

PID CONTROLLERS

VALUE RANGE

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



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FEATURES

- Compact : 48x48x61 mm
96x96x35 mm
- Large display : 16.3 mm (48x48)
25.4 mm (96x96)
- TC, RTD input
- Input sampling cycle 200ms
- 1, 2 setpoints (1 control relay, 1 SSR, 1 Alarm)
- Autotuning : From cold start, At setpoint
- Optional IP66 front
- PID, ON/OFF control
- 85~265 V AC SMPS
- User friendly operation

SPECIFICATIONS

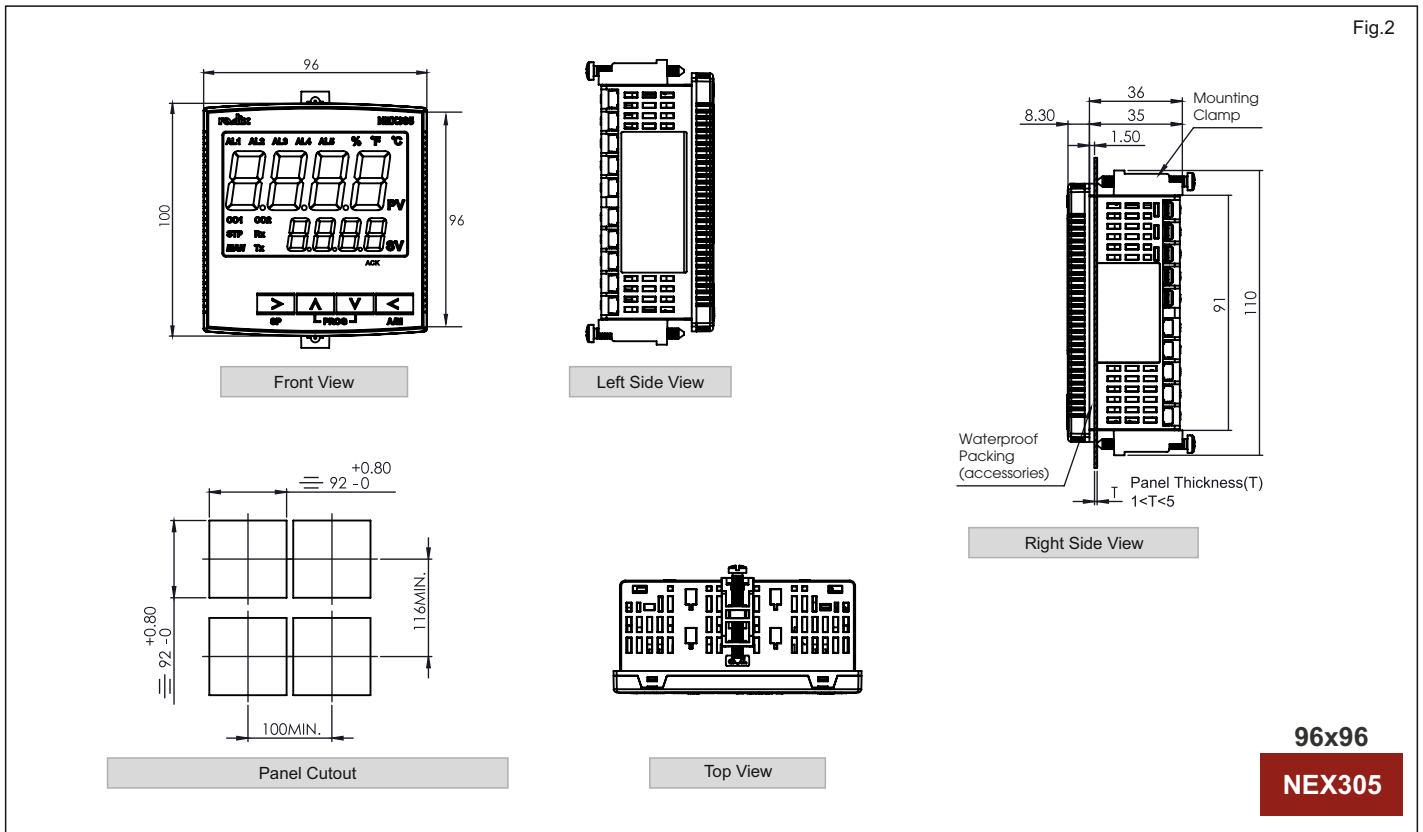
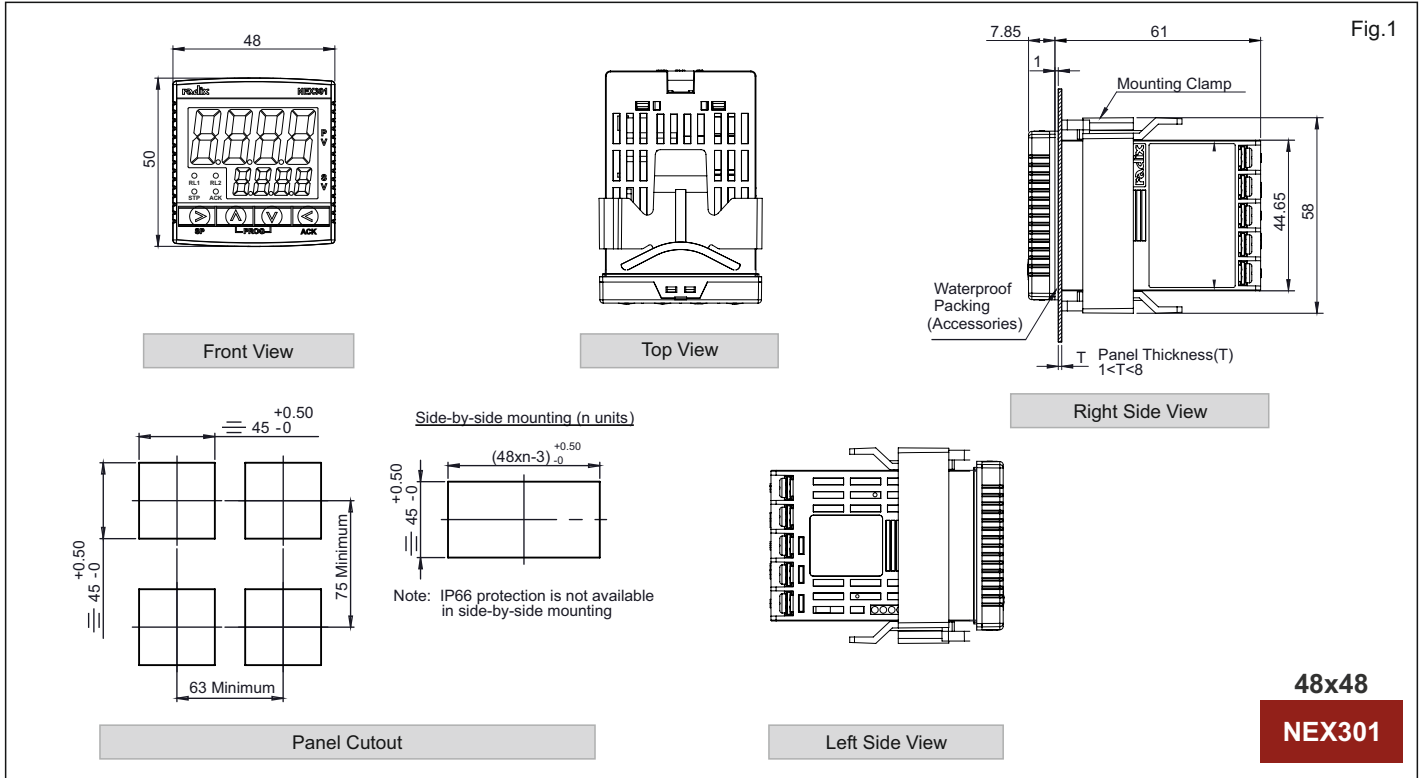
All specifications at ambient of 25 °C unless specified otherwise

