

## JX-72 Universal PID Controller in Flame-proof execution

**PESO**  
CERTIFIED



**Ex-d**  
CERTIFIED

### OVERVIEW

A PID controller is an instrument used in industrial control applications to regulate temperature, flow, pressure, speed and other process variables. PID (Proportional Integral Derivative) controllers use a control loop feedback mechanism to control process variables, thereby providing accurate and stable process control action.

The ASHE JX-72 is a fully configurable micro-controller based universal Digital Process Indicator with PID control or ON/OFF control action. It is offered in a highly compact, rugged and reliable execution. The instrument has three keys on the front panel, with which the operator can set the parameters and configure the instrument. Two four-digit seven segment dual LED displays are provided to indicate the process value and set value. The display can indicate any scale range between -999 to +9999 units.

The Indicators accept all industrial standard input signals, like 4 to 20 mA DC, DC Voltage, and Temperature sensors like RTD Pt-100, Thermocouples (type J,K,R,S). The instrument also provides RS-485 serial communication on Modbus RTU with four baud rate selection options.

The JX-72 provides two control relay options. First relay is provided for PID control action/ON-OFF control action (selectable) and second relay is provided for only ON-OFF control action, which is configured for either Heating/Cooling settings with independent hysteresis value through the keypad on the front panel.

The ASHE Universal JX-72 PID Controller offers a high degree of reliability owing to its inherent accuracy in process measurement and control, besides other characteristics like total immunity to shocks, dust, ambient temperatures, humidity and corrosive atmospheres. Further, the instruments are manufactured using selected high-grade components which guarantee their functional reliability and long operational life.

The instrument is offered in a IP66 certified enclosure in wall/pipe mount execution. The enclosure has provision for two cable entries.

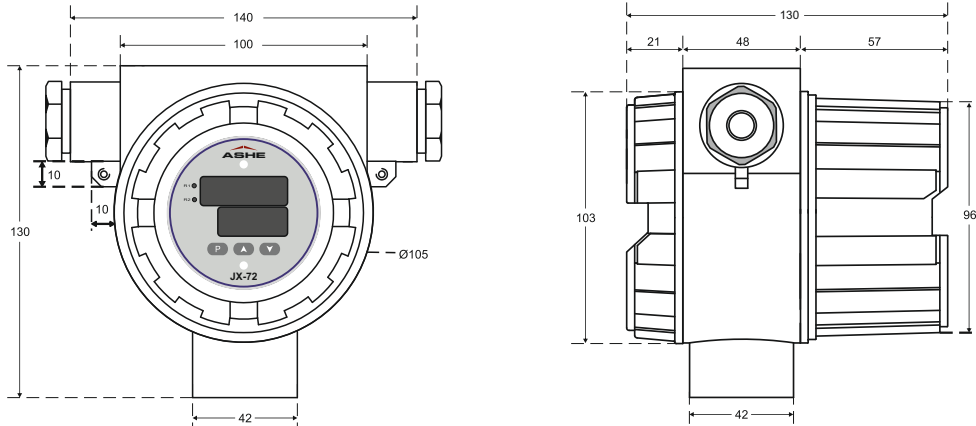
### SPECIFICATIONS

<b>Model</b>	ASHE JX-72
<b>Type</b>	Universal PID Controller
<b>Input Signals</b>	4 to 20 mA DC, DC Voltage, RTD Pt-100, Thermocouples-Types J,K,R,S (Universal Input)
<b>Output Signal</b>	4 to 20 mA DC Retransmission / Control output (Selectable).
<b>Load Driving Capacity</b>	600 ohms
<b>Displays</b>	Dual 4 digit seven segment LED displays
<b>Scale Range</b>	-999 to +9999
<b>Linearity</b>	± 0.1%
<b>Calibration</b>	Configurable from front Keypad
<b>Control Output</b>	Two Relay change over contacts
<b>Contact Rating</b>	10 Ampere @ 230 VAC (resistive loads).
<b>Control Logic</b>	PID control action with Auto tune or Manual tune option and ON-OFF control Action with Heating and Cooling option (Selectable)
<b>Accuracy</b>	±0.1% of FSD
<b>Communication</b>	RS-485 on Modbus RTU Protocol
<b>Auxiliary Output</b>	24 V DC at 100mA for Aux Transmitter Power (Optional)
<b>Power Supply</b>	24 VDC (±10%)
<b>Ingress Protection</b>	IP66
<b>Enclosure</b>	Weather-proof & Flame-proof Exd, die-cast Aluminium alloy LM6 single chamber/dual access enclosure suitable for installation in Hazardous areas for Gas Groups IIA/IIB, T6, Zone 1 & 2 areas, certified by CIMFR Dhanbad
<b>Cable Entries</b>	Two, 3/4" ET
<b>Mounting</b>	Suitable for Wall mounting or 2" Pipe mounting
<b>Mounting Accessories</b>	Stainless steel Angle-Bracket, Mounting Bolt, U-clamp for pipe mounting
<b>Weight</b>	1.4 Kg.
<b>Dimensions</b>	140 x 130 x 130 mm [W x H x D].
<b>Operating Temperature</b>	0 to 55°C

### FEATURES

- Universal Input selection options
- PID Tuning Auto or Manual selectable
- Two control Relay outputs, one for PID and one for On/Off control action
- 4 to 20 mA DC output signal Retransmission / Control output (Selectable)
- Aux 24VDC Power output option for transmitter
- High accuracy and linearity
- Fully configurable
- RS-485 on Modbus RTU communication option
- Baud rate selection options available
- Configuration settings on front panel keyboard
- PESO certified flame-proof enclosure
- Panel / Field / Hazardous-area installation in IP66 execution
- Proven record of several thousand installations

**DIMENSIONAL DIAGRAM**



**HOW TO ORDER**

UNIVERSAL PID CONTROLLER IN FLAME-PROOF EXECUTION	JX-72					
Configuration and add-on options						
<b>1 INPUT SIGNALS</b>						
▶ 4 to 20 mA DC		L				
▶ 0 to 10 VDC		V				
▶ RTD Pt-100 (three-wire)		R				
▶ J type Thermocouple (0 to 750°C)		J				
▶ K type Thermocouple (0 to 1200°C)		K				
▶ R type Thermocouple (0 to 1600°C)		P				
▶ S type Thermocouple (0 to 1750°C)		S				
<b>2 POWER SUPPLY</b>						
▶ 90 to 270 V AC, 50/60 Hz			A			
▶ 24 VDC (±10%)			D			
<b>3 OUTPUT SIGNAL</b>						
▶ 4 to 20 mA DC with aux. 24 VDC @ 100mA Power for transmitter				Q		
▶ 4 to 20 mA output signal				G		
▶ Output signal not required				N		
<b>4 COMMUNICATION</b>						
▶ RS 485 on Modbus RTU required					M	
▶ RS 485 on Modbus RTU not required					N	
<b>5 EXECUTION</b>						
▶ Front Panel mounting						P
▶ Field mounting in Weather-proof execution (Polycarbonate enclosure, Ingress protection)						W
▶ Field mounting in Flame/Explosion-proof Ex-d execution (Cast Aluminum Alloy LM6 enclosure, for Gas groups IIA, IIB)						X

**OUR OTHER PRODUCTS**



FLOW TOTALIZER

SIGNAL ISOLATORS & TRANSDUCERS

TEMPERATURE SCANNER

FLAMEPROOF INSTRUMENTS

STATIC POWER SWITCHES



Designed and Manufactured by :

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