



## Applications

- Pneumatic Systems
- Hydraulic Systems
- Machines Equipments
- Air Cooling – Heating Systems
- Water Technologies
- Automation Applications

Atek BCT 22 series Pressure transmitters offer high performance for demanding commercial and heavy industry applications.

Our products with piezoresistive working principle can be used in water, air, oil etc. applications.

The standard stainless steel housing with IP65 / IP67 protection can work in harsh environments.

The BCT 22 series, which is not affected by electrical fluctuations and reverse connections due to over voltage and reverse polarity protection, has a long life.

- Piezoresistive pressure sensor
- 22 mm body diameter
- Long-term excellent work
- Stainless steel case
- EMC and reverse polarity protection
- Analog 4 ... 20mA / 0 ... 10VDC etc. different analog outputs or CANopen output option
- Different models from 100 mBar to 600 Bar

## BCT 22 TECHNICAL SPECIFICATIONS

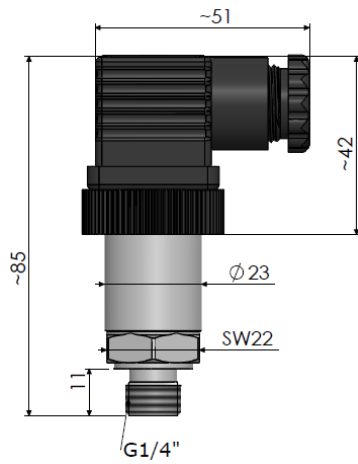
<b>Measurement Range</b>	Diffrent models from 0...100mbar to 0...600Bar Different vacuum models from 0... -100mbar to 0...-1Bar
<b>Measurement Type</b>	Ambient pressure measurement as relative Air, Water, Oil, Non-explosive gases
<b>Working Principle</b>	Piezoresistive
<b>Maximum Compressive Strength</b>	300%F.S. ≤700mbar, 200%F.S. < 250Bar 150%F.S. ≥250Bar *Can be 3 or 5 times.
<b>Oring – Sealing</b>	Standard NBR, optional FKM(Viton) or EPDM
<b>Output Signal</b>	4...20mA (2 Wire), 0...20mA (3 Wire) 0...10VDC, 1...6VDC, 0...5VDC, Ratiometric CANopen
<b>Mechanical Connection</b>	G1/4, G1/8, G1/2, NPT1/4, NPT1/8, NPT1/2, M14, M20x1.5, UNF7/16X20M, UNF7/16X20F
<b>Supply Voltage</b>	<b>4-20 mA</b> : 8 ... 32 V <sub>DC</sub> <b>0-20 mA</b> : 12 ... 30 V <sub>DC</sub> <b>0-10 V</b> : 12 ... 30 V <sub>DC</sub> <b>Ratiometric</b> : 5 V <sub>DC</sub> <b>CANopen</b> : 8...26 V <sub>DC</sub>
<b>Operating Current</b>	Maximum 30mA
<b>Resolution</b>	12 bit
<b>Accuracy</b>	±%0,5 F.S or ±%0,3 F.S @25° C
<b>Long Term Stability</b>	±%0,3 F.S / year
<b>Response Time</b>	Standard: 25ms %10...%90 nominal pressure Optional: 1ms, 5ms, 125ms *1ms response time is only available for current output, not for voltage output models.
<b>Protection Class</b>	IP65 or IP67
<b>Operating Temperature</b>	-40°C ... +85°C
<b>Ambient Temperature</b>	-40°C ... +85°C
<b>Body</b>	Stainless steel body - 1.4305 (AISI303) Optional stainless 316L or Titanium
<b>Electrical Connection</b>	Models with socket DIN43650-A, DIN43650-C, M12, Packard, Circular or 3 x 0.14mm <sup>2</sup> PVC cable
<b>Weight</b>	65 ... 110 grams (except socket)
<b>Mounting / Tightening Torque</b>	15 ... 20 Nm

F.S : Full Scale ( working pressure range )

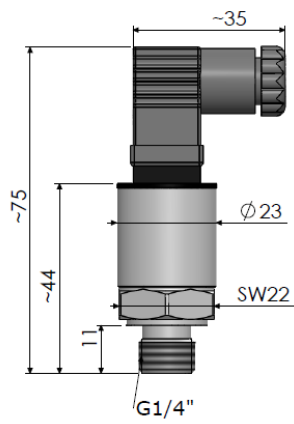
\* Product life will be shortened when more pressure is given than working pressure  
According to the product, it may be damaged at high pressure of 3-5 times.

