The L3000 is a powerful programmable logic controller specifically designed to meet the critical needs of the water and wastewater industries. It easily integrates into a wide range of applications, from simple standalone stations to elaborate networked systems.

The L3000 has unique built-in features and leading advancements designed for reliability, ease-of-use, and cost effectiveness. The fully-programmable L3000, with multiple protocol compatibility and communication ports, offers the flexibility to utilize a wide range of equipment such as PLCs, I/O expansion modules, field busses, and radios. With I/O expansion modules, the L3000 becomes a perfect fit for remote standalone applications.

**Benefits**

- View and modify registers and programs without a laptop
- Integrate multiple vendor devices into one control system
- Access and view documents from anywhere, using the integrated web server
- Build-in storage for documentation and drawings
- Transfer data from PLC to PLC using flash drive & USB ports
- View vital information using L3000 remote data login
- Built-in appearance to view and monitor the operation

**Communications**

- **TESCODE**
- Data Express, Data Express Plus, DO7
- Modbus TCP, Modbus Serial
- DP/PA
- Flexbus

**Options**

- 10-year warranty
- Compact memory interface
- Expandable I/O modules allow for system growth

The L3000 has been qualified to meet various safety and security standards for use in products with high reliability, mission critical mission critical scenarios.

**Features**

- Standard 5-year warranty
- Real-time register data monitoring & trending
- Touchscreen color HDMI display
- Flexible communications built-in
- Battery backed/battery protected
- Powerful Windows®426® programming IDE
- HDMI video port and Tesco Touchscreen display
- Exclusive Brite Lite™ LED displays
- High performance, integrated web server
- Fast 1GHz Processor
- 4000 lines of code full handshake and 10/100 Mbps Ethernet port
- Open Architecture (VME, Bus, IEEE/ANSI, standard, etc.)
- USB and flash drive upload/download capability
- Sophisticated data logger
- Multiple protocols
- NEC 61131-3 compliant

**Specifications**

- **Processor**
  - Texas Instruments OMAP 3730 – 1GHz
  - QNX® Neutrino® RTOS (POSIX)
- **Operating System**
  - L3000 Programmable Logic Controller
- **Operating Temperature**
  - 185° F
- **Battery-backed Memory**
  - 10-year lithium battery
- **Power**
  - 6VDC to 34VDC
- **Communications**
  - 8 USB 2.0
  - 1 Ethernet (10/100 Mbps)
  - 4 Fast USB 2.0
  - 1 10/100 Mbps Ethernet
  - 3 RS-232
  - 1 10/100 Mbps Ethernet

**Contact**

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PO 12914
TESCO® L3000® Series Programmable Logic Controllers

High-Performance Automation System

Built for scalability – L3000 expands to meet your needs

This L3000 was developed to meet the needs of many types of systems from fieldbus and ladder logic machine automation plants. The I/O configurations are customizable to meet facility requirements now and in the future. This L3000 gives you a choice of many I/O card types and chassis models with 3, 5, 12, or 24 card capacity. It supports hundreds of I/O protocols.

TESCO Support

We differentiate class 2A/1WS support to keep you up and running in the event of a failure.

Space in the Air Program To expedite the repair process, TESCO will provide the parts you need by the next day. Return the failed part to us for repair.

Web Server – true mobile connectivity

View data from anywhere

The L3000’s internal web server lets you remotely view live data, and perform configuration, troubleshooting, and maintenance from anywhere in the world. The L3000’s built-in web server stores all site documentation (drawing, D&M, method, programming and operation theory) within the device flash memory. Documents are always available online or remotely using any web browser. Velvet, SMT, or FMI Maintenance logs, site visits, and timeclock entry logs are easily stored from the web browser in the flash drive memory.

View data on laptops, tablets, and mobiles

View your data on multiple devices, from laptops to mobile phones. The L3000’s built-in web server has colorful, well-designed screens that clearly show data in real-time. Operators can add notes in the user log using the web server, including O&M, drawings, and any PDF documents. The web server can even program the system to email alarm notifications to operators or facilities.

