Drive control motor without potentio-meter

This digital controller is used to drive a control motor and has various kind of functions. The feed-back resistance is not necessary for the control motor by the development of the new algorithm. As a result of it. the wiring can be simplified and the fine adjustment of feed-back resistance and the maintenance are no more necessary.



Tel : (0331)256-7070, Fax : (0331)256-7875

Features

1	. Input	· Universal input (Refer to the table for input range)
	Accuracy	Default value : K - 199.9 to 999.9 \sharp Measuring range \rightarrow % 0.3% of span + 1 digit
	,	* Accuracy is not guaranteed between 0 to $400^{\text{f}}_{\text{L}}$
		W5Re/W26Re, PLII, and N thermocouple input. Cold junction compensation error:Within ¾ 1.5£
	Input break action	(at 0 to 50); : Up scale [TC,RTD, Voltage (Low)] Down scale [Voltage (High) Current]
	Input impedance Resistance effect on	: Approx. 0.4¥ V/Ø
	Effect of input lead	: Up to 109 per wire maximum
	Allowable input	: Within $\frac{1}{4}$ 5V But within $\frac{3}{4}$ 15V for the input of 0 to 5V 1 to 5V 0 to 10V
	Sampling cycle	: 0.5 sec
2	. Setting range Set-value (SV)	: Same with input range
	PV bias	: Temperature input→ -1999(-199.9) to 9999(999.9) °C[°F] Voltage, current input ₽ 1999 to 9999
	Setting change	(Decimal point position is same with that of PV) : Temperature inputa 0(0.0) to input span/min
	rate limiter (Common to	voltage-current inputa 0.1 to 100.0% min of scaling span (Setting change rate limiter is OFF by setting 0.)
	Proportional band	: Temperature inputa 1(0.1) to setting limiter span voltage-current inputa 0.1 to 100.0% of scaling span
	Integral time Derivative time	: 1 to 3600 sec. : 0 to 3600 sec (Derivative action is OFF by setting 0.)
	Neutral zone	: 0.1 to 10.0% of more time, but does not become 0.05 sec or below.
	Control response parameter	: Slow, medium, fast
	Motor time Integration output limiter	: 5 to 1000 sec (full open to full close) : 100.0 to 200.0%
	Manual control	: OUT1 is on by up key, OUT2 is on by down key. manual ê Auto balanceless bumpless change -over both
	Output stopping function	(Same with the state of power OFF.)
3	. Control	· Prilliant PID control
		* Possible to change of direct/reverse action by setting
	Output 1	* Electrical life: More than 300 000 times (Resistive load)
	Output 2 (Close side output)	: Relay contact output, Rating:250V AC 3A (Resistive load) * Electrical life; More than 300,000 times (Rated load)
4	. Alarm function (Optic Number of output	on) : 2 points.
	points Alarm types	: Input alarm (High limit, Low limit)
	21	Deviation alarm (High limit, Low limit, High/Low limit, Band) Setting alarm (High imit, Low limit), FAIL * Possible to set hold action except band alarm, setting
		alarm, FAIL. Default value : Alarm 1 æ Deviation alarm (High limits)
	Output	Alarm 1 a Deviation alarm (Low limits) : Relay contact output, Rating : 250V AC 0.5A (Resistive load) * Electrical life: More than 50.000 times (Rated load)
	Alarm delay timer	: 0 to 600 sec

: Alarm output is ON inside alarm range (No special action is done by abnormal input) Alarm action at abnormal input

Input and range table

G	Group		Input a	and range
	je	к	-199.9 to 999.9É	-199.9 to 999.9µ
			-200 to 1372É	-330 to 2500µ
		.	-199.9 to 999.9É	199.9 to 999.9µ
		J	-200 to 1200É	-330 to 2192µ
		Т	-199.9 to 400.0É	-199.9 to 752.0µ
nt		R	0 to 1769É	0 to 3216µ
İnp	no	S	0 to 1769É	0 to 3216µ
Ð	ğ	В	0 to 1820É	0 to 3308µ
atu	Them	E	200 to 1000É	-330 to 1832µ
e		N	0 to 1300É	0 to 2372µ
E		PLII	0 to 1390É	0 to 2534µ
Ŧ		W5Re/ W26Re	0 to 2320É	0 to 4208µ
		U	0 to 600É	0 to 1100µ
		L	0 to 900É	0 to 1600
	DTD	JPt100	-199.9 to 510.0É	-199.9 to 950.0µ
	RID	Pt100	-199.9 to 660.0É	-199.9 to 999.9µ

