

# REPAIR PART LISTING

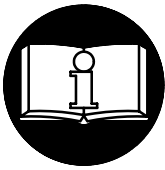
## for

# 120 Nm SERIES TMAD–EU DC ELECTRIC TORQUE MANAGEMENT SYSTEM CONTROLLERS

### NOTICE

Series TMAD–EU Controllers are designed to be used with Series D Wrenches/ Nutrunners for assembly applications requiring precise torque monitoring and control, accuracy, consistency and repeatability. Ingersoll–Rand is not responsible for customer modification of tools for applications on which Ingersoll–Rand was not consulted.

### ⚠ 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.**

Disconnect the power cord from the receptacle before performing any maintenance on this tool.



This symbol is to alert the user and service personnel to the presence of uninsulated dangerous voltage that will cause a risk of electric shock.



This symbol is to alert the user and service personnel to the presence of important operating instructions that must be read and understood to prevent personal injury, electrical shock or damage to the equipment.

**OPERATORS MUST READ THIS MANUAL BEFORE OPERATING THE SYSTEM.**

**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.

- Do not remove any labels. Replace any damaged label.

#### USING THE TOOL

- Always wear eye protection when operating or performing maintenance on this tool.

*(Continued on page 2)*

### 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.

**INGERSOLL-RAND®**  
**PROFESSIONAL TOOLS**

**⚠ WARNING**

**FAILURE TO OBSERVE THE FOLLOWING WARNINGS COULD RESULT IN INJURY.**

**USING THE TOOL (Continued)**

- **Keep work area clean.**  
Cluttered areas and benches invite injuries.
- **Consider the work environment.**  
Don't expose the controller to water or moisture.  
Keep work area well lighted.
- **Guard against electric shock.**  
Prevent body contact with grounded surfaces such as pipes, metal structures or other electrical products.
- **Keep bystanders away.**  
Do not permit unauthorized personnel to operate this Controller.
- **Store idle Controllers.**  
When not in use, the Controller should be stored in a dry and secured area.
- **Don't abuse the cord.**  
Never carry a Controller by its cord or yank the cord of the Controller to disconnect it from a receptacle.  
Keep the cord away from heat, oil, solvent and sharp edges.
- **Maintain the Controller with care.**  
Inspect the Controller cord periodically and if damaged, have it repaired by an authorized service facility.
- **This apparatus must be earth grounded.**
- **Every month, service personnel must test the earth fault protector with the test button.**
- **Should the earth fault disconnect the system, be sure to find the primary reason and correct the problem before resuming operation.**
- **There are no user serviceable parts inside this unit. Refer all servicing to qualified service personnel.**
- **The main power supply cord is a disconnecting device.**  
Disconnect the Controller from the power supply by removing the plug from the Controller to render it powerless.
- **Always disconnect the power supply before opening the cabinet.**
- **If the power supply cable to this Controller is damaged, it must be replaced with a cable that meets the local electrical safety standards for this type of product.**
- **Do not install this Controller near water or other liquids.**
- **Do not install this Controller where it will be subject to vibration, shock, heating sources such as radiators or other devices that generate heat.**
- **Install this Controller as far away as possible from sources of electrical noise such as arc welding equipment.**

**WARNING LABEL IDENTIFICATION**

**⚠ WARNING**

**FAILURE TO OBSERVE THE FOLLOWING WARNINGS COULD RESULT IN INJURY.**

	<b>⚠ WARNING</b> Always wear eye protection when operating or performing maintenance on this tool.
	<b>⚠ WARNING</b> 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.
	<b>⚠ WARNING</b> INDOOR USE ONLY.

	<b>⚠ WARNING</b> Always wear hearing protection when operating this tool.
	<b>⚠ WARNING</b> Do not carry the tool by the cord.
	<b>⚠ WARNING</b> The Torque Reaction Bar must be positioned against a positive stop. Do not use the Bar as a dead handle and take all precautions to make certain the operator's hand cannot be pinched between the Bar and a solid object.

	<b>⚠ WARNING</b> 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.
	<b>⚠ WARNING</b> Do not use damaged, frayed or deteriorated power cords.
	<b>⚠ WARNING</b> Keep body stance balanced and firm. Do not overreach when operating this tool.

