

OPERATION AND MAINTENANCE MANUAL FOR INSIGHT IC DC ELECTRIC TORQUE MANAGEMENT CONTROLLER

Models PD1G, PD2G, PD1G3, & PD2G3 Insight IC controllers are designed for industrial torque angle or yield management of assembly operations.



⚠ WARNING

IMPORTANT SAFETY INFORMATION ENCLOSED

SAVE THESE INSTRUCTIONS

READ AND UNDERSTAND THIS MANUAL BEFORE OPERATING THIS PRODUCT

**IT IS YOUR RESPONSIBILITY TO MAKE THIS SAFETY INFORMATION AVAILABLE
TO OTHERS THAT WILL OPERATE THIS PRODUCT**

**FAILURE TO OBSERVE THE FOLLOWING WARNINGS COULD RESULT IN ELECTRIC SHOCK, FIRE
AND/OR SERIOUS PERSONAL INJURY**

- **Keep your work area clean and well lit.** Cluttered benches and dark areas invite accidents.
- **Do not operate this product in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust.** Electrical products can create sparks which may ignite the dust or fumes.
- **Grounded products must be plugged into an outlet properly installed and grounded in accordance with all codes and ordinances. Never remove the grounding prong or modify the plug in any way. Do not use any adapter plugs. Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded.** If this product should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user.
- **Avoid body contact with grounded surfaces such as pipes, metal structures or other electrical products.** There is an increased risk of electric shock if your body is grounded.
- **Don't expose this product to rain or wet conditions.** Water entering this product will increase the risk of electric shock.
- **Don't abuse the cord. Never use the cord to pull the plug from an outlet. Keep cords away from heat, oil, sharp edges or moving parts. Replace damaged cords immediately.** Damaged cords increase the risk of electric shock.
- **Stay alert, watch what you are doing and use common sense when operating this product. Do not use this product while tired or under the influence of drugs, alcohol, or medication.** A moment of inattention while operating this product may result in personal injury.
- **Use only accessories that are recommended by Ingersoll-Rand for your model.** Accessories that may be suitable for one product may become hazardous when used on another product.
- **Service must be performed only by qualified repair personnel.** Service or maintenance performed by unqualified personnel could result in a risk of injury.
- **When servicing this product, use only identical replacement parts. Follow instructions in the Maintenance Section of this manual.** Use of unauthorized parts or failure to follow Maintenance Instructions may create a risk of electric shock or injury.
- **Always install, operate, inspect and maintain this product in accordance with all applicable standards and regulations (local, state, country, federal, etc.).** Failure to follow standards and regulations can cause personal injury.
- **Always use specified supply voltage.** Incorrect voltage can cause electrical shock, fire, abnormal operation and may result in personal injury.
- **Be sure all electric cords and cables are the correct size and all plugs and connectors are tightly secured.** Under-sized wire and loose connections can cause electrical shock, fire and may result in personal injury.
- **Ensure an accessible emergency electric power shut off has been installed, and make others aware of its location.** In the event of an accident, this shut off may minimize personal injury.
- **Do not remove any labels. Replace any damaged label.** Labels provide information required for safe use of the product.
- **Do not modify this product, safety devices, or accessories.** Unauthorized modifications may result in electric shock, fire or personal injury.
- **Do not use this product for purposes other than those recommended.** Personal injury may result.
- **Disconnect power and lockout/tagout machine prior to removal, insertion or servicing of any component or module within this product.** Failure to follow instructions can result in risk of electric shock and personal injury.
- **Install this product to a vertical structure capable of safely supporting its total weight.** Failure to follow installation instructions properly can result in structure collapse and personal injury.
- **Verify the operation of the Earth Leakage Circuit Breaker (ELCB) once per month with the test button.** A malfunctioning ELCB can result in risk of electric shock or injury.
- **Do not attach or place external loads on any part of the Controller.** Loading may cause hinge or mounting failure and result in personal injury.
- **Replace battery with the same or equivalent type recommended by the battery manufacturer. Observe correct polarity when installing battery. Dispose of used batteries according to battery manufacturer's instructions.** Failure to follow instructions could result in personal injury.

Refer All Communications to the Nearest
Ingersoll-Rand Office or Distributor.

