

# Single Loop PID Controllers

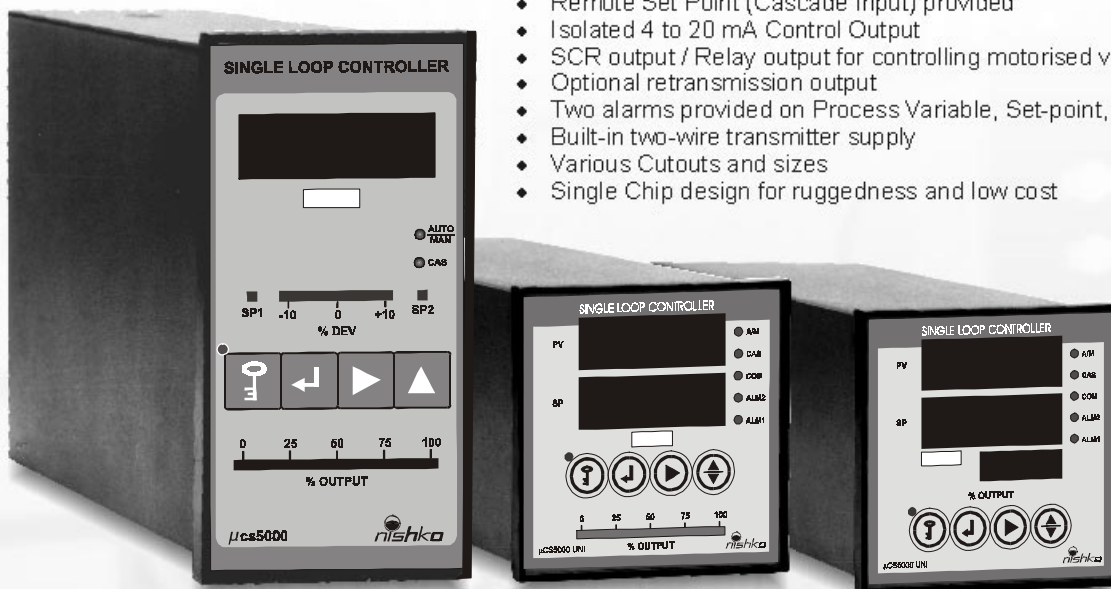
Series :  $\mu$ CS 5000

 nishka



## SALIENT FEATURES

- ◆ Autotuning provided
- ◆ Universal Input
- ◆ Communication Port provided optional
- ◆ Bargraphs / Digital Read-out for deviation, output and set-point
- ◆ Remote Set Point (Cascade Input) provided
- ◆ Isolated 4 to 20 mA Control Output
- ◆ SCR output / Relay output for controlling motorised valves
- ◆ Optional retransmission output
- ◆ Two alarms provided on Process Variable, Set-point, Deviation, Output
- ◆ Built-in two-wire transmitter supply
- ◆ Various Cutouts and sizes
- ◆ Single Chip design for ruggedness and low cost



The  $\mu$ CS 5000 series Single Loop PID Controllers are instruments used for precise controlling of various linear / non linear processes. The same unit can be configured at site to accept inputs from two-wire, three-wire or four-wire transmitters or temperature sensors. The thermocouples and RTD's are linearised. The unit can be configured for internal / external set-point with ratio control and biasing facility. Other functions such as Ramp, Soak, Profile etc. are available on request.

## TECHNICAL SPECIFICATIONS

Input	: 1) 4 to 20 mA DC, 0 to 20 mA DC (Input Impedance < 200 ohm) 2) 1 to 5 V DC, 0 to 5 V DC (Input Impedance > 2K ohm) 3) RTD, PT-100, 3 wire 4) Thermocouples J type, K type (others on request) (Input Impedance > 1M ohm)
Range	: Calibrated as per customers requirement from front key pad
Display	: 1) 4 digit, 1/2" LED for Process Value 2) 4 digit, 1/2" LED for Set-point, Output 3) 3 digit, 0.3" LED or 21 segment bargraph for output
Set-point	: Internal / external programmable
Control Output	: 4 to 20 mA in max 600 ohm load (or Relays)
Modes	: Auto / Manual (bumpless transfer provided)
Control Action	: Forward / Reverse programmable
Control Modes	: P+I+D
Proportional Band (P)	: 2% to 1000%
Integral Action Time (I)	: 1 to 9999 seconds
Derivative Action Time (D)	: 1 to 9999 seconds
Alarms	: Two alarms provided on Process Variable, Set-point, Deviation, Output
Output Relays	: 1 NO + 1 NC per alarm, rated at 230 V AC, 5 A resistive load
Transmitter Supply	: 24 V DC, 30 mA
Retransmission Output	: 4 to 20 mA (Isolated) optional (max load 600 ohm)
Programming	: All parameters programmable by splash proof front key pad
Accuracy	: < +/- 0.2% of FSD
Supply	: 230 V AC, 50 Hz (others on request)
Mounting	: Flush on panel
Dimensions	: Cutout Bezel 1) 92mm X 92mm 1) 96mm X 96mm 2) 138mm(H) X 68mm(W) 2) 144mm(H) X 72mm(W)
Depth	: less than 200mm
Operating Temperature	: 0 to 50 deg C
Temperature Coefficient	: 0.015% / deg C
Humidity	: 90% maximum (non-condensing)

# Single Loop PID Controllers

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## FLAMEPROOF SINGLE LOOP PID CONTROLLERS Series $\mu$ CS 5000-EX

The  $\mu$ CS 5000-EX is suitable for field mounting in hazardous areas and can be fully programmed without opening the enclosure. The double compartment enclosure having separate compartment for terminals is easy for mounting and maintenance.

Mounting	: Field, wall
Enclosure	: Cast Aluminium
Protection	: Flameproof Gr IIA, IIB (IIC on request), weatherproof IP65
Dimensions	: 350mm(H) X 188mm(W) X 120mm(D)
Programming	: From front without opening enclosure

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