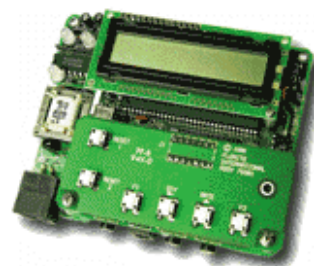


Model N920

Universal Embedded Process Controller



- Manual and Serial Batch, Dose, Alarm Control
- Dual Totalizer and Rate Meter
- Digital Sensor Input and Relay Output
- Multiple Alarm Sources
- Real-Time Clock/Calendar
- Local and Remote Operation and Reporting
- LWAN Communication



MEASURE AND CONTROL

The Model N920 provides service for sensor or process level signals from a variety of digital transducers. Input signals are processed with double word bit precision to service rate-total measurements. Signal are accepted from standard driven, open collector or switches, with adaptive differential support for variable reluctance magnetic sensors to provide high ambient noise rejection even over extended cable distances.

A relay output port provides service for batch and dose control, or local alarm support. It is compatible for interfacing with security systems. Signal interfaces use instrument grade shielded cables that eliminate ambient noise from affecting measurements.

BATCH AND DOSE CONTROL

Quantity delivery controls are selected manually from the front panel keypad, serially through the RS232C port, or remotely through a WAN interface. The required quantity is saved in non-volatile memory when programmed from the keypad. Control functions are supported by a complete set of serial control commands and progress responses.

MONITORING

Monitored and programmed information is menu accessed using the integrated keypad and liquid crystal display, or RS232 port, or remotely using an internal or external WAN interface. Communicator function's enable programmed information to be quickly copied from one unit into another, with a reverse clone feature that recalls measured and programmed values for review using a second unit.

COMMUNICATION

The WAN option enables programming and operating multiple N920 units distributed in wide area networks distant from a central information gathering and control site. The report feature automatically sends monitored information to remote computers based on alarm states, service time, or a clock-calendar schedule. Measurement reports and alarms provide the front end for operations management information gathering, remote billing systems, automated customer service dispatch systems, and equipment maintenance notification.

The N920 is an innovative, high quality, reliable micro-computer-based open architecture instrument - combining process monitoring and several forms of built-in control functions to form a full featured measuring system solution. The N920 is useful for a variety of commercial, industrial, and general instrumentation applications to control mass gas, fluids, pressure, temperature and other general processes variables.

RATE/VALUE FILTER

A digital programmable Butterworth low pass filter provides noise rejection and smoothing of erratic process input signals such as encountered in metering pump applications.

MULTIPLE ALARM SOURCES

Set points are programmable to provide local warning and alarm indications, produce signal outputs, and invoke remote alarm reporting. Set-points may be programmed for quantities, service time, and high and low process rate/values.

LOCAL INDICATORS

Multicolor front panel lamps indicate the state of alarms, batch and dose control progress and WAN connection status. Audio annunciation provides indication for alarms, key activation, and maintenance service events.

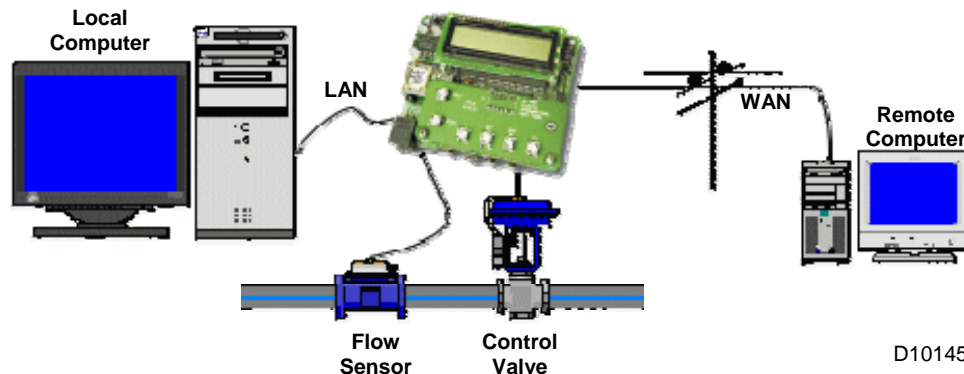
VALUE MEMORY

A non-volatile memory retains accumulated and programmed values without battery backup, with a long life lithium battery supporting the real-time clock-calendar.

