



MODEL EC24E-N ELECTRIC SCREWDRIVER CONTROLLER

NOTICE

These Controllers are designed for dry location use only, with Series EL 24V Electric Screwdrivers.



Series EL24V Electric Screwdrivers are intended for installing screws in metal only.

⚠ WARNING

IMPORTANT SAFETY INFORMATION ENCLOSED.

READ ALL THESE INSTRUCTIONS BEFORE PLACING TOOL IN SERVICE OR OPERATING THIS TOOL AND SAVE THESE INSTRUCTIONS.

IT IS THE RESPONSIBILITY OF THE EMPLOYER TO PLACE THE INFORMATION IN THIS MANUAL INTO THE HANDS OF THE OPERATOR.

FAILURE TO OBSERVE THE FOLLOWING WARNINGS COULD RESULT IN INJURY.

WHEN USING ELECTRIC TOOLS, BASIC SAFETY PRECAUTIONS SHOULD ALWAYS BE FOLLOWED TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK AND PERSONAL INJURY, INCLUDING THE FOLLOWING.

PLACING TOOL IN SERVICE

- Always operate, inspect and maintain this tool in accordance with all regulations (local, state, federal and country), that may apply to hand held/hand operated electric tools.
- Inspect tool cords periodically and if damaged, have them repaired by an authorized service facility. Inspect extension cords periodically and replace if damaged.
- Do not remove any labels. Replace any damaged label.

USING THE TOOL

- Always wear eye protection when operating or performing maintenance on this tool.
- Power tools can vibrate in use. Vibration, repetitive motions, or uncomfortable positions may be harmful to your hands and arms. Stop using any tool if discomfort, tingling feeling or pain occurs. Seek medical advice before resuming use.
- **Guard Against Electric Shock.** Prevent body contact with earthed or grounded surfaces. For example; pipes, radiators, ranges, refrigerator enclosures.
- **Don't Abuse Cord.** Never carry tool by cord or yank it to disconnect from receptacle. Keep cord from heat, oil, and sharp edges.

- **Keep work area clean.** Cluttered areas and benches invite injuries.
- **Consider work area environment.** Don't expose power tools and chargers to water. Keep work area well lighted. Do not use tool in explosive or flammable atmospheres.
- **Keep bystanders and children away.** Do not permit unauthorized personnel to operate this tool, or touch tool or cord.
- **Store idle tools.** When not in use, tools should be stored in a dry, high or locked up place, out of reach of children.
- **Don't force tool.** It will do the job better and more safely at the rate for which it was intended.
- **Use the right tool.** Do not force a small tool or attachment to do the job of a heavy-duty tool.
- **Do not use a tool for a purpose for which it is not intended.** Example: Do not use a screwdriver as a drill.
- **Dress properly.** Do not wear loose clothing or jewelry. They can be caught in moving parts. Rubber gloves and non-skid footwear are recommended when working outdoors. Wear protective hair covering to contain long hair.

NOTICE

The use of other than genuine Ingersoll-Rand replacement parts may result in personal injury, decreased tool performance and increased maintenance, and may invalidate all warranties.

Have your tool repaired by a qualified person. This electric tool is in accordance with the relevant safety requirements. Repairs should only be carried out by qualified persons using original spare parts, otherwise this may result in considerable danger to the user.

Repairs should be made only by authorized, trained personnel. Consult your nearest Ingersoll-Rand Authorized Servicenter.

⚠ WARNING

FAILURE TO OBSERVE THE FOLLOWING WARNINGS COULD RESULT IN INJURY.