Transport programs and configurations between PLCs with a memory stick

Experience true program file portability using a flash memory stick. Quickly backup existing programs, restore or download new programs, and easily transfer programs between PLCs. Data logging can also be transferred to the memory stick.

View site status – without a laptop

Each L3000 comes with your choice of operator interface display. TESCO’s color HDMI touchscreen operator interface is available in various sizes. It can be mounted next to the PLC, enabling you to retrieve live data, view alarms, watch trends, and remotely access other PLCs via the system’s HDI touch-screen technology. Now you can interface with the PLC on easy-to-read colorful screen without a laptop!

TESCO also offers a standard LCD display and keypad in small and large sizes. Operators can troubleshoot and program devices on the facia plate. Its tough exterior is built for rugged environments.

Reliability

Continuous availability – QNX reliability

Equipped with a series of features to ensure continuous availability, the L3000 is a robust system built on the QNX® Neutrino® real-time operating system (RTOS). This system complies with the POSIX Portable Operating System for Uninterrupted service and is preferred for critical systems such as aerospace, air traffic control systems, surgical equipment, and nuclear power plants.

The L3000’s fast 1 Gbps processor provides for simultaneous handling of the application program, web server/HTTP/operating interface, and all telecommunication communications.

Powerful built-in telecommunication features keep the remote site online and connected to its communications network.

To prevent any loss of program or data during power outages, a battery-backed static RAM (PSU) aids in the retention of all the L3000’s configuration data for the application control program, registers, and sensors.

The built-in Watchdog Timer continuously monitors the L3000’s operational and will automatically reset the unit in the event of operator intervention.

Hot Standby redundant systems

TESCO offers a true “Hot Standby” in-directors, true bulletproof transfer system that keeps all equipment and systems running. It automatically switches to a secondary PLC in the event that the primary PLC fails, without interrupting the process. The secondary PLC continuously polls the primary for values to update the system and stays in synchronization. In the event of failure, when a SCADA/ process system fails, the primary PLC will automatically switch to a secondary PLC, and the primary PLC is restarted.

Upgrade and install systems easily

The L3000’s touch screen is out of the box—there is no programming required. A WinBench®64 programming IDE comes available free of charge from TESCO. The L3000 is 100% backwards-compatible with the L2000, and the full line of TESCO PLCs for seamless integration. When upgrading an existing TESCO PLC to an L3000 PLC card, there is absolutely no reprogramming or review of the site needed.

Easy configuration/integration

The L3000 fully-featured, TESCO® program, and configuration tables set the stage to make the initial setup and ongoing maintenance straightforward. To speed up the installation process, the L3000 can transport program and configuration data between PLCs via memory sticks. No more hunting for legacy documented code—the L3000 stores the site-stamped commented code in the PLC memory.

Designed for industrial applications

The L3000 was specifically developed to provide powerful, reliable control and monitoring for industrial applications. It operates reliably in humid and caustic environments, and can withstand temperatures up to 185° F. The controller is industrialized. L3000 circuit boards can also be manufactured with conformal CFB coating to resist humidity and corrosion.

A ten-year lithium battery ensures that the PLC configuration and files are retained in the event of a source power failure.

Efficiency

Flexible telemetry communications based upon open protocols provide easy integration and future expansion of the treatment system.

Open communications

Open protocol integrations with other PLCs/Devices

The L3000 can be used as a gateway device with message pass-through abilities—between Ethernet and serial ports, to connect any combination of TESCO O&M devices. It can be networked in a variety of ways with other third-party PLCs, operator interface, and SCADA systems. It supports cellular modern telemetry, Modbus® serial and TCP/IP, and Realtime. The processor interface includes

– Four communication ports to allow communication with other controllers, operation interface products, and SCADA systems
– Three RS-232 serial ports
– One 10/100 Mbps Ethernet port
– Four USB 2.0/1.1 internal ports
– One HDMI video port to integrate TESCO’s touchscreen interface or other HDMI devices
– External mouse support when using HDMI, large screen monitors, etc.

Open architecture

The L3000 provides open architecture functionality with multi-level password-protected operation. It controls levels of use to the appropriate operators. It also performs an automatic cold start after an incorrect login attempt (3 strikes and you’re out).