

# PID CONTROLLERS

## ECONOMY RANGE

- COMPACT DESIGN WITH LOW DEPTH
- LARGE DISPLAY
- 1 RELAY
- IP66 / NEMA 4X (OPTIONAL)
- RELAY / SSR FOR CONTROL - FIELD SELECTABLE



**NEX313**  
48x48x61



**NEX316**  
48x48x61



**NEX353**  
96x96x35

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### FEATURES

- Compact : 48x48x61 mm  
96x96x35 mm
- Large display : 13.20 / 9.9 mm (48x48)  
13.20 mm (48x48)  
20.32 mm (96x96)
- TC, RTD input
- Input sampling cycle 200ms
- 1 Relay for control
- Autotuning : From cold start
- Optional IP66 front
- PID, ON/OFF control
- 85~265 V AC SMPS, 20~30 AC/DC
- User friendly operation

### SPECIFICATIONS

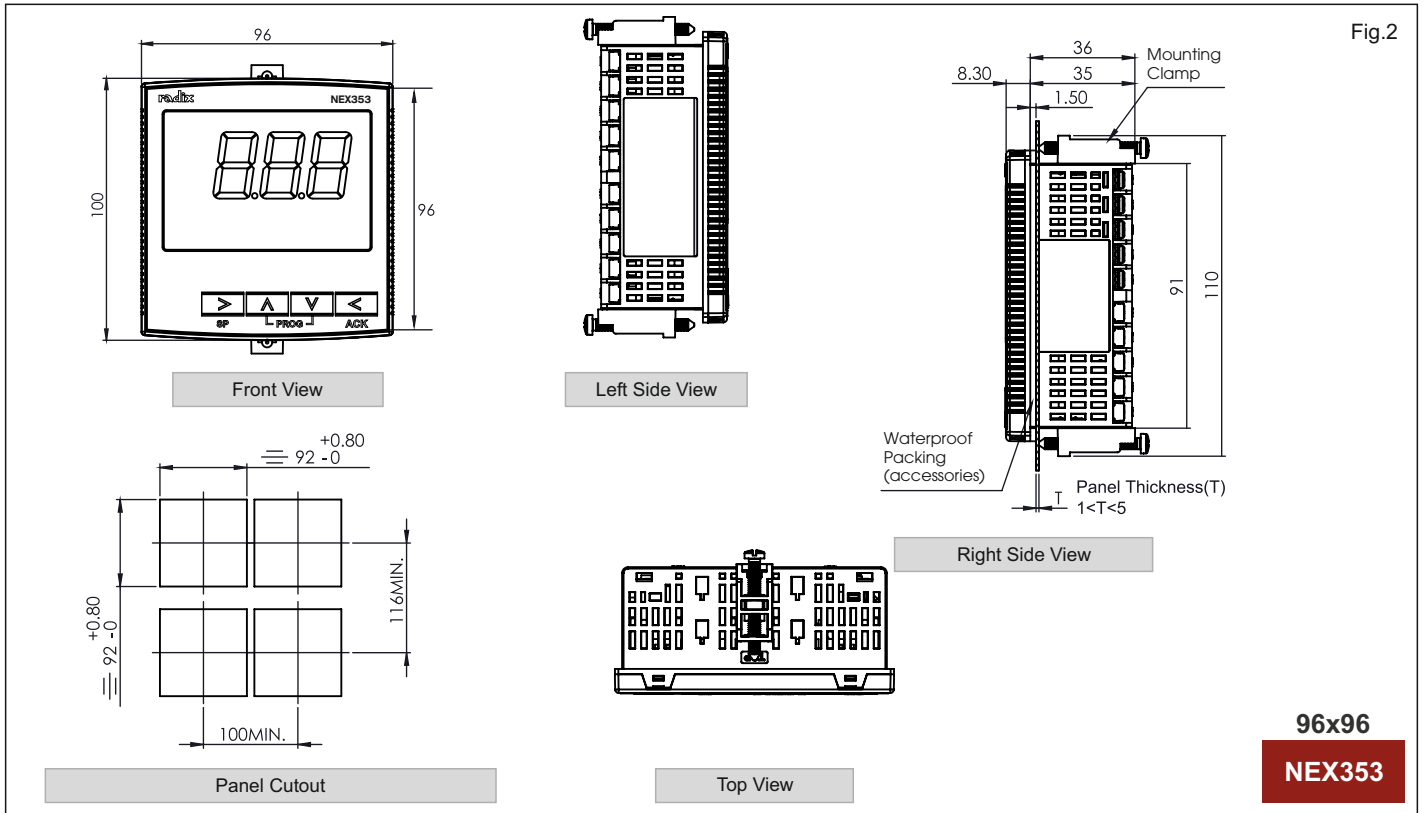
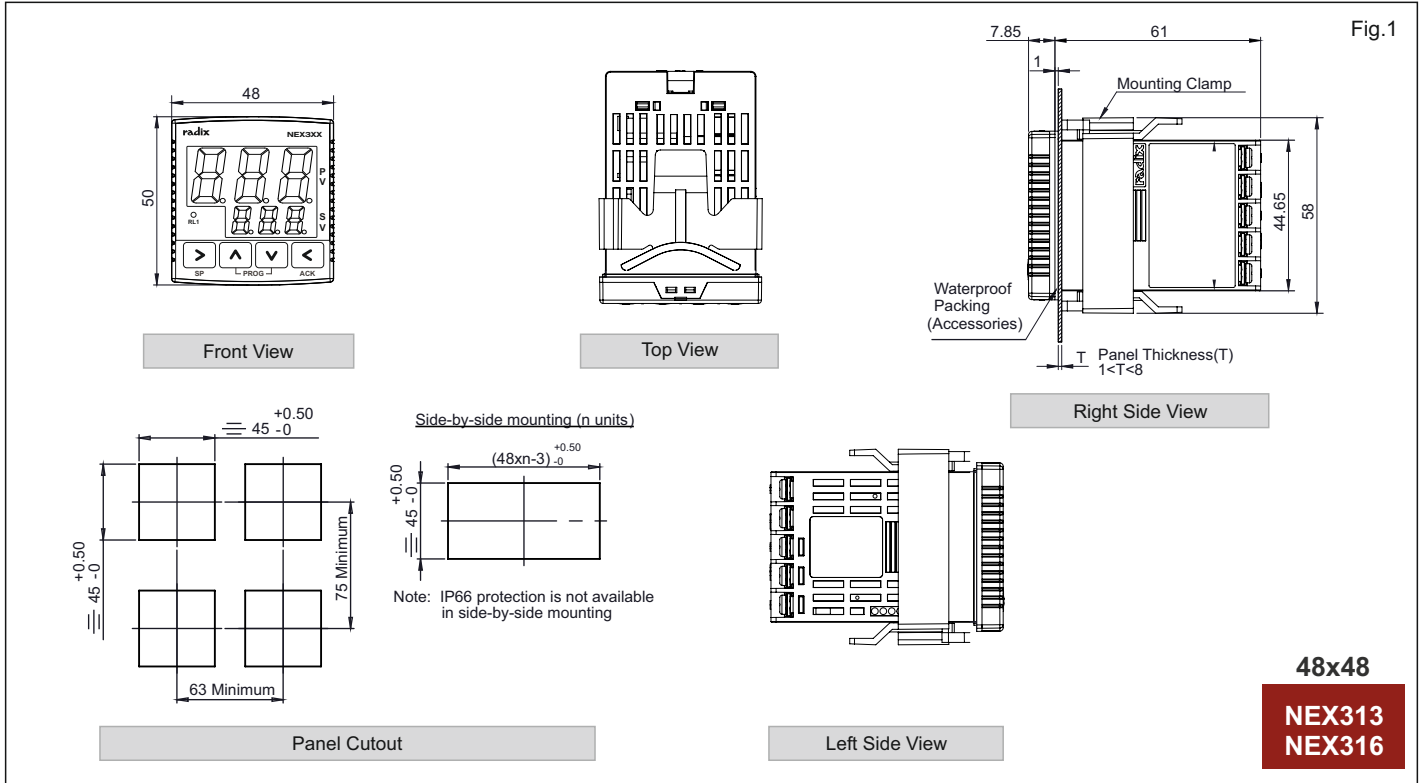
All specifications at ambient of 25 °C unless specified otherwise

