Shinko QX1 Series Modular Controllers User Guide

Contents

Shinko QX1 Series Modular Controllers

SAFETY PRECAUTIONS

- To ensure safe and correct use, thoroughly read and understand this manual before using this instrument.
- This instrument is intended to be used for industrial machinery, mashine tools and measuring equipment.
- Verify correct usage after purpose-of-use consultation with our agency or main office.
- (Never use this instrument for medical purposes with which human lives are involved.)
- External protection devices such as protection equipment against excessive temperature rise, etc. must be installed, as malfunction of this product could result in serious damage to the system or injury to personnel. Also proper periodic maintenance is required.
- This instrument must be used under the conditions and environment described in this manual. Shinko Technos Co., Ltd. does not accept liability for any injury, loss of life or damage occurring due to the instrument being used under conditions not otherwise stated in this manual.
- The contents of this catalog is as of June. 2021, and the specifications are subject to change without notice.
- We have more detailed catalogs for each of the products listed in this product guide. We provide many measuring, controlling, recording and sensing instruments in addition to the products described in this product guide. To inquire, please consult us or our agency.

Caution with respect to Export Trade Control Ordinance

To avoid this instrument from being used as a component in, or as being utilized in the manufacture of weapons of mass destruction(i.e. military applications, military equipment, etc.), please investigate the end users and the final use of this instrument. In the case of resale, ensure that this instrument is not illegally exported.

Digital Indicating Controllers

Panel Mounting

AC series

	, , ,	Input	Thermocouple, RTD, Direct current, D C voltage

	±0.2 %±1 ±0.1 % ±1 ±0.2% ±1	Accuracy	Thermocouple:Within±0.2% of each in put span ±1digit RTD:Within±0.1% of each input span ± 1digit DC current,DC voltage:Within±0. 2% of each input span ±1digit
	125ms(ACS-13A 250ms)	Sampling peri od	125ms(ACS-13A:250ms)
	PID, PI, PD, P, ON/OFF	Control action	PID, PI, PD, P, ON/OFF
	, ,	Control output	Relay contact,Non-contact voltage,Dire ct current
	100 240V AC 50/60Hz,24V AC/DC 50/60Hz	Supply voltag e	100 to 240V AC 50/60Hz,24V AC/DC 5 0/60Hz
	ACS-13A :W48×H48×D6 2mm ACR-13A,ACR-15A:W48×H9 6×D110mm ACD-13A,ACD-15A:W 96×H96×D110mm	Dimensions	ACS-13A :W48×H48×D62mm ACR-13A,ACR-15 A:W48×H96×D110mm ACD-13A,ACD- 15A:W96×H96×D110mm
	, , ,	Option	Heating/Cooling control, Heater burnou t alarm, Serial communicatin,etc.
	ACS-13A UL: 100 240V AC,24V AC/DC Fil e No.E159038	Safety standa rd	ACS-13A only UL:Power input rating100 240V AC,24 V AC/DC File No.E159038

Features

- Industry-leading large display

A specially-desugned LCD display makes it easier to view (ACD,R series) even in bright light and open-air

- ACD-15A,ACR-15A: ON/OFF SERVO digital indicating controller
- ACS-13A: 56mm (depth of control panel interion), Space saving.

BCx2 series

	, , ,	Input	Thermocouple, RTD, Direct current, D C voltage
	±0.2 ±1 ±0.1 ±1 , ±0.2 ±1	Accuracy	Thermocouple:Within±0.2% of each in put span ±1digit RTD:Within±0.1% of each input span ± 1digit DC current,DC voltage:Within±0. 2% of each input span ±1digit
	125ms	Sampling peri od	125ms
	PID, PI, PD, P, ON/OFF	Control action	PID, PI, PD, P, ON/OFF
	, ,	Control output	Relay contact,Non-contact voltage,Dire ct current
	100 240V AC 50/60Hz,24V AC/DC 50/60Hz	Supply voltag e	100 to 240V AC 50/60Hz,24V AC/DC 5 0/60Hz
	BCS2:W48×H48×D68(60)mm BC R2:W48×H96×D68(60)mm BCD2 :W96×H96×D68(60)mm	Dimensions	BCS2:W48×H48×D68(60 mm-deep co ntrol panel interior) BCR2:W48×H96×D 68(60 mm-deep control panel interior) BCD2:W96×H96×D68(60 mm-deep co ntrol panel interior)
	, , ,	Option	Heating/Cooling control,Heater burnout alarm, Serial communicatin,etc.
	UL: 100 240V AC,24V AC/DC Fil e No.E159038	Safety standa rd	UL:Power input rating100 240V AC,24 V AC/DC File No.E159038

Features

- Program control, converter function are standard features
- Each unit needs just 60 mm of control panel space
- Dust-proof/Drip-proof IP66 (front panel only)

JCL-33A

	, , ,	Input	Thermocouple, RTD, Direct current, D C voltage
	±0.2 ±1 ±0.1 ±1 , ±0.2 ±1	Accuracy	Thermocouple:Within±0.2% of each in put span ±1digit RTD:Within±0.1% of each input span ± 1digit DC current,DC voltage:Within±0. 2% of each input span ±1digit
	250ms	Sampling peri od	250ms
	PID, PI PD, P, ON/OFF	Control action	PID, PI, PD, P, ON/OFF
	, ,	Control output	Relay contact, Non-contact voltage, Dir ect current
	100 240V AC 50/60Hz 24V AC/DC 50/60H z	Supply voltag e	100 to 240V AC 50/60Hz, 24V AC/DC 50/60H z
	48× 24× 109.1 mm	Dimensions	48× 24× 109.1 mm
	, , ,	Option	Heating/Cooling control, Serial commu nication, Front panel frame and case: B lack, Terminal cover

	UL: 100 240V AC, 24V AC/DC 50/60Hz File No. E159038	Safety standard	UL: Power input rating 100 240V AC, 24V AC/DC 50/60Hz File No. E159038

Features

- Compact size (width: 48 mm, height: 24 mm)
- Program control, converter function are standard features