USING THE TOOL (*Continued*)

- **Secure work.** Use clamps or a vise to hold work. Operators often need both hands to perform job functions.
 - **Don't overreach.** Keep proper footing, balance, and a firm grip on the tool at all times.
 - **Maintain tools with care.** Keep tools clean for better and safer performance. Follow instructions for lubricating and changing accessories. Inspect tool cords periodically and if damaged, have them repaired by an authorized service facility. Inspect extension cords periodically and replace if damaged. Keep handles dry, clean, and free from oil and grease.
 - **Remove adjusting keys and wrenches.** Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.
 - **Avoid unintentional starting.** Don't carry tool with finger on switch.
 - **Do not drop or abuse the tool.**
 - **Whenever a tool is not being used, position the Power Switch to the "OFF" position and unplug the power cord.**
 - **Stay alert.** Watch what you are doing. Use common sense. Do not operate tool when you are tired.
 - **Check damaged parts.** Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced by an authorized service center unless otherwise indicated elsewhere in this operation manual.
 - **Have defective switches replaced by an authorized service center.**
 - **Do not use the tool if the switch does not turn it on and off.**
 - **Do not drop or abuse the screwdriver.**
 - **Whenever changing a bit, make certain the Forward/Reverse Switch is in the "OFF" position and the tool is unplugged.**
 - **Do not allow chemicals such as acetone, benzene, thinner, ketone, trichloroethylene or other similar chemicals to come in contact with the screwdriver housing as damage will result.**
 - **Do not adjust the torque setting higher than 7 on the Torque Scale.**
- Duty cycle:**
MAX 0.5 sec. "ON"
MIN 3.5 sec. "OFF"
- **Do not tighten more than 900 tapping screws (size: 2 mm, length: 4 mm) per hour.**

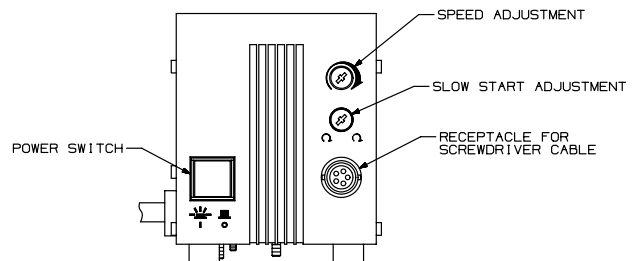
- **Do not operate the Forward/Reverse Switch when the motor is running.**
- **Whenever a tool is not being used, move the Forward/Reverse Switch to the "OFF" position and unplug the screwdriver.**
- **The use of any accessory or attachment other than recommended in this manual can present a risk of personal injury.**

OPERATION

CAUTION

- **Do not drop or abuse the Controller.**
- **Whenever a Controller is not being used, position the Power Switch to the "OFF" position and unplug the power cord.**

MODEL EC24E-N CONTROLLER



(Dwg. TPD1833-1)

SLOW START ADJUSTMENT

CAUTION

A sudden increase in the speed of the screwdriver bit occurs within the first five seconds of start-up when using the SLOW START ADJUSTMENT feature described below. This occurs each time the screwdriver is operated.

Use of the SLOW START ADJUSTMENT lets the screwdriver bit rotate slowly for a brief period of time (zero to five seconds) to provide easier alignment and engagement of the screw threads.

1. To use the SLOW START feature, turn the SLOW START ADJUSTMENT clockwise. This lets the screwdriver bit start rotating at a slow speed and suddenly come up to full speed. Increased clockwise adjustment allows the the screwdriver bit to turn at a slow speed for a longer period of time before suddenly coming up to full speed.
2. To cancel the SLOW START feature, turn the SLOW START ADJUSTMENT counterclockwise until it stops. This cancels the SLOW START feature and the screwdriver bit will start rotating at full speed.

SPEED ADJUSTMENT

Use of the SPEED ADJUSTMENT changes the free speed of the screwdriver. The free speed can be adjusted from full rated speed (turn SPEED ADJUSTMENT to full clockwise position) to 70% of full rated speed (turn SPEED ADJUSTMENT to full counterclockwise position).

POWER SWITCH

The POWER SWITCH turns the power on or off. When power is on, a light illuminates the push-button of the switch.

SCREWDRIVER CORD RECEPTACLE

The SCREWDRIVER CORD RECEPTACLE connects the screwdriver power cord to the controller.

MAINTENANCE

DO NOT ATTEMPT TO REPAIR THIS TOOL.

All repairs and maintenance of the Controller and its cord must be performed by an authorized servicer.

Contact sales office listed on last page of this form.