\*\* IP67 protection is provided if M12 socket models are equipped with press-printed sockets.

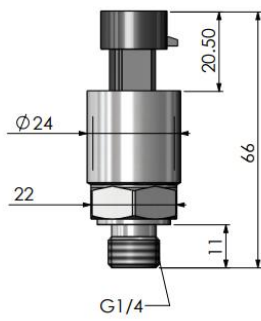
S30 SOCKET : DIN43650-A



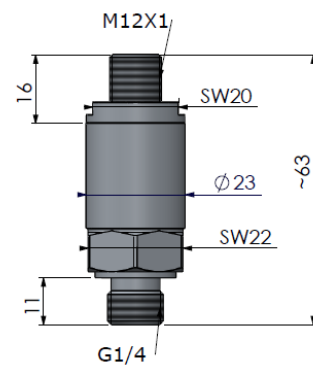
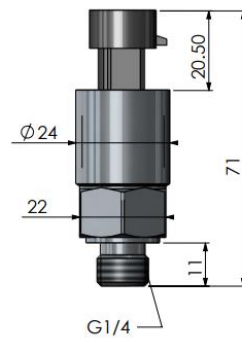
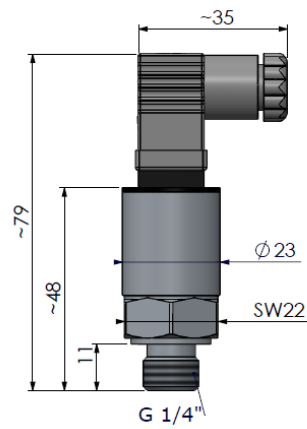
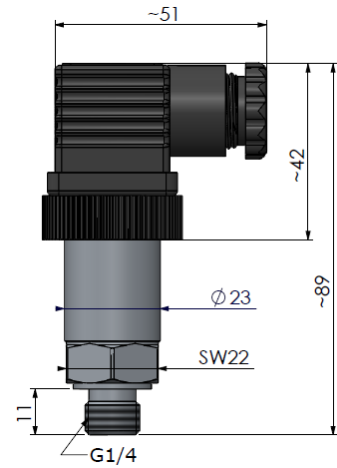
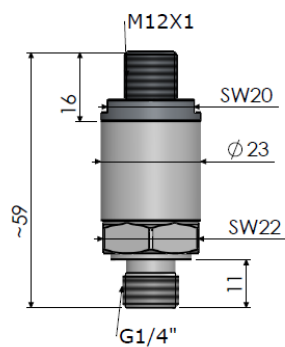
S31 SOCKET : DIN43650-C



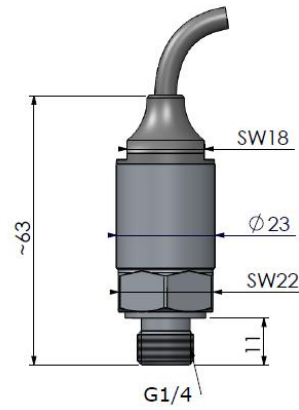
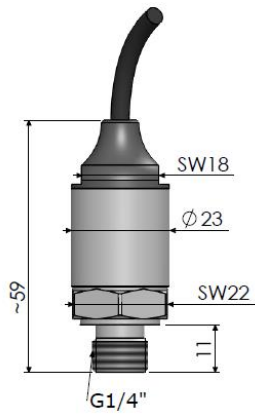
S32 SOCKET : PACKARD



