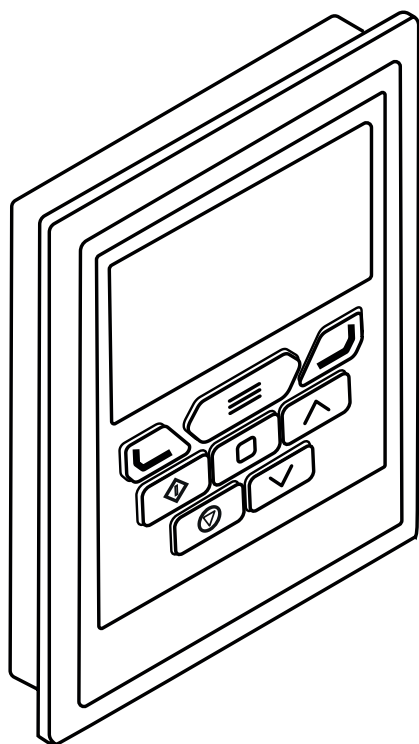




## T3-OPPAD

TFT Remote Keypad

**IP55**

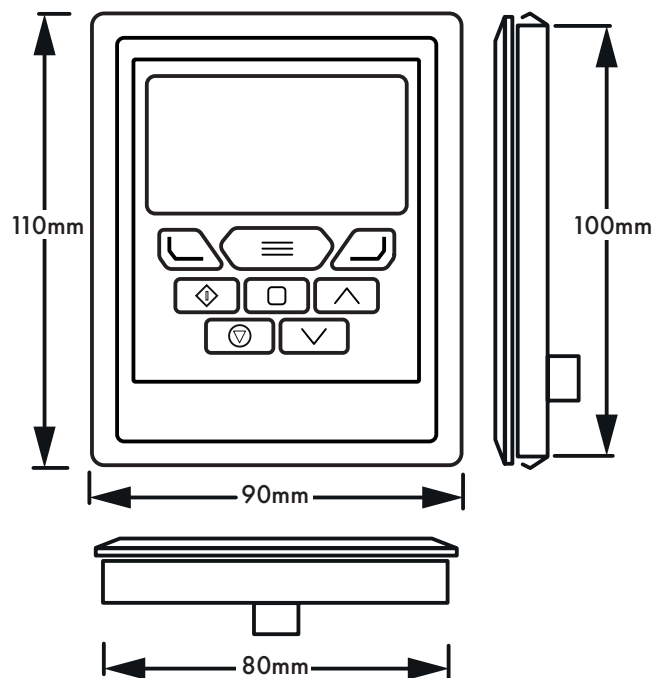


## General Specification

|                    |  |
|--------------------|--|
| Compatible Drives: | E3, P2, V3   |
| Signal Interface:  | CV Standard 8-way RJ45 connector                     |
| Supply Input:      | 24V + / - 10%, DC, 30mA                              |
| RS485 Signal:      | Industry standard 2-wire +5V differential            |
| Environmental:     | Operational: -10 ... 50°C<br>Storage: -40°C ... 60°C |
| Relative Humidity: | < 95% (non condensing)                               |
| Protection Rating: | IP55   |
| Max Cable Length:  | 25m / 82.5ft shielded twisted pair                   |