	, , ,	Input	Thermocouple, RTD, Direct current, D C voltag.e
	±0.2 ±1 ±0.1 ±1 , ±0.2 ±1	Accuracy	Thermocouple:Within±0.2% of each in put span ±1digit RTD:Within±0.1% of each input span ±1digit DC current,DC voltage:Within± 0.2% of each input span ±1digit
	250ms	Sampling peri od	250ms
	PID, PI, PD, P, ON/OFF	Control action	PID, PI, PD, P, ON/OFF
	, ,	Control outpu t	Relay contact, Non-contact voltage, D irect current
	100 240V AC 50/60Hz 24V AC/D C 50/60H z	Supply voltag e	100 to 240V AC 50/60Hz, 24V AC/DC 50/60H z
	72× 72× 110 mm	Dimensions	72× 72× 110 mm
	, , , ,	Option	Heating/Cooling control, Heater burno ut alarm, Serial communication, Front panel fra me and case: Black, Terminal cover
	UL: 100 240 V AC File No. E159038	Safety standard	UL: Power input rating 100 240 V AC File No. E159038

DIN Rall Mounting

DCL-33A

		Input	Thermocouple, RTD, Direct current, D C voltage
	: ±0.2 % ±1 : ±0.1 % ±1 : ±0.2 % ±1	Accuracy	Thermocouple : Within ±0.2 % of each input span ±1 digit RTD : Within ±0.1 % of each input spa n ±1digit Direct current, DC voltage : W ithin ±0.2 % of each input span ±1digit
	125 ms	Sampling peri od	125 ms
	PID PI PD P ON/OFF	Control action	PID PI PD P ON/OF F
		Control output	Relay contact, Non-contact voltage, Dir ect current
	100 240V AC 50/60Hz,24V AC/DC 50/60Hz	Supply voltag e	100 to 240 V AC 50/60 Hz, 24 V AC/D C 50/60 Hz

	W22.5xH75xD100mm	Dimensions	W22.5 x H75 x D100mm
	(RS-485)	Option	Heater burnout alarm, Serial communication (RS-485), Heating/Cooling control, Set value me mory external selection, External settin g input
	UL: 100 240V AC, 24V AC/DC File No. E159038	Safety standa rd	UL: Power input rating 100 to 240 V A C, 24 V AC/DC File No. E159038

Features

- The cost-effective, multi-range controller which can be changed easily to the converter via keypad (for direct current output type only)
- Optional Heating/Cooling control, External setting input, etc.

WCL-13A

		Input	Thermocouple, RTD, Direct current, D C voltage Infrared thermocouple
	: ±0.2 %		

	±1		Thermocouple: Within ±0.2 % of each input span ±1 digit RTD: Within ±0.1 % of each input span ±1digit Direct current, DC voltage: Within ±0.2 % of each input span ±1digit Infraed thermocouple : Within±0.2% of each input span ±1digit
	: ±0.1 %		
	±1	Accuracy	
	: ±0.2 %		
	±1		
	±0.2		
	±1		
	25ms, 125ms, 250ms ( )	Sampling period	25ms, 125ms, 250ms (Selectsble by keypad)
	±0.5	Time Accuracy	Within ±0.5% of the seting time
	PID,PI,PD,P,ON/OFF	Control action	PID,PI,PD,P,ON/OFF
	, ,	Control output	Relay contact,Non-contact voltage,Direct current
	100 240V AC 50/60Hz,24V AC/DC 50/60Hz	Supply voltage	100 to 240V AC 50/60Hz,24V AC/DC 50/60Hz

	W30×H85×D108mm[( )]	Dimensions	W30×H85×D108mm [including socket (sold separately)]
	, ,	Option	Heater burnout alarm, Serial communi catin,etc.

Features

- User-defined combination. Space saving, Energy saving
- I/O for each channel is individually selectable
- Input sampling period selectable.

Communication Type Control Unit

NCL-13A

		Input	Thermocouple, RTD, Direct current, D C voltage
	: ±0.2 % ±1 : ±0.1 % ±1 : ±0.2 % ±1	Accuracy	Thermocouple: Within ±0.2 % of each i nput span ±1 digit RTD: Within ±0.1 % of each input span ±1digit Direct current, DC voltage: Within ±0.2 % of each input span ±1digit

	250ms	Sampling period	250ms
	PID PI PD P ON/OFF	Control action	PID PI PD P ON/OFF
		Control output	Relay contact, Non-contact voltage, Direct current, Open Collector
	24V DC	Supply voltage	24V DC
	DIN	Mounting	DIN rail mounting
	W17.5×H75×D85mm	Dimensions	W17.5×H75×D85mm
	3 ,	Option	Heater burnout alarm/Actuator short circuit alarm (Single-phase, Three-phase), Heating/Cooling control output
	UL 24V DC File No. E159038	Safety standard	UL: Power input rating 24V DC File No. E159038

Features

- Multi-range, compact size DIN rail mounted type
- Setting and operation via the communication function.
- A terminal block (ATB-001-1) is required.
- For direct current input, connect a 50Ω shunt resistor (RES-S03-050) externally.

Modular controllers

QX1 series

Control Module (2ch)

QTC1-2

制御モジュール (4ch)

Control Module (4ch)

QTC1-4

	(*1)	Input	Thermocouple, RTD, Direct current(*1), DC voltage

	23℃ 5 0.2 0.1 0.2 0.2	Accuracy	At ambient temperature of 23℃ and m ounting angle of 5 degrees Thermocouple: Within 0.2% of each in put span RTD: Within 0.1% of each inp ut span Direct currentage: Within 0.2% of each input span DC voltage: Within 0.2% of each input span
	20 ms( ) 50 ms( ) 125 ms(*2)	Sampling peri od	20 ms (with only DC voltage input and Direct current input enabled) 50 ms (with only DC voltage input and Direct current input enabled) 125 ms(*2)
	2 PID fast-PID Slow-PID Gap-PID ON-OFF	Control action	2DOF PID, Fast-PID, Slow-PID, Gap-PI D ON-OFF
	(SSR) (NPN) (AC)	Control output	Relay contact, Non-contact voltage, Dir ect current DC voltage, Open collector (NPN), Triac (AC output zero-cross met hod)

	24 V DC 20 28 V DC	Supply voltag e	24 V DC Allowable fluctuation range: 2 0 to 28 V DC
	DIN	Dimensions	DIN rail mounting
	W30xH100xD85 mm( ) 95 mm	External dime nsions	30 x 100 x 85 mm (W x H x D) (excl. pr otrusions) Depth with terminal cover att ached: 95 mm
		Option	Heater Burnout Alarm, Event Input, Ev ent Output

Features

- Max.1024 points measurement, control and monitoring
- Flexible use to suit any application or site
- Program-less connections to PLCs for reduced work
- Usable as an analog module for reducing initial costs and wiring
- Failure prediction maintenance and risk avoidance
- Peak power suppression function
- Improved product quality
- Five included control methods for reduced manual labor.