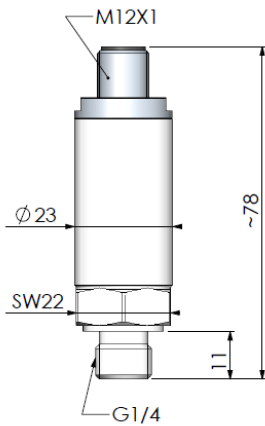
S12/S15 SOCKET : M12



## CABLE



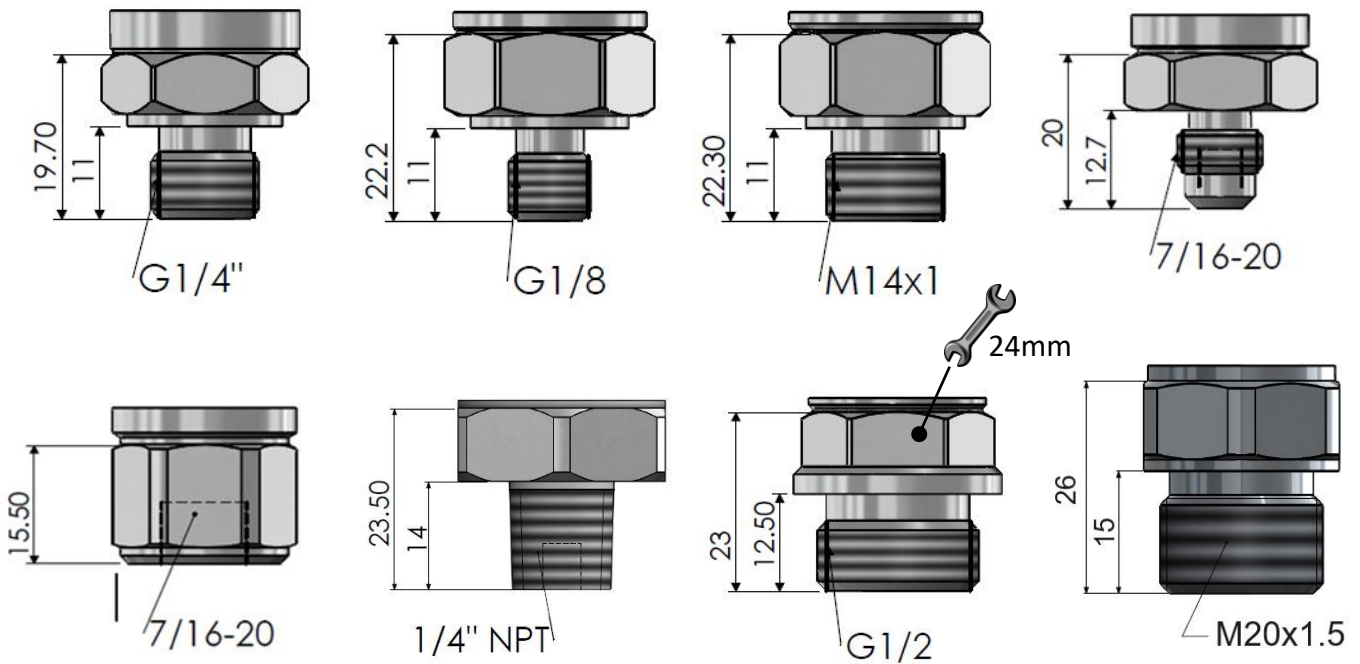
### Mechanical Dimensions (CANopen)



### CANopen Specifications

<b>Communication Profile</b>	CiA 301
<b>Device Type</b>	CANopen, CiA DS404
<b>Node ID</b>	Can be set from 1 to 127 with LSS or SDO Default Node ID:1
<b>Baud Rate</b>	10 kBit/s, 20 kBit/s, 50 kBit/s, 100 kBit/s, 125 kBit/s, 250 kBit/s, 500 kBit/s, 800 kBit/s, 1 Mbit/s Default Baud Rate:125 kBit/s
<b>PDO Data Rate</b>	1000 ms
<b>Error Control</b>	Heartbeat, Emergency Message
<b>PDO</b>	4 Tx PDO
<b>PDO Modes</b>	Event/Time triggered, Synch/Asynch
<b>SDO</b>	1 server
<b>Position Information</b>	Object Dictionary 0x6/7/8/9/130
<b>Termination Resistance</b>	Optional

