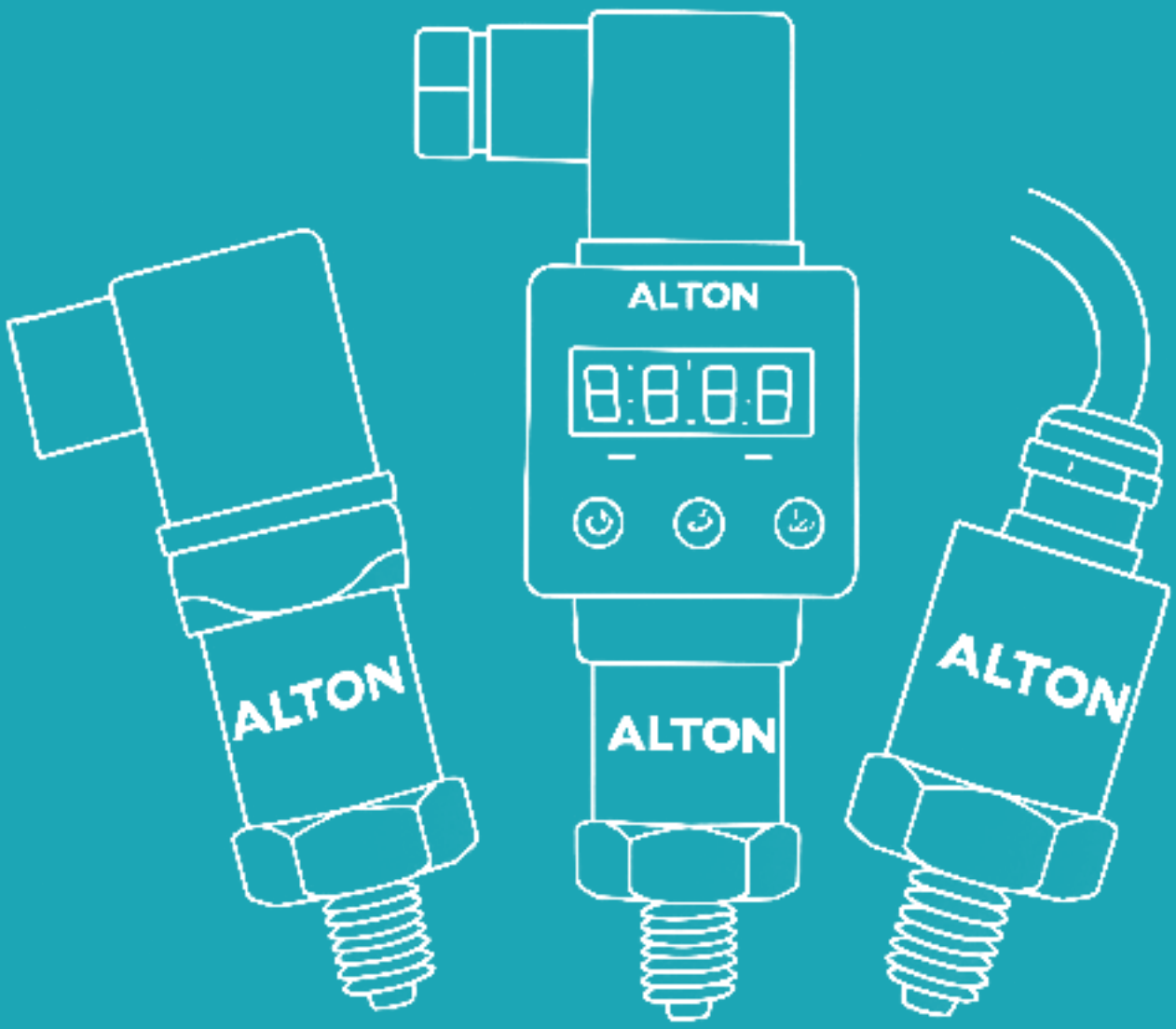
ALTON

Peressure Transmitter



Peressure Transmitter

Overview

- Pressure range from 100 .. 0 mbar up to 600 .. 0 bar
- Vacuum range 1- .. 0
- Absolute and relative (Gauge) pressure
- 2 wire 20 .. 4 ma or 3 wire 10 ..0 VDC (other on request)
- Fast response < 1 msec
- Accuracy %0.5 Full Scale
- Various process connection
- Various electrical connection
- Customer specific versions
- 1 year warranty



Application

- Water and wastewater
- Energy Industries
- Hydraulics and Pneumatics
- Machine building
- Measurement and control technology
- Pumps and compressors