1. In the case of Direct current input, some ranges require an external 50Ω shunt resistor (RES-S01-050).
2. Fixed to 125 ms regardless of settings for thermocouple input and RTD input.

QMC1

	EIA RS-422A EIA RS-485	Communicatio n lines	EIA RS-422A compliant EIA RS-485 co mpliant
		Communicatio n method	Half-duplex communication
		Synchronizatio n method	Start-stop synchronization
	9600, 19200, 38400, 57600 bps	Communicatio n speed	Selecting 9600, 19200, 38400, or 5760 0 bps is possible using the communicat ion specification selection DIP switches .
/	: 7 8 :	Data bit/parity	Data bit:7 bits, 8 bits Parity bit:With parity, No parity Parity:E ven, Odd Select by communication specification selection DIP switch.

	1 2	Stop bit	Selecting 1 or 2 is possible using the c ommunication specification selection D IP switch.
	16 C 5	Number of co nnections	Control module: Max 16 modules For C series compatible, max 5 module s
	24 V DC 20 28 V DC	Supply voltag e	24V DC Allowable fluctuation range: 20 to 28 V DC
	DIN	Mounting	DIN rail mounting
	W30xH100xD85 mm	External dime nsions	30 x 100 x 85 mm (W x H x D)
		Option	Event input, Event output

Digital Temp. Indicating Controllers (Analog Type)

Digital Temperature Indicating Controller

ACN-200

	,	Input	Thermocouple, RTD
	±0.5 ±1	Accuracy	Within±0.5% of each input span ±1digit
	250 ms	Sampling period	250 ms
	PD, ON/OFF	Control action	PD, ON/OFF
	,	Control output	Relay contact,Non-contact voltage
	100 240V AC 50/60Hz	Supply voltage	100 to 240V AC 50/60Hz
	W96xH96xD120mm	Dimensions	W96xH96xD120mm

Features

- Potentiometer analog setting, Auto-reset function
- Control action can be changed with the DIP switch

Digital Deviation Indicating Temperature Controller

RC-600

	,	Input	Thermocouple, RTD
	±0.3 ±1	Accuracy	Within±0.3% of each input span ±1digit
	250 ms	Sampling period	250 ms
	PD, ON/OFF	Control action	PD, ON/OFF
	, ,	Control output	Relay contact, Non-contact voltage, Direct current
	100 240V AC 50/60Hz	Supply voltage	100 to 240V AC 50/60Hz, 24V AC/DC 50/60Hz
	W48xH96xD115mm	Dimensions	W48xH96xD115mm

Features

- Simple seting just like an analog controller (with LED deviation display)
- Control action, alarm type selectable with the DIP, Rotary switches

2ch Oven Temperature Controller

BOC-600

		Input	Thermocouple
	2 (,)	Input points	2 (for top heater and bottom heater)
	0 99 50	Baking time	0 sec. to.99 min. 50 sec.
	±2℃(±0.2 +1)	Indicaticn Accuracy	±2℃ (Equivalent to ±0.2%FS+1 digit)
	±0.5	Time indicatio n accuracy	Within ±0.5% of setting time
	PD, ON/OFF	Control action	PD, ON/OFF
	, ,	Control output	Relay contact, Non-contact voltage, No n-contact
	, , , ,	Sub output	Lighting output, Buzzer output, Boiler o utput, Steam output, Fan output
	100 240V AC 50/60Hz	Supply voltag e	100 to 240V AC 50/60Hz
	W140xH310xD79.6mm	Dimensions	W140xH310xD79.6mm

Features

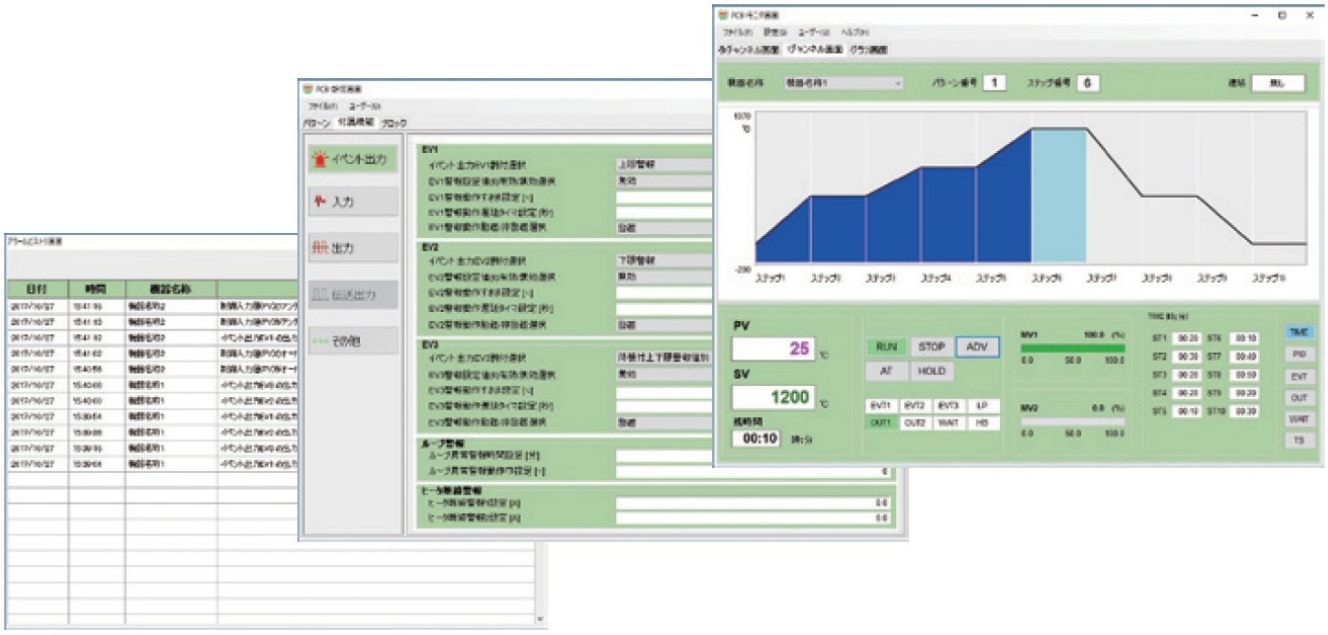
- Device devaloped for baking and confectionery
- 2-channel control (top and bottom heater control)
- Programmable controller function equipped

10ch Temperature Control Board

Features

- Multi-point I/O on a single board
- Simple mounting
- Customizable
- Newly developed – Economical, Short delivery time

Monitoring Software



By using the monitoring software, setting item change, data logging and monitoring can be carried out on a PC. Shinko cable (sold separately) is required.
Model: ACx-13A, DCL-33A, NCL-13A,BCx2 series, PCA1, PCB1, etc.