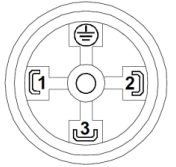
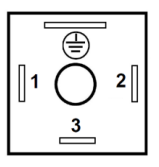
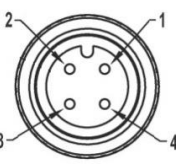
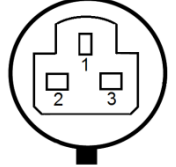
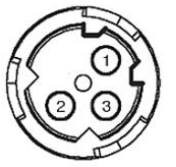
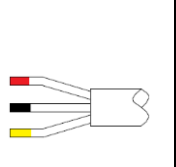
## MECHANICAL CONNECTION



- \* In the case of the G1/2 model, the dimension of key slot is 24mm. All other models are 22mm.
- \*\* Do not turn the product by holding from socket during installation. Otherwise, the product may be damaged.

## ELECTRICAL CONNECTION

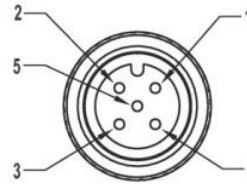
### ELECTRICAL CONNECTION FOR ANALOG OUTPUTS

								
		DIN D43650-A	DIN D43650-C	M12 / 4 pin		PACKARD	CIRCULAR	CABLE
		S30	S31	S12	S15	S32	S33	
		PIN NO	PIN NO	PIN NO		PIN NO	PIN NO	COLOR
CURRENT OUTPUT	+Vcc	2	2	2	1	B	1	RED
	Analog Out	1	1	1	3	C	2	BLACK
VOLTAGE OUTPUT	+Vcc	2	2	2	1	B	1	RED
	GND	1	1	1	3	C	2	BLACK
	Analog Out	3	3	3	2	A	3	YELLOW

- \* For IP67 protection at model with M12 socket, press-printed cable should be used. Otherwise, it can not be used under IP67 conditions.
- \*\* PVC cable is used as standard in the model with cable.
- \*\*\* On models with the PACKARD socket, the letter of pin numbers are 1(C), 2(B), 3(A).
- \*\*\*\* Only S30 socket type can be selected for 0-20mA analog output. Other socket types or wired models cannot be selected.

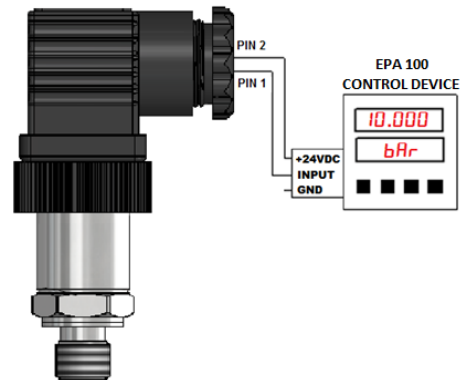
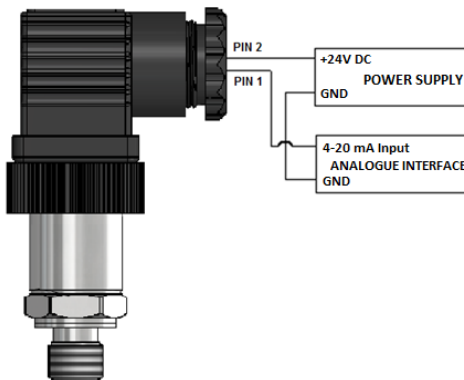
### ELECTRICAL CONNECTION FOR CANOPEN OUTPUTS

Signal	M12 / 5 Pin (S13)	Cable
CAN_SHIELD	Pin 1	Shield
U+ (8..26V)	Pin 2	Red
GND (0V)	Pin 3	Black
CAN_H	Pin 4	Yellow
CAN_L	Pin 5	Green



