PRESSURE TRANSMITTER

"Piezoresistive Pressure Sensor – 22 mm Body Diameter"

BCT 22

YERLİ ÜRETİM

- 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

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.

BCT 22 TECHNICAL SPECIFICATIONS	
Measurement Range	Diffrent models from 0…100mbar to 0…600Bar Different vacuum models from 0… -100mbar to 0…-1Bar
Measurement Type	Ambient pressure measurement as relative Air, Water, Oil, Non-explosive gases
Working Principle	Piezoresistive
Maximum Compressive Strength	300%F.S. ≤700mbar, 200%F.S. ＜250Bar 150%F.S ≥250Bar *Can be 3 or 5 times.
Oring – Sealing	Standard NBR, optional FKM(Viton) or EPDM
Output Signal	4...20mA (2 Wire), 0...20mA (3 Wire) 0...10VDC, 1…6VDC, 0...5VDC, Ratiometric CANopen
Mechanical Connection	G1/4, G1/8, G1/2, NPT1/4, NPT1/8, NPT1/2, M14, UNF7/16X20M, UNF7/16X20F
Supply Voltage	**4-20 mA** : 8 ... 32 V_{DC} **0-20 mA** : 12 ... 30 V_{DC} **0-10 V** : 12 ... 30 V_{DC} **Ratiometric** : 5 V_{DC} **CANopen** : 8…26 V_{DC}
Operating Current	Maximum 30mA
Accuracy	±%0,5 F.S or ±%0,3 F.S @25° C
Long Term Stability	±%0,3 F.S / year
Response Time	1ms %10…%90 nominal pressure
Protection Class	IP65 or IP67
Operating Temperature	-40°C … +85°C
Ambient Temperature	-40°C … +85°C
Body	Stainless steel body - 1.4305 (AISI303) Optional stainless 316L or Titanium
Electrical Connection	Models with socket DIN43650-A, DIN43650-C, M12, Packard or 3 x 0.14mm² PVC cable (Optional PUR cable)
Weight	65 … 110 grams (except socket)
Mounting / Tightening Torque	15 ... 20 Nm

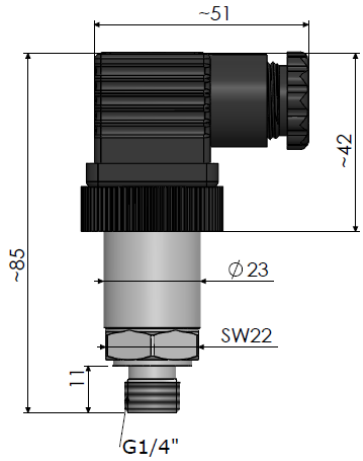
F.S : Full Scale (working pressure range)

* 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.

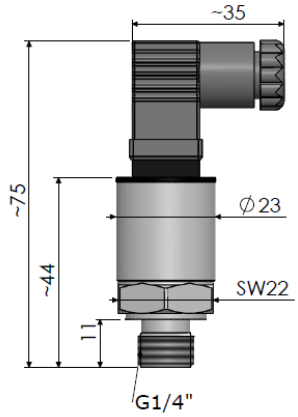
** IP67 protection is provided if M12 socket models are equipped with press-printed sockets.

Mechanical Dimensions (Between -100 miliBar and 600 Bar) (Analog)

