

Process Indicators - IN Series

IN-P - Multifunction Process Indicator

Features

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- Multiple Input Types.
- 6 Digit LED Display.
- Simple setup and calibration.
- On Screen Step by Step Instructions.
- 5 Buttons for easy Operator Interface.
- Option to add up to 6 Relay Outputs.
- Analogue Output Retransmission option.
- Serial RS485/RS232 port option with Modbus RTU.
- Ethernet port option with Modbus TCP.
- Wide Range of Power Supply options from 10V to 265V.
- Multiple functions available for customising to your application.



IN-R - Large Display Tachometer

Features

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- Large 4 Digit Display.
- Microprocessor Based for Wide Range Calibration.
- Inputs: 0~30V, magnetic pickup, NPN, PNP, TTL, Namur.
- 4 Set Points with delay.
- 4 LED's for Alarm indication.
- Analogue Output Retransmission option.
- Simple setup and calibration.
- On Screen Step by Step Instructions.
- 5 Buttons for easy Operator Interface.
- Wide Range of Power Supply options from 10V to 265V.



IN-RT - Flow Rate Indicator with Totaliser

Features

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- 6 Digit LED Display.
- Inputs: 0~30V, magnetic pickup, NPN, PNP, TTL, Namur.
- 4 Set Points with delay.
- Analogue Output Retransmission option.
- Serial RS485/RS232 port option with Modbus RTU.
- Simple setup and calibration.
- On Screen Step by Step Instructions.
- 5 Buttons for easy Operator Interface.
- Wide Range of Power Supply options from 10V to 265V.



IN-RTB - Flow Rate and Batching Controller

Features

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- Dual 6 Digit LED Displays.
- View Flow Rate & total simultaneously.
- Inputs: 0~30V, magnetic pickup, NPN, PNP, TTL, Namur.
- 4 Set Points with delay
- Analogue Output Retransmission option.
- Serial RS485/RS232 port option with Modbus RTU.
- Simple setup and calibration.
- On Screen Step by Step Instructions.
- 5 Buttons for easy Operator Interface.
- Wide Range of Power Supply options from 10V to 265V.



Ordering codes and specifications

IN-P - Multifunctional Process Indicator



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Ordering Information

ITEMS	CODE		DESCRIPTION
SERIES	IN-P-		Multifunctional Process Indicator
ANALOGUE INPUTS	PRC1-		1x 4~20mA / 0~10V input + 24Vdc excitation
	PRC4-		4x 4~20mA input + 24Vdc excitation
	TC1-		1x Thermocouple Input Types B, J, K, N, R, S, T
	TC4-		4x Thermocouple Input Types B, J, K, N, R, S, T
	RTD1-		1x RTD Pt100 input
	RTD4-		4x RTD Pt100 input
RELAY OUTPUTS	N-		None
	R2-		2x 5A relay outputs *For PRC1 model only
	R4-		4x 5A relay outputs
	R6-		6x 5A relay outputs *For PRC1 model only
ANALOGUE OUTPUT / RETRANSMISSION	N-		None
	A-		1x 4~20mA / 0~10V Analogue Output
COMMUNICATIONS <small>* Not all Communication options are available for each input model type, confirm with Intech.</small>	N-		None
	WS232-		1x serial port isolated RS232 (RJ11 terminal)
	WS485-		1x serial port isolated RS485 (screw terminal)
	WEA-		With an Ethernet port (Ascii)
	WEM-		With an Ethernet port (Modbus)
POWER SUPPLY	HV		85~265Vac / 95~370Vdc
	LV		15~48Vac / 10~72Vdc

Ordering Example:

IN-P-RTD4-R4-N-WS485-HV

Multifunction Process Indicator; 4x RTD Pt100 Inputs ; 4x 5A relay outputs; 1x serial port RS485; 85~265Vac / 95~370Vdc Power Supply.

FUNCTIONS AVAILABLE ON REQUEST

A	Auto or manual scanner with alarms
B	Maths functions, (i) $\sqrt{\quad}$, (ii) Difference, (iii) Average, (iv) Hi / Lo Select
C*	Hold, Tare, Reset (External switches connect to rear terminals)
D*	Flow Rate + Totalising
E*	Energy display & totaliser (flow x ΔT)
F	Step controller
G*	Auto / Manual Station
H	Retransmission
I	Other Functions – please specify
J	Data Logging

* Available on channel one only.

