

# Prosafe Electronic Time Delay Unit

Catalog Numbers 440T-MSTUEx, 440T-MDTUEx

## Summary of Changes

This publication contains new and updated information regarding the Prosafe® Electronic Time Delay Units as indicated in the following table.

Topic	Page
Added EMD Safety Relay section	1
Replaced Logic Setting section with SI Safety Relay	1
Adjustments to dimensional drawings	2
New Time and Range Setting tables	3

Installation must be in accordance with the following steps and stated specifications and implemented by suitably competent personnel. This device is intended to be part of the safety-related control system.

Before installation, perform a risk assessment to determine whether the specifications of this device are suitable for all foreseeable operational and environmental characteristics of the machine to which it is to be fitted.

At regular intervals during the life of the unit, check whether these characteristics foreseen remain valid. Inspect this device for evidence of accelerated wear, material degradation, or tampering. If necessary, replace the device. The manufacturer cannot accept responsibility for a failure of this device if the procedures are not implemented or if it is used outside the recommended specifications.

Adherence to the recommended maintenance instructions forms part of the warranty.



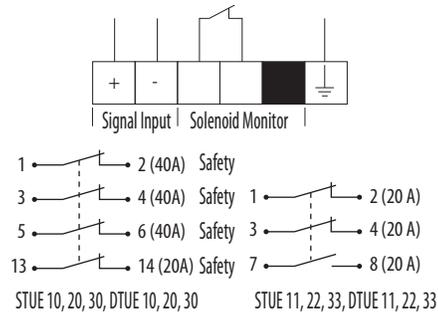
**WARNING:** Do not defeat, tamper, remove, or bypass this unit. Severe injury to personnel could result.

**Table 1 - General Specifications**

Attribute	440T-MSTUEx, 440T-MDTUEx
Safety contacts Isolator on (STUE and DTUE)	3 N.O. Safety (40 A) + 1 N.O. (20 A) 2 N.O. Safety (20 A) + 1 N.C. (20 A)
Solenoid monitor switch	1 N.C. Safety (10 A)
Input voltage	24V DC (6.5 W)
Mechanical life	100,000 (typical)
Shear force to key, maximum	15.1 kN (3398 lbs)
Torque to key, maximum	14 N·m (10.12 lb·ft)
Operating temperature	-10...+40 °C (14...104 °F)

**IMPORTANT** The safety contacts of these products are described as normally closed (N.C.). For example, with the guard closed and the actuator in place (where relevant), the machine is able to start.

**Figure 1 - Wiring Diagram (Shown with Power On)**

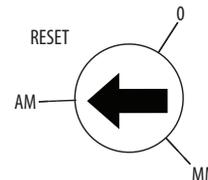


## EMD Safety Relay

The EMD safety relay has two switches. The combination of the switch settings determines the functionality and the duration. During configuration, the Time switch determines the duration of the range switch.