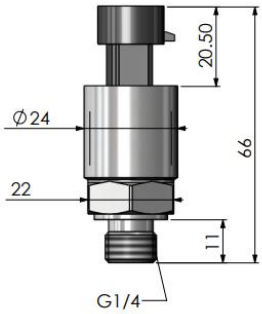
S30 SOCKET : DIN43650-A



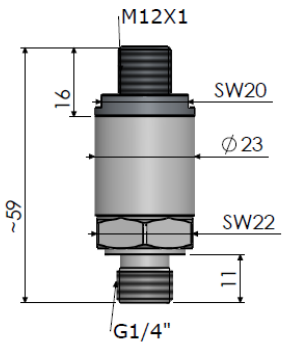
S31 SOCKET : DIN43650-C



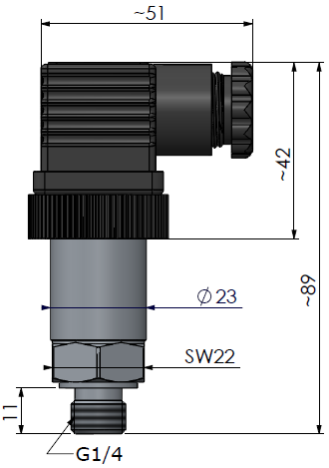
S32 SOCKET : PACKARD

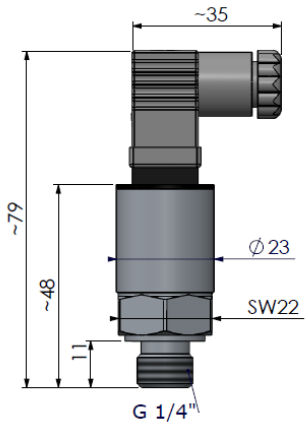


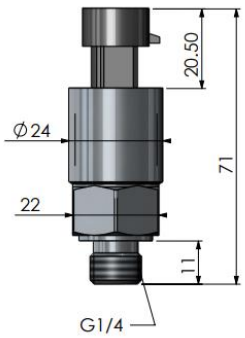
S12/S15 SOCKET : M12

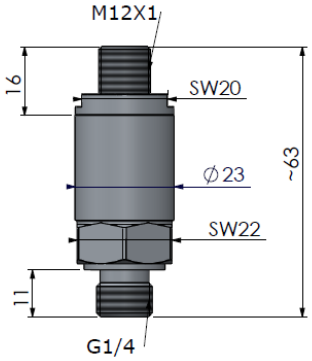


Mechanical Dimensions (Between 2 Bar and 400 Bar) (Analog)

