Temperature Controllers

VX4 LCD Temperature Controllers

Specifications

Model			VX4
Appearance			
W×H×D (㎜)			48.0×48.0×63.0
Input	Thermocouple		K, J, E, T, R, B, S, L, N, U, W, PLII
	Reference junction compensation accuracy		±3.5 ℃ (within -10~50 ℃)
	RTD		JPT100, PT100
	Allowable line resistance		Each 3 wire within 10Ω
	DC voltage / current		1~5 V (4~20 mA), 0~5 V, 0~10 V, 0~50 mV, 0~100 mV
	Sampling cycle		50 ms
Control output	Relay output	Rated switching capacity	5A 250 V a.c., 5 A 30 V d.c.
		Max. switching power	750 VA, 90 W
		Max. switching voltage	250 V a.c., 110 V d.c.
		Max. switching current	5 A
		Mechanical life	20 million times (at 180 CPM)
	SSR output		12 V ± 1 V d.c. pulse voltage (load resistance min. 600 Ω)
	SCR output		1 contact, load resistance: max. 600 Ω ± 0.2% of FS ± 1 digit
Control	Control type		ON/OFF, PID control, 2DOF PID control
	Output operation		Reverse action, direct action
Display part	Display method		Wide viewing angle LCD
	Active area (H X W)		25.7 X 36.2 mm
	PV character (H X W)		15.2 X 6.8 mm
	SV character (H X W)		7.4 X 3.9 mm
	MV character (H X W)		-
Memory	Non-volatile memory life		EEPROM unlocked: when setting E2P.L: OFF in G.SET group - EEPROM life: 1 million times write guaranteed EEPROM lock setting: when setting E2P.L: ON in G.SET group - store in RAM
RS485	Communication method		EIAR RS485 standard, 2-wire half-duplex
	Max. connections		31 (address setting 1~99 available)
	Communication sequence		No sequence
	Communication distance		Within 1.2 ㎞
	Communication speed		4800, 9600, 14400, 19200, 38400, 57600 BPS
	Start bit		1 bit
	Data length		7 or 8 bit
	Parity bit		NONE, EVEN, ODD
	Stop bit		1 or 2 bit
	Protocol		PC-LINK STD, PC-LINK SUM, MODBUS-ASCII, MODBUS-RTU
	Response time		Actual response time = handling time + (response time X 25 ㎳)
Loader	Communication method		USB 2.0
	Protocol		· Protocol : PC-LINK, · Baudrate : 38400 bps, · Start bit : 1 bit, · Data bit : 8 bit, · Parity bit : None, · Stop bit : 1 bit
	Communication distance		Max. 5 m
Option	DI		2 contacts or 4 contacts
	Retransmission output		1 contact, load resistance: max. 600 Ω ± 0.2% of FS ± 1 digit
	Remote input		1 contact, 4 ~ 20 mA (1 ~ 5 V)
	Current input		1 contact or 2 contacts

Power	Power voltage	100 - 240 V a.c., 50/60 Hz
	Voltage fluctuation rate	±10 % of power voltage
	Insulation Resistance	Min. 20 MΩ, 500 V d.c.
	Dielectric strength	2.5 KV a.c. 1 mA 50/60 Hz for 1 min (between 1st and 2nd terminal)
	Power consumption	Max. 8.2 VA
	Ambient temperature & humidity	-10 ~ 50 ℃, 35 ~ 85 % RH (without condensation)
	Storage temperature	-25 ~ 65 ℃
Ambient	Electrostatic discharge (ESD)	KN61000-4-2
	EFT(RS)	KN61000-4-3
	SURGE	KN61000-4-5
	Conductive RF (CS)	KN61000-4-6
	RE	CISPR11
	CE	CISPR11