**International Warning Label:**  
Order Part No. \_\_\_\_\_





# GROUNDING INSTRUCTIONS



**THE CONTROLLER MUST BE EARTH GROUNDED WHILE IN USE TO PROTECT THE OPERATOR FROM SHOCK.** The Controller is equipped with a three-conductor cord and must be wired by qualified personnel to meet local electrical safety standards for connection to a 20 AMP, 115 VAC, 50/60 Hz circuit outlet, or a 10 AMP, 220 VAC, 50/60 Hz outlet. Always check that your ground is operating properly on the outlet by a qualified electrician before using the unit.



## **THIS APPARATUS MUST BE EARTH GROUNDED.**

The three conductors of the power supply cord attached to this apparatus are identified with color as shown in the following table. When connecting the leads of the power supply cord to a plug, make certain each conductor is connected to the correct terminal.

<b>Power Supply Cord</b>	
<b>Conductor</b>	<b>Color</b>
Live	Brown
Neutral	Blue
Grounding	Green–Yellow



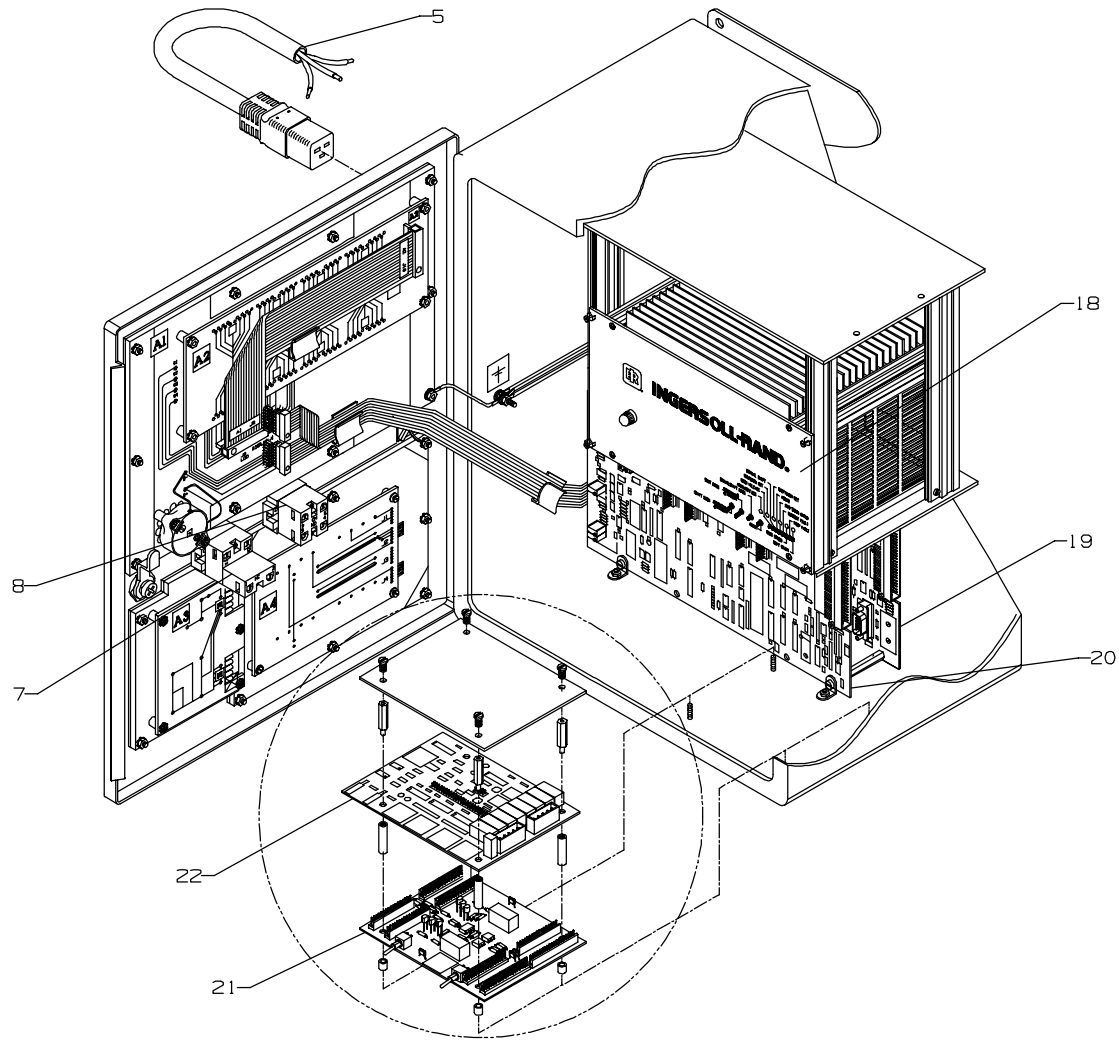
Use only three wire extension cords that have grounded-type plugs and receptacles which meet local electrical safety standards for connection to a 20 AMP, 115 VAC, 50/60 Hz circuit outlet, or a 10 AMP, 220 VAC, 50/60 Hz outlet. Replace damaged extension cords.