Programmable Controllers

100 patterns

PCT−100, PCT−200

	(PCT-100)	Input	Thermocouple, RTD, Direct current, DC voltage (PCT-100: RTD only)
	: ±0.2 % ±1 : ±0.1 % ±1 : ±0.2 % ±1	Accuracy	Thermocouple: Within ±0.2 % of each input span ±1 digit RTD: Within ±0.1 % of each input span ±1digit Direct current, DC voltage: Within ±0.2 % of each input span ±1digit
	25ms(PCT-200) 250ms(PCT-100)	Sampling period	25ms(PCT-200) 250ms(PCT-100)
	PID, PI, PD, P, ON/OFF	Control action	PID, PI, PD, P, ON/OFF

		Control output	Relay contact, Non-contact voltage, Direct current
	24V DC	Supply voltage	24V DC
	100 , 100	Pattern and Step	100patterns, 100steps
	9999	Repetition	9999 times
	: : DIN	Mounting	Touch screen: Flush Temperature controlmodule: DIN rail
	W167.5×H135×D78mm	Dimensions	Touch screen: W167.5×H135×D78mm
	(PCT-100)	Option	Transmission output(PCT-100)
	USB , USB	Components	Temperature control module, Cable for front mounted USB port, USB memory, etc.

Features

- Easier to view and operate via touch screen display

- 100-patterns/100-steps large-capacity memory
- Control data logging (USB flash memory): Recorders not required
- Languages: Japanese, English, Chinese, Korean(for PCT-200)

16 patterns

PCA1

		Input	Thermocouple, RTD, Direct current, D C voltage
	: ±0.2 %		Thermocouple: Within ±0.2 % of each i nput
	±1		span ±1 digit
	: ±0.1 % ±1 : ±0.2 % ±1	Accuracy	RTD: Within ±0.1 % of each input span ±1digit Direct current, DC voltage: Within ±0.2 % of each input span ±1digit

	125 ms	Sampling period	125 ms
	PID PI PD P ON/OFF	Control action	PID, PI, PD, P, ON/OFF
		Control output	Relay contact, Non-contact voltage, Direct current
	100 240V AC 50/60Hz,24V AC/DC 50/60Hz	Supply voltage	100 to 240V AC 50/60Hz, 24V AC/DC 50/60Hz
	16 ( ) 256 (16 /)	Number of patterns Number of steps	16 (Linkable) 256 (16 steps/pattern)
	9999	Number of repetitions	9999 times
	W96×H96×D110 mm	Dimensions	W96×H96×D110 mm
	(RS-232C, RS-485)	Option	Serial communication (RS-232C, RS-485), Time signal output,Transmission output, Heating/ Cooling control

Features

- 16-patterns 16-steps, A maximum of 256 programmable steps
- Power supply and quick setup using a USB Communication Cable
- Dust-proof / Drip-proof IP66 (front panel only)

10 patterns

PCB1

	,	Input	Thermocouple, RTD, Direct current, D C voltage
	: ±0.2 %±1 : ±0.1 % ±1 : ±0.2 % ±1	Accuracy	Thermocouple: Within ±0.2 % of each i nput span ±1 digit RTD: Within ±0.1 % of each input span ±1 digit Direct current, DC voltage: Wit hin ±0.2 % of each input span ±1 digit
	125 ms	Sampling peri od	125 ms
	PID, PI, PD, P, ON/OFF	Control action	PID, PI, PD, P, ON/OFF
		Control output	Relay contact, Non-contact voltage, Dir ect current
	100 240V AC 50/60Hz,24V AC/DC 50/60H	Supply voltag e	100 to 240V AC 50/60Hz, 24V AC/DC 50/60H
	10 ( ) 100 (10 /)	Number of pat terns Number of ste ps	10 (Linkable) 100 (10 steps/pattern)
	10000	Number of re petitions	10000 times
	RUN	Event output	Time signal output, Pattern end output, RUN output, etc.
	W96×H96×D68(60) mm	Dimensions	W96×H96×D68 mm (60 mm-deep control panel interior)
	(RS-485)	Option	Heating/Cooling control, Heater burnou t alarm Serial communication (RS-485), etc.
	UL: 100 240V AC, 24V AC/DC File No. E159038	Safety standa rd	UL: Power input rating 100 to 240V AC , 24V AC/DC File No. E159038

Features

- 10-patterns 10-steps, A maximum of 100 programmable steps
- Power supply and, quick setup using a USB communication cable
- Dust-proof / Drip-proof IP66 (front panel only)

Recorder

HR-700 シリーズ
HR-700 series

		Input	Thermocouple, RTD, Direct current, D C voltage
	1 ( ), 2 ( ), 6 ( )	Input points	Pen 1-point, 2-point Dot printing 6-point
	100mm	Recording ch art width	100mm
	, ALM ( ), ( )	Alarm	No standard alarm output is provided, h owever, ALM indicator lights up. Numb er of setting Max. 4 points (2 points for high l imit and 2 point for low limit for every channel)
	– 1.5kV AC 1 – 500 V AC 1 200V AC 1	Didlectric stre ngth	Power terminal – Ground terminal 1.5k V AC(1 min.) Input terminal – Ground t erminal 500V AC(1 min.) Between Input terminal 200V AC(1 min.)

