ZPA PEČKY, a.s.

ZP2 POSITION CONTROLLER

A built-in position controller allows automatic positioning of the actuator output shaft to be performed, depending on the analog input signal. At the controller input, the input control signal is compared with the feedback signal of the position transmitter. The resulting control deviation, if any, is used for actuator run control, the actuator output shaft being brought into the position corresponding to the input control signal value.

This controller uses the high performance of the RISC processors MICROCHIP for performing all its functions, while at the same time enabling continuous system self-diagnosis to be effected and error messages to be displayed whenever a failure occurs. Due to this facility, the user need not make complicated adjustment as in the case of a current analog controller. For this purpose, it is sufficient to start the initializing program to make the controller perform all necessary functions.

CONTROLLER SOFTWARE

1) The controller can be programmed to perform the required functions in the following two ways:
   - By a PC after the RS 232 interface.
   - By means of the functional keys and LEDs on the controller.

The following parameters can be programmed:

- Control signal
- Controller response to the TEST signal and the error state (depending on the programmed requirements)
- Mirroring (ascending or descending characteristic of the control signal)
- Controller insensitivity
- Type of feedback transmitter (potentiometer, current transmitter)

2) All operating states of the controller can be monitored by a PC after the RS 232 interface. In this case, the controller issues error messages by means of LEDs or PC.
   - Presence of the TEST signal
   - Control signal is missing
   - Limit switches (faulty connection)
   - Failure of position sensor
   - Failure of thermal protection

TECHNICAL PARAMETERS OF THE CONTROLLER

Alternative supply voltages:	A. 230 V +10%, -15%	50 - 60 Hz
	B. 120 V +10%, -15%	50 - 60 Hz
	C. 24 V +10%, -15%	50 - 60 Hz
Control signal	0 to 20 mA, 4 to 20 mA, 0 to 10 V	
Position sensor	Potentiometer of 100 to 10,000 Ω Current transmitter of 4 to 20 mA	
Controller linearity	0.5%	
Controller insensitivity	1 to 10% (adjustable)	
Operating temperature range	- 25 °C to + 75 °C	

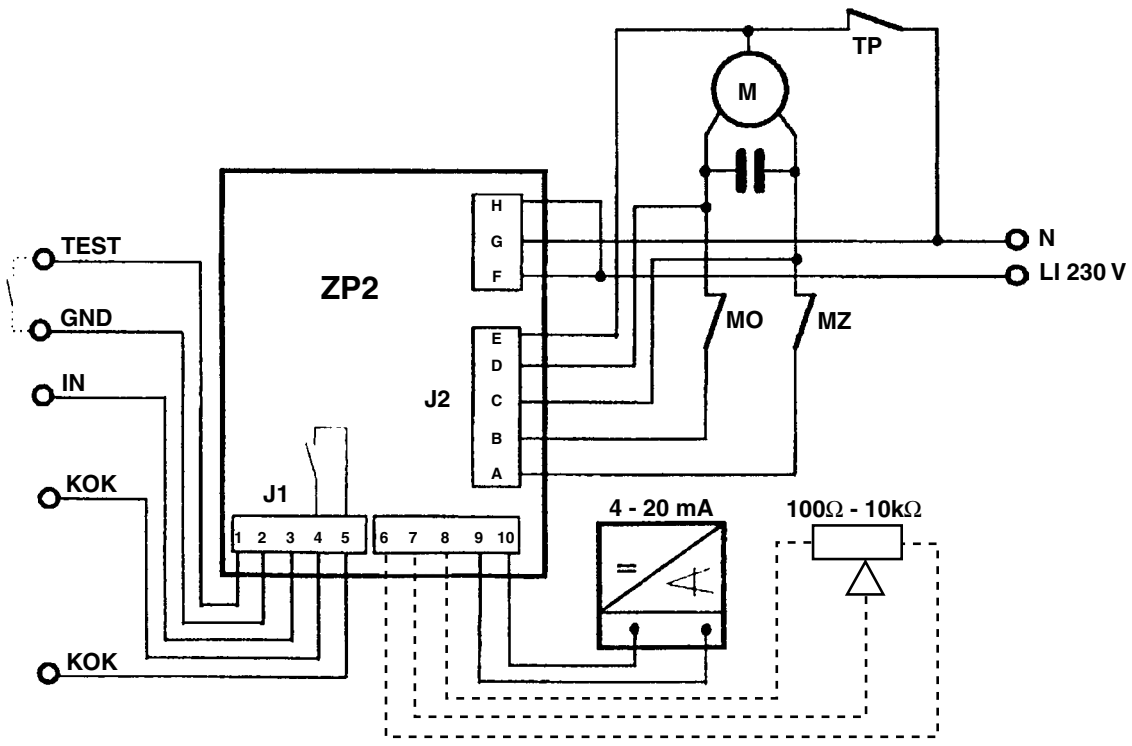
LED error messages	- TEST mode - Control signal is missing - Reversed position switches - Failure of position sensor - Failure of thermal protection
Response to failure:	Failure of sensor - Actuator in the TEST position, LED error message Control signal is missing - Actuator in the TEST position, LED error message TEST mode - Actuator in the TEST position, LED error message
Output signal:	Power outputs - 2x relay of 5 A, 230 V Central failure - Switching contact of 24 V, 2 W 5x LED (power supply, failure, adjustment, opens, closes) Brake - Control signal of 2 mA (signal for additional module)
Actuator position	- I2C bus (signal for additional module)
Adjusting devices:	- 2x calibrating and parameter adjusting push-button - Communication connector
Dimensions:	- 75 x 75 x 25 mm

WIRING DIAGRAM OF THE ZP2 POSITION CONTROLLER

Legend:

J1		**Signal terminal board**
J1-1	TEST	Test input of logic control signal
J1-2	GND	Earth terminal of control signals
J1-3	IN	Control signal input of 0 to 10 V, 0 to 20 mA, 4 to 20 mA
J1-4	KOK	Switching contact of error message
J1-5	KOK	Switching contact of error message
J1-6	+5V	Power supply of potentiometric position transmitter
J1-7	IN RS	Signal of potentiometric position transmitter
J1-8	GNDRS	Earth of potentiometric position transmitter
J1-9	+24V	Power supply of current position transmitter
J1-10	IN IS	Signal of current position transmitter

J2		**Power terminal block**
J2-A	FZ	CLOSE phase
J2-B	FO	OPEN phase
J2-C	MZ	CLOSE torque-limit switch
J2-D	MO	OPEN torque-limit switch
J2-E	TP	Thermal cut-out
J2-F	U	L1 230 V phase of power supply of the output stage
J2-G	N	N 230 V
J2-H	U-TR	L1 230 V phase of power supply of the controllerer-speisung



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