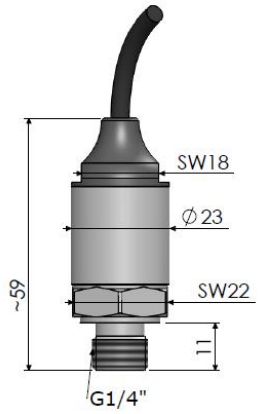


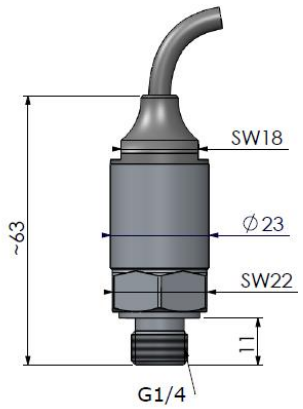




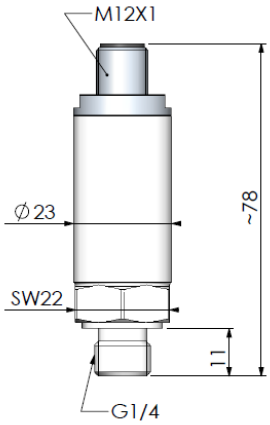


CABLE



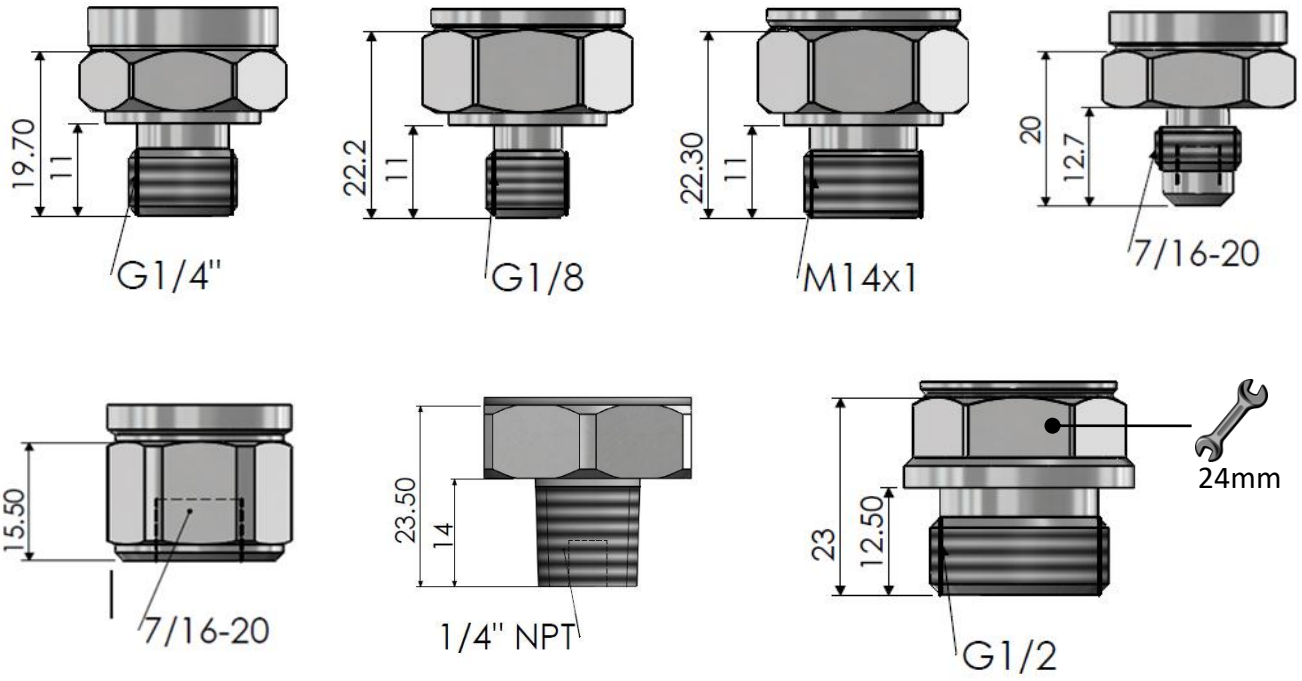


Mechanical Dimensions (CANopen)



CANopen Specifications	
Communucation Profile	CiA 301
Device Type	CANopen, CiA DS404
Node ID	Can be set from 1 to 127 with LSS or SDO Default Node ID:1
Baud Rate	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
PDO Data Rate	1000 ms
Error Control	Heartbeat, Emergency Message
PDO	4 Tx PDO
PDO Modes	Event/Time triggered, Synch/Asynch
SDO	1 server
Position Information	Object Dictionary 0x6/7/8/9130
Termination Resistance	Optional

MECHANICAL CONNECTION

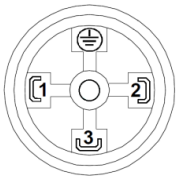
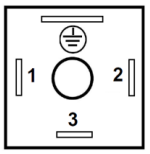
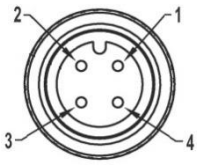
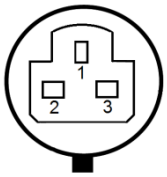
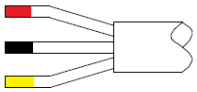


* In the case of the G1/2 model, the dimension of key slot is 24mm. All other models are 22mm.

** Do not turn the product by holding from socket during installation. Otherwise, the product may be damaged.

ELECTRICAL CONNECTION

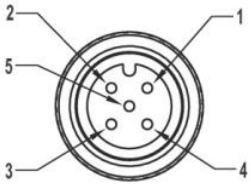
ELECTRICAL CONNECTION FOR ANALOG OUTPUTS

							
		DIN D43650-A	**DIN D43650-C**	**M12 / 4 pin**		**PACKARD**	**CABLE**
		S30 PIN NO	S31 PIN NO	S12 PIN NO	S15	S32 PIN NO	 COLOR
CURRENT OUTPUT	+Vcc	2	2	2	1	2	RED
	Analogue Output	1	1	1	3	1	BLACK
VOLTAGE OUTPUT	+Vcc	2	2	2	1	2	RED
	GND	1	1	1	3	1	BLACK
	Analogue Output	3	3	3	2	3	YELLOW

* For IP67 protection at model with M12 socket, press-printed cable should beused. Otherwise, it can not be used under IP67 conditions.
** There are PVC (standard) or PUR (optional) cable options in the model with cable.
*** On models with the PACKERD socket, the letter of pin numbers are 1(C) , 2(B) , 3(A).

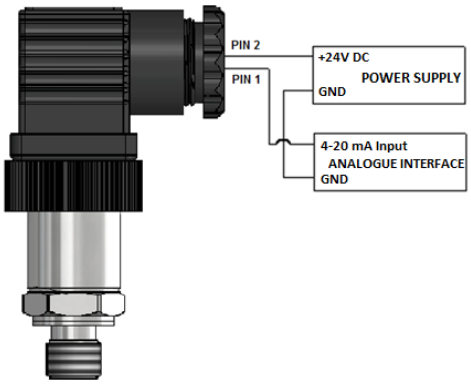
ELECTRICAL CONNECTION FOR CANOPEN OUTPUTS

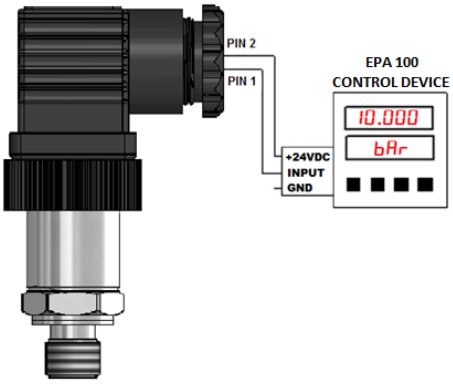
Signal	M12 / 5 Pin Socket	Cable
CAN_SHIELD	Pin 1	Shield
U+ (8..26V)	Pin 2	Red
GND (0V)	Pin 3	Black
CAN_H	Pin 4	Yellow
CAN_L	Pin 5	Green



