AIC 801 Microbased 1/8 DIN Controller

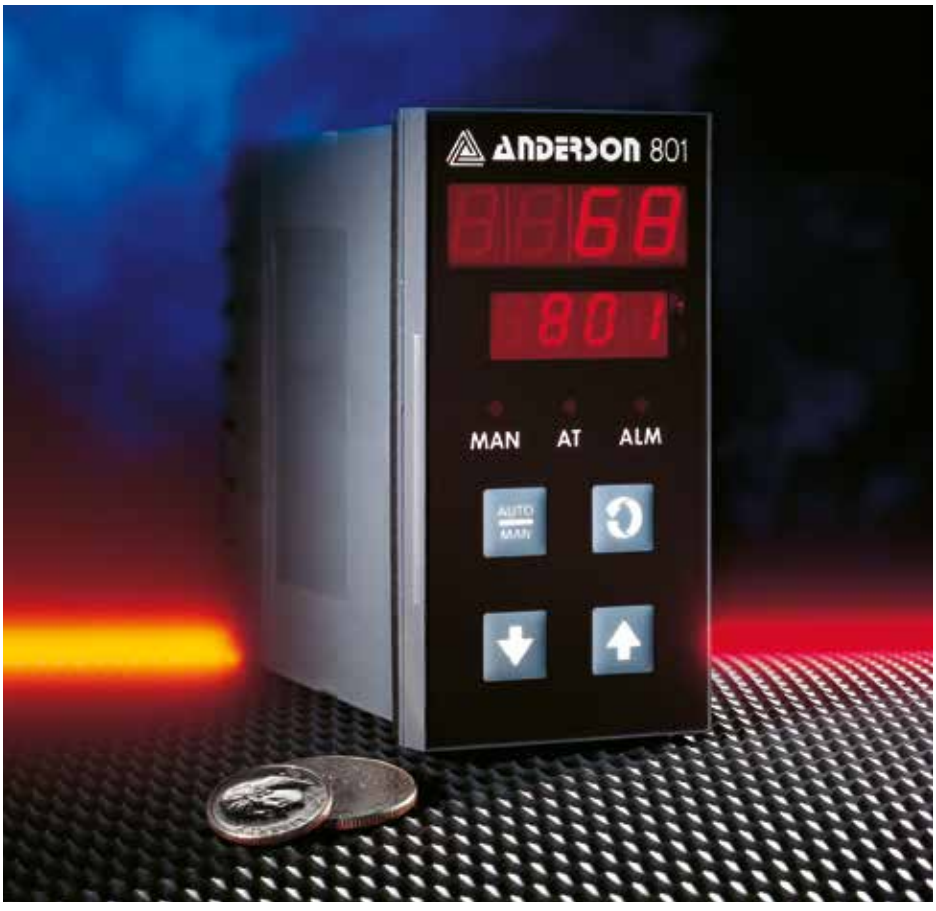
Introduction

The Anderson-Negele AIC 801 controller is designed for use on virtually any process control application. With fully programmable inputs (RTD and 4-20 mA) and dual outputs standard, the unit can be quickly configured for temperature, pressure, level, or even flow control. The 4-20 mA primary output will throttle a valve or vary a pump speed to maintain the process at the desired setpoint, while the secondary relay output can signal any excursion beyond selectable limits.

The unit is now optionally available with an on-board 24 Volt D.C. power supply for use with any 4-20 mA transmitter input.

For field mount applications, specify the ED-190 controller package which includes the 801 pre-mounted in a NEMA 4X enclosure. A pre-wired and piped I:P transducer is included for applications requiring a 3-15 psig pneumatic output. We'll even pre-wired and calibrate any Anderson sensor.

Complete specifications and ordering information are available on the reverse. For more information please visit our Web Site at www.anderson-negele.com, or contact your local Authorized Anderson-Negele Distributor.