EC24E-N Screwdriver Controller


MODEL NO.	HERTZ	WATTS	INPUT VOLTS (ALTERNATING CURRENT)	OUTPUT VOLTS (DIRECT CURRENT)	SIZE IN INCHES (WIDTH, HEIGHT, DEPTH)	WT., PDS.	TYPE OF CORD
EC24E-N	50/60 Hz	25	115V ~	24 V	3.25 x 4.1 x 10.5	5.1	USA

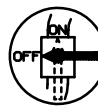
WARNING LABEL IDENTIFICATION


⚠ WARNING


FAILURE TO OBSERVE THE FOLLOWING WARNINGS COULD RESULT IN INJURY.


	<p>⚠ WARNING</p> <p>Always wear eye protection when operating or performing maintenance on this tool.</p>
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	<p>⚠ WARNING</p> <p>Always wear hearing protection when operating this tool.</p>
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	<p>⚠ WARNING</p> <p>Always turn off the electrical supply and disconnect the power cord before installing, removing or adjusting any accessory on this tool, or before performing any maintenance on this tool.</p>
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	<p>⚠ WARNING</p> <p>Powered tools can vibrate in use. Vibration, repetitive motions or uncomfortable positions may be harmful to your hands and arms. Stop using any tool if discomfort, tingling feeling or pain occurs. Seek medical advice before resuming use.</p>
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	<p>⚠ WARNING</p> <p>Do not carry the tool by the cord.</p>
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	<p>⚠ WARNING</p> <p>Do not use damaged, frayed or deteriorated power cords.</p>
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	<p>⚠ WARNING</p> <p>Keep body stance balanced and firm. Do not overreach when operating this tool.</p>
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	<p>⚠ WARNING</p> <p>DRY LOCATION USE ONLY.</p>
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DECLARATION OF CONFORMITY

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

Swan Lane, Hindley Green, Wigan WN2 4EZ
(address)


declare under our sole responsibility that the product,

Series EC24E-N Electric Screwdriver Controller

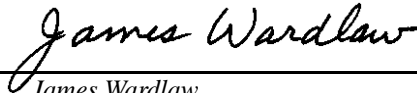
to which this declaration relates, is in compliance with the provisions of
89/336/EEC, 89/392/EEC, 91/368/EEC, 92/31/EEC,
93/44/EEC, 93/68/EEC AND 73/23/EEC Directives.

By using the following Principle Standards: EN292, EN50144-1,
EN50082-1, EN55014-1