<p>INPUTS</p> <p>Input</p> <p>Thermocouple RTD</p> <p>Sampling time</p> <p>Range limits</p> <p>Accuracy</p> <p>Warm up time for specified accuracy</p> <p>Cold junction compensation</p>	<p>J, K, R, S, T Pt100, 3-wire</p> <p>200 ms</p> <p>See Table 1</p> <p>Thermocouple : $\pm 0.25\%$ of FS ± 1 °C Pt100 : $\pm 0.05\%$ of FS ± 1 °C</p> <p>30 minutes</p> <p>Automatic</p>	<p>TEMPERATURE, HUMIDITY</p> <p>Ambient operating temperature</p> <p>Relative operating humidity</p>	<p>-10 to 50 °C</p> <p>Below 90% RH, non-condensing</p>
<p>OUTPUTS</p> <p>No. of setpoints</p> <p>No. of relays</p> <p>Relay contact type</p> <p>Relay contact rating</p> <p>SSR drive</p>	<p>1 setpoint for control 1 setpoint for alarm</p> <p>2</p> <p>NO-C-NC (Relay1), NO-C (Relay2)</p> <p>7A/250 V AC (Relay1) 5A/250 V AC (Relay2)</p> <p>12 V DC drive signal for external SSR</p>	<p>PROGRAMMABLE PARAMETERS</p> <p>Setpoint</p> <p>Unit</p> <p>Resolution</p> <p>High scale</p> <p>Low scale</p> <p>Digital filter</p> <p>Bias</p> <p>Setpoint offset</p> <p>Proportional Band (P)</p> <p>Integral time (I)</p> <p>Derivative time (D)</p> <p>Cycle time</p> <p>Hysteresis (ON/OFF control)</p> <p>Relay logic</p>	<p>Full range (See Table 1) °C, °F</p> <p>User selectable 0.1 or 1</p> <p>Full range (See Table 1)</p> <p>Full range (See Table 1)</p> <p>Low, High, None</p> <p>-99.9 ~ 99.9</p> <p>0.1~999.9</p> <p>0.1~999.9, 0~100% of span</p> <p>Off, 1~6000 seconds</p> <p>Off, 1~6000 seconds</p> <p>1~1000 seconds</p> <p>0.1-999.9</p> <p>a. Heat b. Cool c. Full scale high alarm d. Full scale low alarm e. Deviation high alarm f. Deviation low alarm g. Inband alarm h. Outband alarm</p> <p>Auto/Latch/Latch-hold (at power on)</p> <p>Through key ON, OFF</p>
<p>INDICATION</p>	<p>See Table 2</p>	<p>Alarm types</p> <p>Alarm acknowledge</p> <p>Setpoint lock</p>	
<p>POWER SUPPLY</p> <p>Supply voltage</p>	<p>a) 85~265 V AC, 50/60 Hz b) 20~30 V DC</p>		
<p>ISOLATION</p> <p>Mutual isolation between input, supply, relays</p>	<p>1500 VAC rms, 50Hz / 1 minute</p>		
<p>ENCLOSURE</p> <p>Mounting</p> <p>Terminals</p> <p>Housing material</p> <p>Dimensions (in mm)</p> <p>Weight</p> <p>Protection</p> <p>Front</p> <p>Rear (behind panel)</p>	<p>Panel flush mounting</p> <p>M3 screw, suitable for 2.5 mm² wire</p> <p>ABS plastic, grade: UL94V-0</p> <p>See Table 2 or Fig.1</p> <p>See Table 2</p> <p>IP66(IEC) / NEMA 4X (optional) (when properly installed using IP66 kit)</p> <p>IP20 (IEC 6052)</p>		

