CZ-200P
PG500
PCT-300

Resin pressure sensor : CZ-200P

Resin pressure indicator PG500

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 (PG500), the output converter (PCT-300) 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 CZ-200P 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 mercury 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 PCT-300)
☆ 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

Supports high temperatures (SPRON Diaphragm Type)

A SPRON diaphragm with a maximum operating temperature of 550°C and excellent corrosion resistance on the level of Hastelloy C has been added to our lineup. Suitable for pressure measurement of high-function resins (high-temperature melted resins) such as polymer resins.
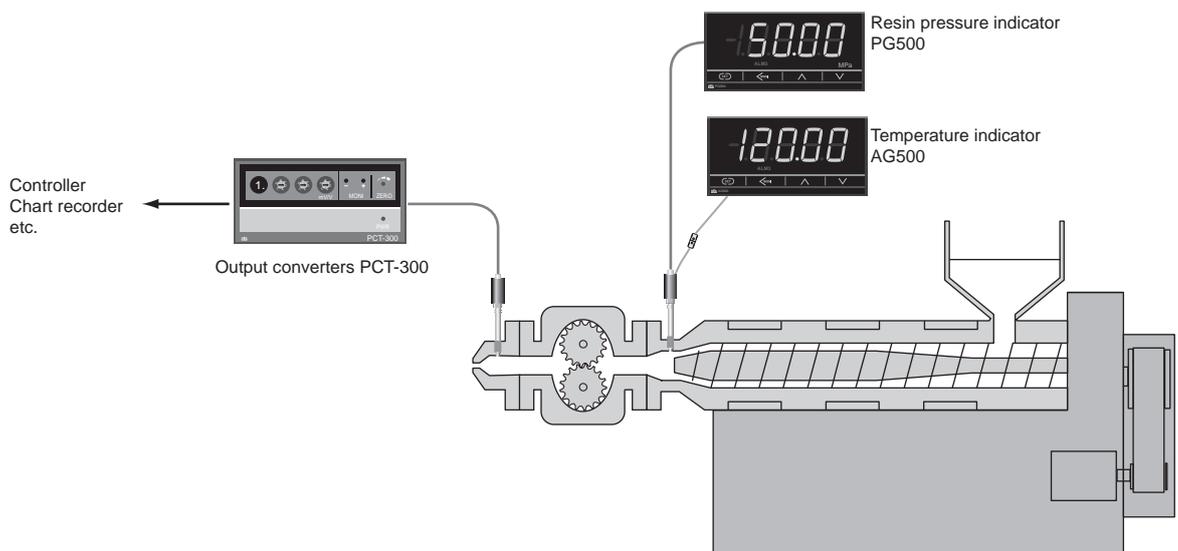 * 450°C when using a J-type thermocouple temperature sensor.

Max.550°C

Output Converter PCT-300

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

Resin Pressure Indicator PG500

☆ Easy-to-read large LED
☆ 100msec sampling cycle time
☆ Optional communication (RS422A/RS-485), retransmission output, up to two alarms

Resin pressure indicator PG500

Temperature indicator AG500

Controller
Chart recorder
etc.

Output converters PCT-300

Resin Pressure Measuring System CZ-200P

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 : 1.0 to 1.8mV/V [At 150°C of diaphragm temperature] *1
• SPRON type (Code : PN) : At 250°C

Bridge Impressed Voltage : 10V DC (at PCT-300, CT-300)
7.7V DC (at PG500, REX-PG410)

Accuracy : SUS630 type (At 150°C of diaphragm temperature)
Within ±1% of full scale
Within ±2% of full scale (Over 70 MPa)
SPRON type
Less than 70MPa   : Within ±1% of full scale
More than 480°C of 10,20,70MPa
: Within ±2% of full scale
More than 100MPa : Within ±2% of full scale
More than 480°C of 100MPa
: Within ±4% of full scale
HASTELLOY C type : Contact to RKC

Linearity : SUS630 type (At 150°C of diaphragm temperature)
Within ±1% of full scale
Within ±2% of full scale (Over 70 MPa)
SPRON type
Less than 70MPa   : Within ±1% of full scale
More than 480°C of 10,20,70MPa
: Within ±2% of full scale
More than 100MPa : Within ±2% of full scale
More than 480°C of 100MPa
: Within ±4% of full scale
HASTELLOY C type : Contact to RKC

Hysteresis : SUS630 type
Within ±0.5% of full scale
Within ±1% of full scale (Over 50 MPa)
Within ±2% of full scale (Over 70 MPa)
Within ±0.2% of full scale (1MPa type)
SPRON type
Less than 70MPa :   Within ±1% of full scale
More than 480°C of 10,20,70MPa
: Within ±2% of full scale
More than 100MPa : Within ±2% of full scale
More than 480°C of 100MPa
: Within ±4% of full scale
HASTELLOY C type : Contact to RKC