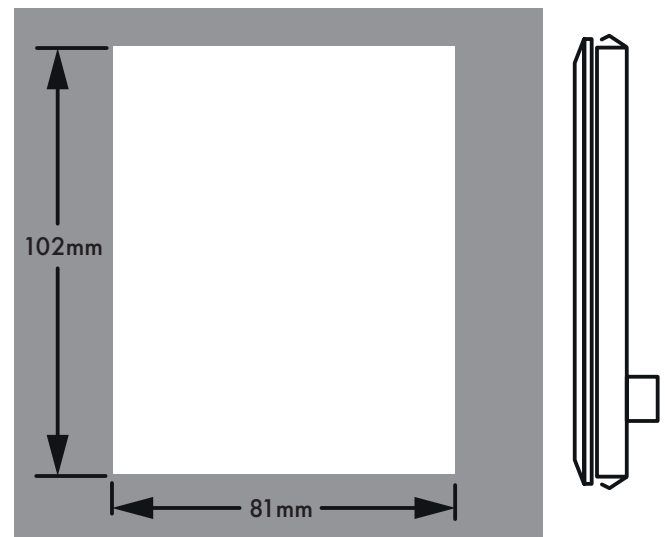
## Mechanical Installation

### Dimensions



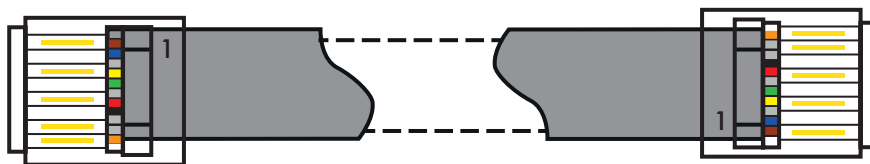
### Through Panel Mount

The panel on to which the T3-OPPAD is to be mounted should be cut out in accordance with the diagram below.



