

6 DIGIT HIGH PRECISION UNIVERSAL PROCESS INDICATOR

MODEL : PI – 541A



INTRODUCTION

SANSEL offers PI 541A High precision universal process indicator are extremely versatile Indicators that can be used for a wide variety of applications in all type of process industries. These Universal indicator offer high precision 6 digit resolution & extreme reliability and low cost for Process measurement. PI 541A is a Microprocessor based instrumentation ensures accurate readings for all Linear Parameters, RTD, ohms, mV, Volts, mA & different type of Thermocouples. A number of programmable features including In-line calibration are standard.

PI541A can offer relay outputs for signals exceeding set points, optional Programmable 4 -20mA or 0 - 10V DC Isolated output and also Optional RS 485 (2 wire) MODBUS protocol output is provided.

Applications

Monitoring, recording, controlling in all type of process industries for the following applications,

- | | |
|---|--|
| ☐ Temperature | ☐ Flow |
| ☐ Humidity | ☐ Level |
| ☐ Pressure | ☐ Voltage / Current / Power |
| ☐ pH / ORP | ☐ Resistance |
| ☐ TDS / Conductivity | ☐ Load cell and more..., |

FEATURES

- ✓ 6 digit 7 segment RED LED display
- ✓ High accuracy
- ✓ Compact size
- ✓ 24 Bit ADC resolution
- ✓ Universal inputs RTD, Thermocouples, mA, mV, voltage, Ohms
- ✓ Wide scalable display range between -199999 to 199999 counts
- ✓ Easy field configurable with front key calibration
- ✓ No hardware selection for the input signals
- ✓ Optional opto isolated Re-transmission output
- ✓ Optional RS 485 (2 wire) MODBUS protocol
- ✓ 24V DC external sensor excitation supply
- ✓ Programmable decimal point & display noise filter
- ✓ Universal supply Voltage 90 to 270 AC / DC

Specifications

Model	PI – 541A
Display	6 Digit 7 segment RED LED
Inputs	0 - 20 mA, 0 to 75 mV, -10 to 10 V DC, 0 – 4000 Ω (H & L Limit Programmable) RTD - PT 100, PT-1000, Thermocouple - J, K, R, S, T, B, N, E

Measure Accuracy	Range	Resolution	Accuracy
mV-	0 to 75mV	selectable	$\pm(0.03\%rdg + 2\mu V)$
V-	0 to 10V	selectable	$\pm(0.03\%rdg + 0.1mV)$
mA-	0 to 25mA	selectable	$\pm(0.03\%rdg + 2\mu A)$
Ohms-	0 to 4000 Ω	0.01	$\pm(0.03\%rdg + 0.05\Omega)$
PT 100-	-200 to 800°C	0.01	$\pm(0.03\%rdg + 0.1^\circ C)$
PT 1000-	-200 to 630°C	0.01	$\pm(0.03\%rdg + 0.1^\circ C)$
J-	-200 to 1200°C	0.1	$\pm(0.03\%rdg + 0.1^\circ C)$
K-	-200 to 1370°C	0.1	$\pm(0.03\%rdg + 0.1^\circ C)$
R-	0 to 1760°C	0.1	$\pm(0.03\%rdg + 0.3^\circ C)$
S-	0 to 1760°C	0.1	$\pm(0.03\%rdg + 0.3^\circ C)$
N-	-200 to 1200°C	0.1	$\pm(0.03\%rdg + 0.1^\circ C)$
B-	600 to 1800°C	0.1	$\pm(0.03\%rdg + 0.3^\circ C)$
T-	-200 to 400°C	0.1	$\pm(0.03\%rdg + 0.1^\circ C)$
E-	-200 to 1000°C	0.1	$\pm(0.03\%rdg + 0.1^\circ C)$
Cold junction Accuracy	$\pm 0.3^\circ C$		
Resolution	0.0001 / 0.001 / 0.01 / 0.1 / 1°C Selectable for Analog 0.01°C for RTD and 0.1°C for TC		
Unit selection	°C / °F (for RTD & TC inputs)		
linearization	Programmable custom Linearization provided (1 - 21 points)		
Input signal filter	1 – 100% user configurable		
Cold junction compensation	Automatic inbuilt 'CJC' is provided		
Relay Output* (optional)	2 Relay (5A rated) with 4 Relay Status Selection, Hysteresis, Cyclic Delay		
Alarm settings	Front key settable		
Alarm indication	Two LED on front panel		
Re Transmission* (optional)	Opto Isolated Analog Output 4 - 20 mA or 0 - 10V DC for process variable		
PC communication* (optional)	RS 485 (2 wire) with MODBUS protocol		
PC Software* (optional)	Monitoring, Data logging, Report & graph		
Sensor excitation Supply	24 V DC $\pm 10\%$ @ 100 mA		
Power supply	90 to 270 V AC / DC / 50/60 Hz		
Front panel	IP 65 protection		
Overall Dimension	48(H) X 96(W) X 110(D) mm		
Cut out Dimension	44(H) x 90(W) mm		
Housing	Panel mountable ABS plastic		
Operating environment	0 to 50°C / 5 to 95% RH non condensing		
Enclosure	ABS Plastic		
Weight (Approx.)	350 grams		

