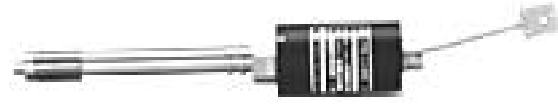


CZ-200P REX-PG410 PCT-300



Resin pressure sensor : CZ-200P



Resin pressure indicator : REX-PG410



Output converter : PCT-300

General Description

RKC's resin pressure measuring system is suitable for monitoring and control of resin pressure for extruders.

The combination of resin pressure sensor (CZ-200P), the resin pressure indicator (REX-PG410), the output converter (PCT-300) and process controller (REX-G9) contributes to the improvement of productivity and quality of products.

The CZ-200P has new features such as built-in thermocouple while retaining high reliability of CZ-100P. The features of CZ200P includes: a wide selection of screw type, UNF, PF and M14/16 type screws, Low pressure type (0 to 0.5MPa, 0 to 1MPa), built-in thermocouple.

A push-rod method is used in CZ-200P. There is no risk of contamination in case of accident, so CZ-200P suits food processing application.

Features

Resin Pressure Sensor CZ-200P

- ☆ The total loop accuracy of 0.5%
(combination with RKC converter)
- ☆ High reliability and stability
- ☆ Wide selection of the range from 1MPa to 150MPa
- ☆ Various screw types, UNF, PF and M14/16
- ☆ Optional built-in thermocouple

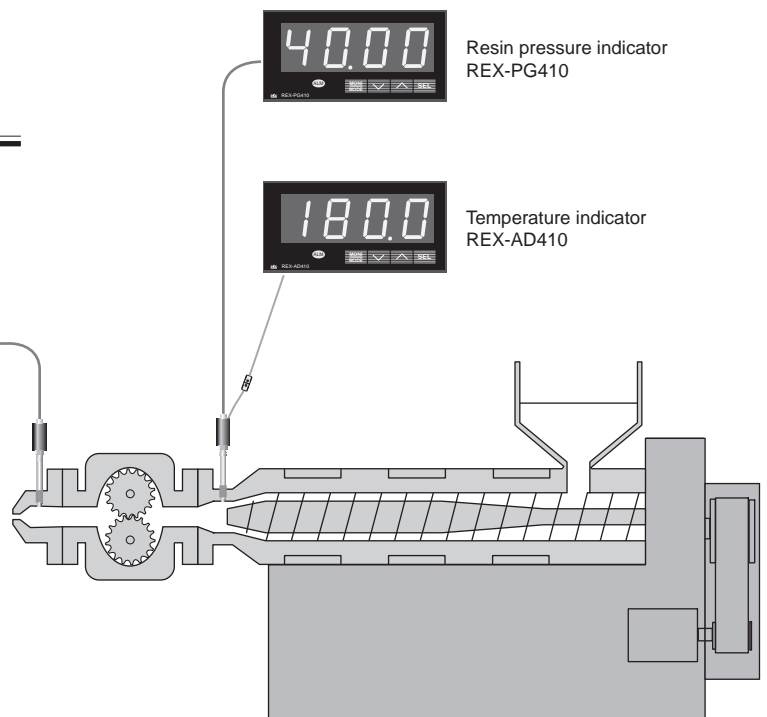
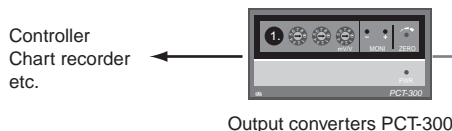


Resin Pressure Indicator REX-PG410

- ☆ Easy-to-read large LED (20mm high)
- ☆ Peak and bottom hold function (Memorization of the maximum and minimum measured value)
- ☆ 100msec sampling cycle time
- ☆ Optional communication (RS422A/RS-485), retransmission output, up to two alarms

Output Converter PCT-300

- ☆ Signal converter for CZ-200P
- ☆ Up to four analog outputs
- ☆ Linearization function



Specifications

Resin Pressure Sensor CZ-200P

Construction

4 sides adhered strain gauge type wheatstone bridge

Rated pressure

General specification: 0 to 10, 0 to 20, 0 to 35, 0 to 50, 0 to 70 MPa
0 to 100 MPa
High pressure type : 0 to 150 MPa (CZ-200P-H type only)
Low pressure type : 0 to 1, 0 to 5 MPa (CZ-200P-L type only)

Rated output : 1.4mV/V \pm 28%

Bridge impressed voltage : 7 V DC

Accuracy : Within \pm 1% of full scale
Within \pm 2% of full scale (Over 100 MPa)
• At 150°C of diaphragm temperature.
(CZ-200P-HK type is 250°C.)