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DIMENSIONS mm



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CONNECTION DIAGRAM

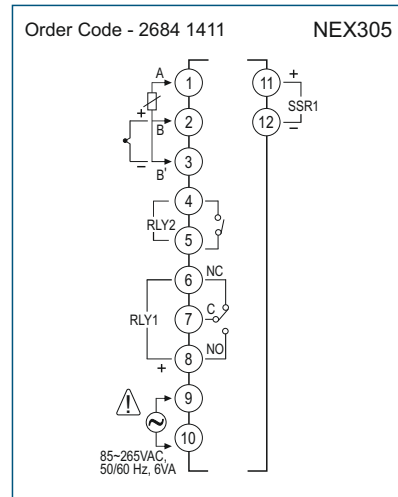
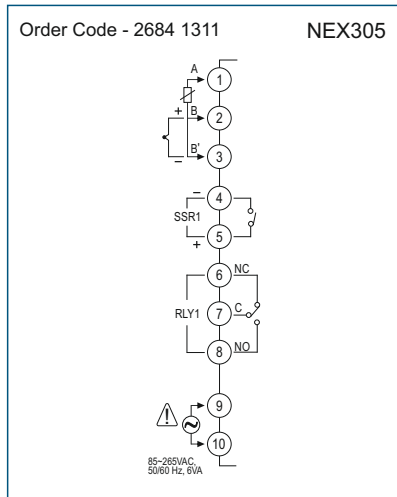
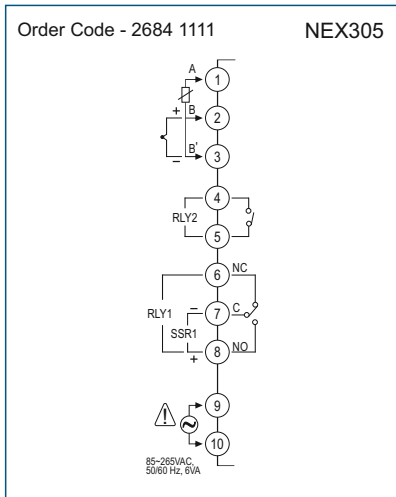
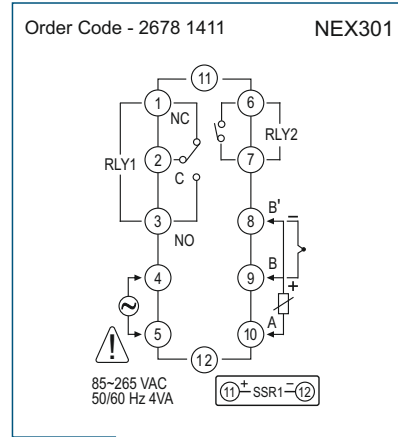
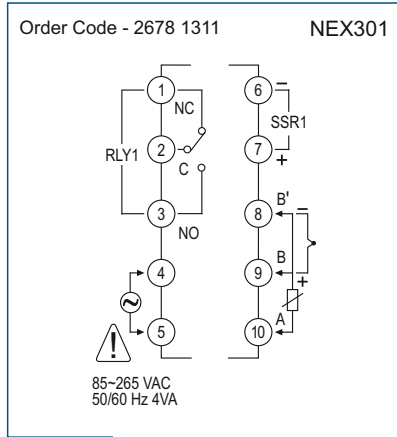
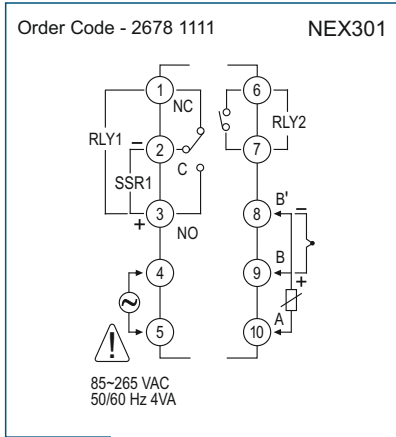