<b>INPUTS</b> Input Thermocouple RTD Sampling time Range limits Accuracy  Warm up time for specified accuracy Cold junction compensation	J, K, R, S, T Pt100, 3-wire 200 ms See Table 1 Thermocouple : $\pm 0.25\%$ of FS $\pm 1$ °C Pt100 : $\pm 0.05\%$ of FS $\pm 1$ °C 30 minutes  Automatic	<b>TEMPERATURE, HUMIDITY</b> Ambient operating temperature Relative operating humidity  <b>PROGRAMMABLE PARAMETERS</b> Setpoint Unit Resolution Digital filter Bias Manual reset Proportional Band (P) Integral time (I) Derivative time (D) Cycle time Relay logic  Setpoint lock	-10 to 50 °C Below 90% RH, non-condensing  Full range (See Table 1) °C, °F Fixed 1 On, Off -99 ~ 99 -99 ~ 99 1~999, 0~100% of span Off, 0.1~99.9 minute Off, 0.1~99.9 minute 1~99 seconds a. Heat b. Cool c. Full scale high alarm d. Full scale low alarm ON, OFF
<b>OUTPUTS</b> No. of setpoints No. of relays Relay contact type Relay contact rating SSR drive	1 setpoint for control 1 NO-C-NC 7A/250 V AC 12 V DC drive signal for external SSR		
<b>INDICATION</b>	See Table 2		
<b>POWER SUPPLY</b> Supply voltage	a) 85~265 V AC, 50/60 Hz b) 20~30 V DC		
<b>ISOLATION</b> Mutual isolation between input, supply, relays	1500 VAC rms, 50Hz / 1 minute		
<b>ENCLOSURE</b> Mounting Terminals Housing material Dimensions (in mm) Weight Protection Front  Rear (behind panel)	Panel flush mounting M3 screw, suitable for 2.5 mm <sup>2</sup> wire ABS plastic, grade: UL94V-0 See Table 2 or Fig.1 See Table 2  IP66(IEC) / NEMA 4X (optional) (when properly installed using IP66 kit) IP20 (IEC 6052)		

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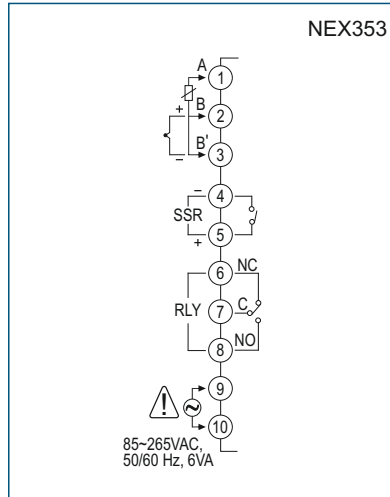
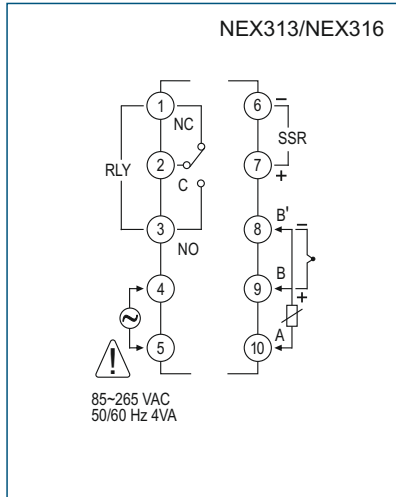
### DIMENSIONS mm



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### CONNECTION DIAGRAM



### TABLE 1

SENSOR / INPUT	RANGE LIMITS (°C / EU)	
	LOW SCALE	HIGH SCALE
Iron / Constantan (J)	-100	850
Chromel / Alumel (K)	-199	999
Pt / Pt - 13% Rh (R)	0	999
Pt / Pt - 10% Rh (S)	0	999
Copper / Constantan (T)	-199	400
Pt100, 3-wire	-199	850

