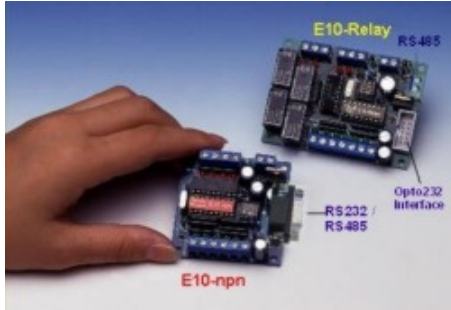


## The World's Lowest Cost Ladder Logic PLCs

(with built-in RS485 Two-Wire Network Port)

E10-npn+ PLC & E10-Relay+ PLC

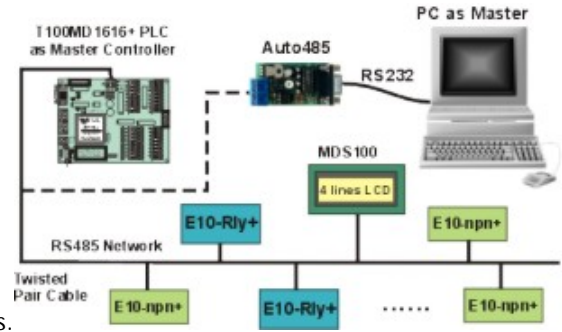
A. Use as stand-alone Tiny Ladder Logic PLC



Photograph of E10-npn+ and E10-Relay+

- Easily connect to PC using built-in RS232 port on the E10-npn+ or via an Opto232 adapter plugged to the E10-Relay+ PLC.

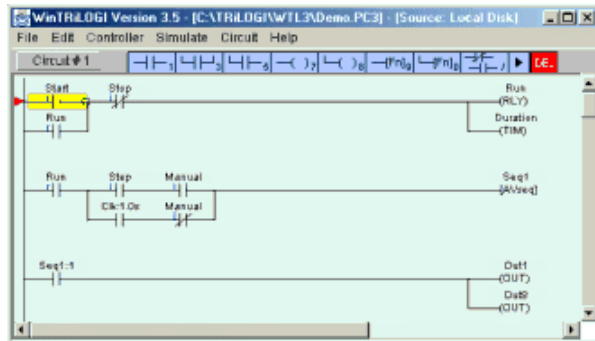
B. Or connect up to 255 of them to a host PC or Master PLC as smart remote



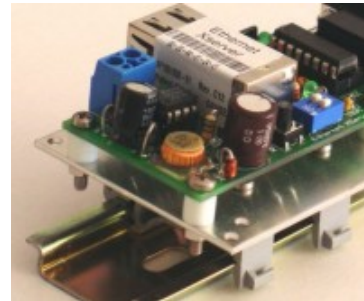
I/Os.

All E10+ PLCs are RS485 Network-Ready! A host computer or Master PLC such as T100MD+ can send simple ASCII based Host Link Commands to read/write the PLC's I/Os. (Please download reference from: <http://www.tri-plc.com/HostlinkE10.pdf>)

C. Programmable using Windows-based Ladder Logic language editor software with offline simulator - The renown [WinTRiLOG](http://www.tri-plc.com) software used by many colleges and universities for teaching PLC programming.



D. Optional [DIN-Rail Mounting Kit](#) available for easy installation



## I. Introduction

Finally, a Ladder-Logic based PLC so small and cost so little that it can effectively replace all those bulky relays, timers or counters found in your current control panels. Its 24V DC transistor outputs or 0 to 250V AC relay outputs eliminate the need for additional driver circuitry and its incredibly low price means you actually save money while getting a technically superior design for your next control panel project!

With their built-in RS485 interface, the new E10+ PLCs are ideal for **distributed control** where the I/Os are distributed to far away locations. The RS485 standard interface allows a twisted pair wire to connect PLCs at up to 1200 m (4000 ft) away!

Up to 255 E10+ PLCs may be connected to a master PLC such as the [T100MD+](#) or to a host PC using the [Auto485](#). Each E10+ PLC can work standalone for fast local control and at the same time, their I/O status can be remotely controlled and monitored by the master PLC or by a PC. Its simple ASCII based [Host Link Commands](#) are really easy to use. You can see a Visual BASIC example at: <http://www.tri-plc.com/applications/VBsample.htm>

An E10+ PLC is programmable using an extremely user-friendly ladder logic editor-cum-simulator software - WinTRiLOGI Version 3.5. This software now runs under Windows operating systems (95,98,ME, NT,2000,XP). The same PC can be used to program either a single E10+ via RS232 interface, or up to 255 E10+ PLCs via the RS485 network.

WinTRiLOGI runs on any Windows PC. Featuring pull-down menus, pop-up windows and on-line context-sensitive help systems, TRiLOGI is the most user-friendly ladder logic editor available. Its built-in logic SIMULATOR allows you to perform complete off-line testing of your program on your PC screen without connecting to the target PLC. You can immediately verify our claim by downloading the evaluation copy of the TRiLOGI from our Internet Website: <http://www.tri-plc.com/trilogi.htm> and finish writing the ladder program for your next project in no time!

## II. Hardware Specifications

	<b>E10-Relay+</b>	<b>E10-npn+</b>
<b>1. Power Supply</b>	<ul style="list-style-type: none"> <li>- 24V AC (transformer) or 24VDC</li> <li>- Current = 0.2A</li> <li>- Rectified DC24V available for sensor.</li> </ul>	<ul style="list-style-type: none"> <li>- DC 12 to 24V (<math>\pm</math> 10% ripple)</li> <li>- Current 0.5~2A (load dependent)</li> </ul>
<b>2. CPU</b>  Program Storage Size Average Execution Speed	216 steps stored in EEPROM 20 $\mu$ s per step	216 steps stored in EEPROM 20 $\mu$ s per step
<b>3. Serial Interface</b>	<ul style="list-style-type: none"> <li>- 1 x TTL signal</li> <li>- 1 x RS485 port</li> <li>- Slave only mode.</li> <li>- Need Opto232 adapter to connect to PC.</li> </ul>	<ul style="list-style-type: none"> <li>- 1 x RS232 or RS485 port</li> <li>- Jumper selectable</li> <li>- Slave only mode.</li> <li>- Direct connection to PC</li> </ul>
<b>3. Input Circuits</b>  Number of inputs Input Voltage for Logic 0 Input Voltage for Logic 1	<b>6 (PNP type)</b> open circuit or 0 to 3.5V DC 8 to 24V DC	<b>6 (NPN type)</b> open circuit or 8.5V to 24V 0V to +3.5V DC
<b>4. Output Circuits</b>  Number of outputs Peak output current Output Voltage for Logic 1 Inductive back EMF protection	<b>4</b> 2.0A @250VAC or 24VDC per output Dry contact ---- No----	<b>4</b> Sink 1.0A per output 1.2V @ Iout = 500mA -----yes----
<b>5. Dimension</b>	7.8cm (L) x 5.6cm (W) x 2.5cm(H)	5.4cm (L) x 5.4cm (W) x 2.0cm(H)
<b>6. Weight (approximate)</b>	75g	35g