Reproducibility : Within ±0.2% of span
• More than 480°C of 10,20MPa :Within ±2% of full scale

Zero Balance : ±0.6mV/V (Within ±40% of span)

Bridge Resistance : 350Ω±5Ω (Input resistance)
350Ω±5Ω (Output resistance) *2

Allowable Maximum Temperature of the Diaphragm :
400°C (SPRON type : 550°C)

Allowable Maximum Temperature of the Strain Gauge : 200°C *3

Zero Point Temperature Effect (To the temperature of the diaphragm)
SUS630 type : ±0.2%/10°C
±0.3%/10°C (10MPa, 150MPa)
SPRON type : 0.1±0.2%/10°C
HASTELLOY C type : Contact to RKC

Output Temperature Effect
Output temperature effect is an equal value as zero point.
• SPRON type : 0.15±0.2%/10°C

Effect of Wind (Without lead pipe cover)
Within ±1% of full scale (at wind of 4m/sec)

Allowable Overload : Within 120% of rated pressure
Within 500% of rated pressure (1MPa type)
Within 1000% of rated pressure (0.5MPa type)

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

Lead Pipe Cover material : SUS630

Recommended Tightenibg Torque :
Fixed nut type: 30 N•m (300 kgf•cm)
Loose nut type: 60 N•m (600 kg•cm)

Output effect of tightening torque :
Within ±0.2% of full scale (at recommended tightening torque)
• M14, PF1/4, 1/2-UNF screw type : ±1%

*1 The output of each sensor becomes a specific value within the range of 1.0 to 1.8 mV/V.
*2 As the input side of bridge resistance, the 374Ω±10Ω type is also available.
This type is interchangeable with the 350Ω±5Ω type.
*3 When the temperature at the bottom of outer tube (nut side) is more than 180°C,
the temperature at the strain gauge exceed 200°C.
If the temperature at the strain gauge exceed 200°C, the performance cannot be
assured. Therefore, cover the heat source with a heat insulating material so that
the above temperature does not exceed 200°C.
The temperature at the strain gauge can be expected not to rise when:
• the long type of sensor is used or
• the sensor is installed a slant or transversely.
If any of the above measures can be taken, take it.

<Temperature Sensor Function>
Sensor type :   Thermocouple : K or J (Ungrounded junction, Class2)
Maximum Temperature : 550°C (Thermocouple K), 450°C(Thermocouple J)
Response time :   Approx. 90 sec (room temperature to 100°C, 98 % response)
Cable length :   100mm (Standard, Maximum length 1 m)
Temperature detection position :
Internally 2mm from a diaphragm

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

< General Specifications >
Supply Voltage
90 to 264V AC (Including supply voltage variation)
[Rating : 100 to 240V AC] (50/60Hz common use)

Power Consumption
Less than 12.5VA

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

Net Weight
Approx. 290g

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

Specifications

Resin Pressure Indicator PG500

Input
Strain gauge type pressure sensor
a) Pressure sensor gain setting range : 0.500 to 1.999mV/V
-6.0mV to 15.9mV (Including zero point adjustment range)
b) Pressure sensor gain setting range : 1.000 to 1.999mV/V
-9.8mV to 25.9mV (Including zero point adjustment range)
c) Pressure sensor gain setting range : 2.000 to 2.999mV/V
-12.3mV to 32.6mV (Including zero point adjustment range)
d) Pressure sensor gain setting range : 3.000 to 4.000mV/V
-16.1mV to 42.5mV (Including zero point adjustment range)

Gain Setting
a) Gain setting decimal point position:
Three decimal place, Four decimal place
b) Setting range: 0.500 to 4.000mV/V (Three decimal place)
0.5000 to 1.9999mV/V (Four decimal place)

Shunt resistance output value
40.0 to 100.0% (Functions when a resistance for sensitivity
adjustment built-in pressure sensor is used)

Input impedance : More than $1M\Omega$

Input break action : Up-scale/Down-scale (Selectable)

Sensor power supply : 7.7V DC±3% (Within 30mA DC)

Sampling Time : 0.1 sec.

Input adjustment
a) Zero point adjustment
1. Manual setting : -Input span to +Input span
2. Auto-zero function : -5.0 to +5.0mV (Input conversion)
b) Ratio setting
1. Manual setting (Gain adjustment setting) : 0.500 to 1.500
2. Automatic calibration function
Auto calibration is used to automatically set the PV ratio so that the
measured value (PV) will be the pressure of the shunt resistance output value.
(Functions when a resistance for sensitivity adjustment built-in pressure
sensor is used)
c) Linearize :
Use to correct the non-linear nature of pressure sensor CZ-100P/CZ-200P.
• Select the linearizing type symbol engraved on the rated nameplate
attached to the CZ-100P or CZ-200P housing.
d) Digital filter : 0.0 to 100.0 sec (OFF when 0 is set.)