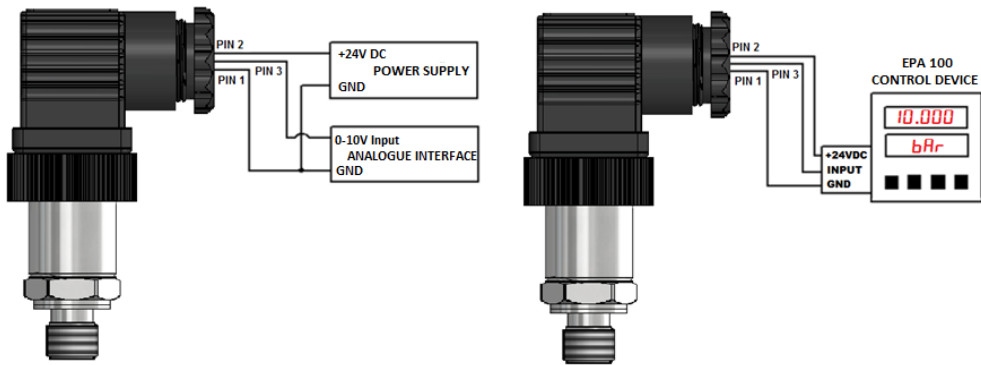
2 Wire 4-20mA Connection Socket Pin No	Signal
1	4...20mA Analogue Output
2	+8...32 VDC (Supply)

### Sample Connection:



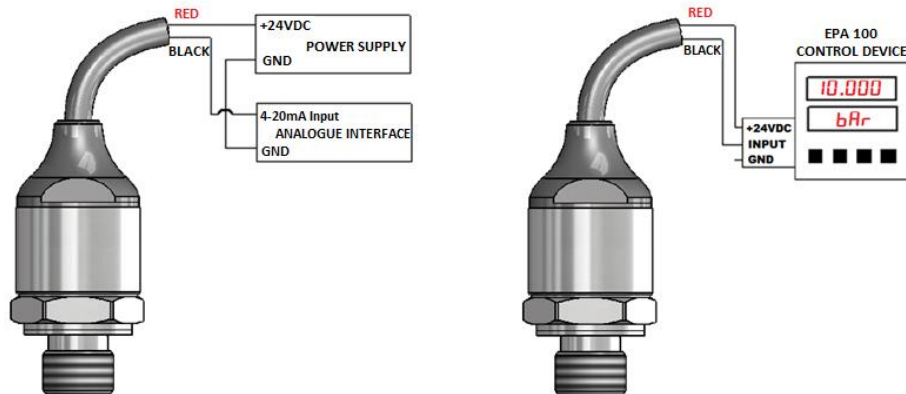
3 Wire 0-10VDC or 0-20 mA Connection Socket Pin No	Signal
1	GND
2	+12...30 VDC (Supply)
3	0...10VDC or 0-20 mA Output

**Sample Connection:**



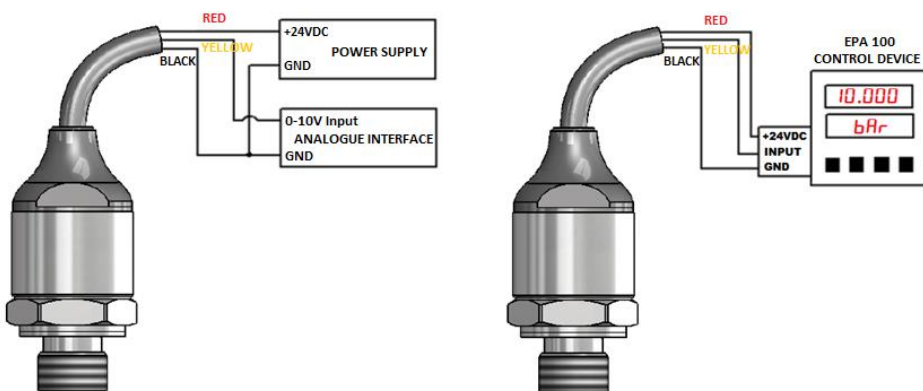
2 Wire 4-20mA Connection Cable Color	Signal
BLACK	4...20mA Analogue Output
RED	+8...32 VDC (Supply)