Specifications

Power supply	HV: 85~265Vac / 95~370Vdc or LV: 15~48Vac / 10~72Vdc
Sampling rate	10Hz
Resolution	16-bit
Accuracy	0.05% of reading.
Temperature drift	Typically 50ppm/°C
Calibration	Factory pre-calibrated - automatic or manual user calibration available
Security	Setup is PIN code protected
Case	48 x 96 x 119.5mm (H x W x D) / 45.5 x 92.5mm panel cutout

OPTIONAL

Relay outputs	2, 4 or 6 x 5A Form A relays
Analogue output	Isolated 16-bit 4~20mA/0~10V output (fully scaleable). Window programmable over any range within the full-scale range of the indicator
Serial port	Isolated RS485/RS232. <u>Modes:</u> ASCII, Modbus RTU slave, Ranger A. <u>Data rates:</u> 1200~115k2 baud. <u>Parity:</u> Odd, even or none.

JUMPER SELECTABLE OPTIONS

Input range jumper	20mA, Custom, 2V, 10V.
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Ordering codes and specifications

IN-R - Large Display Tachometer with relay output options

Ordering Information

ITEMS	CODE		DESCRIPTION
SERIES	IN-R-		Large display Tachometer Indicator
RELAY OUTPUTS	N-		None
	R2-		2x 5A relay outputs
	R4-		4x 5A relay outputs
ANALOG OUTPUT	N-		None
	A-		1x 4~20mA / 0~10V analogue output
POWER SUPPLY	HV		85~265Vac / 95~370Vdc
	LV		15~48Vac / 10~72Vdc



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Specifications

Easy setup	Scrolling text prompts for intuitive, easy setup
Security	Calibration and set-point functions have independent security code access (direct access to set-point activation values is independently configurable)
Input signal	0~24Vdc or 0~30Vac. Selectable sensor type: Logic (Open collector (NPN/PNP), Namur, TTL) or magnetic pickup (Tacho).
Pulses per revolution	User selectable from 1 to 9999 pulses per revolution
Measurement range	1~99990RPM (1ppr sensor) to 0.1~99990RPM (10ppr sensor)
Display resolution	0.1RPM, 1RPM or 10RPM (displayed as RPM/1000)
Input noise filtering	Selectable low pass filter options: Off, 200Hz, 2kHz or 20kHz
Power supply	HV: 85~265Vac / 95~370Vdc or LV: 15~48Vac / 10~72Vdc
Sampling rate	Nominally 3Hz (low RPM mode=Off)
Accuracy	0.1RPM
Temperature drift	Typically 30ppm/°C
Calibration	Factory calibrated
Relay outputs	2 or 4 x programmable relay outputs with hysteresis and delay on make
LED indicators	4x LED annunciators for alarms and relay status indication
Case	48mm x 96mm x 119.5mm (H x W x D) / 45.5mm x 92.5mm panel cutout

IN-RT - Flow Rate Indicator with Totaliser and relay output options

Ordering Information



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ITEMS	CODE		DESCRIPTION
SERIES	IN-RT-		Flow Rate Indicator + Totaliser
RELAY OUTPUTS	N-		None
	R2-		2x 5A relay outputs
	R4-		4x 5A relay outputs
ANALOG OUTPUT	N-		None
	A-		1x 4~20mA / 0~10V analogue output
SERIAL PORT	N-		None
	WS485-		1x serial port isolated RS485 (RJ11 terminal)
	WS232-		1x serial port isolated RS232 (screw terminal)
POWER SUPPLY	HV		85~265Vac / 95~370Vdc
	LV		15~48Vac / 10~72Vdc

