



Relative Humidity Transmitter

Catalog Number(s) 1414-IHZ20AKOAA,
1414-IHZ20AKDAA, 1414-CHZ30PKOAA,
1414-CHZ30PKDAA



About Relative Humidity Transmitter

The Relative Humidity transmitter uses a capacitive type humidity sensor and microprocessor temperature compensation for reliable, accurate readings.

Important User Information

Solid state equipment has operational characteristics differing from those of electromechanical equipment. *Safety Guidelines for the Application, Installation and Maintenance of Solid State Controls* (Publication SGI-1.1 available from your local Rockwell Automation sales office or online at <http://www.literature.rockwellautomation.com>) describes some important differences between solid state equipment and hard-wired electromechanical devices. Because of this difference, and also because of the wide variety of uses for solid state equipment, all persons responsible for applying this equipment must satisfy themselves that each intended application of this equipment is acceptable.





In no event will Rockwell Automation, Inc. be responsible or liable for indirect or consequential damages resulting from the use or application of this equipment.

The examples and diagrams in this manual are included solely for illustrative purposes. Because of the many variables and requirements associated with any particular installation, Rockwell Automation, Inc. cannot assume responsibility or liability for actual use based on the examples and diagrams.

No patent liability is assumed by Rockwell Automation, Inc. with respect to use of information, circuits, equipment, or software described in this manual.

Reproduction of the contents of this manual, in whole or in part, without written permission of Rockwell Automation, Inc., is prohibited.

Throughout this manual, when necessary, we use notes to make you aware of safety considerations.

<p>WARNING</p> 	<p>Identifies information about practices or circumstances that can cause an explosion in a hazardous environment, which may lead to personal injury or death, property damage, or economic loss.</p>
<p>IMPORTANT</p>	<p>Identifies information that is critical for successful application and understanding of the product.</p>
<p>ATTENTION</p> 	<p>Identifies information about practices or circumstances that can lead to personal injury or death, property damage, or economic loss. Attentions help you identify a hazard, avoid a hazard and recognize the consequences.</p>
<p>SHOCK HAZARD</p> 	<p>Labels may be located on or inside the equipment (e.g., drive or motor) to alert people that dangerous voltage may be present.</p>
<p>BURN HAZARD</p> 	<p>Labels may be located on or inside the equipment (e.g., drive or motor) to alert people that surfaces may be dangerous temperatures.</p>

Install Relative Humidity Transmitter

The Relative Humidity Transmitter can be mounted in a duct or outside the structure.

Duct - Drill a 5/8" (or larger) hole in the return air duct. Remove the protective plastic sleeve from the probe and place it through the hole and secure the enclosure to the duct with sheetmetal screws. Orientation of the enclosure and probe has no effect on the operation of the device.

Outside Air – For best results, locate the sensor on the north side of the structure high under an eave to prevent incorrect readings from direct sunlight and damage due to the elements. Mount the OSA enclosure with the sensor module facing down to prevent the accumulation of dirt or water.

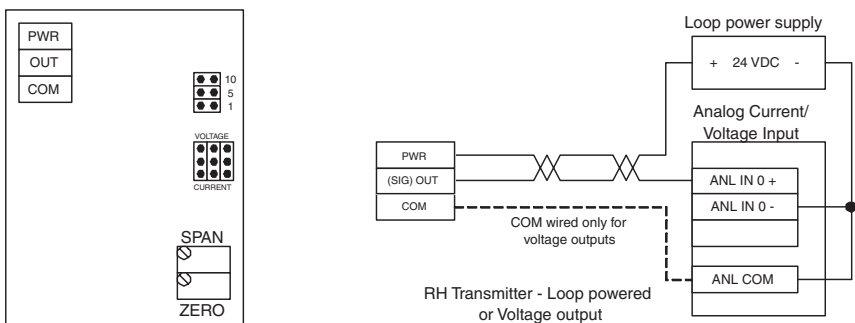
Wire/Connect Relative Humidity Transmitter

Anti-static precautions should be followed to prevent damage to the device.

The transmitter should be connected to the controller using twisted pair 18 to 22 AWG wire and requires three wires for voltage and AC operation while only two wires are required for the factory-default DC 4 to 20 mA loop-powered operation. Use shielded cable for the highest noise immunity. Do not route signal wires in the same conduit with power cables as signal degradation may occur. The controller Analog Input (AI) must be selected to match the transmitter output before power is applied. The AI type must be a current input with 250 or 500 ohm impedance. Duct and O.S.A. transmitters have an operating range of -40 to 80 °C (-40 to 170 °F). The transmitter board should not be mounted where temperatures will exceed these values. See the connection diagram for more details.

Wire Connections For Relative Humidity Boards

Typical wiring to a controller is shown in the connection diagram.



Specifications

Relative Humidity Transmitter - Specifications

Specification	Value
Accuracy	+/- 2 or 3 % RH
Power Supply	24Vac/dc
Wiring Connections	Screw connectors (18-24 awg)
Output (scaled 0-100%)	4...20mA, 0...1, 0...5, 0...10V dc (jumper selectable)
Operating Temperature	-40...80 °C

All other trademarks are the property of their respective holders, and are hereby acknowledged.

www.rockwellautomation.com

Power, Control and Information Solutions Headquarters

Americas: Rockwell Automation, 1201 South Second Street, Milwaukee, WI 53204-2496 USA, Tel: (1) 414.382.2000, Fax: (1) 414.382.4444

Europe/Middle East/Africa: Rockwell Automation, Vorstlaan/Boulevard du Souverain 36, 1170 Brussels, Belgium, Tel: (32) 2 663 0600, Fax: (32) 2 663 0640

Asia Pacific: Rockwell Automation, Level 14, Core F, Cyberport 3, 100 Cyberport Road, Hong Kong, Tel: (852) 2887 4788, Fax: (852) 2508 1846

Publication 1414-IN007A-EN-P - October 2005

PN 40055-237-01(1)

Copyright © 2005 Rockwell Automation, Inc. All rights reserved. Printed in the U.S.A.