 Control loop break a (Available only with LBA time setting 	alarm (LBA) function alarm function) :0 to 7200sec (OFF by setting 0)
range LBA dead band	: Temperature input a 0 to 9999°C[°F] Voltage, current input a 0 to 100% of scale
Output	(Orr by setting 0) : Relay contact output, Rating;250V AC 0.5A (Output from No. 1 alarm terminal. Common to temperature alarm)
6. Contact input [step] Contents	 Increase only for D900 Switching of SV1/SV2 (Open:SV1, Close:SV2) * Impossible to switch over to SV2 by key operation
Input type	: Non voltage contact input (Open : More than 50K), Close:Below 109))
7. Analog output (Option Output signal	on : Available only for D900) : 0 to 20mA DC, 4 to 20mA DC (I cod registerance) Loos than 600
Output type	: To be selected from measured, deviated and set-value
8. Communication (Op Communication method	otion : Available only for D900) : RS-485 (2 wires), RS-422A(4 wires)
Synchronous	: A synchronous type
Communication speed	: Selectable from 1200BPS, 2400BPS, 4800 BPS, 9600 BPS, 19200 BPS
Bit configuration	: Start bit \rightarrow 1, Data bit \rightarrow 7 or 8, Parity bit \rightarrow odd, even or not exist. stop bit \rightarrow 1 or 2
Maximum number of connection	: 31 units
9. General specificatio	ns
Water proof and dust proof	: IP54 (Effective only for the front direction when installed on a panel) * A NEMA 4X front cover is available as an option only
	D100. (Effective only for the front direction when installed on a
Memory back-up	panel) : Backed up by EEP-ROM
	(Data retaining period : Approx. 10 years)
failure	power failure of more than 20msec will set up the initial state.
Insulation resistance	: Between measuring and ground terminals : More than 500V
	Between power and ground terminals : More than 500V
Dielectric strength	: Between measuring and ground terminals 1000V AC 1 minute. Between power and ground terminals 1500V AC 1 minute.
Power supply voltag	e: a) 90 to 264V AC [Including voltage variation] 50/60Hz, (100 to 240V AC Rating)
	 b) 21.6 to 26.4V AC [Including voltage variation] 50/60Hz, (24V AC Rating)
	 c) 21.6 to 26.4V DC [Ripple rate less than 10p-p] (24V DC Rating)
Power consumption	: a) 100 to 240V AČ D100 : less than 11VA, D900 : Less than 12VA
	D100 : less than 7.0VA, D900 : Less than 7.5VA c) 24V DC
Weight Ambient	D100 : less than 180mA, D900 : Less than 200mA : D100→Approx. 180g, D900a Approx. 360g : 0 to 50£
temperature	
Ambient humidity	: 20 to 80% RH · Free from corrosive and flammable gas, and dust
Other conditions	Free from external noise and direct vibration and shock. The place without direct sunlight is recommended.

Group			Input an	d range		
	V-11		0 to 10mV DC			
Ē	(Low)	mv	0 to 100mV DC			
<u>.</u>		(v)	0 to 1V DC	Scale range and decimal		
ğ	Voltage (High)	v	0 to 5V DC	the range of -1999 to 9999		
Į0			1 to 5V DC			
			0 to 10V DC			
Current		m۸	0 to 20mA DC *1			
lr	nput	mA	4 to 20mA DC *2			

*1 : Add 250 resistor (+/-0.02%+/-10mmp 0.25W) to 0-5V DC range externally. Use MCX250R00Q (from alpha electronics) or equivalent.
 * 2 : Add 250 resistor (+/-0.02%+/-10mmp 0.25W) to 1-5V DC range externally. Use MCX250R00Q (from alpha electronics) or equivalent.

á D100Z

D 1 0 0	Ζ	- M M *	à	N - N N - N	à	Contents
Control Action	Ζ					Position proportioning action without FBR
Control Output		MM				Relay contact output
Alarm Function		1	Ν			None
			D			Dual alarm
Water proof/Dust proof					N	Not supplied
(NEMA 4X)					1	Water proof/Dust proof spec. (Using a front cover confirming to NEMA 4X)

á D900Z

D 9 0 0	Z	- M *	· 🗌 ,	- N	- 🗌 -	-	Contents
Control Action	Z						Position proportioning action without FBR
Control Output		М					Relay contact output
Alarm Function			N				None
			D				Dual alarm
Analog Output	N			Not supplied			
				Analog output 1pt. (Specify output signal code)			
Digital Communication	I Communication		N	Not Supplied (with step function)			
			4	RS-422A (with step function)			
			5	RS-485 (with step function)			

Power Supply (Specify either)

24V AC/DC

* When current input is selected, the shunt resistor (To be mounted outside. Sold separately) is to be purchased.

Output Signal Code

				1	
7	0 to 20mA DC	8	4 to 20mA DC		100 to 200V A

Accessory

Name	Model	Unit of sale
Shunt resistor for current input (250♥)	KD100-55	1

Control motor, control damper and etc. are available. Please contact our sales agent for detailed information.





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