Input Accuracy : ± (0.1% of full scale + 1 digit)

Influence of ambient temperature
a) Input : ±0.006% of Input span/°C
b) Sensor power supply : ±0.013% of Output span/°C4

Display : 5-digits (The most significant digit : -1 or 1)

< Standard function >

Contact Input
Number of input : 3 points, Non-voltage contact input
(OPEN : 500kΩ or more, CLOSE : 10Ω or less)
Function : DI1 : Auto-zero DI2: Hold reset,
DI3 : Alarm interlock reset

Hold Function
Peak hold : Holds maximum pressure value
Bottom hold : Holds minimum pressure value
• The held values can be reset manually, by external contact signal
or by communication after the confirmation by the operator.
• Data is not backed up when the instrument power supply is off.

< Optional function >

Analog Output
Number of point : 1 point (PV value)
Output signal : a) 0 to 1V DC, 0 to 5V DC, 1 to 5V DC, 0 to 10V DC
Load resistance : More than 1kΩ
Output impedance : Less than 0.1Ω
b) 0 to 10mV DC, 0 to 100mV DC
Load resistance : More than 20kΩ)
Output impedance : Less than 10Ω
c) 4 to 20mA DC, 0 to 20mA DC
Load resistance : Less than 600Ω
Output impedance : More than 1MΩ
Output accuracy : ± 0.1% of span
Output resolution : More than 12 bits

Alarm Output
Number of points : Up to 4 points
Alarm action : High or low alarm (Available for hold function)
Output : Relay output, Form A contact, 250V AC 0.5A
(resistive load)
Other functions : a) Energized/de-energized action is
configurable.
b) Delay timer : 0.0 to 600.0 sec)
c) Interlock (latch) function is configurable.

Digital Communications
Communication method : RS-422A (4-wire), RS-485 (2-wire)
a) ANSI X3.28 sub-category 2.5A4 (RKC standard)
b) MODBUS-RTU
• Selectable
Communication speed : 1200, 2400, 4800, 9600, 19200 BPS
Bit format : Start bit : 1
Data bit : 7 or 8 • MODBUS 8 bits only
Parity bit : Without, Odd or Even
Stop bit : 1 or 2
Maximum connection : 31 units

< General Specifications >

Waterproof/Dustproof
NEMA4X, IP66
• Waterproof/Dustproof protection only effective from the front in
panel mounted installation.

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

Power Consumption
Less than 10VA (100 to 240V AC)
Less than 7.0VA (24V AC)
Less than 210mA (24V DC)

Rush Current
Less than 12A

Memory Backup
Backed up by non-volatile memory (FRAM)
• Data retaining period : Approx. 10 years
• Number of writing : Approx. 10,000,000,000 times.
(Depending on storage and operating conditions.)

Insulation resistance
More than 20MΩ (500V DC) between measured terminals and ground
More than 20MΩ (500V DC) between power terminals and ground

Dielectric voltage
1500V AC for one minute between measured terminals and ground
1500V AC for one minute between power terminals and ground

Operating Environments
-10 to +50°C [14 to 122°F] , 5 to 95% RH (Non condensing)

Net Weight
Approx. 200g

External Dimensions (W x H x D)
96 x 48 x 60mm

Resin Pressure Measuring System CZ-200P

Intrinsic Safety

Intrinsically Safe Explosionproof Construction Resin Pressure Meter   (For Indoor, outdoor)

The qualification No. of the intrinsically safe explosionproof construction resin pressure meter obtained from the ministry of Labor, Japan, is T55821 (For indoor use) T56658 (For outdoor use). The explosion class and ignition group of the objective gases and steam are i2G3. The qualified consists of the pressure sensor CZ-200P and safety barrier (RZB-001), but the output converter is not subject to qualification testing as a general sending/receiving instrument.
For indoor use, the standard connector or the waterproof connector can be selected. For outdoor use, the waterproof connector must be used.

