INSTALLATION INSTRUCTIONS
TE5 SERIES
TIME DELAY RELAYS

April 2024 **901-0000-365**

Potentially hazardous voltages are present. Electrical shock can cause death or serious injury.
Installation should be done by qualified personnel following all National, State & Local Codes.

Présence de tensions potentiellement dangereuses. Une décharge électrique peut causer la mort ou des blessures graves.
L'installation devrait être effectuée par du personnel qualifié suivant tous les codes nationaux, provinciaux et locaux.

BE SURE TO REMOVE ALL POWER SUPPLYING THIS EQUIPMENT BEFORE CONNECTING OR DISCONNECTING WIRING.
READ INSTRUCTIONS BEFORE INSTALLING OR OPERATING THIS DEVICE. KEEP FOR FUTURE REFERENCE.

Installation and Wiring:

- Mount the TE5 Series product on 35mm DIN Rial. Hook the fixed (upper) DIN clip over the top edge of the DIN rail and rotate the product downward applying pressure to snap the lower DIN clip over the rail edge, securing the product to the rail.
- Connect wiring to the product according to the wiring diagram on the side of the product or per the proper wiring diagram below. Use 14-22AWG solid or stranded copper wire with a terminal tightening torque of 4 in-lbs.
- For use of a single TE5 series product, the unit may operate at the maximum specified parameters. For the use of more than one TE5 series products next to each other, follow the installation considerations below for spacing with respect to ambient temperature and load amount.

Setting the Time Delay(s):

- Adjustable time TE5 Series products have one or two blue dials on the front face. Rotate each dial's pointer to the desired time setting. A 1/8"(3mm) flat-blade(slotted) or phillips screwdriver is recommended for this. The time range is printed on the side nameplate for reference. Please note that the dial markings are for reference only and may not be exact. Fixed time delays do not have a dial, the time settings are permanently set at the factory and cannot be changed.

Operation of Time Delay Function

- For detailed information on how each time delay relay function operates, including both written and visual descriptions, and the relationship between Control Voltage, Trigger (if present) and Output, please see www.macromatic.com/functions.

Installation Considerations:

- When installing TE5 series products immediately next to other DIN rail devices with no spacing between devices, thermal energy from the surrounding devices should be considered. Heat from nearby devices can increase the surrounding air temperature significantly. If the installation environment temperature is already high and/or the contact current is significant, derating or spacing may be needed to ensure reliable operation. Although each installation is unique, manufacturer recommendations and derating tables are provided below for guidance.

Suggested Derating Factor for Contact Ratings

Surrounding Air Temperature	25C	40C	50C	55C	60C	65C
0MM Spacing	None	0.8	0.3	-	-	-
5MM Spacing	None	None	None	None	0.5	0.3
10MM Spacing	None	None	None	None	None	None

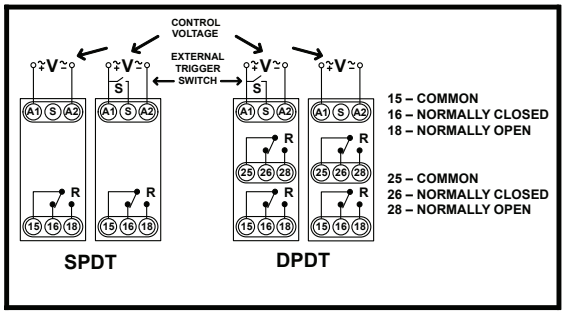
Notes:

- *spacing is the distance between the TE5 series product and the next closest DIN rail devices on the same DIN rail.*
- *The surrounding air temperature is the highest air temperature immediately surrounding the device.*

Troubleshooting

- Check that all connections are correct per the connection diagram on the product. For DC Input Voltages, make sure the polarity matches the connection diagram, with positive voltage connected to terminal A1.If problems continue, contact us at www.macromatic.com/contact for more information.
- For products that use a Trigger to initiate the timing function, a dry-type contact is recommended. Using a solid state switch is acceptable. See www.macromatic.com/leakage or contact Macromatic for information regarding leakage currents limits and other solid state design considerations. Make sure the trigger switch is connected between A1 and S terminals as shown in the wiring diagram.

WIRING DIAGRAMS



Specifications

Timing Characteristics	
Maximum Setting (Adjustable)	+5%, -0%
Maximum Setting (Adjustable)	+0%, -50%
Fixed Time Delay	+/-2% or +/- 0.05 Seconds, whichever is greater
Repeat Accuracy	+/-0.1% or +/-0.05 Seconds, whichever is greater
Reset Time	Input Voltage: 0.1 Seconds, Triggered fucntions only: 0.04 Seconds
Start-up Time	Time from when power is applied until unit is timing: 0.05 Seconds
Maintian Function Time	Time unit continues to operate after power is removed: 0.01 Seconds
Trigger Switch Closure Time	Minimum required trigger switch closure time: 0.05 Seconds

Input Characteristics	
Control Voltage Range (V)	24-240VAC 50/60Hz, 12-240VDC
Operating range (% of V)	85% to 110%
Maximum Consumption (Burden)	5VA (AC) and 1W(DC)

Output Characteristics	
Number and type of contents	SPDT or DPDT
Contact Material	AgSnO2In
Contact Ratings	10A @ 250V AC, 8A @ 30V DC

LED Indication	
Solid Green	Control Voltage Applied
Flashing Green	Time Delay Active
Red LED ON	Relay Energized
Red LED OFF	Relay De-energized

Warranty

All catalog-listed products manufactured by Macromatic are warranted to be free from defects in workmanship or material under normal service and use for a period of five (5) years from the date of manufacture.