	RS-232C 1200/2400/4800/9600bps	Interface	RS-232C 1200/2400/4800/9600bps
	100 240V AC 50/60Hz	Supply voltag e	100 to 240V AC 50/60Hz
	W144×H144×D175mm	Dimensions	W144×H144×D175mm
	(RS-485), DI , ,	Option	Communication (RS-485) function, DI f unction, Alarm output function, Paper-e mpty detection
	UL 100 240V AC File No. E195 801	Safety standa rd	UL Power input rating 100 to 240V AC File No. E195801

Features

- Effective recording width 100mm
- Short Depth (150mm) and Light weight (1.5kg)
- Communication function (RS-232C) is provided as standard
- Multi-range input

Indicators

Digital indicators


PV
10000
SV
10000
JIR
FAST
MODE
Shinko
PV
10000
SV
10000
JIR
FAST
MODE
Shinko

JIR-301-M

		Input	Thermocouple, RTD, Direct current, D C voltage
	±0.2 ±1 ±0.1 ±1 , ±0.2 ±1	Accuracy	Thermocouple:Within±0.2% of each in put span ±1digit RTD:Within±0.1% of each input span ± 1digit DC current,DC voltage:Within±0. 2% of each input span ±1digit
	125 ms	Sampling peri od	125 ms
	,	Alarm action	Process high alarm, Process low alarm , Process high with standby , Process low with st andby, High/Low limit range alarm
	100 240V AC 50/60Hz 24V AC/DC 50/60Hz	Supply voltag e	100 to 240V AC 50/60Hz, 24V AC/DC 50/60Hz
	W96xH48xD100mm	Dimensions	W96 x H48 x D100mm
	(RS-485) 4, 2 , 2	Option	Serial communication(RS-485),Alarm o utput 4 (A4), Insulated power output, P ower for 2-wire transmitter,Transmissio n output 2, User specified transmission output,Terminal cover, etc.
	UL 100 240V AC,24V AC/DC File No. E159038	Safety standa rd _____	UL: Power input rating 100 to 240V AC, 24V AC/DC File No. E159038

Features

- Standard spec: Multi-input, 3 points of alarm Alarm output, Transmission output (4 to 20 mA DC) , IP66
- Optional spec: Alarm output (A4), Transmission output 2 Power for 2-wire transmitter.

Hand-Held Digital Thermo-hygrometer

DFT-700-M

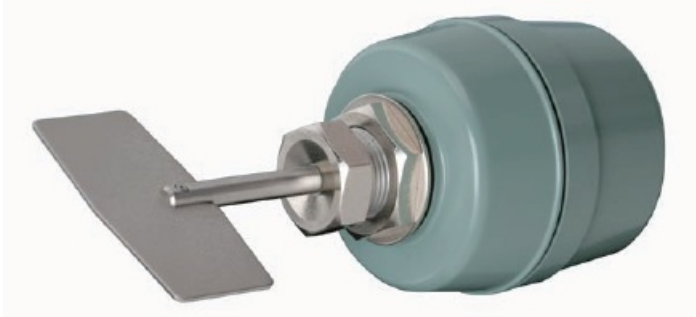
		Input	Thermocouple, RTD, Hygrothermo sensor
	±0.2 FS±1 ±0.1 FS±1 ±0.3℃(RH)	Indicating accuracy	Thermocouple Within ±0.2 FS±1 digit RTD Within ±0.1 FS±1 digit Hygrothermo sensor ±0.3℃(RH)
		Action method	Double integral method
	3V DC 3 (2)	Action method	3V DC Size AA alkaline battery (2 pieces)
	200	Battery life	200 hours for continuous measurement

		Sensor model and application	
PCE-701( )	PCE-707L( )	PCE-701(General surface)	PCE-707L(General surface)
PCE-702( ) PCE-709( )		PCE-702(Surface of roll)	PCE-709(Direct mounting of sensor)
PCE-704(,)	PCE-700M( )	PCE-704(Liquids and interiors) PCE-700M(Surface of metal mold)	
PCE-706(,)	PCR-701(,)	PCE-706(Liquids and interiors) PCR-701(Liquids and interiors)	
PCE-707( )	THD-700-P( )	PCE-707(General surface)	THD-700-P(Hygrothermo sensors)

Features

- Memory function for 10 pieces of data
- Back-light lets you check data in the dark
- Multi-range input

Level Switch



LV-300

	0.049N m(0.5kg cm) ( )	Detecting torque	0.049N•m(0.5kg•cm) or more (Fixed)
	1rpm(min^{-1}) (60Hz)	Wing rotation speed	1rpm(min^{-1}) (60Hz)
		Action	Detector wing revolution by motor
	85, 100, 150, 200, 250mm( )	Wing shaft length	85, 100, 150, 200, 250mm(Specify when ordering)
	5 2m	Lead wire	5-wire cabtyre cord, 2m (Vinyl coated)
	IP66 ( )	Dust-proof/ Drip-proof	IP66 (excluding parts from the Main unit mounting nut to detector wing)
	AC 100V, 110V, 115V, 200V, 220V, 230V, 240V( ) 50/60Hz	Supply voltage	100V, 110V, 115V, 200V, 220V, 230V, 240V AC (Specify when ordering) 50/60Hz
	3A 250V AC ( )	Contact capacity	3A 250V AC (Resistive load)
	(7mm)	Mounting	Fastened by nut (Panel Maximum 7mm)

Features

- Extremely Durable 100% Die-cast Aluminium Unit
- Stainless steel Detector wing
- Dust-proof/Drip-Proof IP66(excluding parts from the Main unit mounting nut to detector wing.

Actuators (Output Units)

Power Controllers


Shinko
POWER
CONTROLLER
1
2
4
DAMP
MIN
TIME
POWER
200
220V
100
110V
Shinko POWER CONTROLLER
PA 230 H 13R13057 10 A

PA-200

	PA-215 15A 3kVA( ), 5.2kVA(3) PA-230 30A 6kVA( ), 10.4kVA(3) PA-260 60A 12kVA( ), 20.8kVA(3) PA-2100 100A 20kVA( ), 34.6kVA(3) PA-2150 150A 30kVA( ), 52.0kVA(3)	Rated current Capacity	PA-215 15A 3kVA(Single-phase), 5.2kVA(3-phase) PA-230 30A 6kVA(Single-phase), 10.4kVA(3-phase) PA-260 60A 12kVA(Single-phase), 20.8kVA(3-phase) PA-2100 100A 20kVA(Single-phase), 34.6kVA(3-phase) PA-2150 150A 30kVA(Single-phase), 52.0kVA(3-phase)
	4 20mA DC, 0.8 4V DC ,	Input signal	4 to 20mA DC, 0.8 to 4V DC Non-voltage contact input, Manual setting
	3 (3)	Control system	Specify from below. Single-phase control Zero-cross frequency division control 3-phase control (There is no zero cross when 3-phase is applied.)
	100V/110V AC, 200V/220V AC 150A ,	Rated voltage	100V/110V AC, 200V/220V AC (Specify one for 150A.)