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 :　1.0 to 1.8mV/V [At 150°C of diaphragm temperature] *1
• SPRON type (Code : PN) : At 250°C
Bridge Impressed Voltage : 10V DC (at PCT-300, CT-300)
7.7V DC (at PG500, REX-PG410)
Accuracy :　SUS630 type (At 150°C of diaphragm temperature)
Within ±1% of full scale
Within ±2% of full scale (Over 70 MPa)
SPRON type
Less than 70MPa   : Within ±1% of full scale
More than 480°C of 10,20,70MPa
: Within ±2% of full scale
More than 100MPa : Within ±2% of full scale
More than 480°C of 100MPa
: Within ±4% of full scale
HASTELLOY C type : Contact to RKC
Linearity :　SUS630 type (At 150°C of diaphragm temperature)
Within ±1% of full scale
Within ±2% of full scale (Over 70 MPa)
SPRON type
Less than 70MPa   : Within ±1% of full scale
More than 480°C of 10,20,70MPa
: Within ±2% of full scale
More than 100MPa : Within ±2% of full scale
More than 480°C of 100MPa
: Within ±4% of full scale
HASTELLOY C type : Contact to RKC
Hysteresis :　SUS630 type
Within ±0.5% of full scale
Within ±1% of full scale (Over 50 MPa)
Within ±2% of full scale (Over 70 MPa)
Within ±0.2% of full scale (1MPa type)
SPRON type
Less than 70MPa :   Within ±1% of full scale
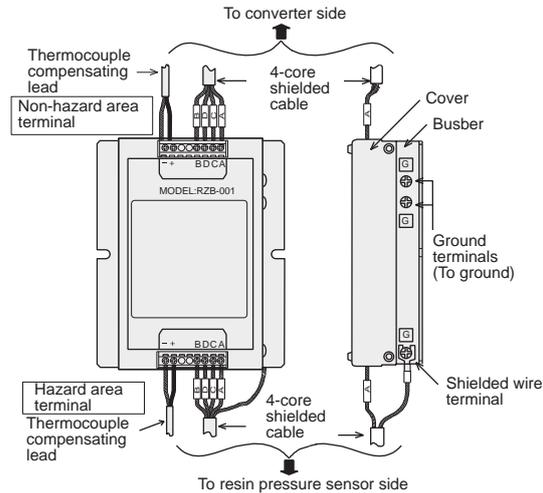More than 480°C of 10,20,70MPa
: Within ±2% of full scale
More than 100MPa : Within ±2% of full scale
More than 480°C of 100MPa
: Within ±4% of full scale
HASTELLOY C type : Contact to RKC
Reproducibility :　Within ±0.2% of span
• More than 480°C of 10,20MPa :Within ±2% of full scale
Zero Balance :　±0.6mV/V (Within ±40% of span)
Bridge Resistance :　350Ω±5Ω (Input resistance)
350Ω±5Ω (Output resistance) *2
Allowable Maximum Temperature of the Diaphragm :
400°C (SPRON type : 550°C)
Allowable Maximum Temperature of the Strain Gauge : 200°C *3
Zero Point Temperature Effect (To the temperature of the diaphragm)
SUS630 type : ±0.2%/10°C
±0.3%/10°C (10MPa, 150MPa)
SPRON type : 0.1±0.2%/10°C
HASTELLOY C type : Contact to RKC
Output Temperature Effect
Output temperature effect is an equal value as zero point.
• SPRON type : 0.15±0.2%/10°C
Effect of Wind (Without lead pipe cover)
Within ±1% of full scale (at wind of 4m/sec)
Allowable Overload :　Within 120% of rated pressure
Within 500% of rated pressure (1MPa type)
Within 1000% of rated pressure (0.5MPa type)
Marginal Overload :　Within 150% of rated pressure
Within 1000% of rated pressure (1MPa type)
Lead Pipe Cover material : SUS630
Recommended Tightenibg Torque :
Fixed nut type: 30 N•m (300 kgf•cm)
Loose nut type: 60 N•m (600 kg•cm)
Output effect of tightening torque :
Within ±0.2% of full scale (at recommended tightening torque)
• M14, PF1/4, 1/2-UNF screw type : ±1%

*1 The output of each sensor becomes a specific value within the range of 1.0 to 1.8 mV/V.
*2 As the input side of bridge resistance, the 374Ω±10Ω type is also available.
This type is interchangeable with the 350Ω±5Ω type.
*3 When the temperature at the bottom of outer tube (nut side) is more than 180°C, the temperature at the strain gauge exceed 200°C.
If the temperature at the strain gauge exceed 200°C, the performance cannot be assured. Therefore, cover the heat source with a heat insulating material so that the above temperature does not exceed 200°C.
The temperature at the strain gauge can be expected not to rise when:
• the long type of sensor is used or
• the sensor is installed a slant or transversely.
If any of the above measures can be taken, take it.

<Temperature Sensor Function>
Sensor type :   Thermocouple : K or J (Ungrounded junction, Class2)
Maximum Temperature :　550°C (Thermocouple K), 450°C(Thermocouple J)
Response time :   Approx. 90 sec (room temperature to 100°C, 98 % response)
Cable length :   100mm (Standard, Maximum length 1 m)
Temperature detection position :
Internally 2mm from a diaphragm

