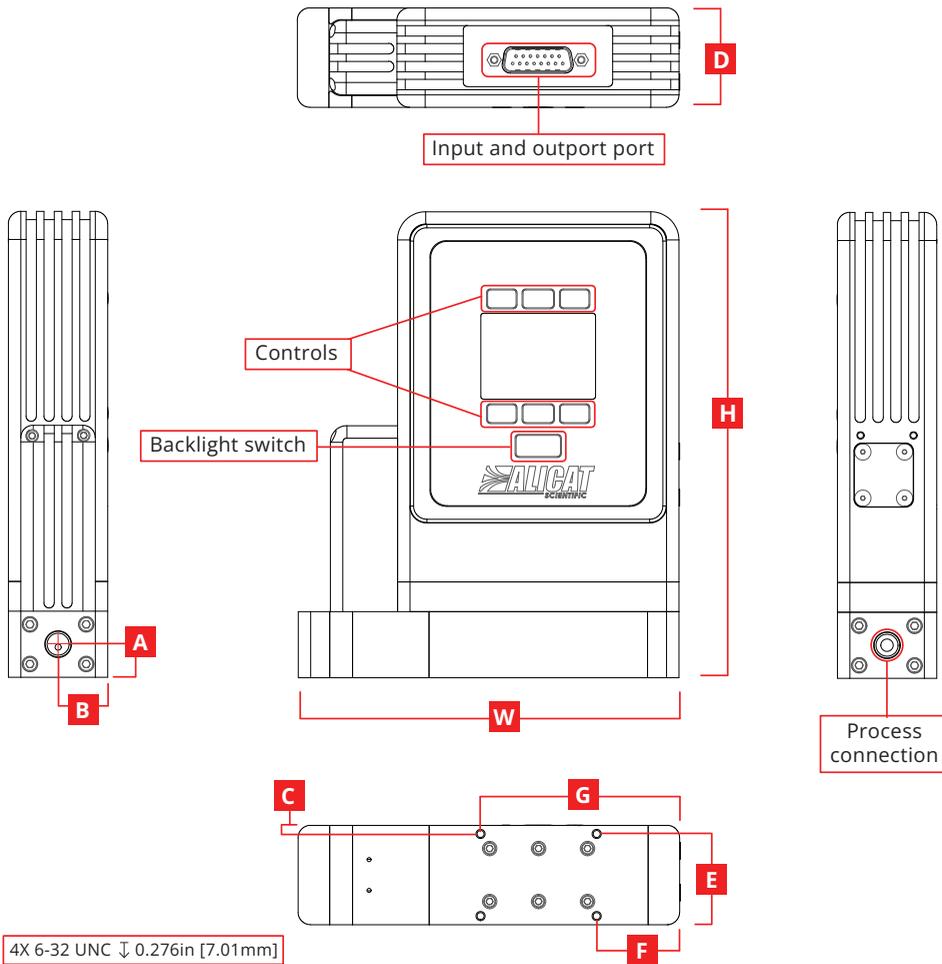


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## Representative Example



30 PSI



DIMENSIONS AND THREADED MOUNTING LOCATIONS										WEIGHT
Valve configuration	Width	Depth	Height <sup>4</sup>	A	B	C	E	F	G	
P01-P06, S01-S05 valve	5.75"	1.50"	7.05"	0.50"	0.75"	0.13"	1.37"	1.25"	3.00"	≈ 5.0 lb
	146.1 mm	38.1 mm	179.1 mm	12.7 mm	19.1 mm	3.3 mm	34.8 mm	31.8 mm	76.2 mm	≈ 2.3 kg
P07 valve	6.00"	1.50"	7.65"	0.80"	0.75"	0.13"	1.37"	1.25"	3.00"	≈ 6.0 lb
	152.4 mm	38.1 mm	194.3 mm	20.3 mm	19.1 mm	3.3 mm	34.8 mm	31.8 mm	76.2 mm	≈ 2.7 kg

<sup>4</sup> Differential pressure models for aggressive gases are 0.950" taller.

PORT DIMENSIONS						
Valve type	Port size	Inlet & outlet ports		Remote sensor	Differential port (P1)	Differential port (P2)
		F	G	I	J	K
P01-P06, S01-S05	1/8" NPT	0.50"	0.75"	2.31"	1.55"	2.70"
		12.7 mm	19.1 mm	58.7 mm	39.4 mm	68.6 mm
P07	1/4" NPT	0.80"	0.75"	2.31"	1.55"	2.70"
		20.3 mm	19.1 mm	58.7 mm	39.4 mm	68.6 mm