



## T-PRO Offliner

v1.7

### Release Description

**DATE: 2021-09-29**

#### FEATURE ENHANCEMENTS

- Added support for T-PRO 4500 Firmware v2.2 (setting version 604):
  - Added the 'Control Command Names' screen to allow the configuration of user settable names for Single Point (SPC) control commands.
  - Added the ability to configure the reset settings for Output Contacts and Target LEDs using Single Point (SPC) control commands
  - Added SPC control commands into the ProLogic input list to allow the realization of CB open/close commands and various operational interlocks.
  - Added Single Point (SPC) control commands to the Output Matrix to allow direct control of Output Contacts and LEDs.

#### CORRECTIONS TO ISSUES

- None.

#### COMPATIBILITY

T-PRO 8700 Firmware Versions	v5.0 and below
T-PRO 4000 Firmware Versions	v1.3 and below
T-PRO 4500 Firmware Versions	v2.2 and below
T-PRO 8700 Setting File Versions	1 – 11
T-PRO 4000 Setting File Versions	401-403
T-PRO 4500 Setting File Versions	601-604
Microsoft Windows	Windows 7 Professional Windows 10 Professional

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).

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## REVISION HISTORY

### v1.6 – 2021-03-05

- **Enhancement** (T-PRO 4500): Added per phase logic inputs to the ProLogic input list for the following: 2nd Harmonic restraint , 5th harmonic restraint , High Set (Unrestrained), ROCOD and 87 Delta phase, and 87N Delta phase.
- **Enhancement** (T-PRO 4500): Added the option to select RMS measurement for 50G/51G protection functions. Previously only DFT measurement was available.
- **Enhancement** (T-PRO 4500): Added the ability to disable 2nd harmonic restraint blocking completely in 87, as well as the ability to enable 2nd harmonic restraint blocking on a per phase basis without cross-blocking.
- **Enhancement** (T-PRO 4500): Added the ability to block each function listed in the output matrix individually with an External Input, Virtual Input or ProLogic.
- **Enhancement** (T-PRO 4500): Added the ability to configure the reset option for each LED to be either Self Reset or Latched.
- **Enhancement** (T-PRO 4500): Added the ability to individually configure each output contact reset type as Self Reset, Latched or Pulsed.
- **Enhancement** (T-PRO 4500): Changed from per unit (pu) to equivalent secondary Amp calculation for 50, 51, 67, 67N, 49 and Through Fault.
- **Major** (T-PRO 8700 setting versions 9, 10 & 11): Fixed issue with the following ProLogic input selections:
  - Selection of 27-1 Trip resulted in 87N-HV High Mismatch being used.
  - Selection of 27-2 Trip resulted in 87N-LV High Mismatch being used.
  - Selection of I2t Alarm resulted in 87N-TV High Mismatch being used.
  - Selection 87 High Mismatch resulted in 87 Fast Trip being used.
- **Major** (T-PRO 4000, T-PRO 8700): Fixed issue where the I2 Cross Blocking setting changed from Off to On after setting conversion.
- **Minor** (T-PRO 4500): Fixed issue where the PT ratio was not updating automatically after changing the Winding Data HV and LV voltage values on the System Parameters screen.
- **Minor** (T-PRO 4500): Fixed issue where the IOmin warning messages on the 87N screen are based on 5A even when the CT secondary value in IN1 or IN2 is changed to 1A on the System Parameter screen.
- **Minor** (T-PRO 4500): Fixed issue where 21P, 21N and 68 couldn't be configured after a first time installation due to a missing component in the installer.
- **Minor** (T-PRO 4500): Fixed issue where some fields in the Setting Summary weren't being displayed correctly.
- **Minor** (T-PRO 4500): Fixed issue where the Group Logic Pickup Delay was restricted to 0.00s only. The limit is now 0 to 999s.
- **Minor** (T-PRO 4500): Fixed issue where the Ground Reactance Tilt Angle was not shown correctly on the graph for 21N and 21P under some conditions.
- **Minor** (T-PRO 8700, T-PRO 4000): Fixed issue where changes to the the "Ratio of Load Loss to Iron Loss (R)" field in the Nameplate Data screen were being saved correctly to the settings file, but when the file was opened again, the default value was shown, and would overwrite the original setting if the file was saved again.

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#### v1.5a – 2019-11-29

- **Enhancement:** Updated default setting file for T-PRO 4000 to disable LEDs from ProLogic settings.
- **Minor:** Corrected inconsistencies in the way that current channels are labeled.

#### v1.5 – 2018-11-06

- **Enhancement:** Added support for T-PRO 4500 v2.0 Firmware.
  - Added the ability to configure 3 Zone Backup Impedance Protection (21) including line parameter and Directional Element menus.
  - Added the ability to configure 68 Power Swing Block function.
  - Added the ability to configure the enhanced 60 Loss of Potential function.
  - Added the ability to configure the disabling of Neutral Inputs IN1 and IN2 via an External Input.
  - Added support for two different CT secondary ratings to support a mix of 1A and 5A CTs.
  - Added support for the following External Input and Output Contact product variants, 8 in + 8 out, 16 in + 16 out, 16 in + 24 out, 24 in + 32 out.
  - Added the ability to reset the front panel target LEDs using the following options: External Inputs, Virtual Inputs, ProLogic.
  - Added selection of phase to phase voltage values to the DNP3 configuration screen.
- **Enhancement:** Changed the pick-up value units from PU to A for the 49, 50/51, and 67 functions and the through fault monitor.
- **Major (T-PRO 4500):** Fixed issue where “Self Check Fail”, IEC61850 Communication Alarm” and “Time Sync Loss” were missing from the ProLogic input list.
- **Minor (T-PRO 4500):** Fixed issue where the ProLogic inputs in the Setting Summary are incorrect under some conditions.
- **Minor (T-PRO 4500):** Fixed issue where selecting the “Display and Print Only Enabled Protection Devices” option in the Print Setting Summary dialog was not supported.

#### v1.4 – 2016-10-09

- **Enhancement:** Added support for T-PRO 4500
- **Minor:** Fixed issue where some settings were incorrectly scaled when switching between 1A and 5A CT setting.
- **Minor:** Fixed issue where 87N Neutral Differential does not display the correct IO min value.
- **Minor:** Corrected the 67N pickup and the 50BF pickup delay values for setting in the default setting file for T-PRO 4000.

#### v1.3 Rev 2 – 2016-10-09

- **Enhancement:** Added T-PRO 8700 User Manual v5.0 Rev 0

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### v1.3 – 2015-02-14

- **Enhancement:** Support for Directional Earth fault 67N protection
- **Enhancement:** Support for SNTP time server configuration
- **Enhancement:** Support for Prologic and Output Matrix enhancements
- **Major:** Correction of cross platform setting conversion issues from T-PRO 8700
- **Major:** DNP3 operation/mapping corrections
- **Minor:** Enforcement of character restrictions in Unit ID naming

## 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.

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