Specifications

Input	0~24Vdc, 0~30Vac
Sensor types	NPN, PNP, Mag (20mV to 30V), TTL, digital, closed contact or NAMUR
K factor ranges	3 ranges for K factors, from 0.1 to 99.9999, 999.999 or 9999.99
Frequency	2Hz to 10KHz
Power supply	HV: 85~265Vac / 95~370Vdc or LV: 15~48Vac / 10~72Vdc
Excitation	24V DC (50mA max)
Accuracy	0.005%
Temp drift	Typically 2ppm/°C
Flow rate	L/sec, L/min or L/hour
Flow resolution	1ml, 10ml, 0.1L or 1L
Totaliser resolution	x0.1, x1, x10, x100 or cubic meters
Totaliser reset	Reset totalisers via front panel or rear pins.
Totaliser volumetric pulse	Volumetric pulse on Total 2, with adjustable pulse width from 0.1 to 10.0 seconds.
Totaliser features	Both totalisers can be individually programmed for low flow cutoff and rollover.
Security	Setup PIN code protected for security
Case	48mm x 96mm x 119.5mm (H x W x D) / 45.5mm x 92.5mm panel cutout

OPTIONAL

Analog output	Isolated 16-bit 4~20mA / 0~10V output (fully scalable). Window programmable over any range within the full-scale range of the controller
Serial port	Isolated RS485/RS232. <u>Modes</u> : ASCII, Modbus RTU slave, Ranger A. <u>Data rates</u> : 300~38400 baud. <u>Parity</u> : Odd, even or none.
Relay outputs	2 or 4 x 5A Form A relays

JUMPER SELECTABLE OPTIONS

Input noise filter jumper	20kHz, 2kHz, 200Hz, Filter OFF
Input signal jumper	Logic (DC), Magnetic pickup (AC)
Load jumper	Sink/Source (digital transistor or switch interface), Namur (2-wire proximity detector), Tacho (AC magnetic pickup)

Ordering codes and specifications

IN-RTB - Flow Rate and Batching Controller with relay outputs



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Ordering Information

ITEMS	CODE		DESCRIPTION
SERIES	IN-RTB-		Flow Rate and Batching Controller
RELAY OUTPUTS	N-		None
	R2-		2x 5A relay outputs
	R4-		4x 5A relay outputs
ANALOG OUTPUT	N-		None
	A-		1x 4~20mA / 0~10V analogue output
SERIAL PORT		N-	None
		WS232-	1x serial port Isolated RS232 (RJ11 terminal)
		WS485-	1x serial port Isolated RS485 (screw terminal)
POWER SUPPLY		HV	85~265Vac / 95~370Vdc
		LV	15~48Vac / 10~72Vdc

Specifications

Input	0~24Vdc, 0~30Vac
Sensor types	NPN, PNP, Mag (20mV to 30V), TTL, digital, closed contact or NAMUR
Sensor calibration	Direct K factor entry or pulses per unit of measurement
K factor ranges	3 ranges for K factors, from 0.1 to 99.9999, 999.999 or 9999.99
Frequency	2Hz to 10KHz
Power supply	HV: 85~265Vac / 95~370Vdc or LV: 15~48Vac / 10~72Vdc
Excitation	24V DC (50mA max)
Accuracy	0.005%
Temp drift	Typically 2ppm/°C
Security	Setup is PIN code protected
Case	48 x 96 x 119.5mm (H x W x D) 45.5 x 92.5mm panel cutout
FLOW	
Flow rate	Units/sec, units/min or units/hour
Rate multiplier	x0.0001 to x1000
TOTALISER	
Resolution	x1, x103, x106
Features	Low flow cutoff and reset at power up
FEATURES	
Reset	Reset total and / or batch manually or via setpoint logic
Volumetric pulse	Adjustable pulse width from 0.1 to 10.0 seconds.
Batching	Batching mode available, with in-flight correction.
OPTIONAL	
Analog output	Isolated 16-bit 4~20mA / 0~10V output (fully scalable). Window programmable over the full-scale range.
Serial port	Isolated RS485/RS232. Modes: ASCII, Modbus RTU slave, Ranger A. Data rates: 300~38400 baud. Parity: Odd, even or none.
Relay outputs	2 or 4 x 5A Form A relays (1 used for batch setpoint)
JUMPER SELECTABLE OPTIONS	
Input noise filter jumper	20kHz, 2kHz, 200Hz, Filter OFF
Input signal jumper	Logic (DC), Magnetic pickup (AC)
Load jumper	Sink/Source (digital transistor or switch interface), Namur (2-wire proximity detector), Tacho (AC magnetic pickup)

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Warning: These products are not designed for use in, and should not be used for patient connected applications. In any critical installation an independent fail-safe back-up system must always be implemented.