**Sample Connection:**



3 Wire 0-10VDC Connection Cable Color	Signal
BLACK	GND
RED	+12...30 VDC (Supply)
YELLOW	0...10VDC Output

**Sample Connection:**



## WARNING

Wrong connections disrupt the sensor.  
If water pressure measurement is used, insert M5 valve to the transmitter. Otherwise, the pressure peaks of water pump disrupts the transmitter.

### ORDER CODING

#### Output Signal

Voltage Output Product  
V : 0-10VDC (standard)  
V1 : 0-5VDC  
V2 : 1-6VDC  
V3 : 0,5-4,5VDC  
V4 : 0,5-5,5VDC  
V5 : 1-5VDC  
V6 : 1-10VDC

Ratiometric Products  
V8 : Ratiometric 0.5-4.5VDC  
V9 : Ratiometric 0-5VDC

Current Output Products  
A : 4-20mA (2-wire) (standard)  
A0 : 0-20mA (3-wire)

CANopen Output Products  
C: CANopen

\* Ask for other options.

#### Electrical Connection

S12 : M12x1 4 pin  
S13 : M12x1 5 pin (for CANopen output)  
S15 : M12x1 4 pin (1 supply, 3 output)  
S30 : DIN43650-A type large type socket  
S31 : DIN43650-C type small type socket  
S32 : Packard socket  
S33 : Circular socket  
2M : 2 meters cable

\*Only S30 socket can be selected for 0-20mA (A0) analog output. Other socket types or wired models cannot be selected.

\* Ask for other options.

### Model

BCT 22

10Bar

A

G1/4

S30

-

#### Working Pressure Range

0...-100mBar : Vacuum 0...-100mbar  
-1...0Bar : Vacuum -1...0BAR  
0...-1Bar : Vacuum (Reverse Calibration)

100mBar : 0...100mbar  
250mBar : 0...250mbar  
400mBar : 0...400mbar  
600mBar : 0...600mbar

1Bar : 0...1BAR  
10Bar : 0...10BAR  
16Bar : 0...16BAR  
25Bar : 0...25BAR  
100Bar : 0...100BAR  
160Bar : 0...160BAR  
250Bar : 0...250BAR  
400Bar : 0...400BAR  
600Bar : 0...600BAR

\* Ask for other options.

#### Mechanical Connection

G1/4 : G1/4 Connection  
G1/8 : G1/8 Connection  
G1/2 : G1/2 Connection  
NPT1/4 : NPT1/4 Connection  
NPT1/8 : NPT1/8 Connection  
NPT1/2 : NPT1/2 Connection  
M14 : M14x1 Connection  
M20x1.5 : M20x1.5 Connection  
7/16M : UNF7/16x20M Connection  
7/16F : UNF7/16x20F Connection

\* Ask for other options.

#### Body Material/ Custom Coding

Empty : Stainless 303  
E316 : Stainless 316L

\* Ask for other options.

#### Sample Code :

BCT 22 100mBar A G1/4 S30

Features: 0...100mbar working range, 4-20mA analogue output (2 wire connection), G1/4 connection, DIN43650-A socket, stainless 303 body

BCT 22 10Bar A G1/4 S30 E316

Features: 0...10BAR working range, 4-20mA analogue output (2 wire connection), G1/4 connection, DIN43650-A socket, stainless 316L body

### BY-PRODUCTS

#### BSS Series Pressure Transmitter Coolers

[Max. 250 °C](#)

#### EPA Series Measurement and Control Devices

[48x48mm model EPA 100](#)

[74x74mm model EPA 200](#)

[96x48mm model EPA 300](#)



### Atek Elektronik Sensör Teknolojileri Sanayi ve Ticaret A.Ş.