TABLE 1

SENSOR / INPUT	RANGE LIMITS (°C / EU)	
	LOW SCALE	HIGH SCALE
Iron / Constantan (J)	-100	850
Chromel / Alumel (K)	-200	1370
Pt / Pt - 13% Rh (R)	0	1700
Pt / Pt - 10% Rh (S)	0	1700
Copper / Constantan (T)	-200	400
Pt100, 3-wire	-200	850

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TABLE 2

Product Photo		
Model	NEX301	NEX305
Inputs type	TC, RTD	
Size	48H x 48W x 61D mm	96H x 96W x 35D mm
Display	Upper 0.64" / 16.3 mm Lower 0.354" / 9 mm	Upper 1" / 25.4 mm Lower 0.56" / 14.2 mm
Relay output	Relay1 - Control Relay2 - Control or Alarm SSR1 - Control	
Analog output	Not available	
Communication	Not available	
Transmitter excitation supply	Not available	

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

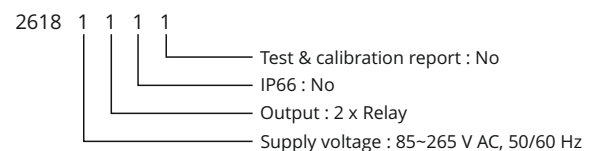
- For Products not covered in preferred order codes & standard order codes, contact sales

MODEL : NEX301

STANDARD ORDER CODES *

Product code	2618				
Supply voltage	1				85~265 V AC, 50/60 Hz
	2				20~30 V DC
Output		1			2 x Relay
		2			1xSSR,1xRelay (2SP-SSR1,Relay2)
		3			1xRelay+1xSSR (1SP-SSR1,Relay1)
		4			2xRelay+1xSSR (2SP-Relay1,SSR1,Relay2)
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

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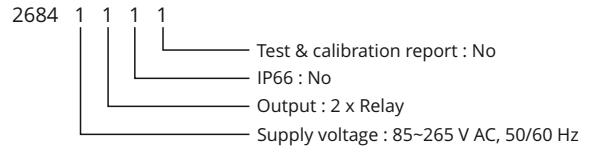
ORDERING INFORMATION

MODEL : NEX305

STANDARD ORDER CODES *

Product code	2684				
Supply voltage	1				85~265 V AC, 50/60 Hz
	2				20~30 V DC
Output		1			2 x Relay
		2			1xSSR,1xRelay (2SP-SSR1,Relay2)
		3			1xRelay+1xSSR (1SP-SSR1,Relay1)
		4			2xRelay+1xSSR (2SP-Relay1,SSR1,Relay2)
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

PREFERRED ORDER CODES

Product	Order Code	Brief Specs	Power Supply
NEX301	2618 1111	2xRelay, SMPS	SMPS
NEX301	2618 1311	1xRelay+1xSSR (1SP-SSR1,Relay1)	SMPS
NEX301	2618 1411	2xRelay+1xSSR (2SP-Relay1,SSR1,Relay2)	SMPS
NEX305	2684 1111	2xRelay, SMPS	SMPS
NEX305	2684 1311	1xRelay+1xSSR (1SP-SSR1,Relay1)	SMPS
NEX305	2684 1411	2xRelay+1xSSR (2SP-Relay1,SSR1,Relay2)	SMPS

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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