

# Single Loop PID Controllers

Series : CS 5000



## 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 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 Display	: Calibrated as per customers requirement from front key pad 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)

## **NISHKO INSTRUMENTS PVT. LTD.**

El-5, Electronic Zone, MIDC Bhosari, Pune 411026

Phone : 020-27121066, 27127620, 27122304. Fax : 020-27122888

E-mail : nishko@vsnl.com Web site : [www.nishko.com](http://www.nishko.com)