Serial No. Range: (1995 →) 3VH XXXXX →



D. Vose
Name and signature of authorised persons



James Wardlaw
Name and signature of authorised persons

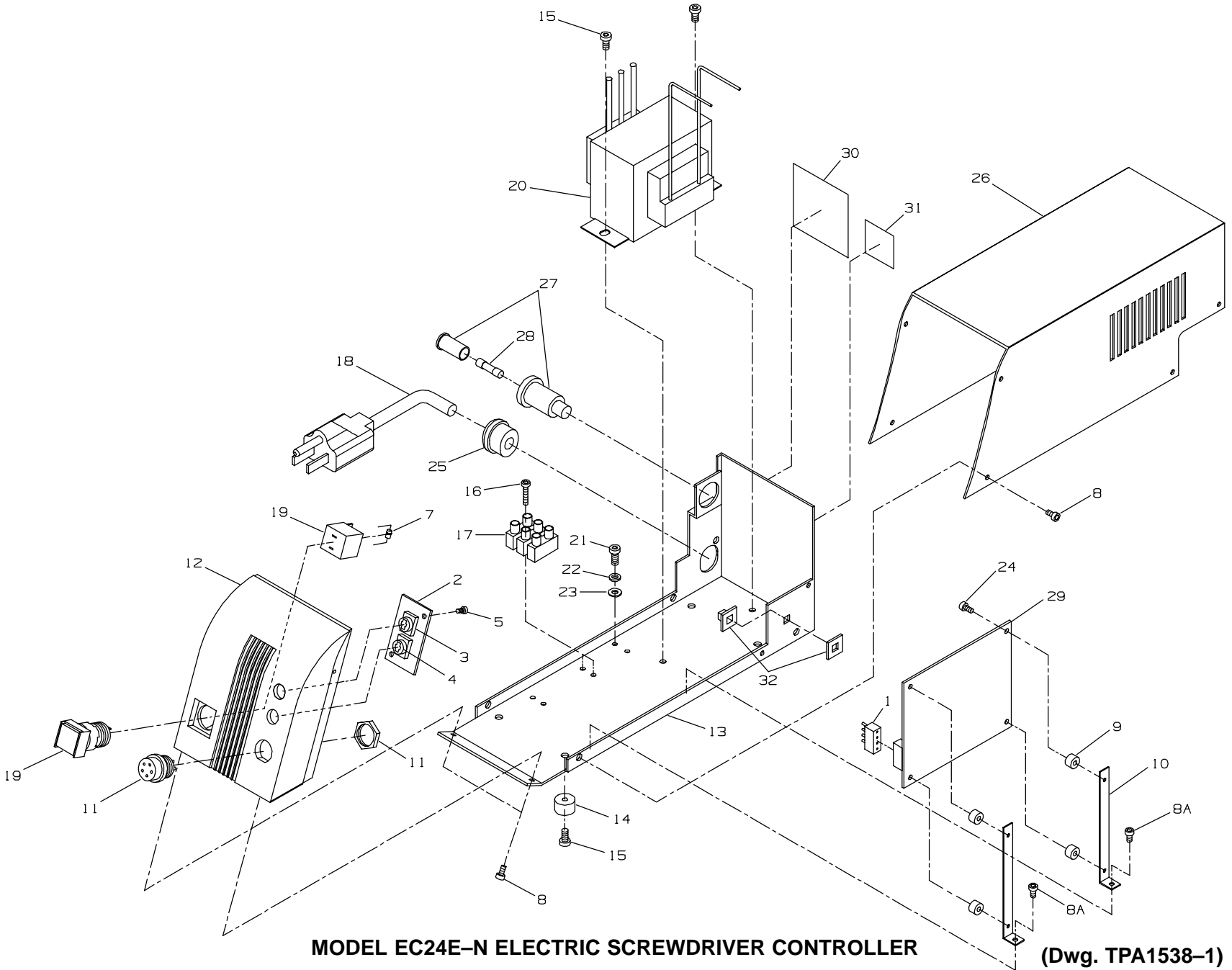
January, 1999
Date

January, 1999
Date

NOTICE

SAVE THESE INSTRUCTIONS. DO NOT DESTROY.

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



MODEL EC24E-N ELECTRIC SCREWDRIVER CONTROLLER

(Dwg. TPA1538-1)

PART NUMBER FOR ORDERING

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1	Plug (2)	EC24N-P238	23	Ground Screw Lockwasher (bottom; internal teeth)	EC24N-43
2	Potentiometer PCB	EC24N-200	24	Self-tapping Screw (4)	_____
3	Speed Potentiometer	EC24N-93	25	Cord Strain Relief Grommet	EC24N-240
4	Soft Start Potentiometer	EC24N-424	26	Cover	EC24N-40
5	Self-tapping Screw (2)	_____	27	Fuse Holder	EC24N-45
7	Zener Diode	EC24N-204		Fuse Package	EC24N-P46
8	Self tapping Screw (12)	_____	28	Fuse	_____
8A	Bracket Screw (2)	_____	29	Control Base Assembly	EC24N-B525
9	Control Base Spacer (4)	EC24N-425	30	Nameplate	EC24EN-301
10	Control Base Mounting Bracket (2)	EC24N-426	31	Caution Label	EC24E-99
11	Receptacle	EC24N-203	32	Signal Terminal	EC24N-P47
12	Front Panel	EC24N-25	*	Chassis Hardware Package (includes illustrated items 5 [2], 8 [12], 8A [2], 9 [4], 14 [4], 15 [6], 16 [2] and 24 [4] . .	EC24N-P3
13	Chassis	EC24N-3	*	Controller Mounting Bracket	EC24-MB
14	Rubber Foot (4)	_____	*	Digital Counter	EC24-DC
15	Self-tapping Screw (6)	_____	*	Fuse Warning Label	EC24N-98
16	Self-tapping Screw (2)	_____			
17	Terminal Block	EC24N-30			
18	Cord Assembly	EC24N-239			
19	Power Switch	EC24N-565			
20	Transformer	EC24N-53			
21	Ground Screw	EC24N-41			
22	Ground Screw Lockwasher (top; split type) .	EC24N-42			

* Not illustrated.

