3-point control input controller for use with motor-driven actuators JDS-210

(quasicontinuous action) or PWM output with PI / PID behaviour
DIN built-in housing

Technical data

Measuring range:	–199,9 … +650,0°C
Power consumption:	5W
Operating voltage:	230 V ~, 50 / 60 Hz
Switching capacity:	10 (3) A, 24 … 250 V ~
Contact	1 relay as potential-free changeo-ver contact, 1 relay as potential-free make contact
Sensor:	PT100 (4-, 3- and 2-conductor connection technique)
Resolution:	0.1°C
Accuracy:	< 0.3 % FS ±1 digit (at nominal temperature = 25°C)
Measuring rate:	3 measurements / second
Ambient conditions:	0 … 50°C, 0 … 80 %r.h. (non condensing)
Degree of protection:	IP 54 (front)
Protection class:	II (front)
Terminals:	terminal screws / plug-in terminals (max. 1.5 m^2)

Application

The JDS-210 is an universially applicable, micro-processor-controlled controller for the joint operation with PT100 sensors. The device is mainly applied for the control of the motor driven actuators of three-way mixing valves, straight way valves or air flaps. The device is equipped with a two wire interface (RS-485). Cross-linking and data acquisition is possible via PC.

Sensors and measuring transducers are not included in the scope of the delivery. (As for choice of sensors or measuring trans-ducers available, see as of page 99).

Avoid parallel laying of sensor line and mains supply cables or protect it by shielding.

Relay terminal allocation:

Relay 1: Terminal 6 – input
Terminal 7 – make contact

Relay 2: Terminal 3 – break contact
Terminal 4 – input
Terminal 5 – make contact

Control behaviour

Function of the position transmitter:
Control behaviour: P, PD / OPENING – NEUTRAL – CLOSING. For the triggering / actuation of flaps, motor valves, etc. Relay 1 issues the command for "OPENING" while relay 2 issues the one for "CLOSING".

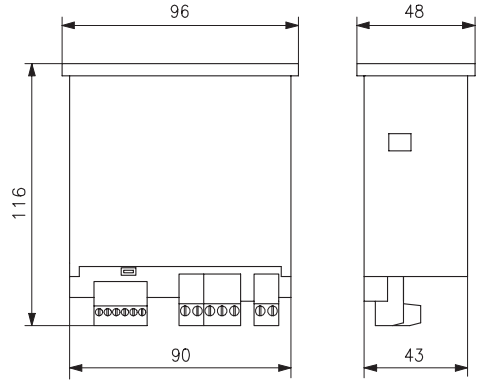
Function of the clocked PWM controller:
Control behaviour: Clocked P-, PI-, PD-, PID controller. Relay 1 serves to adjust to the actually adjusted set value (control behaviour depending on the actually adjusted control parameters), while relay 2 serves as an alarm relay min. / max. alarm.

Explanation of terms

PWM (pulse width modulation):
The pulse / pause relation (pulse length t_i – time of inactivity t_p – pulse duty ration V) varies within a certain predefined time (cycle duration T) in dependence on the set- / actual value deviation in such a way that a cer-tain actuator (e.g. thermo-electric valve drive, electrical direct heating, etc.) can be triggered in a clocked manner.
P behaviour: The control difference (set- / actual value deviation) induces a proportional correcting variable.
D behaviour: : The change rate of the control difference induces the actual value of the related correcting variable.
I behaviour: The control difference induces the change rate of the related correcting variable.

Type	Item No.	PG
JDS-210	G 8000377	J

JDS-210



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