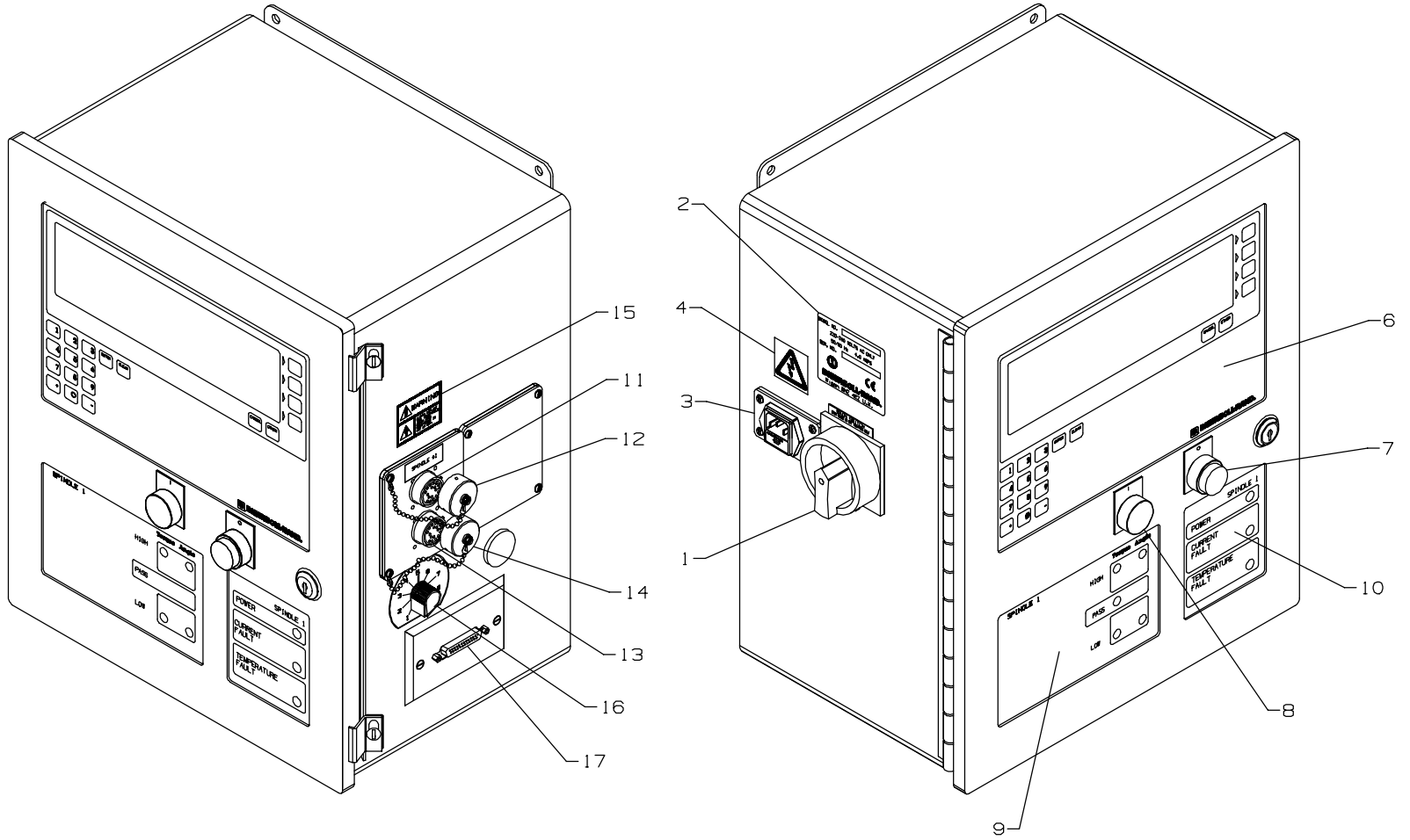
Ingersoll–Rand Company makes no warranty or implies any warranty or liabilities due to the misuse or damage resulting from the application of the information supplied in this manual. Liabilities due to errors in the manual are only limited to replacement of the manual. Ingersoll–Rand reserves the right to change information contained in this manual or the program without notice at any time.

