

WATER SUPPLIES DEPARTMENT
STANDARD SPECIFICATION E-81-05
INDICATING CONTROLLER

1. GENERAL

An indicating controller shall be designed with a proportional-integral-derivative (PID) feedback loop control component suitable for control of output device such as valve actuator. The controller shall be able to be automatically regulated on a preset signal as the setpoint for comparison with the measured output for controlling. The design of the controller shall avoid sudden variation of the output status such as valve actuator position in the control process. Switching of the controller from manual to auto shall be bumpless and shall not require manual balancing beforehand.

2. DESIGN

Unless stated otherwise in the Particular Specification, the indicating controllers shall meet the following requirements:

Supply voltage	: 220V a.c. 50 Hz or 24V d.c. to suit the system requirement as specified
Analog input signal	: Two 4 - 20 mA d.c.
Analog output signal	: One 4 - 20 mA d.c.
Output contact	: One 2A 220V a.c. 50 Hz or 2A 24V d.c. as specified
Measurement error	: Less than ± 0.05 mA
Operating temperature	: 0 - 50 °C
Operating humidity	: 10 - 90 % relative humidity
Communication interfaces	: RS485 or RS232 or Ethernet to suit the system requirement as specified
Degree of protection	: IP54 to IEC 60529 or better

3. CONSTRUCTION

The indicating controller shall have two digital LED displays, one for indication of the set value and the other for the measured value.

The controller shall be provided with auto/manual mode selection. All the adjustments of the setpoint and the control mode shall be by means of tactile-feel keys / push buttons provided on the controller front.

Indicators shall be provided for display of system operating status and alarms shall be provided for initiation of system abnormal status.

- End of this Specification -