Safety Barrier Specifications

Explosionproof construction : Intrinsically safe explosionproof construction (i2G3)
Use rated   : Power supply circuit 9V 50mA,
Signal circuit 6V 50mA,
Thermocouple circuit 6V 50mA
Rating for maintaining safety : 250V AC,50/60Hz,250V DC
Allowable inductance   : Wiring between the resin pressure sensor and safety barrier : 0.6 mH or less
Allowable capacitance   : Wiring between the resin pressure sensor and safety barrier : 0.1μF or less
Ambient temperature   : -10 to +40°C (14 to 104°F)
Ambient humidity   : 45 to 85% RH (Non condensing)
Cover   : Iron (Coating)
Busbar   : Brass (Nickel plating)
Ground requirement   : Ground this safety barrier so that its grounding resistance will be less than the grounding reference resistance value of shunt diode type safety barriers (e.g. less than 1Ω) conforming to each national standard. (Requirements)
Weight   : Approx. 850g
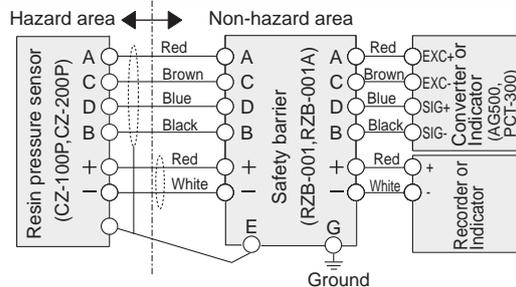
Terminal Configuration

External Dimensions

Unit:mm

External Wiring

CZ200_04E

Model and Suffix Code

■ CZ-200P

Specifications		Model and Suffix Code
Model		**CZ-200P** − □ □−□ □ □−□□□□*□ □ □−□ □□00
Screw type	Fixed nut type PF3/8　Tip diameter : 10mm Loose nut type PF3/4　Tip diameter : 18mm Fixed nut type 1/2-20UNF　Tip diameter : 7.8mm Fixed nut type PF1/2　Tip diameter : 10mm Fixed nut type PF1/4　Tip diameter : 7.8mm Fixed nut type M14X1.5　Tip diameter : 10mm	H L U J V W
Load-pipe length	Under nut : L=120mm　• Not available for SPRON type Under nut : L=150mm Under nut : L=180mm Under nut : L=210mm	A B C D
Diaphragm material	SUS630 (Standard) Hastelloy C SPRON	S H P
Diaphragm surface treatment	Standard Ceramic kanigen plating　• Not available for SPRON type	N K
Intrinsically safe	Non-intrinsic safety (Standard) Intrinsic safety (For indoor use) Intrinsic safety (For outdoor use)	N G H
Pressure range	See Pressure Range Code Table	□□□□
Linearization function　*1	Not supplied For PG500/REX-PG410 (Available for PG410 with S/N 98A□□□□ or later) For PCT-300□−□ L (PCT-300 should have linearization function)	N G T
Lead-pipe cover	Not supplied　• Not available for SPRON and fixed nut type　*3 With lead-pipe cover	N C
Cable connection connector	Standard connector type　• Not available for SPRON type Waterproof, connector type, equivalent to IP67 (Not available for built-in sensor type or SPRON type) waterproof, direct connection type, equivalent to IP67 (Not available for built-in sensor type)　*4	N P Q
Temperature sensor	Not supplied K type thermocouple (Not available for waterproof connector) J type thermocouple (Not available for waterproof connector)	N K J
Thermocouple lead length　*2	Standard 100mm (Possible to specify by each 100mm. Maximum 1m.)	□□00

*1 : Linearization function is not available for pressure range of 0 - 70MPa or more.
　　Linearization function is not available for hastelloy C diaphragm .
2 : The model code after " " is not necessary if there is no option specified after " * ".:
*3 : For a fixed nut type with a SPRON diaphragm, the lead-pipe cover is always included.
*4 : The cable length on the SUS630 (standard) with a Hastelloy C diaphragm is 3 m. Please specify whether or not a flexible cover tube is to be included.

Pressure Range Code Table　　* ( ) : Range code

Specifications	Range
Fixed nut type	0 to 10MPa (010P), 0 to 20MPa (020P), 0 to 35MPa (035P), 0 to 50MPa (050P), 0 to 70MPa (070P), 0 to 100MPa (100P), 0 to 150MPa (150P)*1
Loose nut type　*2	0 to 1MPa (001P), 0 to 2MPa (002P), 0 to 3MPa(003P), 0 to 5MPa (005P), 0 to 10MPa (010P), 0 to 20MPa (020P), 0 to 35MPa (030P), 0 to 50MPa (050P), 0 to 70MPa (070P), 0 to 100MPa (100P)

*1 For pressure range of 0 - 150MPa, only the SUS630 diaphragm is available.
*2 For pressure range of 0 - 0.5MPa with loose nut and the range of 0 - 5Mpa with fixed nut, contact RKC agent. (Rated output : 0.5 to 0.9mV/V, Special amplifier type)
　Minimum range of HASTELLOY C and SPRON diaphragm are 10MPa.

Cable for Thermocouple

Specifications				Model Code
Compensation wire (Stainless steel shielded cable)	CZ-200P ⟷	Temperature controller/Indicator　(Length : 5m)	Type K	W-BL-K2EXA-TMA-Y3-5000
			Type J	W-BL-J2EXA-TMA-Y3-5000

Cable for Pressure　　· For cables with specifications other than those below, please Please contact RKC agent.