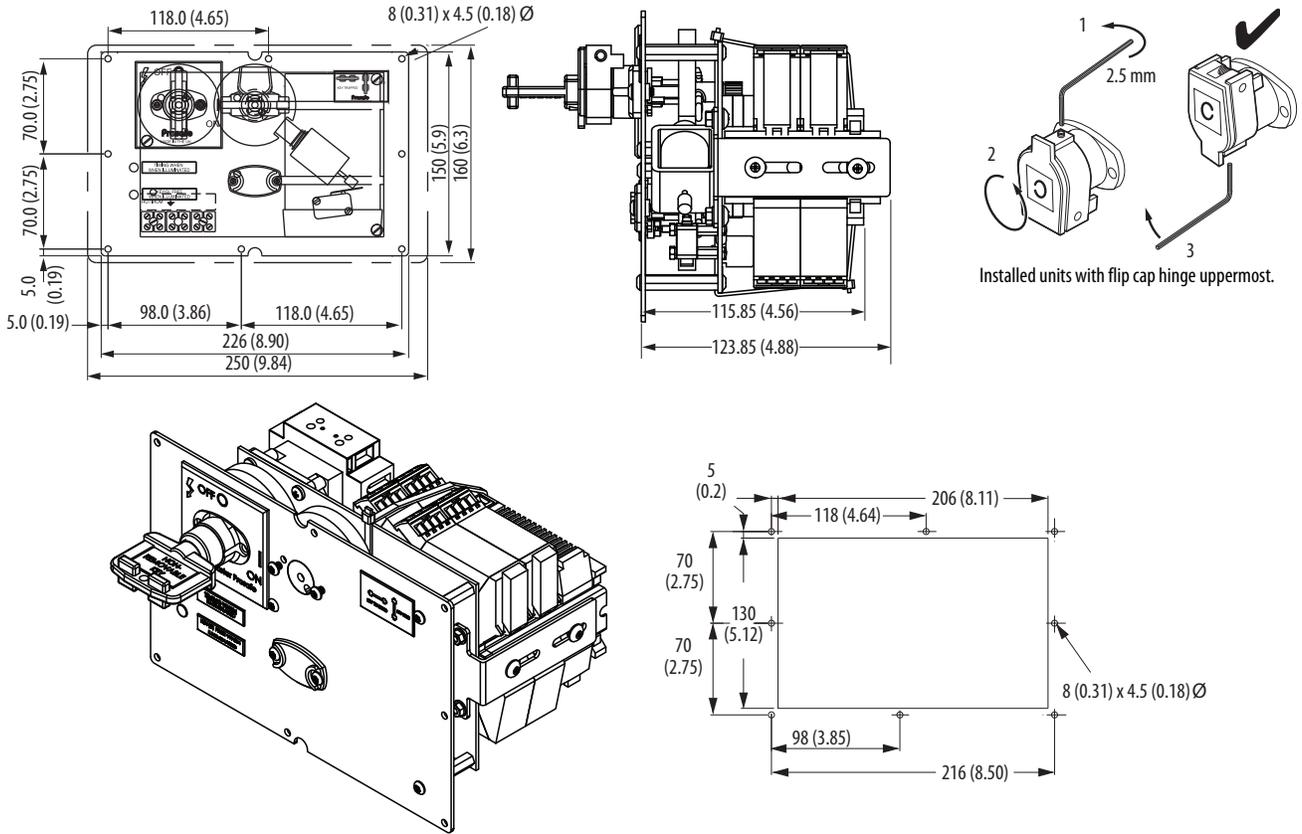
To configure, power the unit OFF. Set the range switch to zero and the time switch to either 1 (for short range timing) or 10 (for long range timing). Apply power and adjust the time and range switches, as necessary. Due to intended operation of this unit, only on-delay range settings 5, 6, and 7 can be used. After adjusting the switches, cycle the power to the unit to store the settings. See [Table 3](#) and [Table 4 on page 3](#) for Range and Time Switch Adjustments.

## SI Safety Relay



The SI safety relay is set to AM (automatic reset) at the factory. Verify that it is still set to AM. Do not change this setting.

**Figure 2 - Dimensions [mm (in.)]**



**Table 2 - Product Specifications**

Type	Input Voltage	Contact Set 1	Contact Set 2	Catalog Number
Single Key Out Panel Mounted	24V DC	3 N.O. 40 A	1 N.O. 20 A	440T-MSTUE10
		2 N.O. 20 A	1 N.C. 20 A	440T-MSTUE11
	110V AC	3 N.O. 40 A	1 N.O. 20 A	440T-MSTUE20
		2 N.O. 20 A	1 N.C. 20 A	440T-MSTUE22
	230V AC	3 N.O. 40 A	1 N.O. 20 A	440T-MSTUE30
		2 N.O. 20 A	1 N.C. 20 A	440T-MSTUE33
Dual Key Out Panel Mounted	24V DC	3 N.O. 40 A	1 N.O. 20 A	440T-MDTUE10
		2 N.O. 20 A	1 N.C. 20 A	440T-MDTUE11
	110V AC	3 N.O. 40 A	1 N.O. 20 A	440T-MDTUE20
		2 N.O. 20 A	1 N.C. 20 A	440T-MDTUE22
	230V AC	3 N.O. 40 A	1 N.O. 20 A	440T-MDTUE30
		2 N.O. 20 A	1 N.C. 20 A	440T-MDTUE33

**Table 3 - Range Settings**

Range Switch Setting	Time Delay (Short Range) [s]	Time Delay (Long Range) [s]
5	0.3...3	30...300
6	3...30	300...3000
7	30...300	—

**Table 4 - Time Settings**

Time Switch Setting	Delay Adjustment
1	10%
2	20%
3	30%
4	40%
5	50%
6	60%
7	70%
8	80%
9	90%
10	100%

### Examples

For a 2 minute delay, start the short range configuration and set the range to 7 for a 300 second maximum and the time to 4 for 40% of the maximum.