Model N920 Technical Specifications

Measured Values			
Process Input	Any Wave Form	Process Rate	0.00±9,999,999.99 units/time
Process Quantity	0–99,999,999.99 units	Clock Date–Time	day:month:year:hrs:min:sec
Service Time	0–65,535 hrs	Next Report	day:month:year:hrs:min:sec
Date–Time	day:month:year:hrs:min:sec		
Program Values			
Control Functions	Monitor	Process Input	Pulse, Hz
Port Select	Fixed	Process Output	Pulse, Relay
Rate Time Base	sec/min/hrs	Quantity 1,2 Limits	0.00–99,999,999.99 units
Hi/Lo Rate Limits	0.00±9,999,999.99 units/time	Measure Units	3 chars, a-z, 0–9, A-Z, and other symbols
Time Limit	0–65,535 hrs		
Measure Type	Quantity and Rate		
Pulse Constant	1-999,999 (pulse/qty ratio)		
Communication Port Select	Sio/Wan, Report/Alarm	Network Address	0–65,535
Wan Numbers	2 each 16 chars (0-9, *, #, A, B, C, D, T, P, ', ')	Auto-Answer	0–255 rings
Date–Time	day:month:year:hrs:min:sec	Report Start	day:month:year:hrs:min:sec
Report Frequency	0–999 sec/min/hrs/days/months		
Configuration			
On/Off	Secure keypad, Error control, Batch, Dose, Report, Decimal, Serial Error Control, Std/Max Protocol		
Calibration	Factory defaults		
Controls and Indicators			
Keypad	Six key soft-touch - CHAN (RST2), QTY, PROG (F2), VIEW (F1), ZERO/TARE (RST1), RATE		
Display	Liquid crystal nematic 2x16 alphanumeric dot matrix gray ±20° view		
Audio	Magnetic 2.0 KHz 85db @ 10 cm		
Lamps	LED Qty/Rate/Time tri-color		
Input Port			
Interface	3.5mm three conductor plug sleeve=gnd ring=signal tip=excitation		
Digital Pulse	0-18.396 KHz accuracy ±0.01% ±0.5bit, 0–24V range 2.4V threshold (typ) z-in 47K hall effect open collector TTL/CMOS dry contacts		
Excitation	5.0V 50mA or external regulated supply voltage		
Output Port			
Interface	3.5mm three conductor plug		
Relay	1 Form A (B option) 28 VAC 1.0 A carry 0.5A switch 1KV iso sleeve=no/nc tip=com		
Control Performance	Batch, Dose Deviation = +/-50 [Rate/36 + 2/Pulse Constant]/Quantity %		
WAN Port	RJ-11 FCC Subpart "H" modem full duplex V.22bis		
Local Serial Port	3.5 mm audio stereo plug EIA/TIA 232D (RS-232C) full duplex 2400bps sleeve=gnd ring=txd tip=rxd		
Value Memory	Non-volatile error detect eeprom 100 year retention without power, capacity=64x8 (extrnl)/512x8 (intrnl), 1.0 ms/x 10^6 write		
Diagnostics	Memory check sum, installation, local serial, WAN communication		
Power Required	2.1 mm center pos 10–16 VDC std (10-24V opt) US 110–130 VAC 50/60 Hz adapter with Europe 220VAC (option)		
Consumption	0.60 watts @ 12V (lamps on - no options)		
Date-Time Clock	Battery 1216 3.0V 35 mA/hr lithium 9 years		
Environment	Operate 0–55°C, 0–95% RH non-condense, ship/store –20° to +85°C, 30 min warm to rated accuracy		
Enclosure	NEMA 4X front panel/surface mount, ABS, gray, UL94V0 (option)		
Size/Weight	6.3x4.3x1.3 (160x110x33 mm), 10.5 oz (300 gm)		
Publications	Operator's Manual, Warranty Registration, Key Reference Card, Web available		
Regulatory	FCC Part 15 Class A, Part 68 5TUUSA-23969-DT-E, UL/CSA/VDE power adapter, CE mark available		
Made In USA	Pub No. 75065, 5/04 Specifications are subject to change at any time without notice. ©2000-2004, Florite International, Inc		

N920 Application Example



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