	Specifications			Model Code
Standard Type	CZ-200P ⟷	PG500 (Length : 5m) : Y-shaped terminal lugs (M3) PCT-300 (Length : 5m) : Y-shaped terminal lugs (M3)	Heat-resistant glass coated cable	W - AB - N G - PA - 5000
			Silicon coated cable	W - AB - N S - PA - 5000
	CZ-200P ⟷	CT-300 (Length : 5m) : Plug	Heat-resistant glass coated cable	W - AB - N G - PP - 5000
			Silicon coated cable	W - AB - N S - PP - 5000

The letter in the □ indicates the cable coating type. Select from the three types below.
　G: Heat-resistant glass coated cable, V: Vinyl coated cable, S :Silicon coated cable

■ Safety Barrier

Specification	Model Code		Specification	Model Code
Intrinsic Safety (For indoor)	RZB-001A1		Intrinsically safe circuit side (Hazard area) CZ-200P ⟷ RZB-001 (5m)	W-AB-Y G -PB-5000
Intrinsic Safety (Built-in thermocouple circuit, For indoor)	RZB-001N1	Connection cable		
Intrinsic Safety (For outdoor)	RZB-001A2		Non-intrinsically safe circuit side (Non hazard area) RZB-001 ⟷ AG500 (1m) or PCT-300(1m)	W-AB-N V -BA-1000
Intrinsic Safety (Built-in thermocouple circuit, For outdoor)	RZB-001N2			

• This product has passed the qualification test of intrinsically safe explosion proof when combined with our resin pressure sensor (CZ-100P/CZ-200P).
　Always combine and use this product with our resin pressure sensor.

Resin Pressure Measuring System CZ-200P

Model and Suffix Code

■ PG500

No.	Specifications	Model and Suffix Code				Hardware coding only Quick start code									
		PG500				①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩
						□	□*□	–	□ –	□	□ –	□	□	□	□
①	Input type	Standard type	A												
		Intrinsic safety type	B												
		Standard type (Loose Nut : 0.0 to 0.5MPa, Fixed Nut : 0 to 5MPa)	C												
		Intrinsic safety type (Loose Nut : 0.0 to 0.5MPa, Fixed Nut : 0 to 5MPa)	D												
		For 3.33mV/V output type	X												
②	Power supply	100 to 240V AC		4											
		24V AC/DC		3											
③	Alarm	Not supplied			N										
		Number of alarm output (Specify 1 to 4)			□										
④	Analog output	Not supplied				N									
		See Analog Output Signal Code Table, Code : 1 to 8				□									
⑤	Communication	Not supplied					N								
		RS-422A					4								
		RS-485					5								
⑥	Initial setting	No quick start code (Default setting)						N							
		Specify quick start code						1							
⑦	Alarm 1	See Alarm Code Table							□						
⑧	Alarm 2	See Alarm Code Table								□					
⑨	Alarm 3	See Alarm Code Table									□				
⑩	Alarm 4	See Alarm Code Table										□			

● Terminal cover (Sold separately)

Model Code : KFB400-58

● Analog Output Signal Code Table

1	0 - 10mV DC	7	0 - 20mA DC
2	0 - 100mV DC	8	4 - 20mA DC
3	0 - 1V DC		
4	0 - 5V DC		
5	0 - 10V DC		
6	1 - 5V DC		

● Alarm Code Table

N	No alarm
H	Process High
J	Process Low
K	Process High with Alarm Hold
L	Process Low with Alarm Hold

■ PCT-300

Specifications	Model and Suffix Code			
	PCT-300	N – □	□	
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			N
	Gain change switch (x1 or x2)			G
	Linearization function			L

Supply Voltage ▶

100 - 240V AC

External Dimensions and Rear Terminals

(Unit : mm)

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

Connector receptacle PRC03-23A10-7F
Outer tube
Flat head diameter of hexagon nut : 23
Diaphragm
PF3/8 (JIS B grade)
Thermocouple connector CMP01-□
Flexible tube (Approx.100mm)

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

Mounting hole (Unit : mm)

Standard dimensions and weight

	L	L1	L2	L3	Weight
HA	120	8	6	60	Approx.430g
HB	150	8	6	90	Approx.470g
HC	180	8	6	120	Approx.510g
HD	210	8	6	150	Approx.550g

• The L dimension can be up to a maximum of 250 mm. (Please contact RKC agent)

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

PF3/8

For loose nut type (CZ-200P-L type)

Connector receptacle PRC03-23A10-7F
Outer tube
Flat head bolt 14
C type snap ring
Flat head diameter of hexagon nut : 23
Diaphragm
PF3/4 (JIS B grade)
Thermocouple connector CMP01-□
Flexible tube (Approx.100mm)

Mounting hole (Unit : mm)