For a 30 minute delay, start in the long range configuration and set the range to 6 for a 3000 second maximum and the time to 6 for 60% of the maximum.

### Upon Installation

Lubricate code barrel assembly with light oil or spray, for example, WD-40® or alternative product suitable for application. Check for correct operation.

## Maintenance

### Every Week

Check the correct operation of the switching circuit. Also check for signs of abuse or tampering. Inspect the unit for damage. Replace the unit if damage is apparent.

### At Least Every Six Months

Isolate all power. Check for any sign of wear or damage, for example, cam assembly wear or contact oxidization and replace if apparent. Clean out any accumulation of fine dirt, and so on. Lubricate code barrel assembly with light oil or spray, for example WD-40 or alternative product suitable for application.

Assessment of the operating environment can require the unit to be lubricated more frequently. Reinststate the power and check for correct operation.

### Repair

If there is any malfunction or damage, do not attempt to repair it. Replace the unit before machine operation is allowed.

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**IMPORTANT** Do not dismantle the unit.

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## Declaration of Conformity

This declaration is to declare that the products that are shown on this document conform with the Essential Health and Safety Requirements (EHSRs) of the European Machinery Directive (2006/42/EC), the relevant requirements of the Low Voltage Directive (2014/35/EU). These products also conform to EN 14119, EN ISO 13849-1, EN ISO 13849-2, EN 60204-1.

# Rockwell Automation Support

Use the following resources to access support information.

<b>Technical Support Center</b>	Knowledgebase Articles, How-to Videos, FAQs, Chat, User Forums, and Product Notification Updates.	<a href="https://rockwellautomation.custhelp.com/">https://rockwellautomation.custhelp.com/</a>
<b>Local Technical Support Phone Numbers</b>	Locate the phone number for your country.	<a href="http://www.rockwellautomation.com/global/support/get-support-now.page">http://www.rockwellautomation.com/global/support/get-support-now.page</a>
<b>Direct Dial Codes</b>	Find the Direct Dial Code for your product. Use the code to route your call directly to a technical support engineer.	<a href="http://www.rockwellautomation.com/global/support/direct-dial.page">http://www.rockwellautomation.com/global/support/direct-dial.page</a>
<b>Literature Library</b>	Installation Instructions, Manuals, Brochures, and Technical Data.	<a href="http://www.rockwellautomation.com/global/literature-library/overview.page">http://www.rockwellautomation.com/global/literature-library/overview.page</a>
<b>Product Compatibility and Download Center (PCDC)</b>	Get help determining how products interact, check features and capabilities, and find associated firmware.	<a href="http://www.rockwellautomation.com/global/support/pcdc.page">http://www.rockwellautomation.com/global/support/pcdc.page</a>

## Documentation Feedback

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## Additional Resources

These documents contain additional information concerning related products from Rockwell Automation.

Resource	Description
Guardmaster® Safety Relays User Manual, publication <a href="#">440R-UM013</a>	Provides guidelines for installing a Guardmaster Safety Relays.
Industrial Automation Wiring and Grounding Guidelines, publication <a href="#">1770-4.1</a>	Provides general guidelines for installing a Rockwell Automation industrial system.
Product Certifications website, <a href="http://www.rockwellautomation.com/global/certification/overview.page">http://www.rockwellautomation.com/global/certification/overview.page</a>	Provides declarations of conformity, certificates, and other certification details.

You can view or download publications at <http://www.rockwellautomation.com/global/literature-library/overview.page>. To order paper copies of technical documentation, contact your local Allen-Bradley distributor or Rockwell Automation sales representative.

## Waste Electrical and Electronic Equipment (WEEE)



At the end of life, this equipment can be collected separately from any unsorted municipal waste.

Rockwell Automation maintains current product environmental information on its website at <http://www.rockwellautomation.com/rockwellautomation/about-us/sustainability-ethics/product-environmental-compliance.page>.

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