Features

- H series can be used precision control and inductive resistance
- Z series that is noiseless is recommended for computer lines

PA-3000

	20A, 30A, 40A, 50A, 75A, 100A	Input signal	20A, 30A, 40A, 50A, 75A, 100A
	4 20mA DC, 1 5V DC ( )	Input signal	4 to 20mA DC, 1 to 5V DC or ON/OFF contact signal (selectable by terminal)
	/ (DIP)	Control syste m	Phase control / Frequency division cont rol (Selectable by DIP switch)
	100 120V AC, 200 240V AC	Rated voltage	100 to 120V AC, 200 to 240V AC

Features

- Compact and light single-phase AC power controller
- Phase control system (H) and zero cross frequency division contorl system (Z) (Selectable by built-in DIP switch)

Solid State Relays

SA-400

	SA-420-Z 0.1 20A, SA-440-Z 0.5 40A	Rated current	SA-420-Z 0.1 20A, SA-440-Z 0.5 40A
	5 24V DC	Input voltage	5 to 24V DC
	100 240V AC	Load voltage	100 to 240V AC
	100MΩ 500V DC (INPUT , LOAD ,)	Insulation resistance	100MΩ or more (at 500V DC) Between Input/Load terminals, Between terminals -Heat sink
	3000V AC, 1 (INPUT , LOAD ,)	Dielectric strength	3000V AC for 1 minute Between Input/Load terminals, Between terminals -Heat sink
	SA-420 W30×H100×D100mm SA-440 W45×H100×D100mm	Dimensions	SA-420 W30×H100×D100mm SA-440 W45×H100×D100mm

Features

- Both DIN rail and panel mountable
- Easy viewing of action by LED display

	SA-515-Z 15A, SA-525-Z 25A, SA-540-Z 40A	Rated current	SA-515-Z 15A, SA-525-Z 25A, SA-540 -Z 40A
	4 32V DC	Input side con trol voltage	4 to 32V DC
	75 250V AC 45 65Hz	Load voltage	75 to 250V AC 45 to 65Hz
	- 100MΩ 500V DC	Insulation resi stance	Input-Output 100MΩ or more, at 500V DC
	– 4000V AC 1 – 250 0V AC 1	Dielectric stre ngth	Input terminal – Output terminal 4000V AC for 1 minute Input terminal – Case 2500V AC for 1 minute
	W40×H58×D25.5mm	Dimensions	W40×H58×D25.5mm

Features

- Cost efficient for customized systems
- Built-in ‘varistor’ for absorbing external power surges

Communication Units

For PC

IF-400

⇔		Host computer ⇔ IF-400	
RS-232C RS-422A RS-485		Communication line RS-232C/RS-422A/RS-485	
⇔		IF-400 ⇔ Controller	
RS-485		Communication line RS-485	
	2400 4800 9600 19200bps( )	Communication speed	2400, 4800, 9600, 19200bps
	100 240V AC 50/60Hz, 24V AC/DC 50/60Hz	Supply voltage	100 to 240V AC 50/60Hz, 24V AC/DC 50/60Hz
	DIN	Mounting	DIN rail
	W22.5×H75×D100mm	Dimensions	W22.5×H75×D100mm

- A communication converter/repeater that interfaces a controller (RS-485) with host computer (RS-232C or RS-422A)

For PLC

SIF-400

PLC ⇔		PLC ⇔ SIF-400	
RS-232C RS-422A RS-485 (9600 19200bps), (7 8), , , , 1 2		Communication line RS-232C/RS-422A/RS-485 Communication The following can be set by keypad. Communication speed: 9600/19200 bps Data length: 7 bits/8 bits Parity: No parity/Even/Odd Stop bit: 1 bit/2 bits	
⇔		SIF-400 ⇔ Contoller	
RS-485 SIF-400 DCL-33A, JC□-33A , NCL-13A SIF-400-AC ACS-13A( )		Communication line RS-485 Controller model name SIF-400 DCL-33A, JC□-33A series, NCL-13A SIF-400-AC ACS-13A only	
	SIF-400 1 , 32 20	Number of connectable units	Max. 32 units of controller per SIF-400 can be connected. (20 units for fixed address)
	100 240V AC 50/60Hz, 24V AC/DC 50/60Hz	Supply voltage	100 to 240V AC 50/60Hz, 24V AC/DC 50/60Hz
	DIN	Mounting	DIN rail
	W22.5×H75×D100mm	Dimensions	W22.5×H75×D100mm

- Interface unit to connect the PLC and controllers.

For PLC

SIF-600

PLC ⇔	PLC ⇔ SIF-600
RS-232C RS-422A RS-485 RS-422A RXA,RXB 200Ω 9600 19200 38400bps 1 7 8 1 2	Communication line RS-232C/RS-422A/RS-485 RS-422A Built-in terminator (200Ω) between RXA and RXB Communication speed 9600 19200 38400bps Start bit 1 bit Data length 7 bits/8 bits Parity No parity/Even/Odd Stop bit 1 bit/2 bits
⇔	SIF-600 ⇔ Contoller
RS-485 , MODBUS (ASCII, RTU)	Communication line RS-485 Connectable controllers Controllers with Shinko protocol & MODBUS protocol (ASCII, RTU)

	95 32 , IF-400	Number of connectable units	Max. 95 units [A repeater (Shinko's IF-400 is recommended) is required when connecting 32 units or more]
	100 240V AC 50/60Hz, 24V AC/DC 50/60Hz	Supply voltage	100 to 240V AC 50/60Hz, 24V AC/DC 50/60Hz
	DIN	Mounting	DIN rail
	W30×H88×D108mm [ ]	Dimensions	W30×H88×D108mm [including socket (sold separately)]

Features

- To suit your needs, choose form 4 communication methods
- Enables communication between PLC and peripheral devices
- Easy connection without programming (Shinko's WCL-13A)

Signal Conditioners

I/O type: Changeable

SGI	1	Isolator(1-output)
SGIW	2	Isolator(2-outputs)
SGS	1	DC signal transmitter(1-output)
SGSW	2	DC signal transmitter(2-outputs)
SGD	1	Current loop supply(1-output)
SGDW	2	Current loop supply(2-outputs)