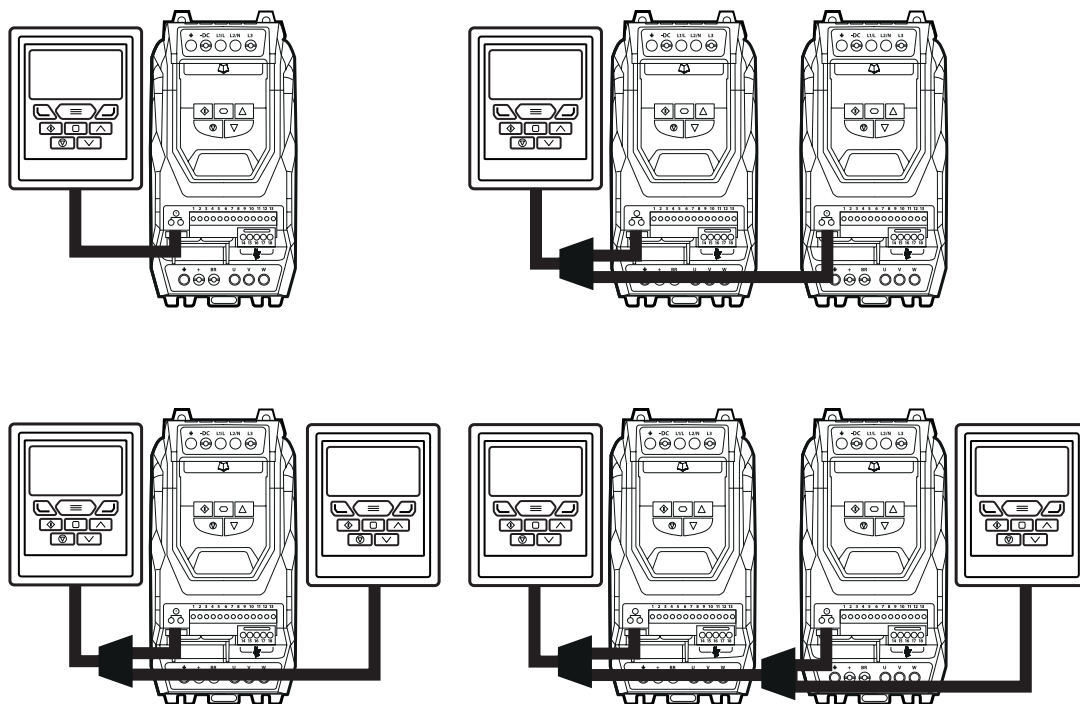
## Electrical Installation

### Cable Requirements



**CAUTION!** Incorrect cable connection may damage the drive. Extra care should be taken when using third party cable.

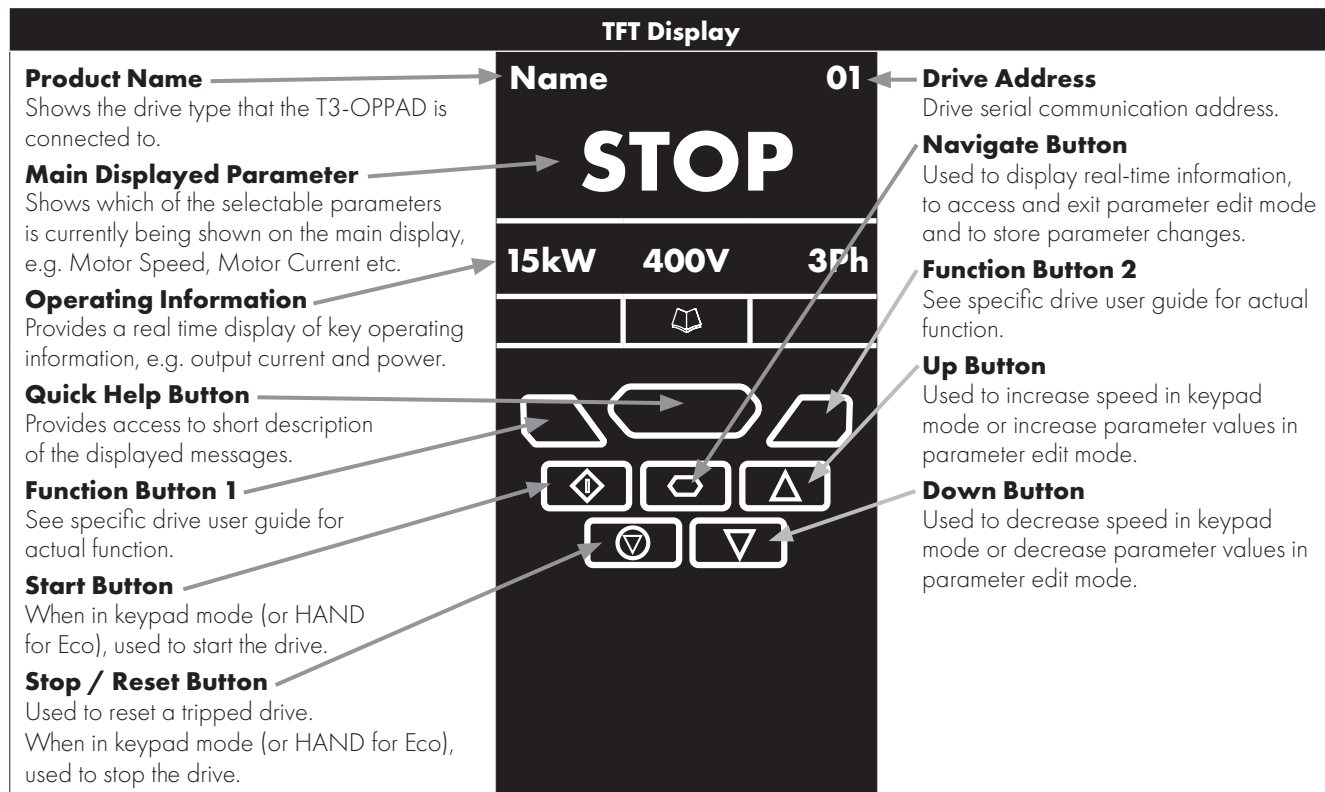
## Allowed System Configurations



Different drive models can be used on the same T3-OPPAD network provided a unique communications address is assigned to each. **NOTE** Cannot be used with Master – Slave or Cascade Control

## Keypad and Display Layout

The illustration below explains the main features of the T3-OPPAD. Please note that some features and display messages are specific to certain variants of the drive family.

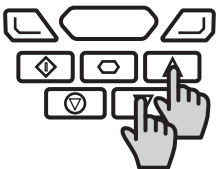
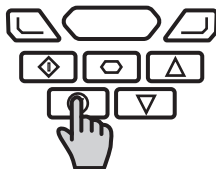


## Easy Startup

### To setup the drive communication address

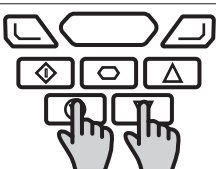
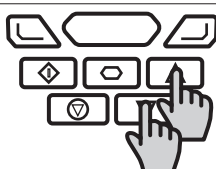
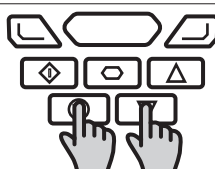
By default, the T3-OPPAD will try to communicate with the drive that has Address 1 in the network after powering up for the first time. The T3-OPPAD will display **"Scanning for Drive 01."** after power up, which indicates that the T3-OPPAD is searching for the drive with the correct drive address in the network. Once the drive has been found, the message **"Load..."** will be displayed on the T3-OPPAD, which indicates that the T3-OPPAD is reading the configuration information from the drive. Usually it will take 1~2 seconds for the T3-OPPAD to read this information. After the data has been loaded, the T3-OPPAD will display the drive real time status.