Features

- Unique dual 4 digit programmable display
- Programmable inputs: RTD/4-20mA
- Optional 24 Volt transmitter power supply
- Dual Output: 4-20mA and relay
- Auto/manual Control
- Auto Tuning
- Simple configuration with password protection
- NEMA 4X/IP66 sealed front panel

Applications

Any process control application where the controller modulates the position of a valve or speed of a pump to control the variable including:

- Hot water "set" temperature on continuous pasteurizers
- Balance Tank or Filler bowl level control
- Product discharge temperature on heat exchangers
- Back pressure control

Specifications

INPUT SPECIFICATIONS

General

Input Sample Rate:	Four per second
Input Resolution:	14 bits approximately
Input Impedance:	Greater than 100M ohm resistive (except for DC mA and V inputs)
Isolation:	Universal input isolated from all outputs

RTD

Type and Connection:	Three-wire Pt100
Calibration:	Complies with BS1904 and DIN43760
Lead Compensation:	Automatic
Sensor Break Protection:	Break detected within 2 seconds. Control outputs set to OFF (0% power); alarms operate as if the process variable has gone under-range)

DC mA

Scale Range Maximum:	-1999 to 9999
Scale Range Minimum:	-1999 to 9999
Minimum Span:	1 display LSD
Sensor Break Protection:	Break detected within 2 seconds. Control outputs set to OFF (0% power); alarms operate as if the process variable has gone under-range)

OUTPUT SPECIFICATIONS

Output 1 (Primary)

Type:	4-20mA DC
Resolution:	Eight bits in 250mS (10 bits in 1 sec. typical, >10 bits in >1 sec. typical).
Update Rate:	Every control algorithm execution
Load Impedance:	4-20mA: 500 ohm maximum
Isolation:	Isolated from all other inputs and outputs

Output 2: 24 Volt D.C. for transmitter power supply (when specified)

Output 3 (Secondary)

Type:	Relay
Contact Type:	SPDT
Rating:	2A resistive at 120/240V AC
Lifetime:	>500,000 operations at rated voltage/ current
Isolation:	Inherent

CONTROL SPECIFICATIONS

Auto Tune Types:	Pre-Tune and Auto-Tune
Proportional Bands:	0 (off), 0.5% - 999.9% of input span @ 0.1% increments
Auto Reset:	1s-99min 59 sec and Off
Rate:	0 (off) - 99min 59sec
Manual Reset:	Adjustable in the range 0-100% of output power (single output) or -100% to +100% of output power (dual output)
Deadband/Overlap:	-20% to +20% of proportional band 1 + proportional band 2
ON/OFF Hysteresis:	0.1% to 10.0% of input span
Auto/Manual Control:	User-selectable with "bumpless" transfer into and out of Manual control
Cycle Times:	Selectable for 0.5 sec to 512 sec in binary steps
Setpont Range:	Limited to Setpoint Upper and Setpoint Lower limits
Setpoint Ramp:	Ramp rate selectable 1-9999 LSDs per hour and infinite. Number displayed is decimal point aligned with selected range.

PERFORMANCE

Reference Conditions

Ambient Temperature:	20°C ±2°C
Relative Humidity:	60-70%
Supply Voltage:	90-264V AC 50HZ ±1%
Lead Resistance:	<0.1 ohm/lead balanced (Pt 100)
Common Mode Reject.:	>120dB at 50/60Hz giving negligible effect at up to 264V 50/60Hz
Series Mode Rejection:	>500% of span (at 50/60Hz) causes negligible effect

DC Linear Inputs

Measurement Accuracy:	±0.25% of span ± -1 LSD
Linearization Accuracy:	Better than ± 0.2°C any point, any 0.1°C range (±0.05 typical). Better than ±0.5°C any point, any 1°C range.

RTD Inputs

Measurement Accuracy:	±0.25% of span ± 1 LSD
Linearization Accuracy:	Better than ±0.2°C any point, any 0.1°C range (±0.05°C typical). Better than ± 0.5°C any point, any 1°C range.
Temperature Stability:	0.01% of span/°C change in ambient temperature
Supply Voltage Influence:	Negligible
Rel. Humidity Influence:	Negligible

OPERATING CONDITIONS

Ambient Operating Temp.:	0°C to 55°C
Ambient Storage Temp.:	-20°C to 80°C
Relative Humidity:	20% - 95% non condensing
Supply Voltage:	90 - 264VAC 50/60 Hz
Lead Resistance:	50Ω per lead maximum balanced (pt100)

PHYSICAL

Dimensions:	1/8 DIN front panel (48mm x 96mm) (1.89 x 3.78 inches)
Mounting:	Plug-in with panel mounting fixing strap. Panel cut-out 45 mm x 92 mm (1.77 x 3.62 inches)
Terminals:	Screw type (combination head)
Weight:	16 ounces maximum

AGENCY APPROVALS UL Approved for USA, UL Certified in Canada

Order Information

MODEL	DESCRIPTION
801101000	Standard controller with programmable input, dual output
801401000	Same as above with 24 Volt D.C. transmitter power supply

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