





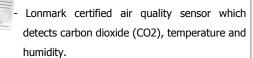




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## **INCA-100**

### CO2 / Temperature / Humidity Sensor



- Home, industrial and HVAC applications
- Power supply range: 12 24 AC/DC
- Generic purpose Output relay.
- Long life self-calibrated non disperse infrared sensor (> 15 years).

- LonMark functional profiles:

0 Nodeobject

1040 hvacTempSensor

1050 hvacRelativeHumi

1070 co2Sensor

3040 lampActuator

- Neuron FT5000 @ 20Mhz
- Firmware FIN2100L01001
- Program ID 80:00:E1:0A:00:06:04:01



Dower Supply	TECHNICAL DATA			
Transil diode		ELECTRICAL		
Overvoltage Overload         Transil diode PTC           Power consumption         \$\scrim*{c}\$ \$\text{PTC}\$           Temperature         Measurement Range Resolution 0.1 °C Accuracy (-10°C70°C) ± 0.5°C Accuracy (-20°C10°C) ± 2°C Accuracy (-20°C10°C) ± 3°C Accuracy (-20°C10°C) + 3°C Accu	Power Supply		12-24 AC/DC	
PTC	Frequency (AC Supply source)		50-60 Hz	
Newer consumption   SENSORS	Overvoltage		Transil diode	
SENSORS   Measurement Range   Resolution   0.1 °C	Overload		PTC	
Temperature	Power consumption		< 600 mW	
Temperature   Resolution   0.1 °C   ± 0.5 °C   ± 0.5 °C		SENSORS		
Accuracy (-10°C70°C)	Temperature	Measurement Range	-20°70°C	
Accuracy (-10°C10°C)		Resolution	0.1 °C	
Humidity		Accuracy (-10°C70°C)	± 0.5°C	
Humidity   Resolution   1 % RH     Desviation   ± 3% RH (1090 %RH)     Maximum desviation   ± 7% RH (010 %RH y 9099%RH)     Sensing method   Autocalibrated non disperse infrared     Measurement range   05000 ppm     Accuracy   ± 30 ppm, 3%     Repeatability   ± 20 ppm, 1%     Warm-up time   < 1 minute     COMMUNICATIONS     Type		Accuracy (-20°C10°C)	± 2°C	
Humidity   Desviation	Humidity	Measurement range	095% RH (Without condensation)	
Maximum destriation		Resolution	1 % RH	
Sensing method Measurement range Accuracy Repeatability Warm-up time COMMUNICATIONS  Type Transceiver  Relay  OUTPUT  Relay  1 X 3A-250 VAC / 3A - 30 VDC Cosφ = 1  PACKAGE  Mounting Dimensions (milimeters) Colour and material IP  OPERATING CONDITIONS  OPERATING CONDITIONS  OPERATING CONDITIONS  Accuracy £ 30 ppm, 3% £ 20 ppm, 1% € 1 minute € 2 minute € 1 minute € 2 minute € 2 minute € 3 minute € 4 minute € 4 minute € 4 minute € 5 minute € 6 minute € 7 minute € 8 minute € 9 minute		Desviation	± 3% RH (1090 %RH)	
Sensing method Measurement range     Autocalibrated non disperse infrared 05000 ppm       Accuracy     ± 30 ppm, 3%       Repeatability     ± 20 ppm, 1%       Warm-up time     < 1 minute		Maximum desviation	± 7% RH (010 %RH y 9099%RH)	
CO2 Sensor   Accuracy   ± 30 ppm, 3%   ± 20 ppm, 1%   Warm-up time   < 1 minute	CO2 Sensor	Sensing method	Autocalibrated non disperse infrared	
Repeatability   ± 20 ppm, 1%   < 1 minute		Measurement range	05000 ppm	
Warm-up time         < 1 minute		Accuracy	± 30 ppm, 3%	
COMMUNICATIONS   LonWorks (ISO/IEC 14908-2)		Repeatability	± 20 ppm, 1%	
Type         LonWorks (ISO/IEC 14908-2)           Transceiver         OUTPUT           Relay         1 X 3A-250 VAC / 3A – 30 VDC Cosφ = 1           PACKAGE           Mounting         Wall mounting           Dimensions (milimeters)         80 x 80 x 25           Colour and material         White, ABS UL94-V0           IP         IP20           OPERATING CONDITIONS           Operating temperature         -20°C70°C           CO2 Sensor operating temperature         0°C50°C           Life         > 15 years			< 1 minute	
Transceiver         FTT-10 (78 KBps)           OUTPUT           Relay         1 X 3A-250 VAC / 3A - 30 VDC Cosφ = 1           PACKAGE           Mounting         Wall mounting           Dimensions (milimeters)         80 x 80 x 25           Colour and material         White, ABS UL94-V0           IP         IP20           OPERATING CONDITIONS           Operating temperature         -20°C70°C           CO2 Sensor operating temperature         0°C50°C           Life         > 15 years	COMMUNICATIONS			
OUTPUT           Relay         1 X 3A-250 VAC / 3A - 30 VDC Cosφ = 1           PACKAGE           Mounting         Wall mounting           Dimensions (milimeters)         80 x 80 x 25           Colour and material         White, ABS UL94-V0           IP         IP20           OPERATING CONDITIONS           Operating temperature         -20°C70°C           CO2 Sensor operating temperature         0°C50°C           Life         > 15 years	Туре		LonWorks (ISO/IEC 14908-2)	
Relay	Transceiver		FTT-10 (78 KBps)	
Mounting Dimensions (milimeters) Colour and material IP OPERATING CONDITIONS Operating temperature CO2 Sensor operating temperature Life PACKAGE Wall mounting 80 x 80 x 25 White, ABS UL94-V0 IP20 OPERATING CONDITIONS OPERATING CONDITIONS OPERATING CONDITIONS 1-20°C70°C O°C50°C > 15 years	OUTPUT			
Mounting Dimensions (milimeters) Colour and material IP OPERATING CONDITIONS  Operating temperature CO2 Sensor operating temperature Life Wall mounting 80 x 80 x 25 White, ABS UL94-V0 IP20  OPERATING CONDITIONS  -20°C70°C 0°C50°C > 15 years	Relay		$1 \times 3A-250 \text{ VAC} / 3A - 30 \text{ VDC Cos} = 1$	
Dimensions (milimeters)  Colour and material IP  OPERATING CONDITIONS  Operating temperature  CO2 Sensor operating temperature  Life  80 x 80 x 25  White, ABS UL94-V0 IP20  OPERATING CONDITIONS  -20°C70°C  0°C50°C  > 15 years	PACKAGE			
Colour and material White, ABS UL94-V0 IP20  OPERATING CONDITIONS  Operating temperature -20°C70°C O°C50°C  CO2 Sensor operating temperature 0°C50°C  Life > 15 years				
IP IP20  OPERATING CONDITIONS  Operating temperature -20°C70°C  CO2 Sensor operating temperature 0°C50°C  Life -5 years				
OPERATING CONDITIONS  Operating temperature  CO2 Sensor operating temperature  Life  OPERATING CONDITIONS  -20°C70°C  0°C50°C  > 15 years				
Operating temperature -20°C70°C CO2 Sensor operating temperature 0°C50°C Life > 15 years	IP			
CO2 Sensor operating temperature 0°C50°C Life > 15 years				
Life > 15 years				
Storage temperature I-30°C70°C				
	Storage temperature		-30°C70°C	