MAINTENANCE SECTION

MAINTENANCE SECTION

TROUBLESHOOTING GUIDE

Trouble	Probable Cause	Solution
No Power	Fuse	Disconnect Power Cord. Replace fuse.
	Power Switch	Disconnect Power Cord. Use ohmmeter to check yellow and black leads at Switch. Reading should be 0 to full scale when switched from on to off.
	Power Cord	Use Voltmeter to check white lead at terminal block and black lead at Switch. Reading should be 115 VAC for Model EC24N and 230VAC for Model EC24E.
	Transformer	Use voltmeter to check the two yellow leads from the Transformer. Reading should be 24 VAC.
	Circuit Board	Replace the circuit board.
Faulty braking	Circuit Board	Replace the Circuit Board.
Speed Control does not work	Speed Potentiometer	Disconnect Power Cord. Unplug the Socket Assembly from Circuit Board. Using an ohmmeter, check the yellow and orange leads at the potentiometer by rotating the knob. Reading should be 0 to 2 000 ohms.
	Circuit Board	Replace the Circuit Board.

**Service Centers
Centres d'entretien
Niederlassungen
Centri di Assistenza
Centros de Servicio
Service Centra**

Ingersoll-Rand Company
510 Hester Drive
White House
TN 37188
USA
Tel: (615) 672-0321
Fax: (615) 672-0601

Ingersoll-Rand
Sales Company Limited
Chorley New Road
Horwich Bolton
Lancashire BL6 6JN
England
UK
Tel: (44) 1204 690690
Fax: (44) 1204 690388

Ingersoll-Rand
Equipements de Production
111 avenue Roger Salengro
BP 59
F - 59450 Sin Le Noble
France
Tél: (33) 27 93 0808
Fax: (33) 27 93 0800

Ingersoll-Rand GmbH
Gewerbeallee 17
45478 Mülheim/Ruhr
Deutschland
Tel: (49) 208 99940
Fax: (49) 208 9994445

Ingersoll-Rand Italiana SpA
Casella Postale 1232
20100 Milano
Italia
Tel: (39) 2 950561
Fax: (39) 2 95360159

Ingersoll-Rand Ibérica
Camino de Rejas 1, 2-18
28820 Coslada (Madrid)
España
Tel: (34) 1 6695850
Fax: (34) 1 6696054

Ingersoll-Rand Nederland
Produktieweg 10
2382 PB Zoeterwoude
Nederland
Tel: (31) 71 452200
Fax: (31) 71 5218671

Ingersoll-Rand Company SA
PO Box 3720
Alrode 1451
South Africa
Tel: (27) 11 864 3930
Fax: (27) 11 864 3954

Ingersoll-Rand
Scandinavian Operations
Kastruplundgade 22, I
DK - 2770 Kastrup
Danmark
Tlf: (45) 32 526092
Fax: (45) 32 529092

Ingersoll-Rand SA
The Alpha Building
Route des Arsenaux 9
CH -1700 Fribourg
Schweiz/Suisse
Tel: (41) 37 205111
Fax: (41) 37 222932

Ingersoll-Rand Company
Kuznetsky Most 21/5
Entrance 3
103698 Moscow
Russia
CIS
Tel: (7) 501 882 0440
Fax: (7) 501 882 0441

Ingersoll-Rand Company
16 Pietro
Ul Stawki 2
00193 Warsaw
Poland
Tel: (48) 2 635 7245
Fax: (48) 2 635 7332