SGM	1	Current loop supply with ratio setting(1-output)
SGMW	2	Current loop supply with ratio setting(2-outputs)
SGT	1	Thermocouple transmitter(1-output)
SGTW	2	Thermocouple transmitter(2-outputs)
SGR	1	RTD transmitter(1-output)
SGRW	2	RTD transmitter(2-outputs)
SGP	1	Potentiometer transmitter(1-output)
SGPW	2	Potentiometer transmitter(2-outputs)
SGU	1	Universal transmitter(1-output)
SGUW	2	Universal transmitter(2-outputs)
SGL	1	Linearizer(1-output)
SGF	1	Multi pulse transmitter(1-output)
SGFW	2	Multi pulse transmitter(2-outputs)

SGJ	1	Pulse-Analog transmitter(1-output)
SGJW	2	Pulse-Analog transmitter(2-outputs)
SGQ	1	Differential transmitter(1-output)
SGZ	1	2-input math function transmitter(1-output)

Products necessary for air-conditioning control are lined up in the Multi series.

SGH	(Hi/Lo) 1	High/Low selector(1-output)
SGB	( ) 1	Ratio, Bias(Ratio transmitter)(1-output)
SGBW	( ) 2	Ratio, Bias(Ratio transmitter)(2-outputs)
SGXW	2	Split-Range transmitter(1-output)
SGC	1	Limiter(1-output)
SGCW	2	Limiter(2-outputs)
2 4	outputs and 4-outputs are available.	
SGAL	(4 20mA, 1 5V)(2)	Instrumentation signal input Alarm setter (4 to 20mA, 1 to 5V only)(2-outputs)
SGAL	(4 20mA, 1 5V)(4)	Instrumentation signal input Alarm setter (4 to 20mA, 1 to 5V only)(4-outputs)
SGAU	(2)	Universal input Alarm setter(2-outputs)
SGAU	(4) Universal input Alarm setter(4-outputs)	

I/O type: Fixed SH series

SH シリーズ
SH series

SHI	1	Isolator(1-output)
SHIW	2	Isolator(2-outputs)
SHS	(1)	DC signal transmitter(1-output)
SHSW	(2)	DC signal transmitter(2-outputs)
SHD	(1)	Current loop supply(1-output)
SHDW	(2)	Current loop supply(2-outputs)
SHT	1	Thermocouple transmitter(1-output)
SHTW	2	Thermocouple transmitter(2-outputs)
SHR	1	RTD transmitter(1-output)
SHRW	2	RTD transmitter(2-outputs)
SHP	1	Potentiometertransmitter(1-output)
SHPW	2	Potentiometertransmitter(2-outputs)

SB series/SC series

Features

- Simple wiring into plug-in socket for power supply & I/O (SB series)
- RMS computation, 3rd harmonic wave, JIS C1111(SC series)

SE series

Features

- I/O programmable, with viewable displays
- Compact, with various standard functions
- Plug-in type

Water Quality Management Products

Panel Mounting

AER-100 シリーズ
AER-100 series

AER-102-PH	pH	pH Meter
AER-101-ORP	ORP( )	ORP Meter
AER-102-ECH	( )	Conductivity Meter (High)
AER-102-ECL	( )	Conductivity Meter (Low)
AER-102-SE		Resistivity Meter
AER-101-TU	SS	Turbidity/SS Meter
AER-102-DO		DO Meter

Internal Panel Mounting

WIL-100 シリーズ
WIL-100 series

WIL-102-PH	pH	pH Meter
WIL-101-ORP	ORP( )	ORP Meter
WIL-102-ECH	( )	Conductivity Meter (High)
WIL-102-ECL	( )	Conductivity Meter (Low)
WIL-102-SE		Resistivity Meter
WIL-101-TU	SS	Turbidity/SS Meter
WIL-102-DO		DO Meter

Outdoor Mounting

FEB-100 シリーズ
FEB-100 series

FEB-102-PH	pH / ORP( )	pH Meter / ORP Meter
FEB-102-ECH	( )	Conductivity Meter (High)
FEB-102-ECM	( )	Conductivity Meter (Low)

	100 240V AC 50/60Hz	Supply voltage	100 to 240V AC 50/60Hz
	W240×H162×D75mm	Dimensions	W240×H162×D75mm

Sensors (Temperature, Humidity, Other)

Humidity Detectors, Temperature/Humidity Detectors

HD-500-V, THD-500-V

	(JIS Pt100 B)	Sensor type	Temperature: Platinum thin film RTD (JIS Pt100 B class) Humidity: Electrostatic capacity variation type
	0 80℃ 5 90 %RH	Measurement range	Temperature: 0 to 80℃ Humidity: 5 to 90 %RH
	±(0.3+0.005|t|) ℃ (JIS Pt100 B) ±3 %RH (20 80 %RH 15 55℃) ±4 %RH (20 80 %RH 0 65℃) ±5 %RH (0 100 %RH 5 45℃) ±6 %RH (20 80 %RH 65 75℃) ±8 %RH (0 100 %RH 0 80℃)	Accuracy	Temperature: ± (0.3+0.005|t|) ℃ (JIS Pt100 Class B) Humidity: Within ±3 %RH (Accuracy guaranteed within the range of 20 to 80 %RH, 15 to 55 ℃) Within ±4 %RH (Accuracy guaranteed within the range of 20 to 80 %RH 0 to 65℃) Within ±5 %RH (Accuracy guaranteed within the range of 0 to 100 %RH, 5 to 45℃) Within ±6 %RH (Accuracy guaranteed within the range of 20 to 80 %RH, 65 to 75 ℃) Within ±8 %RH (Accuracy guaranteed within the range of 0 to 100 %RH, 0 to 80℃)
	35 20 [30⇔85 %RH 100 90 % , 51/min(0.16m/s)] ( )	Response time	Temperature: 35 seconds Humidity: Approx. 20 sec [Time to reach 90% of 30⇔85 %RH. However, airflow 51/min (0.16 m/s)] (Waterproof filter mounted to the sensor chip)
	3 100 Ω at 0℃ (JIS Pt100 B) 0 1 V DC(0 100 %RH)	Output	Temperature: 3-wire type 100Ω at 0℃ (JIS Pt100 Class B) Humidity: 0 to 1 V DC(Equivalent to 0 to 100%R H
	5 V DC(5 %)	Supply voltage	5 V DC (Within 5 %)