Allowable maximum temperature of the diaphragm : 400°C

Allowable maximum temperature of the strain gauge : 150°C

Zero point temperature effect

\pm 0.2%/10°C (To the temperature of the diaphragm) of full scale
 \pm 0.3%/10°C (To the temperature of the diaphragm) of full scale
• Only for over 100MPa or CZ-200P-H type with the range of 0 to 10 MPa.

Output temperature effect

Output temperature effect is an equal value as zero point temperature effect.

Allowable overload : Within 120% of rated pressure
Within 500% of rated pressure (1MPa type)

Marginal overload : Within 150% of rated pressure
Within 1000% of rated pressure (1MPa type)

Temperature sensor function

Sensor type : Thermocouple : K or J (Ungrounded junction)
Cable length : 100mm (Standard, Maximum length 1 m)
Temperature detection position : Internally 2mm from a diaphragm

Resin Pressure Indicator REX-PG410

Input

RKC's resin pressure sensor CZ-200P (CZ-100P)

Sampling time : 0.1 sec.

Performance

Measuring accuracy : \pm (0.1% of full scale + 1 digit)

< Standard function >

Contact input

Number of input : 2 points, Non-voltage contact input
Function : Reset of auto-zero and hold

Hold function

Peak hold : Holds maximum pressure value
Bottom hold : Holds minimum pressure value
The held value is initialized by the power-off or reset operation.

< Optional function >

Analog output

Number of point : 1 point (PV value)
Output signal : 0 to 5V DC, 1 to 5V DC, 0 to 10V DC, 0 to 10mV DC
4 to 20mA DC, 0 to 20mA DC
Load resistance : More than 1k Ω for voltage output
Less than 600 Ω for current output
Output accuracy : \pm 0.3% of span

Alarm output

Number of point : 2 points
Alarm action : High or low alarm (Available for hold function)
Output : Relay output, Form A contact, 250V AC 1A
(resistive load)

Digital communications

Communication method : RS-422A (4-wire), RS-485 (2-wire)
Communication speed : 1200, 2400, 4800, 9600, 19200 BPS
Bit format
Start bit : 1
Data bit : 7 or 8
Parity bit : Without, Odd or Even
Stop bit : 1 or 2
Communication code : ASCII(JIS) 7-bit code

< General Specifications >

External Dimensions (W x H x D)
96 x 48 x 100mm

Supply voltage

- 90 to 264V AC (Including supply voltage variation)
[Rating : 100 to 240V AC] (50/60Hz common use)
- 21.6 to 26.4V AC (Including supply voltage variation)
[Rating : 24V AC] (50/60Hz common use)
- 21.6 to 26.4V DC (Ripple rate 10% p-p or less)
[Rating : 24V DC]

Power consumption

Less than 12VA (100 to 240V AC)
Less than 7.5VA (24V AC)
Less than 200mA (24V DC)

Operating environments

0 to 50°C [32 to 122°F] , 45 to 85% RH

Net weight

Approx. 300g

Output Converter PCT-300

Input

RKC's resin pressure sensor CZ-200P (CZ-100P)

Gain setting

Setting range : 10.00 to 19.99 mV/V
Setting accuracy : Within \pm 0.2% of full scale

Output

Number of points : Up to 4 points (standard : 2 points)

Output signal

- No.1 output : 0 to 10V DC (Load resistance : More than 2k Ω)
- No.2 output : 0 to 10mV DC (Load resistance : More than 10k Ω)
- No.3 output : 1 to 5V DC (Load resistance : More than 1k Ω)
- No.4 output : 4 to 20mA DC (Load resistance : Less than 600 Ω)

< General Specifications >

External Dimensions (W x H x D)
96 x 48 x 100mm

Supply voltage

90 to 264V AC (Including supply voltage variation)
[Rating : 24V DC]

Power consumption

Less than 10VA (100 to 240V AC)