# CO2 Sensor nvoCO2ppm SNVT\_ppm Mandatory Mandatory Configuration Properties Optional Network Variables Optional Configuration Properties nc26 - CO2 Offset **HVAC Temperature** Sensor nv Mandatory Network Variables Mandatory Configuration Properties Optional Network Variables Optional Configuration Properties nc70 - Temperature Offset HVAC Relative **Humidity Sensor** nvoHVACRH SNVT\_lev\_percen

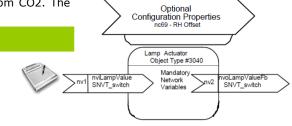
#### TECHNICAL INFORMATION

INCA-100 is a wall mounting device suitable for home, industrial, indoor air systems, ventilation and hvac applications. It is a LonMark certified device according to the Interoperability Guidelines Version 3.4, with Lonmark profiles #0 (NodeObject), #1040 (hvacTempSensor), #1050 (hvacRelativeHumi), #1070 (co2Sensor) and #3040 (lampActuator)

The INCA-100 device is maintenance – free in normal environments thanks to the built-in self correcting automatic correction algorithm. This algorithm constantly keeps track of the sensor's lowest reading over a 7.5 day interval and slowly corrects for any long-term drift detected as compared to the expected fresh air value of 400 ppm CO2. The tuning speed is limited to about 300 ppm/week.

### ORDERING INFORMATION

INCA-100H



Mandatory Network Variables

Mandatory
Configuration Properties
nc49 - Max Send Time
nc52 - Min Send Time
nc62 - RH Send on Delta