Description

Alton KPT/ EPT family pressure transmitters are reliable instruments for pressuremeasurement in industrial environments. With compact design and high quality manufacturing, they can be integrated into a widerange of machine designs and process automation applications. The many measuring ranges, and various process and electrical connections, contribute to them universal applicability.The processing of the sensor signal is done by newly developed digital electronics and sensor specific deviations such as non-linearity, hysteresis and temperature errors are compensated actively. Alton products are particularly cost-efficient and offer very good performance, matched to the majority of applications in terms of precision and robustness. The high reliability and long service life ensure low maintenance and replacement costs



Product range overview

Family series	Pressure range	Measured Value	Process connection	Power	Output signal	Electrical Connection
KPT 30 EPT 30	0 .. -1 bar	Relative (Gauge) Pressure	G1/4" male Seal: DIN3852, DIN 3869, EN837 G 1/4" female G1/2" male Seal: DIN3852, DIN 3869 ¼"NPT male ½" NPT male ¼" NPT female "7/16 20UNF female with valve opener Other is possible by order	9 .. 36 VDC 5 VDC	4 .. 20 ma 0 .. 10 VDC 0.5 .. 4.5 VDC Digital output: RS485 Modbus-RTU Other is possible by order	Hirschmann EN175301 Round plug M12x1 5pin Direct Cable Packard metri pack Round plug DIN72585 ISO15170 Other is possible by order
	-1 .. 0 bar					
	-1 .. 12 bar					
	0 .. 100 mbar					
	0 .. 250 mbar					
	0 .. 600 mbar					
	3 .. 15 Psi					
KPT 20 EPT 20	0 .. 1	Relative (Gauge) Pressure				
	0 .. 2.5					
	0 .. 4					
	0 .. 6					
	0 .. 10					
	0 .. 16					
	0 .. 25					
	0 .. 40					
	0 .. 60					
	0 .. 100					
	0 .. 160					
	0 .. 250					
	0 .. 400					
	0 .. 600					
KPT 50 EPT 50	0 .. 1	Absolute Pressure				
	0 .. 2					
	0 .. 6					
	0 .. 10					
	0 .. 16					
	0 .. 25					

General technical specifications

General technical specifications

Accuracy Specification	Accuracy	0.5 %FS	% FS = % of the measuring range (full scale)
	Repetition accuracy	0.1 %FS	
Electrical Specification	Operating voltage range VDC	9 ... 36 VDC	Output signal 4 ... 20 mA
			Output signal 0 ... 10 VDC
			Output signal 0 ... 5 VDC
			Output signal 1 ... 5 VDC
		5VDC +/- 10%	Output signal 0.5 ... 4.5 VDC
	Reverse polarity protection	Protected	For operating voltage
Mechanical Specification	Housing material	SS 316L	For KPT types
		SS 304	For EPT types
	Seal material	FKM (Viton)	
	Sensor material	SS316L	
	Note on materials	RoHS-compliant	
Certifications	CE marking	To EU EMC Directive	
	EMC protection	2014/30/EU	
	Ingress Protection (IP)	IP 65	Electrical connection: Hirschmann EN175301
		IP 67	Electrical connection: Direct Cable
			Electrical connection: Packard metri pack
		IP 68	Electrical connection: Round plug M12x1 5pin
		IP 69K	Electrical connection: Round plug DIN72585 ISO15170

Input Signal

Input Signal									
Family series	Measured Value	Pressure measuring range			Over-load pressure	Burst Pressure	Operating medium	Temperature	
		Start value	End value	Unit				Medium [°C]	Ambient [°C]
KPT 30 EPT 30	Relative	0	-1	bar	2 bar	5 bar	Water, Oil and Compressed air to ISO 8573-1:2010 [–:–:–] For other mediums; **KPT:** Liquid and Gaseous compatible with *SS316L* **EPT:** Liquid and Gaseous compatible with *SS304*	-20 .. 120°C	-20 .. 80°C
		-1	0	bar	2 bar	5 bar			
		-1	12	bar	2 bar				
		0	100	mbar	0.75 bar	1.5 bar			
		0	250	mbar	1.8 bar	3.6 bar			
		0	600	mbar	2 bar	4 bar			
		0.2	1	bar	2 bar	5 bar			
KPT 20 EPT 20	Relative	0	1	bar	2 bar	5 bar			
		0	2.5	bar	5 bar	12 bar			
		0	4	bar	8 bar	20 bar			
		0	6	bar	12 bar	30 bar			
		0	10	bar	20 bar	50 bar			
		0	16	bar	32 bar	80 bar			
		0	25	bar	50 bar	125 bar			
		0	40	bar	80 bar	160 bar			
		0	60	bar	120 bar	240 bar			
		0	100	bar	200 bar	400 bar			
		0	160	bar	320 bar	640 bar			
		0	250	bar	375 bar	1000 bar			
		0	400	bar	600 bar	1200 bar			
		0	600	bar	900 bar	1800 bar			
KPT 50 EPT 50	Absolute Pressure	0	1	Abar	2 Abar	5 Abar			
		0	2	Abar	4 Abar	10 Abar			
		0	6	Abar	12 Abar	20 Abar			
		0	10	Abar	20 Abar	30 Abar			
		0	16	Abar	32 Abar	50 Abar			
		0	25	Abar	50 Abar	80 Abar			