**NOTE** In the case where the keypad is connected to a drive where the network address is not 1, the following steps can be used to set the address of the drive

| Select Drive Address<br>01  | Select Drive Address<br>01  |
|---|---|
|  |  |
| Use the Up and Down arrows to select the address.                                 | Press the Stop button once address has changed to match the connected drive.      |

### Working with Multiple Drive Networks

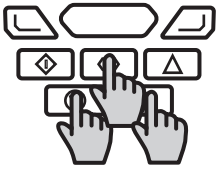
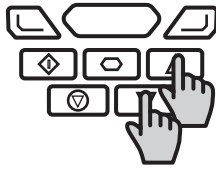
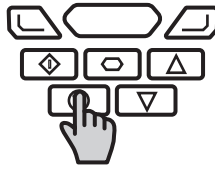
When the T3-OPPAD is used on networks with multiple drives, the user can change the drive address to set up communication with another drive in the same drive network at anytime.

| Select Drive Address<br>xx  | Select Drive Address<br>xx  | Select Drive Address<br>xx  |
|---|---|---|
|  |  |                        |
| Briefly press the Stop and Down keys to display the above message.                  | Use the Up and Down arrows to select the desired address.                           | After selecting the new address, press the Stop and Down keys to establish communications with the drive. |

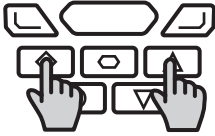
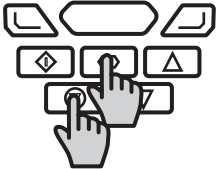
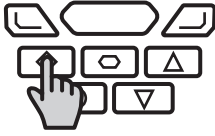
**NOTE** For detailed parameter listing and functional setup, please refer to the corresponding drive user guide

### Networks with 2 T3-OPPADs connected

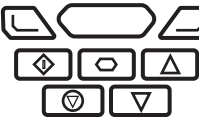
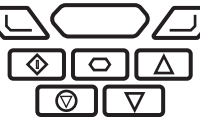




A maximum of 2 T3-OPPADs can be connected within the same drive network to communicate with the same drive or different drives. When using two T3-OPPADs simultaneously on a network, the user must change the T3-OPPAD Device Number on the second T3-OPPAD to ensure correct operation. All T3-OPPAD units are set to Device Number 1 by default.

| Select OPPAD ID xx  | Select OPPAD ID xx  | Select OPPAD ID xx  |
|---|---|---|
|  |  |  |
| To change the Device Number, press the Navigate, Stop and Down keys together.       | Use the Up and Down arrows to select the desired T3-OPPAD Number (1 or 2).          | Press the Stop key to return to normal operation.                                   |

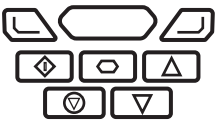
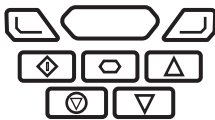
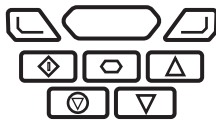
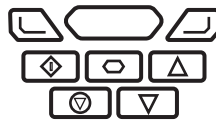
## Changing the Display Language

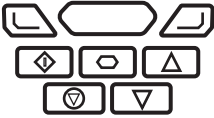
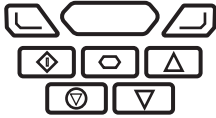
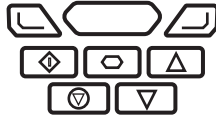
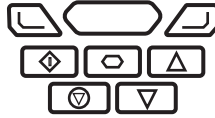
| <b>STOP</b>   | <b>Select Language</b><br><b>Español</b><br><b>Deutsch</b><br><b>English</b>      | <b>Select Language</b><br><b>Español</b><br><b>Deutsch</b><br><b>English</b>      |
|---|---|---|
|  |  |  |
| Hold down the Start and Up keys for >1s   | Use the Up and Down arrows to select a language.                                  | Press the Navigate button to select.  |