Operating environments

0 to 50°C [32 to 122°F] , 45 to 85% RH

Net weight

Approx. 290g

Model and Suffix Code

■ CZ-200P

Specifications	Model and Suffix Code											
Model	CZ-200P - □ □ □ □ □ N - □ □ □ □ □ □ □ □ 0100											
Screw type	Fixed nut type PF3/8	Tip diameter : 10mm	H									
	Loose nut type PF3/4	Tip diameter : 18mm	L									
	Fixed nut type 1/2-20UNF	Tip diameter : 7.8mm	U									
Load-pipe length	Fixed nut type Under nut : L= 120mm		A									
	Fixed nut type Under nut : L= 150mm		B									
	Fixed nut type Under nut : L= 180mm		C									
	Fixed nut type Under nut : L= 210mm		D									
Diaphragm material	SUS630 (Standard)		S									
	Hastelloy C		H									
Diaphragm surface treatment	SUS630 (Standard)		N									
	Ceramic kanigen plating		K									
Intrinsically safe	Non-intrinsic safety (Standard)									N		
Pressure range	See pressure range code table below											
Linearization function	Not supplied										N	
	For REX-PG410 (Available for PG410 with S/N 98A □□□□□ or later.) For PCT-300□-□L (PCT-300 should have linearization function)										G	
Lead-pipe cover	Not supplied										N	
	With lead-pipe cover										C	
Waterproof function	Not supplied										N	
	Waterproof, connector type, equivalent to IP67 (Not available for built-in sensor type) Waterproof, direct connection type, equivalent to IP67 (Not available for built-in sensor type)										P	
Temperature sensor	Not supplied										K	
	K type thermocouple J type thermocouple										J	
Thermocouple lead length	Standard 100mm (Possible to specify by each 100mm. Maximum 1m.)											0100

- When a thermocouple is not supplied, the lead length is not necessary to be specified.
- The model code after "*" is not necessary if there is no option specified after "*" .

Pressure range code table

Code	Specifications
001P	0 - 1 MPa
005P	0 - 5 MPa
010P	0 - 10 MPa
020P	0 - 20 MPa
035P	0 - 35 MPa
050P	0 - 50 MPa
070P	0 - 70 MPa
100P	0 - 100 MPa
150P	0 - 150 MPa

- For pressure range of 0 - 5MPa or less, only the loose nut type (L type) is available.
- For pressure range of 0 - 150MPa, only the fixed nut type (H type) is available.
- For pressure range of 0 - 0.5MPa with loose nut and the range of 0 - 5Mpa with fixed nut, please contact RKC agent.
- kgf/cm² type is available. Please contact RKC agent.

Cable for pressure

Specifications	Model and Suffix Code
Heat-resistant glass coated cable : Standard 5 m	W - AB - NG - PA - 5000
Vinyl coated cable : Standard 5 m	W - AB - NV - PA - 5000
Silicon coated cable : Standard 5 m	W - AB - NS - PA - 5000

Cable for thermocouple

Specifications	Model and Suffix Code
For type K thermocouple : Standard 5 m	W - BL - KA - DA - 005000
For type J thermocouple : Standard 5 m	W - BL - JA - DA - 005000

■ REX-PG410

Specifications	Model and Suffix Code										
Model	REX-PG410 A □ * □ □ □ □ □ □										
Input type	Standard type	A									
Power supply	100 to 240V AC	4									
	24V AC/DC	3									
Alarm 1	No alarm	N									
	See alarm code table	□									
Alarm 2	No alarm	N									
	See alarm code table	□									
Analog output	Not supplied	N									
	See analog output code table	□									
Communications	Not supplied	N									
	RS-422A (4-wire)	4									
	RS-485 (2-wire)	5									

Alarm code table

Code	Specifications
H	Process high alarm
J	Process low alarm
K	Process high alarm with hold
L	Process low alarm with hold

Analog output code table

Code	Specifications
1	0 - 10mV DC
4	0 - 5V DC
5	0 - 10V DC
6	1 - 5V DC
7	0 - 20mA DC
8	4 - 20mA DC