Output Signal

Output signal		
Signal type	Current (2-wire)	4 ... 20 mA
	Voltage (3-wire)	0 ... 10 VDC
		0 ... 5 VDC
		1 ... 5 VDC
		0.5 ... 4.5 VDC
Load Ω	Current (2-wire)	≤ (auxiliary power - 8 V) / 0.02 A
	Voltage (3-wire)	> Maximum output signal / 1 mA
Voltage supply	Output signal 4 ... 20 mA	9 ... 36 VDC
	Output signal 0 ... 10 VDC	9 ... 36 VDC
	Output signal 0 ... 5 VDC	9 ... 36 VDC
	Output signal 1 ... 5 VDC	9 ... 36 VDC
	Output signal 0.5 ... 4.5 VDC	5VDC +/- 10%



Process connections

Process connection				
Code	**Process connection**	**Connection standard**	**Seal Standard**	**Seal material**
MG41	G1/4″ male	DIN EN ISO 1179-2	DIN 3852	FKM (Viton)
MG42			DIN 3869	
MG43		EN837		
FG41	G 1/4″ female			
MG21	G1/2″ male	DIN EN ISO 1179-2	DIN 3852	FKM (Viton)
MG22			DIN 3869	
MN41	¼″ NPT male	ANSI/ASME B1.20.1		
MN21	½″ NPT male			
FN41	¼″ NPT female			
M716	7/16″ - 20UNF female with valve opener	SAE J514		





Electrical connections

Electrical connection							
Code	**Process connection**	**IP**	**Schematic**		**Current out-put (2 wire)**	**I / V Output (3 wire)**	**Digital out-put (Mod-bus-RTU)**
D	Hirschmann EN175301	IP65		1	I+	U+ (Supply)	X
				2	I-	U- (Ground)	
				3	X	Analog Signal	
				4	Earth	Earth	
M	Round plug M12x1 5 pin	IP68		1	I+	U+ (Supply)	U+ (Supply)
				2	X	Analog Signal	A (+)
				3	I-	U- (Ground)	U- (Ground)
				4	Earth	Earth	B (-)
				5	X	X	Earth
C	Direct Cable	IP67		R	I+	U+ (Supply)	U+ (Supply)
				BK	I-	Analog Signal	A (+)
				BL	X	U- (Ground)	U- (Ground)
				BR	X	X	B (-)
				----	Earth	Earth	Earth
P	Packard metri pack	IP67		1	I+	U+ (Supply)	X
				2	I-	U- (Ground)	
				3	Earth	Analog Signal	
R	Round plug DIN72585 ISO15170	IP69K		1	I+	U+ (Supply)	U+ (Supply)
				2	X	Analog Signal	A (+)
				3	Earth	Earth	B (-)
				4	I-	U- (Ground)	U- (Ground)

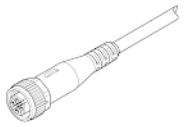
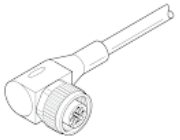
Typecodes