### TABLE 2

Product Photo			
Model	NEX313	NEX316	NEX353
Inputs type	TC, RTD		
Size	48H x 48W x 61D mm	48H x 48W x 61D mm	96H x 96W x 35D mm
Display	Upper 0.52" / 13.20 mm	Upper 0.52" / 13.20 mm Lower 0.39" / 9.90 mm	Upper 0.8" / 20.32 mm
Relay output	Relay - Control SSR - Control		
Analog output	Not available		
Communication	Not available		
Transmitter excitation supply	Not available		

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### ORDERING INFORMATION

■ **Preferred order codes**

- In regular production
- Short delivery period
- Smaller minimum order quantity & value

■ **Standard order codes**

- All options available are found here
- Minimum order quantity & value will apply

- For Products not covered in preferred order codes & standard order codes, contact sales

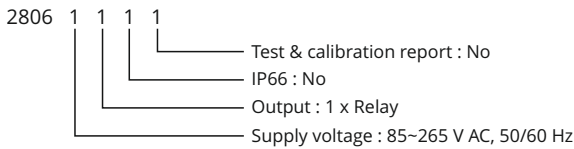
### STANDARD ORDER CODES

**MODEL : NEX313**

STANDARD ORDER CODES \*

Product code	2806				
Supply voltage	1				85~265 V AC, 50/60 Hz
	2				20~30 V DC
Output		1			1 x Relay
		2			1xRelay+1xSSR
IP66			1		No
			2		Yes
Test & calibration report				1	No#
				2	Yes**

**EXAMPLE**



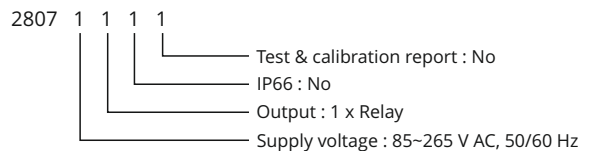
- \* Minimum order quantity & value will apply.
- \* For products not covered by standard order code, contact sales. Minimum order quantity & value will apply.
- # Certificate Of Conformance is included
- \*\* Chargeable

**MODEL : NEX316**

STANDARD ORDER CODES \*

Product code	2807				
Supply voltage	1				85~265 V AC, 50/60 Hz
	2				20~30 V DC
Output		1			1xRelay
		2			1xRelay,+1xSSR
IP66			1		No
			2		Yes
Test & calibration report				1	No#
				2	Yes**

**EXAMPLE**



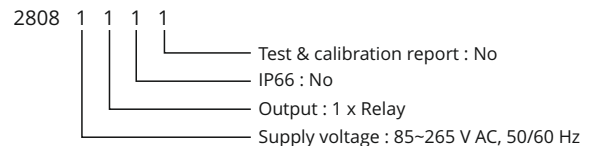
- \* Minimum order quantity & value will apply.
- \* For products not covered by standard order code, contact sales. Minimum order quantity & value will apply.
- # Certificate Of Conformance is included
- \*\* Chargeable

**MODEL : NEX353**

STANDARD ORDER CODES \*

Product code	2808				
Supply voltage	1				85~265 V AC, 50/60 Hz
	2				20~30 V DC
Output		1			1 x Relay
		2			1xRelay+1xSSR
IP66			1		No
			2		Yes
Test & calibration report				1	No#
				2	Yes**

**EXAMPLE**



- \* Minimum order quantity & value will apply.
- \* For products not covered by standard order code, contact sales. Minimum order quantity & value will apply.
- # Certificate Of Conformance is included
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### PREFERRED ORDER CODES

Product	Order Code	Brief Specs	Power Supply
NEX313	2806 1111	1xRelay, SMPS	SMPS
NEX313	2806 1211	1xRelay+1xSSR	SMPS
NEX316	2807 1111	1xRelay, SMPS	SMPS
NEX316	2807 1211	1xRelay+1xSSR	SMPS
NEX353	2808 1111	1xRelay, SMPS	SMPS
NEX353	2808 1211	1xRelay+1xSSR	SMPS

**Note : For only SSR output instead of Relay output Contact sales**

#### ENQUIRIES

**Instruments:** sales@radix.co.in  
**Sensors:** sensors@radix.co.in  
**Gauges:** gauges@radix.co.in  
**Automation:** automation@radix.co.in  
**Level:** level@radix.co.in

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