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

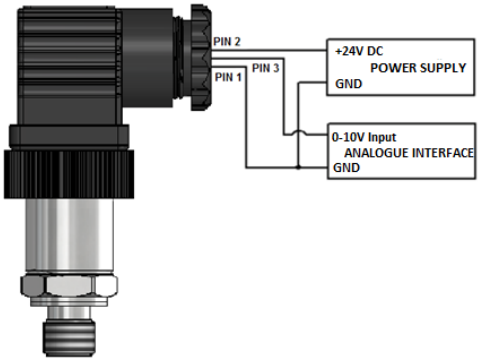
Sample Connection:

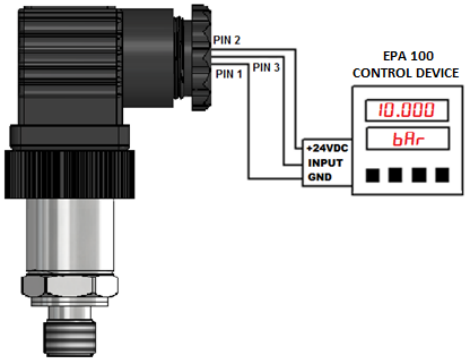




3 Wire 0-10VDC or 0-20 mA Connection Socket Pin No	Signal
1	GND
2	+12...30 VDC (Supply)
3	0...10VDC or 0-20 mA Output

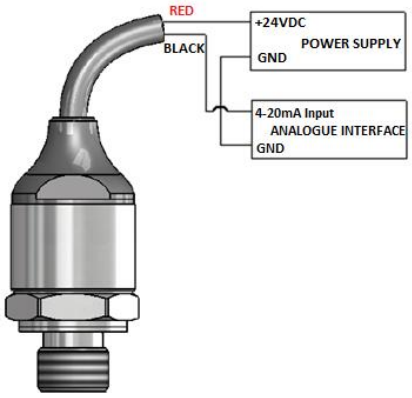
Sample Connection:

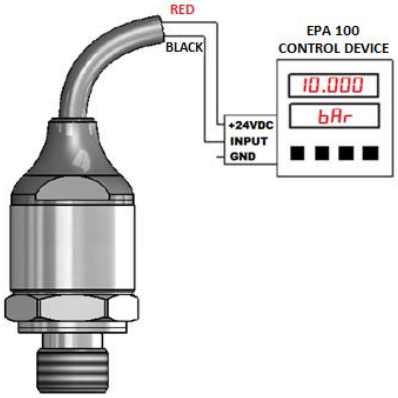




2 Wire 4-20mA Connection Cable Color	Signal
BLACK	4...20mA Analogue Output
RED	+8...32 VDC (Supply)

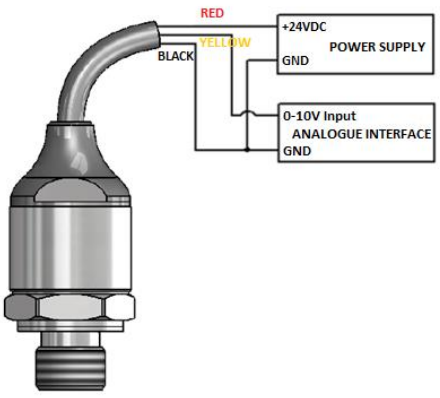
Sample Connection:

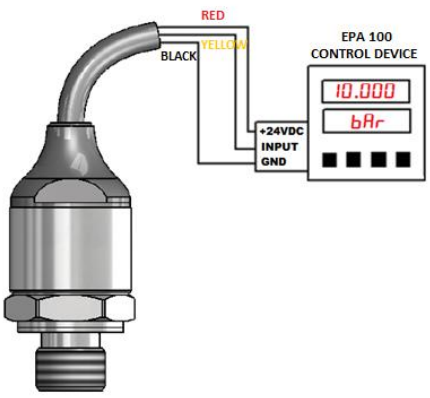




3 Wire 0-10VDC or 0-20 mA Connection Cable Color	Signal
BLACK	GND
RED	+12...30 VDC (Supply)
YELLOW	0...10VDC or 0-20 mA Output

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

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

* 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
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

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www.metrolog.net

Metrolog Controles de Medição

Address / Endereço:

Rua Sete de Setembro, 2656
13560-181 - São Carlos - SP
Brazil / Brasil

Phone / Telefone:

+55 (16) 3371-0112
+55 (16) 3372-7800

Internet:

www.metrolog.net
metrolog@metrolog.net