## Operating Displays

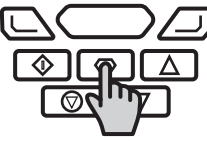
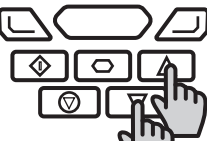
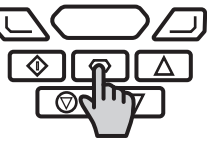
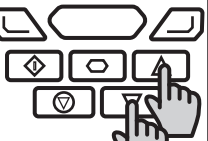
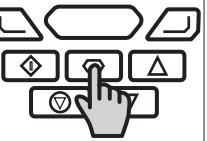
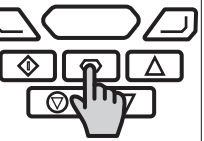
| <b>Inhibit / STO Active</b>  | <b>Drive Stopped</b>   | <b>Drive Running Output Frequency Display</b>   | <b>Drive Running Output Current Display</b>  | <b>Drive Running Motor Power Display</b>   | <b>Drive Running Motor Speed Display</b>   |
|--|--|---|--|--|--|
| <b>Name</b> 01<br><b>INHIBIT</b>   | <b>Name</b> 01<br><b>STOP</b>  | <b>Output Frequency</b> 01<br><b>23.7Hz</b>   | <b>Motor Current</b> 01<br><b>15.3A</b>  | <b>Motor Power</b> 01<br><b>6.9kW</b>  | <b>Motor Speed</b> 01<br><b>718rpm</b>   |
| 15kW 400V 3Ph  | 15kW 400V 3Ph  | 15.3A 6.9kW   | 6.9kW 23.7Hz   | 23.7Hz 15.3A   | 23.7Hz 15.3A   |
|  |  |   |      |  |        |
| Drive Inhibited. The STO connections are not made.                                 | Drive Stopped / Disabled.  | Drive is enabled / running, display shows the output frequency (Hz). Press the Navigate key to select alternative displays. | Press the Navigate key for < 1 second. The display will show the motor current (Amps). | Press the Navigate key for < 1 second. The display will show the motor power (kW).   | If P1-10 > 0, pressing the Navigate key for < 1 second will display the motor speed (Rpm). |

## Additional Display Messages

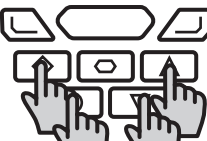
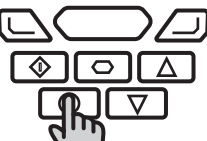
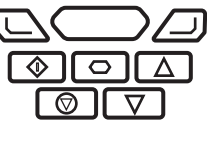
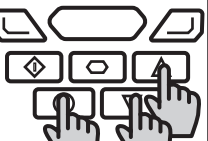
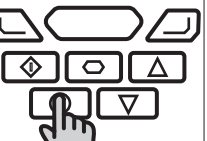
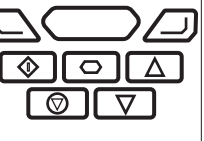
| <b>Auto Tuning in Progress</b>  | <b>External 24VDC Supply</b>  | <b>Overload</b>   | <b>Fire Mode</b>  |
|---|---|---|---|
| <b>Name</b> 01<br><b>Auto-tuning</b>  | <b>Name</b> 01<br><b>Ext 24V</b>  | <b>Name</b> 01<br><b>OL 23.7Hz</b>  | <b>Fire Mode</b>  |
|   | <b>External 24V mode</b>  | <b>15.3A 6.9kW</b>  |   |
|  |                    |  |  |
| Auto tune in progress.  | The drive control board is powered only from an external 24 Volt source, with no mains power applied. | Indicates an Overload condition. Output current exceeds the motor rated current.    | Display shows 'Fire Mode'.  |

| Switching Frequency Reduction   | Mains Loss  | Maintenance Time Elapsed  |   |
|---|---|---|---|
| Name 01<br><b>SF↓ 23.7Hz</b>  | Name 01<br><b>ML 23.7Hz</b>   | Name 01<br><b>OL 23.7Hz</b>   | Name 01<br><b>23.7Hz</b>  |
| 15.3A   | 15.3A 6.9kW   | 15.3A 6.9kW   | 15.3A 6.9kW   |
|  |  |  |  |
| Switching frequency is reduced, due to high heatsink temperature.                 | The incoming mains power supply has been disconnected or is missing.              | The motor is in overload drawing a current higher than its rated current.         | The user programmable maintenance reminder time has elapsed.                        |