KPT	20	D	-	010	-	C1	-	Mg4	+	N

Housing and Process connection material	Stainless Steel 316-L	KPT
	Stainless Steel 304	EPT
Measuring Type	Relative pressure ranges	20
	Vacuum,mbar and +/- relative pressure ranges	30
	Absolute Pressure ranges	50
Electrical Connection	Hirschmann En175301	D
	Round plug M12x1 5 pin	M
	Direct Cable	C
	Packard metri pack	P
	Round plug DIN72585 ISO15170	R
Pressure Range	0 .. -1 bar	0V1
	-1 .. 0 bar	V10
	-1 .. 12 bar	V12
	0 .. 100 mbar	.10
	0 .. 250 mbar	.25
	0 .. 600 mbar	.60
	3 .. 15 Psi	315
	0 .. 1	001
	0 .. 2.5	2.5
	0 .. 4	004
	0 .. 6	006
	0 .. 10	010
	0 .. 16	016
	0 .. 25	025
	0 .. 40	040
	0 .. 60	060
	0 .. 100	100
	0 .. 160	160
	0 .. 250	250
	0 .. 400	400
	0 .. 600	600
	0 .. 1	A01
	0 .. 2	A02
	0 .. 6	A06
	0 .. 10	A10
	0 .. 16	A16
	0 .. 25	A25
Output Signal	4 .. 20 ma	C1
	0 .. 10 VDC	V1
	0.5 .. 4.5 VDC	V2
Process Connection	G1/4" male - Seal: DIN 3852, DIN 3869, En837	Mg4
	G 1/4" female	Fg4
	G1/2" male - Seal: DIN3852, DIN 3869	Mg2
	¼"NPT male	Mn4
	½" NPT male	Mn2
	¼" NPT female	Fn2
	7/16" - 20UNF female with valve opener	716
Options	RS485 - Modbus RTU	N4
	Cooling Element	CL
	Top Mount Indicator	LD

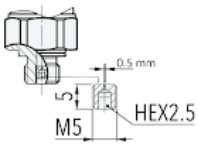
Accessories

Electrical connection accessories

Shape	Name	Length	IP	Order Code
	Female M12x1 4 Pin Straight socket Open end	1 m	IP 68	KEA-MF-STR-100
		2.5 m		KEA-MF-STR-250
		5 m		KEA-MF-STR-500
	Female M12x1 4 Pin Angled socket Open end	1 m	IP 68	KEA-MF-ANG-100
		2.5 m		KEA-MF-ANG-250
		5 m		KEA-MF-ANG-500

Shape	Name	Pin #	IP	Order Code
	Femail Hirschmann EN175301 for cable connection	2+1	IP 65	KEA-DF-67W-BL
		3+1	IP 67	KEA-DF-PG9-BL

Mechanical connection accessories

Shape	Name	Dimension	Order Code
	**Pressure peak damping element** Orifice diameter: 0.5mm		KMA-PD-0.5
	**Siphons** For protection pressure transmitter against hot pressure media such as steam and also to reduce the effect of rapid pressure surges		KMA-SP-***
	**Pressure Snubber** For protection pressure transmitters against sud-den pressure increase or fluctuations		KMA-SB-***

Accessories

Digital indicators

Shape	Name	Technical specification	Order Code
	**Head mount indicator** for current output trans-mitters with Hirschman EN175301 connector	In: 4..20 ma Power loop Out: 4..20ma 2x Digital out NPN	KUIH-L-T1-C1AL
	**Panel mount indicator** **KUIS**: 48x48x80mm **KUIR**: 96x48x80mm **Supply power:** **A**: 90..256 vac With Aux 24VDC-30ma **D**: 18 .. 30 VDC **Input signal:** **T2**: 4..20ma, 0..10VDC, 0..75mv **T3**: T2+ Thermocouple, RTD **Output signal:** **C1**: 4..20ma **R**: Relay output **N4**: RS485 modbus-rtu (master)	Current output Aux 24VDC - 30ma	KUIS-A-T2-C124
		Current output 2x Relay output Aux 24VDC - 30ma	KUIS-A-T2-C1RR24
		Current output Aux 24VDC - 30ma	KUIR-A-T2-C124
		Current output 2x Relay output Aux 24VDC - 30ma	KUIR-A-T2-C1RR24
		Current output 2x Relay output RS485 modbus-rtu (master) KUIR-A-T3-C1RR24N4	KUIR-D-T3-C1RRN4
			KUIR-A-T-3C1RR24N4

Data Loggers

Shape	Name	Interface		Order Code
	**Data logger** Power: 9 .. 28 VDC Input: 4 Analog , 2 Digital Protocols: Modbus-TCP, MQTT, HTTP post	GSM GPRS	-	KLOG-2AI2DIS-G
			Modbus-RTU (master)	KLOG-2AI2DIN4S-G

Power Supplies

Shape	Name	Output		Order Code
	**Power supply** Input: 100..240 vac Short circuit protected Overload protected	24 VDC	2.5 A 60 W	KEA-DF-67W-BL
			5 A 120 W	KEA-DF-PG9-BL



info@altonautomation.de

Brücke 2,41462 Neuss,Germany

www.altonautomation.de

+49 2131 2988695