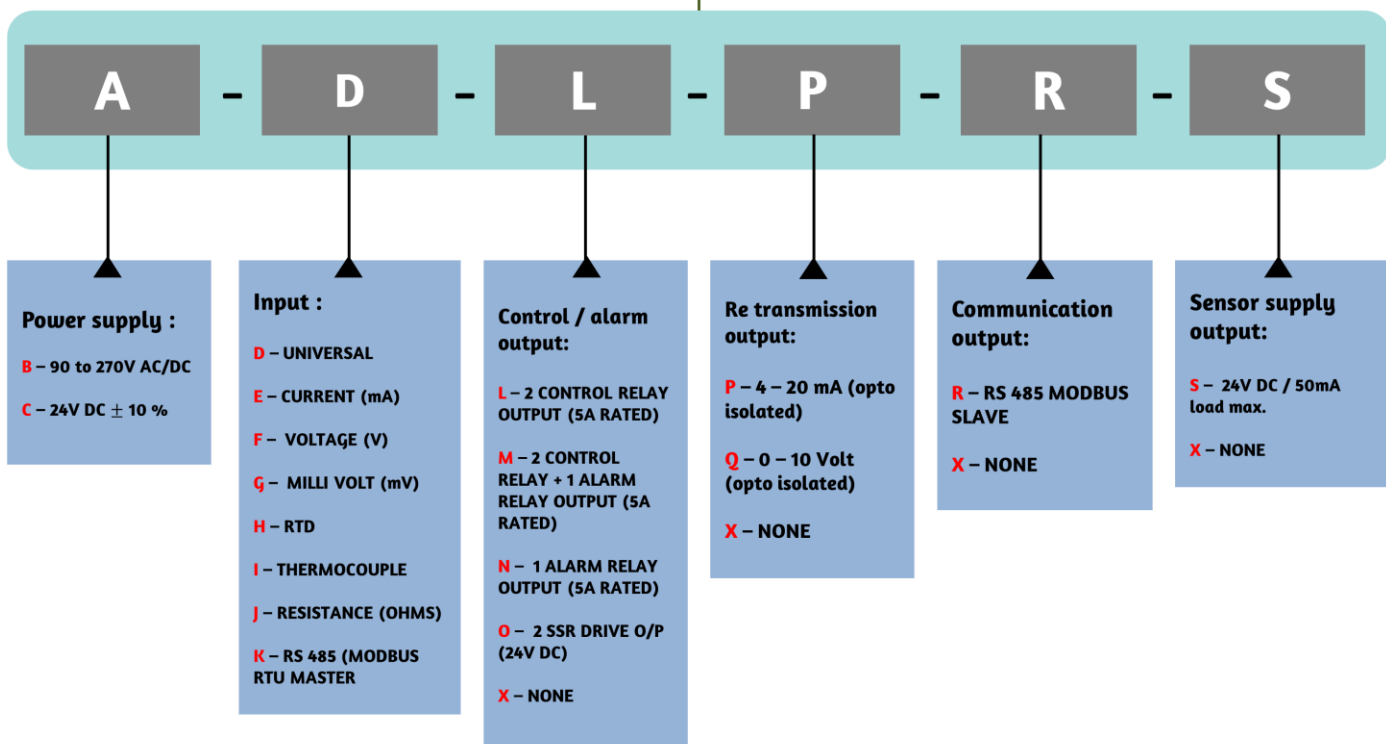
NOTE: Due to continuous improvement published specifications may change without notice

** Relay & Retransmission or PC communication any one was possible in one PI 542A

* Refer ordering information optional to select any one display size

ORDERING INFORMATION FOR 4 DIGIT PROCESS INDICATOR

MODEL : PI 541A - A - D - L - P - R - S



S.NO.	ERP item code	ordering code	power supply	Display	Input	Control / alarm output	Re transmission output	Communication output	Sensor supply output
1	FIGD-00051	PI 541A-B-D-L-P-R-S	90 to 270V AC/DC	0.5" 5.5 DIGIT	UNIVERSAL	2 CONTROL RELAY OUTPUT(5A RATED)	4 – 20 mA (opto isolated)	RS 485 MODBUS SLAVE	24V DC / 50mA load max.
2	FIGD-00110	PI 541A-B-D-L-X-X-S	90 to 270V AC/DC	0.5" 5.5 DIGIT	UNIVERSAL	2 CONTROL RELAY OUTPUT(5A RATED)	NONE	NONE	24V DC / 50mA load max.
3	FIGD-00111	PI 541A-B-D-L-P-X-S	90 to 270V AC/DC	0.5" 5.5 DIGIT	UNIVERSAL	2 CONTROL RELAY OUTPUT(5A RATED)	4 – 20 mA (opto isolated)	NONE	24V DC / 50mA load max.
4	FIGD-00112	PI 541A-B-D-X-P-R-S	90 to 270V AC/DC	0.5" 5.5 DIGIT	UNIVERSAL	NONE	4 – 20 mA (opto isolated)	RS 485 MODBUS SLAVE	24V DC / 50mA load max.
5	FIGD-00113	PI 541A-B-D-X-P-X-S	90 to 270V AC/DC	0.5" 5.5 DIGIT	UNIVERSAL	NONE	4 – 20 mA (opto isolated)	NONE	24V DC / 50mA load max.
6	FIGD-00114	PI 541A-B-D-X-X-R-S	90 to 270V AC/DC	0.5" 5.5 DIGIT	UNIVERSAL	NONE	NONE	RS 485 MODBUS SLAVE	24V DC / 50mA load max.
7	FIGD-00115	PI 541A-B-D-X-X-X-S	90 to 270V AC/DC	0.5" 5.5 DIGIT	UNIVERSAL	NONE	NONE	NONE	24V DC / 50mA load max.



SANSAL INSTRUMENTS AND CONTROLS SANSAL CALIBRATION LABORATORIES

ISO/IEC 17025 Accredited Calibration Laboratory by NABL CC - 2879
(Thermal, Mechanical, Electro-Technical, Dimension Parameters)

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