

# DATASHEET | NA-101/102-FC1/FC2/FC3 | FLP PROCESS CONTROLLER

## Low cost and compact size controller



NA-102-FC1



NA-101-FC1



NA-102-FC2



NA-102-FC3

C.M.R.I. Certified for gas group I IIA IIB

External Box : Ex. Flameproof with S S Box

### Feature :-

- Flame proof low cost and compact size controller.
- $\mu$ P Based Power, full & highly reliable controller.
- I, IIA, IIB, IP 65 as per IS 2148/1981, certified by C.M.R.I.
- Universal Input T/C, RTD, Linear input selection.
- Potential Free Relay contact output upto 1/2/3/4 .
- 0.1% Accuracy of FSD.
- Isolated 0/4-20mA process value retransmission output.
- All Configurations and calibration from front panel keypad.
- Highly communicative serial interface facility (RS 232/485).
- Transmitter loop power supply with current limit as standard.
- Power supply :230V/110V AC or 24V/12V DC
- Optional GSM mobile connectivity.
- Fully Password Protected Operation.

### Main Vantage :-

- Jumper less and fail safe design for long term consistent operation.
- Fully password protection for tamper free operation.
- No separate loop supply required for 2 wire transmitter.
- device configurations & calibration. Through front keypad.
- All different input in single controller.
- Field Configurable
- Highly communicative serial port for SCADA connectivity.
- Optional GSM mobile connectivity for remote data access.

### INPUT

Type	Range
J	-50 to 750 °C
K	-50 to 1200 °C
R	0 to 1750 °C
S	0 to 1750 °C
T	0 to 400 °C
E	-50 to 500 °C
PT-100	-50 to 400 °C
CU 53	-50 to 250 °C
LINEAR	-1999 to 9999
SPECIAL	-1999 to 9999

### Application :

- IIA, IIB, IP 65 zone On/Off control Application
- Pharmaceutical plant
- Laboratory and scientific instruments
- Petrochemical plant
- Oil and Gas plant
- Fertilizer plant

Computer Software (SCADA) Available for On line Process Viewing, Controlling and Data Logging.



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**NASHA AUTOMATION**  
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Technical Specification :-		
<b>Flame Proof</b>	Gas group	I IIA IIB as per IS 2148/1981
	Enclose certification	Enclosure is certified by C.M.R.I., Dhanbad
	Display glass	Clear glass thognet type A as per IS 2206
	Degree protection	IP 65 as per IS 2147
	Material of constructions	Aluminum alloy
	Cable entry	3/ 5/ 7 x 3/4 "ET
<b>Input</b>	Input Type	<b>T/C</b> : K, J, R, S, E, N, T
		<b>RTD</b> : Pt-100, Cu53 ( 2wire & 3 wire)
		<b>Current</b> : 0 ~ 20mA DC, 4~20mA DC
		<b>Voltage</b> : 0-5V/1-5V, 0.5 -2.5V/0- 10 V DC
		<b>Special on demand</b> : 0-75/200 mV & 0-1/10V/100/300 V DC 0-75/200 mV 0-100/300V DC <b>Resistance</b> : 0-500 R, 0-1/5/10 K, 1M
	Transmitter power supply	24 V DC @ 30 mA max, isolated from I/P & O/P
	Cold junction comp. & Sensor break ind.	Software base Automatic
	Range limits	As per input range Table
	Accuracy	+/- 0.1 % of span for linear & RTD, +/-0.25 % for T/C
	Input impedance	>330 K for Voltage ,mV, and T/C, 100 R for current
<b>Indication</b>	Indication	PV & SV for <b>UT102</b> & PV for <b>UT101</b> - 4 digit 7 segment display.
	Status indication	LEDs for Relay status & Communication
	Alarm modes	Very Low/Low/High/very High
<b>Control Mode</b>	On Off control	Relay / SSR
	Dead Band controls	High and Low Set point for level application
<b>Output</b>	Relay Output	<ul style="list-style-type: none"> <li>● NO - C - NC Contacts , 5A@240 V AC Resistive</li> <li>● 1 / 2 / 3 / 4 Relays / SSR output</li> </ul>
	SSR Output	24VDC @ 20 mA ,12VDC @ 20 mA
	Retransmission Current & Voltage outputs	0~20/ 4~20 mA, 0~5V, 0~10V, 1~5V DC, fully 3 port isolated
<b>Communication</b>	Communication Protocol & method	Modbus RTU RS- 485/RS- 232 Communication
	Programmable parameter & Connectable number	Baud rate,Parity , Node address , Stop bit & 0-256 unit
	Wireless communication	GSM/GPRS base mobile(sms) Communication
<b>Programmable Parameters</b>	Setpoint / Hysteresis / High scale / Low scale	Full range as per input selection
	Relay logic	Heat • Cool • F.S. high & low alarm • Dead band alarm
	Display resolution	-1999 to 9999 fully configurable for linear input
	Programming of parameters	Through 4 tactile keys
<b>Other</b>	Dimensions & Mounting	As per box selection & wall/structure 2/4 holes
	(A) Supply voltage (B) Power consumption	(A) 110/230 V AC, 50/60 Hz (B) 4 watts maximum
	Operating ambient Temperature and Humidity	• 0~50 °C • Below 90%, non condensing

## Ordering Information :-

NA - 101 / 102		1	2	3	4	5	6	7	8	9	10						
FLP Housing		EXT. Housing		Input type		CNT. Output-1		RTS. Output-2		Aux power		TPS		Comm.			
102 dual dis. Flp	Fc1	None	N	Rtd & T/C	R	None	N	—	None	N	—	230V AC	2	None	N	None	0
101 sing. dis. Flp	Fc1	M S pow.coated	M	Linear	L	Relay	R	1•2 3•4	4-20mA	C	1•2	110V AC	1	24V DC	2	RS-485	4
Flp box-5 Entry	Fc2	S S Flush mount	S	Special	S	SSR	S	1•2 3•4	0-10/5V	V	1•2	24V DC	4	12V DC	1	RS-232	2
Flp box-7 Entry	Fc3					Special	T	1	Special	T	1						

■ NASA-101-FC1/FC2 = we can gives only Relay or Retransmission or Communication output.



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