PROGRAMMABLE ONOFF CONTROLLER — X96A

FLAMEPROOF, IP65

- Two universal inputs
- 0 / 1 / 2 / 3 / 4 setpoints corresponding to input 1, input 2
- Isolated 2 x 0/4~20 mA or 0-10 V DC retransmission outputs corresponding to input 1, input 2
- 24 V DC transmitter supply
- RS485 / MODBUS RTU
- 85~265 V AC SMPS
- ONOFF control

SPECIFICATIONS

All specifications at ambient of 25 °C, unless specified otherwise

INPUTS

No. of inputs	2 (input 1, input 2)
Input group 1 (common for both inputs)	
Thermocouple	B, E, J, K, N, R, S, T
RTD	Pt100, 3-wire
Voltage	0~50 mV
Current	0~20 mA, 4~20 mA
Input group 2 (common for both inputs)	
Thermocouple	B, C, D, E, G, J, K, N, R, S, T
RTD	Pt100, 3-wire, Cu53
Current	0~20 mA, 4~20 mA, Square root (for input 1)
Voltage	0~50 mV Through DIP selection following voltage inputs are available : 0~1 V, 0~5 V, 0~10 V, 0~10 mV, 0~100 mV, 0~200 mV
Transmitter supply	22 V nominal, 30 mA max
Range limits	See Table 1
Accuracy	See Table 1
Cold junction compensation	Automatic
Sensor break protection	User programmable

INDICATION

Process variable	Upper : 4 digit, 7 segment 0.8” (20.3 mm) red LED display
Setpoint	Lower : 4 digit, 7 segment 0.52” (13.2 mm) green LED display
Status indication	LEDs for relay status LEDs for setpoint indication LEDs for communication

OUTPUTS

No. of relays	0 / 1 / 2 / 3 / 4
Relay contact type	NO-C-NC
Relay contact rating	5A / 230V AC, resistive
SSR drive	12 V DC drive signal for external SSR
No. of analog outputs	0 / 1 / 2 (current or voltage)
Current output	4~20 mA / 0~20 mA / 20~4 mA / 20~0 mA isolated from input
Maximum load for current output	500 ohms
Voltage output	0~10 V / user specified
Load for voltage output	>10 Kohms

COMMUNICATION

Port	RS485
Protocol	Modbus RTU
Slave ID	User programmable (1~256)

ENCLOSURE

Enclosure	Certified flameproof for gas groups I, IIA & IIB
Material	Aluminium alloy
Dimensions (in mm)	352(H) x 190(W) x 170(D)
Protection	IP65
Keyboard	4 Pushbuttons
Mounting	Wall mount
Mounting accessories	Included
Cable entries*	5 x 3/4” ET

* Cable glands to be ordered separately

PROGRAMMABLE PARAMETERS

Setpoint	Full range (See Table 1)
Unit	°C, °F, EU
Resolution	User selectable 0.01, 0.1 or 1 for linear input, 0.1 or 1 for temperature
High scale	Full range (See Table 1)
Low scale	Full range (See Table 1)
Digital filter	A (minimum) ~ F (maximum)
Hysteresis	0~25% span
Bias (for process variable)	-50 to 50% of range limit
Relay logic	a. Heat b. Cool c. Fullscale high alarm d. Full scale low alarm e. Deviation high alarm f. Deviation low alarm g. Inband alarm h. Outband alarm (e. to h. available for SP2, SP3, SP4 only)
Alarm types	Self reset or latched and can be disabled at power on
Alarm acknowledge	Front panel function used to reset relay in alarm condition
Setpoint lock	ON, OFF
Level lock	ON, OFF
Relay action	Reverse / direct

OTHER

Supply voltage	a) 85~265 V AC, 50/60 Hz b) 20~35 V DC (optional)
Power consumption	4 watts maximum
Operating ambient temperature	0~50 °C
Relative humidity	Below 90%, non condensing

CAT#258R4/P1/2/310317/A

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TABLE 1

SENSOR / INPUT	RANGE LIMITS (°C / EU)		RANGE IN WHICH ACCURACY IS SPECIFIED		TYPICAL ACCURACY AT 30 °C (°C / EU)	WORST CASE ACCURACY (°C / EU)
	LOW SCALE	HIGH SCALE	LOW SCALE	HIGH SCALE		
Input Group 1						
Pt - 6% Rh / Pt - 30% Rh (B)	400	1820	400	1820	± 3	± 5
Chromel / Constantan (E)	-270	850	0	850	± 1	± 3
Iron / Constantan (J)	-210	760	0	760	± 1	± 3
Chromel / Alumel (K)	-270	1372	-50	1200	± 1	± 3
Nicrosil / Nisil (N)	-270	1300	-50	1200	± 1	± 3
Pt / Pt - 13% Rh (R)	0	1760	400	1760	± 2	± 5
Pt / Pt - 10% Rh (S)	0	1760	400	1760	± 2	± 5
Copper / Constantan (T)	-270	400	-200	400	± 1	± 3
Pt100, 3-wire	-200	850	-200	600	± 0.3	± 1.0
Linear (0~50 mV, 0~20 mA, 4~20 mA)	-1999	9999	-1999	9999	± 5 EU	± 20 EU
Input Group 2						
The following inputs are available in Input Group 2 in addition to inputs of Input Group 1.						
Tungsten - 5% Rh / Tungsten - 26% Rh (C)	0	2320	0	2320	± 3	± 5
Tungsten - 3% Rh / Tungsten - 25% Rh (D)	0	2310	0	2310	± 3	± 5
Tungsten / Tungsten - 26% Rh (G)	0	2310	0	2310	± 3	± 5
Cu53	0	180	0	180	± 0.3	± 0.5
Linear (0~10 mV, 0~100 mV, 0~200 mV, 0~1 V, 0~5 V, 0~10 V)	-1999	9999	-1999	9999	± 5 EU	± 20 EU
Linear (4~20 mA) with square root	0	9999	0	9999	± 10 EU	± 40 EU

ORDERING INFORMATION

FLP X96A will be supplied with the following standard specifications :

1.	Input	Input group 1
2.	Supply voltage	85~265 VAC
3.	RS485	Not provided

ORDER CODE	
2194	A

A	Configuration		
	No. of inputs	Relay	4~20 mA output
01	1	2	0
02	1	2	1
03	1	4	0
04	1	2	2
05	1	4	2
06	2	0	0
07	2	2	0
08	2	4	0

Ordering Options
The following ordering options are available on request.
Minimum order quantity and/or minimum order value may apply.

	Option	Details
1.	Analog output	0~10 V DC
2.	Supply voltage	24 V DC
3.	Input	Input group 2
4.	Communication	RS485

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