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NOTICE

- Ingersoll-Rand Company makes no warranty or implies any warranty or liabilities due to the misuse or damage resulting from the application of information supplied by this manual. Liabilities due to errors in the manual are only limited to replacement of the manual. Ingersoll-Rand reserves the right to change information contained in this manual or the program without notice at any time.
- Repairs should be attempted only by authorized, trained personnel. Consult your service center listing for your nearest Ingersoll-Rand authorized service center.
- Use of other than genuine Ingersoll-Rand replacement parts may result in safety hazards, decreased tool performance, and increased maintenance, and may invalidate all warranties.
- All programs and the manual are copyrighted and rights reserved. Reproduction is prohibited without prior permission of Ingersoll-Rand.

GROUNDING INSTRUCTIONS

⚠ DANGER

**FAILURE TO OBSERVE THE FOLLOWING INSTRUCTIONS
COULD RESULT IN SEVERE INJURY OR DEATH.**

THE CONTROLLER MUST BE EARTH GROUNDED. The controller is equipped with a three prong plug and cable. Comply with all local electrical codes for connecting to Power Supply. The Power Supply must be within voltage and frequency requirements as specified below. DO NOT use the controller on a 2-prong plug outlet with an adapter. Always check that your ground is operating properly on the outlet by a qualified electrician before using the controller.

Model #	Voltage Requirement
PD1G & PD2G	Single Phase 120 Volts, 50/60 Hz, 20 Amp
PD1G3 & PD2G3	Single Phase 230 Volts, 50/60 Hz, 10 Amp

EU WIRING

⚠ WARNING

THIS APPARATUS MUST BE EARTH GROUNDED

The three conductors of the mains lead attached to this apparatus are identified with color as shown in the table, together with the matching terminal plug. When connecting the mains lead to a plug, be sure to connect each conductor to the correct terminal as indicated.

MAINS LEAD		PLUG
Conductor	Color	Mark on the Matching Terminal
Live	Brown	Red or letter L
Neutral	Blue	Black or letter N
Grounding	Green-Yellow	Green, Green-Yellow letter G or symbol ⊥

WARNING SYMBOL IDENTIFICATION

	<p>⚠ WARNING</p> <p>This symbol is to alert the users and service personnel to the presence of uninsulated dangerous voltage that will cause a risk of electrical shock.</p>
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	<p>⚠ WARNING</p> <p>This symbol is to alert the user and service personnel to the presence of important operating instructions must be read to prevent injury, electrical shock or damage to the equipment.</p>
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	<p>⚠ WARNING</p> <p>You must read this manual before operating the system.</p>
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AGENCY SYMBOL IDENTIFICATION

European Community Mark	
	<p>Indicates compliance with relevant CE directives.</p>

Underwriters Laboratory Mark	
	<p>Indicates compliance with both Canadian and U.S. requirements.</p>

EXPLANATION OF SYMBOLS USED

Electrostatic Sensitive Devices	
	<p>This symbol is to inform the user and service personnel to the presence of electrostatic sensitive devices. ESD precautions should be used when handling these devices or component damage could result.</p>

Protective Conductor Terminal	
	<p>This symbol is to inform the user and service personnel to the presence of the protective ground point.</p>

DECLARATION OF CONFORMITY

We Ingersoll-Rand, Co.
(supplier's name)

Swan Lane, Hindley Green, Nr Wigan WN2 4EZ, U.K.
(address)

declare under our sole responsibility that the product,

PD1G2, PD2G2, PD1G3, PD2G3 Insight-IC Tightening System

to which this declaration relates, is in compliance with the provisions of

73/23/EEC, 89/336/EEC Directives.

By using the following Principle Standards: EN60335-1, EN55011/A, EN61000-3-2, EN61000-3-3, EN61000-6-2

Serial No. Range: P01H00001 →



D. Vose
Name and signature of authorised persons



Ronald S. Miller
Name and signature of authorised persons

November, 2001

Date

November, 2001

Date

NOTICE

SAVE THESE INSTRUCTIONS. DO NOT DESTROY.

When the life of the Product has expired, it is recommended that the Product be disassembled, degreased and parts be separated by material so that they can be recycled.