YWK-50, YWK-50-C Pressure Controller Instruction Manual

This controller uses a bellows-type sensor. It can be used for controlling or alarming the pressure of gaseous, steam, or liquid media. The YWK-50-C features a cast aluminum casing, is waterproof, and meets marine conditions. The YWK-50 uses a phenolic plastic casing and is a standard type.

● **Basic Performance:**

No.	Setting Range (MPa)	Adjustable Differential Range (MPa)	Setting Value Error (MPa)	Repeatability Error (MPa)	Max Allowable Pressure (MPa)	Weight (kg)
		Min Differential ≤	Max Differential ≥			
1	-0.1~0	0.006	0.028	0.004	0.002	0.05
2	0~0.1	0.006	0.028	0.004	0.002	0.16
3	0~0.2	0.010	0.080	0.008	0.004	0.35
4	0~0.3	0.018	0.100	0.012	0.006	0.50
5	0~0.5	0.030	0.150	0.020	0.010	0.75
6	0~0.8	0.070	0.250	0.032	0.016	1.3
7	0~1	0.070	0.250	0.040	0.020	1.55
8	0~1.5	0.100	0.280	0.060	0.030	2.1
9	0~2	0.120	0.300	0.080	0.040	2.9
10	0~3	0.150	0.500	0.120	0.060	4.4

No.	Setting Range (MPa)	Adjustable Differential Range (MPa)	Setting Value Error (MPa)	Repeatability Error (MPa)	Max Allowable Pressure (MPa)	Weight (kg)
11	0~4	0.250	0.600	0.160	0.080	5.7
12	0~6.5	0.390	1.000	0.260	0.130	8.1

Note: The setting value refers to the lower switching value.

● **Electrical Performance:**

AC Resistive Load	DC Resistive Load
Voltage V	Current A
380	3

Wiring Diagram

[Image of wiring diagram showing terminals 1, 2, 3 and a switch symbol P]

Single-pole double-throw microswitch operation status: When pressure P rises to the upper switching value, terminals 1-2 are connected; when P drops to the lower switching value, terminals 1-3 are connected.

Setting Value Adjustment: If high precision for the set value is not required, debugging can be performed using the controller's scale and a pressure gauge in the system. If high precision for the set value is required, please use a dedicated pressure calibrator and a precision pressure gauge for debugging.

Example: Control the pressure of the controlled medium to be between 1.0~1.2MPa.

1. Select a pressure controller with a setting range of 0~1.5MPa.
2. Rotate the adjustment rod until the pointer indicates 1.0MPa on the scale. This value is the lower switching value.
3. Connect the controller's terminals to the electrical circuit of the controlled system. Note that terminals 1-2 are connected when pressure rises, and 1-3 are connected when pressure drops.
4. Power on. Allow the controlled medium's pressure to rise, then repeatedly adjust the differential knob until the controller switches when the pressure reaches 1.2MPa.

● **Dimensions** (Dimensions marked with an asterisk '*' are installation dimensions) [Image of the controller's dimensions with measurements]

● **Installation**

- Open the controller cover; there are 4 M4 screws inside for user installation.
- Unscrew the connector. Solder one end of the Ø6mm metal pressure tube into the sleeve (or use a flaring method), then tighten the connector to seal the connection. The controlled medium enters the bellows chamber through this metal pressure tube. Install the controller cover properly.
- **Installation Position:** Vertical or tilted 22.5°.
- **Cable Specifications:** Ø12mm or Ø7.5mm three-core cable.

[Image showing pressure controller pressure tube connection diagram with components like connector, Ø6 metal pressure tube, sleeve, M12x1 deep 12, bellows chamber, solder]

● **Precautions:**

- The controlled medium should not be corrosive to brass, phosphor bronze, stainless steel, and lead-tin solder.
- When opening the controller cover for installation, do not rotate the internal screws or poke internal parts.
- The pressure of the controlled medium should not exceed the maximum allowable pressure listed in the table.
- The numbers on the differential knob are illustrative only and not actual values; actual values should be read from a standard table. Once the differential is set, it is recommended to seal the position of the differential knob with paint.
- The controller is guaranteed for eighteen months from the date of factory delivery. The factory is responsible for timely repair or replacement for any product quality issues.