Indoor Sensors, Duct Inserted Sensors

DSW-100-T		Indoor temperature sensor
DSW-100-H		Indoor humidity sensor
DSW-100-T□H□		Indoor temperature/humidity sensor
DSW-200-CO2	CO2	Indoor CO2 sensor
DSD-101-CO2	CO2	Duct inserted CO2 sensor
DSD-200-HA		Duct inserted humidity sensor

Infrared Temperature Sensors

	0 250℃ 0 500℃	Measurement range	0 to 250℃, 0 to 500℃
	2:1 RD-502 15:1 RD-515)	Field-of-view	2 :1(RD-502), 15:1(RD-515)
	240ms 90%	Response tim e	240ms (90% response)
	4 20mA DC	Output	Direct current, 4 to 20mA DC

RD−600シリーズ
RD−600 series

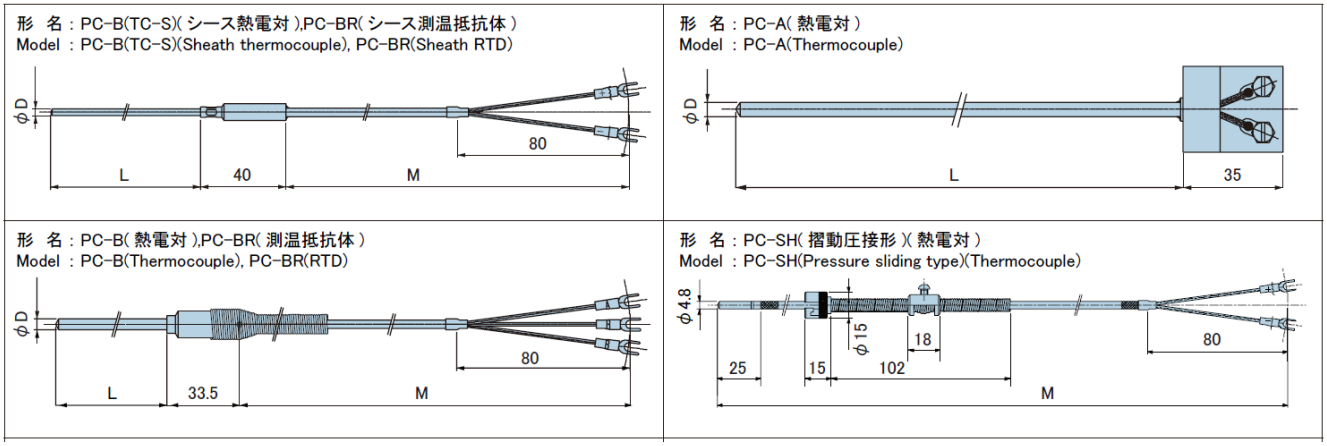
	50 400℃ 150 1000℃	Measurement range	50 to 400℃, 150 to 1000℃
	22:1 RD-622-LM 75:1 RD-675-H M	Field-of-view	22:1(RD-622-LM), 75:1(RD-675-HM)
	1ms 9 0%	Response tim e	1ms (90% response)
	0 20mA DC, 4 20mA DC 0 5 V DC, 0 10V DC K, J	Output	Direct current, 0 to 20mA DC, 4 to 20m A DC DC voltage, 0 to 5V DC, 0 to 10V DC Thermocouple K, J

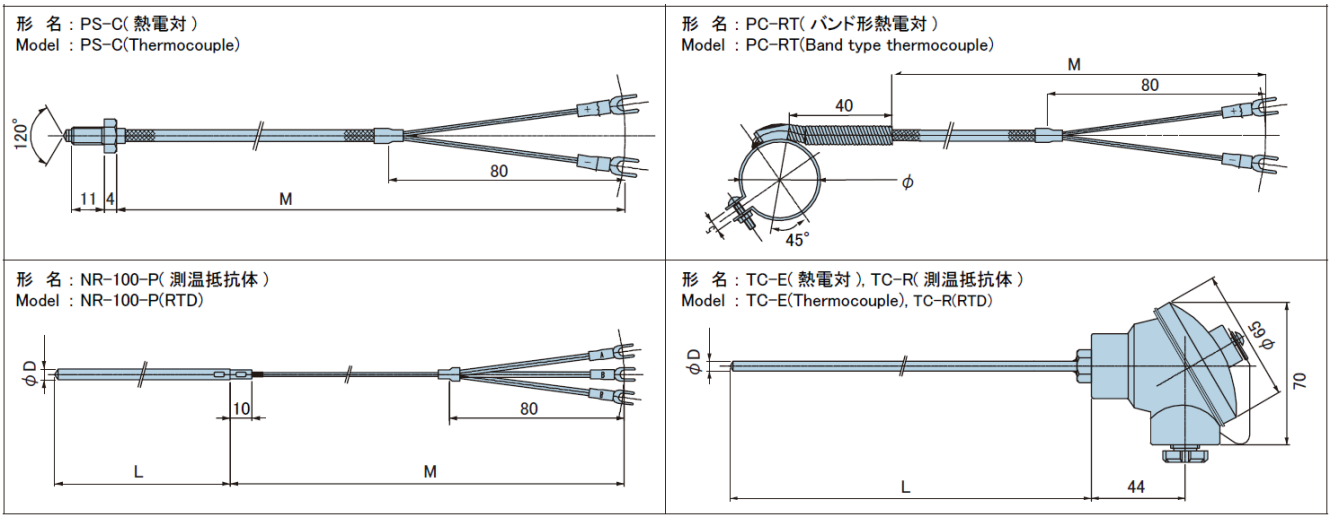
RD-715-HA

	0 500℃	Measurement range	0 to 500℃
	15:1	Field-of-view	15:1
	14ms 90%	Response time	14 ms (90% response)
	4 20mA DC	Output	Direct current 4 to 20mA DC

Temperature Sensor (Thermocouple, RTD)

- The temperature sensors listed below are typical Shinko sensors. We can also provide sensors suitable for the user's specifications other than those listed. For more information, please contact our agency or us. (When ordering, please specify the diameter, length, etc.)





Documents / Resources

	Shinko QX1 Series Modular Controllers [pdf] User Guide QX1 Series Modular Controllers, QX1 Series, Modular Controllers, Controllers