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For warranty claims of the equipment contact your nearest Ingersoll–Rand Distributor.



(Dwg. TPA1628)

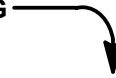


(Dwg. TPA1629)

**PART NUMBER FOR ORDERING**



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1	Power Disconnect Switch .....	DEA40-EU-862	17	Communication Port	
2	Nameplate .....	DEA40-EU-877		for models with RS-232 Port .....	DEA40-907
3	Power Inlet .....	DEA40-861		for models with RS-485 Port .....	DEAA-752
4	Warning Label .....	DEA40-EU-883-1	18	Servo Drive	DEA120-700
5	Power Input Cord .....	DEA120-EU-880	*	Fuse (20 amp; Time Delay) .....	DEA120-982
6	Display Key Pad Assembly .....	DEA40-A905	19	Central Processing Unit Circuit Board	
7	Spindle Stop Switch Operator .....	DEA40-EU-865X		for models with RS-232 Port .....	DEA40-A900
7	Spindle Stop Switch Body and Contact Block ...	DEA40-EU-865Y		for models with RS-485 Port .....	DEA120-M742
7	Spindle Stop Switch Legend Plate .....	DEA40-EU-865Z	*	Central Processing Unit Battery .....	DEA40-891
8	Spindle Start Switch Operator .....	DEA40-EU-867X	*	64 Pin C P U Cable to Input-Output Board .....	DEA40-915
8	Spindle Start Switch Body and Contact Block ...	DEA40-EU-867Y	*	16 Pin C P U Cable to Display (2) .....	DEA40-914
8	Spindle Start Switch Legend Plate .....	DEA40-EU-867Z	20	Input-Output Circuit Board .....	DEA40-A902
9	Alarm Panel Assembly .....	DEA40-A906-1	21	Interface Circuit Board .....	DEA120-A950-1
10	Status Light Panel Assembly .....	DEA40-A866-1	*	20 Pin Cable from Input-Output to	
11	23 Pin Bare Tool Connector .....	DEA40-967		Interface Board (3) .....	DEA40-EU-976
12	Tool Connector Dust Cover .....	DEA40-872	*	7 Pin Cable Interface to Alarm Printed	
13	Accessory Port Connector			Circuit Board .....	DEA40-935
	for models without		22	Accessory Circuit Board .....	DEAA-M720-1
	accessory options .....	DEA40-887	*	Cabinet Wire Harness .....	DEA120-966
	for all other models .....	DEAA-753-1	*	Circuit Breaker .....	DEA120-894
14	Accessory Port Dust Cover (1 for each spindle) ..	DEA40-888	*	Fuse Terminal .....	DEA120-EU-100
15	Warning Label .....	DEA40-879	*	Fuse Terminal End Section .....	DEA120-EU-101
16	Configuration Selector Switch Assembly .....	DEA40-884-10	*	Fuse (20 amp; Time Delay) .....	DEA120-EU-102
16	Configuration Selector Switch Legend .....	DEA40-890	*	Input Power Filter Assembly .....	DEA120-EU-A999
16	Configuration Selector Switch Operator .....	DEA40-885			

\* Not illustrated.

**NOTICE**

**SAVE THESE INSTRUCTIONS. DO NOT DESTROY.**

