



T-PRO 2000

Firmware v1.0

Release Description

DATE: 2025-09-05

Initial release for general availability.

FEATURE HIGHLIGHTS

- *Analog Input Flexibility:* Two selectable analog input options (1A and 5A) are available, allowing users to choose the preferred IN channel configuration during ordering.
- *Transformer Configuration:* Supports fixed two-winding transformer protection with user-selectable Auto Transformer settings, enabling IN channel assignment to HV, LV, or combined HV+LV windings.
- *Differential Protection:* Enhanced protection with 87 Differential and 87N Neutral Differential functions for transformer applications.
- *Thermal Overload Protection:* 49 Thermal Overload protection with up to 12 stages and configurable HV/LV current input settings for greater flexibility.
- *Overcurrent Protection:* Independent HV and LV overcurrent functions are supported, including 50, 51, 50N, 51N, 46/50, and 46/51.
- *Under/Over Voltage Protection:* Independent Under/Over Voltage functions are supported, including 27/59 DT & 27/59 IT, 59GDT, 59GIT.
- *Under/Over frequency:* Independent under/over frequency functions are supported. including 81 U/O and 81R.
- *Neutral Overcurrent:* 50G & 51G Neutral Overcurrent protections with user-configurable measurement methods (DFT or True RMS) selectable through system parameter IN REF.
- *Event Recording:* An Auto Event Save option is available; when the event log reaches capacity, the IED automatically triggers event recording and stores the data in a dedicated record file.
- *Time Synchronization Monitoring:* Time Sync Loss Alarm can be mapped to outputs and LED indicators, providing clear notification of time source failures.
- *Programmable Logic:* Supports up to 24 ProLogic functions for user-configurable logic building.
- *Inputs/Outputs:* Provides 14 Digital Inputs, 14 Digital Outputs, and 30 Virtual Inputs for flexible configuration.
- *Communication Protocols (Serial):* Supports Modbus, DNP 3.0, and IEC 103 over serial communication.
- *Communication Protocols (Ethernet):* Supports IEC 61850 Edition 2.0 and DNP 3.0 over Ethernet.
- *IEC 61850:* Edition 2.0 protocol is supported with monitoring and reporting capabilities, along with support for up to 30 GOOSE data publications and 15 GOOSE data subscriptions.

ERLPhase Power Technologies Customer Support Contact Information

support@erlphase.com

204-477-0591 x1

www.erlphase.com



FEATURE ENHANCEMENTS

- Cyber Security:
 - N/A.
- General:
 - N/A.

CORRECTIONS TO ISSUES

- Cyber Security:
 - N/A.
- General:
 - N/A.

COMPATIBILITY:

T-PRO Offliner Settings Software:	V1.9 Rev 0 or above
Relay Control Panel Software:	v3.7 Rev 0 or above
RecordGraph Software:	v6.4 Rev 0 or above
RecordBase Central Station Software:	v5.8 Rev 0 or above
RecordBase View Software:	v5.8 Rev 0 or above
ERL 61850 IED Configurator:	v4.1 Rev 1 or above
ICD File Version:	v4.0 Rev 1
Setting Version:	1
T-PRO 2000 User Manual:	v1.0 Rev 0

Minor releases, designated with a letter suffix (e.g. v3.1a), maintain the same compatibility as the base version (e.g. v3.1=v3.1a).



CLASSIFICATION OF CHANGES MADE

The issues fixed in software / firmware upgrades are classified as defined below. While the decision to upgrade installed products is the user's, these classifications provide a guideline for the need and priority of the upgrade.

Critical: Critical changes fix issues/problems that prevent the basic operation of the device and have no workaround. Critical changes merit a product upgrade as soon as possible, if that function is being used under the conditions causing the issue

Major: Major changes fix problems that prevent the basic operation of the device but do have a workaround. Any major changes merit a product upgrade as soon as possible if the function is being used under the conditions causing the issue and a workaround is not acceptable.

Minor: Minor changes fix non vital issues that do not prevent the basic operation of the device and may or may not have a workaround. Product upgrades for such changes are not necessary unless they apply to and are needed by the user.

Feature Enhancement: Feature enhancements add a capability or extend existing capabilities of the product. Upgrades for such changes need be made only if and when that feature enhancement is desired.