Standard dimensions and weight

	L	L1	L2	L3	Weight
LA	120	20	10	90	Approx.760g
LB	150	20	10	120	Approx.850g
LC	180	20	10	150	Approx.940g
LD	210	20	10	180	Approx.1030g

• The L dimension can be up to a maximum of 230 mm. (Please contact RKC agent)

PF3/4

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

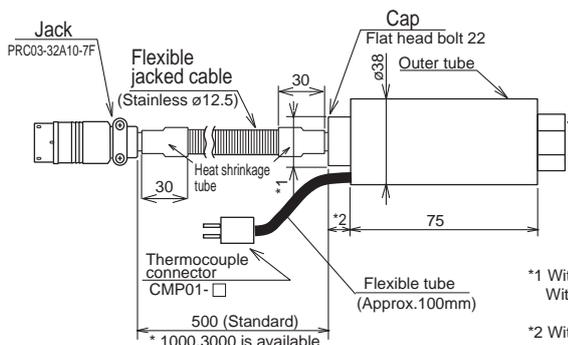## For fixed nut type unified thread (CZ-200P-U type)

Connector receptacle PRC03-23A10-7F
Outer tube
Flat head diameter of hexagon nut : 23
Diaphragm
1/2-20UNF-2A
Thermocouple connector CMP01-□
Flexible tube (Approx.100mm)

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

Mounting hole (Unit : mm)

Standard dimensions and weight

	L	L4	Weight
UA	120	60	Approx.410g
UB	150	90	Approx.450g
UC	180	120	Approx.490g
UD	210	150	Approx.530g

• The L dimension can be up to a maximum of 250 mm. (Please contact RKC agent)

1/2-20UNF-2B

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

● When the diaphragm material is SPRON, the cable type is direct connection.

Jack
PRC03-32A10-7F
Flexible jacked cable (Stainless ø12.5)
Cap
Flat head bolt 22
Outer tube
Heat shrinkage tube
Thermocouple connector CMP01-□
Flexible tube (Approx.100mm)

500 (Standard)
* 1000,3000 is available

• In the case of a loose nut type or fixed nut type unified screws, the outer tube and cable are as shown at left.

• Mounting hole dimensions are the same as on the standard product.

• Unit dimensions are the same as the dimensions of the standard product; however, the lead unit (L) dimension 120 mm (HA, LA, UA) is not possible.

• The fixed-nut type is only available with a lead-pipe cover.

*1 With thermocouple connector : ø20
Without thermocouple connector : ø26

*2 With thermocouple connector : 12
Without thermocouple connector : 15

Reference : Screw dimension tolerances

Class \ Screw type	PF1/4,PF3/8	PF1/2,PF3/4	M14 x 1.5, M16 x 1.5	1/2-20UNF
JIS B grade (Class 2, 2B) Inner diameter tolerances of female screw	0 to +0.445	0 to +0.541	0 to +0.300	0 to +0.278
JIS B grade (Class 2, 2B) Effective diameter tolerances of female screw	0 to +0.250	0 to +0.284	0 to +0.150	0 to +0.141

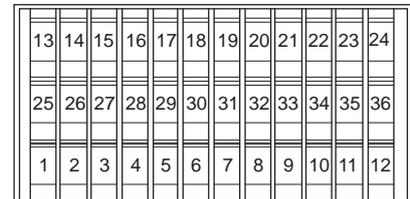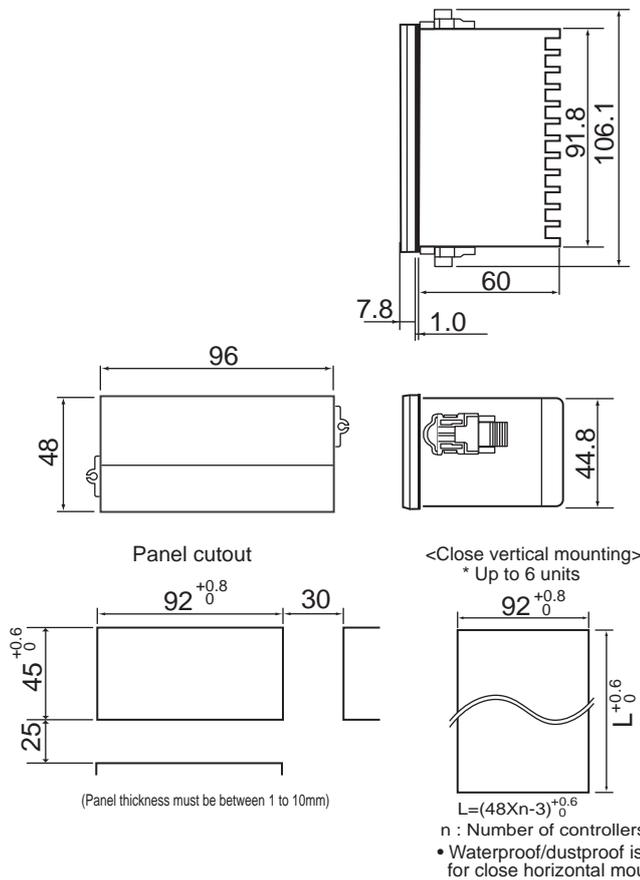# Resin Pressure Measuring System CZ-200P

