EJ1N Series Digital Temperature Controller

Up to 16 Units can be connected side by side (64 control PID loops)

2 and 4 loops model units

Universal inputs for thermocouple, Pt100 and linear sensors





Available with screw terminals and screw-less clamp terminals

Serial RS485 connection with Modbus **RTU/Compoway-F protocol**

PC programming port on the front

EJIN Series Product Highlights

Easy set-up, quick and intuitive operation



CX-thermo special setup software. Effectively reduces work from setup to adjustment and operation.



State fault/ heater overcurrent



Two wiring technology supported



For Easy Wiring Screw and screw-less clamp terminals models

OMRON

Powerful control/tuning algorithms



Bad step responce / Good disturbance resonse

Good step responce / Bad disturbance resonse

Good step responce / Good disturbance resonse

Simplify commissioning tasks thanks to extensive set of feature to make PID tuning effort easier.

Space saving



Just 31mm wide: 6 times less space needed then traditional 1/16 DIN controllers.

EJIN Series Reduce Crossover Wiring



Basic Units (TC2/4) 2-ch/4-ch temperature control

End Unit (EDU)Power supply and communications connection

PORT A

RS-485

For setting

Connector for QLP port

or

Terminal block

Baud rate: 38,400 bps Backup mode (fixed)

PORT B

RS-485

For host communications and distributed placement

Settings made using communications for each **Basic Unit**

EJ1N support internal bus wiring connection in order to transfer power supply and RS485 lines to attached modules from End Unit. It allow to save 4 wires wiring for each TC modules attached side by side. Simply connect power supply line and RS485 to end unit module to power up the entire system.



EJ1N Series Fit in every machine configuration

1. Basic Configuration

Max.16 units can be connected in a row sideways to one End Unit



2. Distributed placement



Max. 64 TC units can be connected according to the distributed placement

Max. 16 units can be connected in a row sideways to one EDU (including HFU)

EJ1N Series Heaters current peak reduction

The peak current can be reduced to 1/2 or 1/4 by using the output offset function. This contributes to downsizing output transistors and reducing electricity.



peak	1/4 of peak	
/cle: 10s	Control cycle: 10s	
: 40%	Output: 40%	Each EJ1N relay. Whe
		activate ea
		system is a huge amo
		"output of
		e overlappir
	Peak current down to 1/4	



TC module is able to drive 2/4 solid states en machine starts and each PID loops ach own heater the risk is that all heating activated at the same time demanding ount of power from the grid. EJ1N support ffset" feature that avoid control output ng in order to decerase overall current peak.

EJ1N Series Internal bus for OR/AND logic operation



- Application examples:
- specific temperature level (AND logic)



The EJ1 has two built-in buses that can be used to allocate

special features to SUB1 and SUB2 outputs located to

End unit module (Bus Output Assignments).

• Detect if all control loops temperature rise-up at

• Detect if there are some malfunctions in one of the

EJ1N-TC module connected side by side (OR logic)

EJ1N Series Applications





Ovens and furnaces where multi zones control is required





EJ1N Series

Additional features:

- Fast and precise regulation: 250 ms sampling loop period time
- Linear 4..20mA and logic output for handling widers range of actuators
- Several alarms type supported (temperature, Loop Break alarm...)
- ON/OFF control or 2-PID (with autotuning, self-tuning)
- Control outputs ON Scheduling Function to reduce overall heaters current peak when machine starts





EJ1N Series Portfolio



End unit

Accessories