Suffix code

Model	Code	Content
VX	□-□□□□-□□□□□□	LCD Digital Temperature Controller
Size	2	48(W) X 96(H) ㎜
	4	48(W) X 48(H) ㎜
	7	72(W) X 72(H) ㎜
	9	96(W) X 96(H) ㎜
Sensor	U	Universal input
OUT1 (Heating)	M	Relay
	S	SSR
	C	SCR
OUT2 (Cooling)	N	None
	M	Relay
Power	A	100 - 240 V (a,c), 50/60 Hz
Option - Sub output	A1	RELAY 1 (standard)
	A2	RELAY 1 & 2
	A3	RELAY 1, 2 & 3 (※ *1, *2)
	A4	RELAY 1, 2, 3 & 4 (※ *2)
Option - Communication		None
	C	RS485
Option - Retransmission output		None
	T	4 ~ 20 mA
Option - DI (Digital Input)		None
	D2	2 contacts (DI 1 ~ 2)
	D4	4 contacts (DI 1 ~ 4)
Option - CT		None
	H1	CT1
	H2	CT1 & 2
Option - Remote input		None
	R	4 ~ 20 mA

※ Regarding the codes available for order, please refer to our website
※ * 1) Not available for VX4. However, when OUT2 = M is selected, ALM3 can be used according to the parameter setting.
※ * 2) You can select from VX2, 7, 9 (VX4 is excluded)

AX series Multi Input Digital Temperature Controllers CE

Specifications

Model			AX9	AX2	AX7	AX3	AX4
Appearance							
W×H×D (㎜)			96.0×96.0×63.0	48.0×96.0×63.0	72.0×72.0×63.0	96.0×48.0×63.0	48.0×48.0×63.0
Input type			Multi input (thermocouple : K, J, R, T, IEC 584-1, RTD : Pt100 Ω, IEC751)				
Sampling cycle			100 ㎳				
Input impedance			Max. 1 ㏁				
Allowable input voltage			Max. 10 V d.c.				
Accuracy			±0.3 % of FS ±1 digit (in case of R type, ±1.0 % of FS ± 1 digit in the 0 ~ 600 ℃ range)				
Display			7 Segment LED (PV : Red, SV : green)				
Front size (㎜)	PV		22.5×11.2	14.5×7.0	14.5×7.0	15.9×7.6	13.0×6.5
	SV		18.7×9.3	10.8×5.2	9.4×4.7	12.0×6.0	9.2×5.2
Insulation Resistance			Min. 20 ㏁, 500 V d.c for 1 min (between 1st and 2nd terminal)				
Dielectric strength			2300 V a.c. 50/60 ㎐ for 1 min (between 1st and 2nd terminal)				
Control type			PID control (PID control by auto-tuning), ON/OFF control, P control				
Control output operation			Direct action / reverse action (selection by parameter setting)				
Control output type	Relay output (RLY 1)		1A contact, 3 A 240 V a.c. 3 A 30 V d.c. (resisitive load) But the relay control output can be set as alarm output when not in use.				
	Voltage output (SSR)	Time-division proportional control (CYC)	12 - 15 V d.c. pulse voltage (load resistance min. 600 Ω)				
		Phase control (PHA)					
	Current output (SCR)		4 - 20 ㎃ d.c. (load resistance max. 600 Ω)				
Power voltage			100 - 240 V a.c. 50/60 ㎐ (10 % of power voltage)				
Voltage fluctuation rate			±10% of power voltage				
Power consumption			Max. 5.5 VA				
Ambient temperature & humidity			- 5 ~ 50 ℃, 35 ~ 85 % RH (without condensation)				
Weight (packed)			400 g	320 g	300 g	320 g	180 g

Suffix code

Model	Code			Content	
AX	□-	□	□	Multi Input Digital Temperature Controller	
Appearance	2			48(W) X 96(H) ㎜	
	3			96(W) X 48(H) ㎜	
	4			48(W) X 48(H) ㎜	
	7			72(W) X 72(H) ㎜	
	9			96(W) X 96(H) ㎜	
Option		1		Relay 1 + Relay 2+SSR	When using relay or SSR output (internal selection by parameter)
		2		Relay 1 + Relay 2 + Relay 3 + SSR	
		1B		SSR + Relay 1(form C) + Relay 2	Only AX2, 3, 7, 9
		2B		SSR + Relay 1(form C) + Relay 2 + Relay 3	
		3		4 - 20 ㎃ + Relay 2	When using current output
		4		4 - 20 ㎃ + Relay 2 + Relay 3	
Power			A	100 - 240 V a.c. 50/60 ㎐	

※ The relay output operates as control output, alarm output and LBA output depending on the internal parameter settings.