External Dimensions

PCT-300

Unit : mm

9	10	11	12	13	14	15	16
1	2	3	4	5	6	7	8
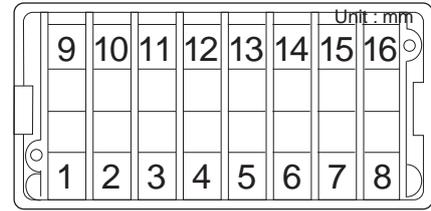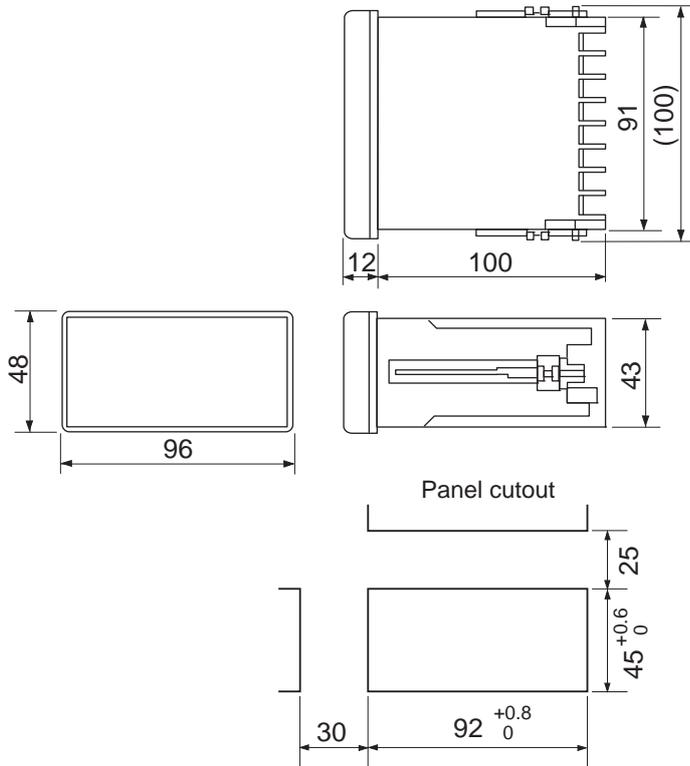
9	10	11	12	13	14	15	16
	0-10mV DC / 0-10V DC		SHD	EXC+	EXC-	SIG+	SIG-
Analog output			Sensor input				

1	2	3	4	5	6	7	8
⏚	100-240V AC			1-5V DC		4-20mA DC	
Ground	Power supply			Analog output		Analog output	

Dimensions: 12, 100, 91, (100), 48, 96, 43

Panel cutout

25, $45^{+0.6}_{0}$, 30, $92^{+0.8}_{0}$

PG500

Unit:mm

13	14	15	16	17	18	19	20	21	22	23	24
25	26	27	28	29	30	31	32	33	34	35	36
1	2	3	4	5	6	7	8	9	10	11	12

• Use a solderless terminal for screw size M3X6.

13	14	15	16	17	18	19	20	21	22	23	24
	COM DI 1 DI 2 DI 3			SHD	EXC+ (Red)	EXC- (Brown)	SIG+ (Blue)	SIG- (Black)			
	Digital input				CZ-200P CZ-100P						
					Sensor input						

25	26	27	28	29	30	31	32	33	34	35	36
SG	T(A)	T(B)	R(A)	R(B)							+⎾AO⏌-
		RS-422A									
SG	T/R(A)	T/R(B)									
	RS-485										
Communication										Analog output	

1	2	3	4	5	6	7	8	9	10	11	12
AC 100-240V		COM	NO	NO	COM	NO	NO	CAL+	CAL-		
AC 24V			ALM1	ALM2		ALM3	ALM4				
DC +24V-											
Power supply		Alarm 1, 2 output			Alarm 3, 4 output			Calibration output			

Relay contact output

Dimensions: 91.8, 106.1, 60, 7.8, 1.0, 96, 48, 44.8

Panel cutout

$92^{+0.8}_{0}$, 30, $45^{+0.6}_{0}$, 25

(Panel thickness must be between 1 to 10mm)

<Close vertical mounting>
* Up to 6 units

$92^{+0.8}_{0}$, $L^{+0.6}_{0}$

$L=(48Xn-3)^{+0.6}_{0}$
n : Number of controllers (2=<n=<6)
• Waterproof/dustproof is not available for close horizontal mounting.