## Changing Parameters

| Stop  | Name 01<br><b>P1-01</b>   | Name 01<br><b>P1-08</b>   | Name 01<br><b>30.0A ↕</b>  | Name 01<br><b>P1-08</b>   | Name 01<br><b>Stop</b>  |
|---|---|---|--|---|---|
| 15kW 400V 3Ph   | 50.0Hz  | 30.0A   | P1-08 ↑30.0 ↓3.0   | 30.0A   | 15kW 400V 3Ph   |
|  |    |  |    |  |  |
| Press and hold the Navigate key > 2 seconds.                                      | Use the Up and Down keys to select the required parameter.<br>Display will show the present parameter value on the lower line of the display. | Press the Navigate key for < 1 second.  | Adjust the value using the Up and Down keys. Display will show the maximum and minimum possible settings on the lower line of the display. | Press for < 1 second to return to the parameter menu.                               | Press for > 2 seconds to return to the operating display.                           |

## Parameter Factory Reset / User Reset

| Factory Parameter Reset :   |   |   | User Parameter Reset :   |   |   |
|---|---|---|--|---|---|
| Name 01<br><b>Stop</b>  | Name 01<br><b>P-Def</b>   | Name 01<br><b>Stop</b>  | Name 01<br><b>Stop</b>   | Name 01<br><b>U-Def</b>   | Name 01<br><b>Stop</b>  |
| 15kW 400V 3Ph   | 50.0Hz  | 15kW 400V 3Ph   | P1-08 ↑30.0 ↓3.0   | 30.0A   | 15kW 400V 3Ph   |
|  |  |  |  |  |  |
| Press and hold the Up, Down, Start and Stop keys for >2s.                           | The display shows P-def. Briefly press the Stop key.                                | The display returns to Stop. All parameters are reset to Factory defaults.          | Press and hold the Up, Down and Stop keys for >2s.                                   | The display shows U-def. Briefly press the Stop key.                                  | The display returns to Stop. All parameters are reset to User Defaults.               |

## Drive Fault Messages and Trip Codes

See drive User Guide for further information.

### Further Status Messages and Troubleshooting

T3-OPPAD uses various display messages to indicate different working status. See the following table for more information.

#### Status Messages

| Message                            | Explanation   |
|------------------------------------|---|
| <b>Scanning for Drive<br/>xx</b>   | The T3-OPPAD is searching for the drive with address 'xx' in the network.   |
| <b>Load...</b>                     | The T3-OPPAD has found the drive in the network and is loading the initialisation information from the drive.                                       |
| <b>SC-OBS</b>                      | The communication link between the drive and T3-OPPAD has failed.   |
| <b>Select Language</b>             | Displayed in the language selection screen, with a list of available languages. Press the Navigate key to select a language                         |
| <b>Select drive address<br/>xx</b> | Displayed when selecting the address of the drive that the T3-OPPAD should try to communicate with. Press the Stop key to select the drive address. |
| <b>Select T3-OPPAD ID</b>          | Displayed when selecting the T3-OPPAD ID (1 or 2) so that two T3-OPPADs can be connected to a single drive, or network of multiple drives.          |

#### Troubleshooting

| Symptom   | Explanation   |
|---|---|
| <b>Select drive address<br/>xx<br/>displayed after<br/>'SCAN..' message</b> | The T3-OPPAD failed to successfully communicate with the specified drive address in the network. Check that the RJ45 data cable connection is correct. Check that the drive with address XX is available in the network.<br>If XX > 1 and only one T3-OPPAD is connected, then check the T3-OPPAD device number, make sure the number is 1. |
| <b>Display 'Err-id' on<br/>power up</b>                                     | This normally occurs when there are two T3-OPPAD units in the same drive network and both of them have the same device number. Check and change the device number of one T3-OPPAD.  |
| <b>Display 'Err-id' during<br/>normal operation</b>                         | This normally occurs when the user plugs a second T3-OPPAD into the drive network. Change the device number of one of the T3-OPPAD units.   |
| <b>Display<br/>'SC-OBS'</b>   | Communication link between the T3-OPPAD and drive has failed during operation.<br>Check the electrical connection, and make sure the cable is connected correctly between the T3-OPPAD and the drive. Press 'STOP' button to enable the T3-OPPAD to search for the drive again.   |



82-OPTFT-IN\_V2.00

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