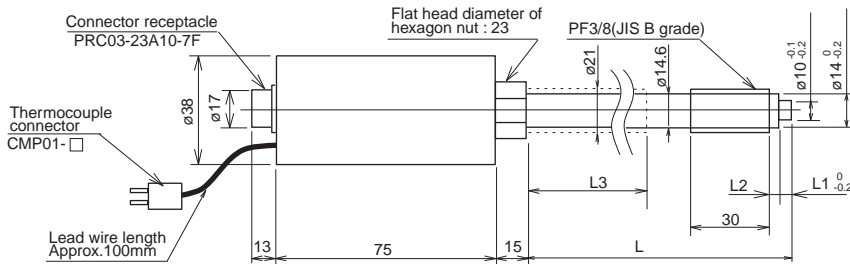
■ PCT-300

Specifications	Model and Suffix Code										
Model	PCT-300 N - □ □										
Type	Standard type N										
Number of output	2 outputs (0 to 10V DC, 0 to 100mV DC)										2
	3 outputs (0 to 10V DC, 0 to 100mV DC, 1 to 5V DC)										3
	4 outputs (0 to 10V DC, 0 to 100mV DC, 1 to 5V DC, 4 to 20mA DC)										4
Option	Not supplied										No symbol
	Gain change switch (x1 or x2) Linearization function										G L

External Dimensions

(Unit : mm)

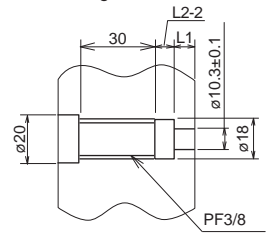
■ For fixed nut type (CZ-200P-H type)



⋯ Dotted-line section : Dimensions of lead-pipe cover (Option)

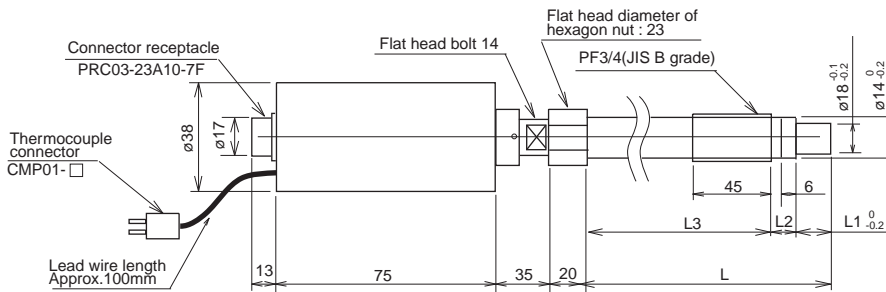
Standard dimensions				
	L	L1	L2	L3
HA	120	8	6	60
HB	150	8	6	90
HC	180	8	6	120
HD	210	8	6	150

Mounting hold



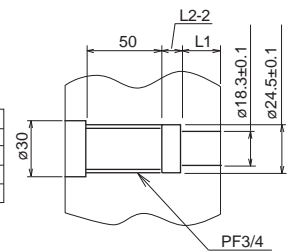
- Element finished to JIS B grade. Install the sensor so that each screw is smoothly inserted.

■ For loose nut type (CZ-200P-L type)



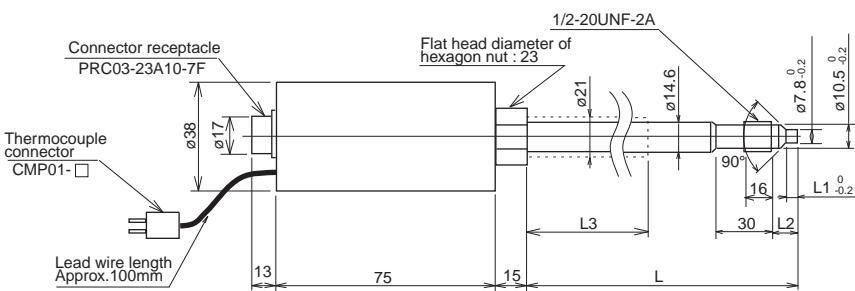
Standard dimensions				
	L	L1	L2	L3
LA	120	20	10	90
LB	150	20	10	120
LC	180	20	10	150
LD	210	20	10	180

Mounting hold



- Element finished to JIS B grade. Install the sensor so that each screw is smoothly inserted.

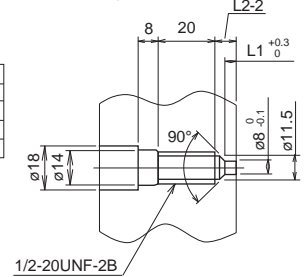
■ For fixed nut type unified thread (CZ-200P-U type)



⋯ Dotted-line section : Dimensions of lead-pipe cover (Option)

Standard dimensions				
	L	L1	L2	L3
UA	120	5.4	12	60
UB	150	5.4	12	90
UC	180	5.4	12	120
UD	210	5.4	12	150

Mounting hold



- Install the sensor so that each screw is smoothly inserted.