TDU series

4189341369A

Touch display units for AGC and ASC controllers

Connection guidelines

Improve Tomorrow

1. About the Communication guidelines

1.1 Symbols and notation

Symbols for general notes

NOTE This shows general information.

More information
This shows where you can find more information.

Example

This shows an example.

How to ...
This shows a link to a video for help and guidance.

1.2 Symbols for hazard statements

DANGER!

This shows dangerous situations.

If the guidelines are not followed, these situations will result in death, serious personal injury, and equipment damage or destruction.

WARNING

This shows potentially dangerous situations.

If the guidelines are not followed, these situations could result in death, serious personal injury, and equipment damage or destruction.

CAUTION

This shows low level risk situation.

If the guidelines are not followed, these situations could result in minor or moderate injury.

NOTICE

This shows an important notice

Make sure to read this information.

1.3 Intended users

This is the **Communication guidelines** for communication between the Touch Display Unit (TDU), and a variety of controllers.

The manual is for the designer who creates applications that use the TDU.

More information
See also TDU 107 Core Installation Instruction and TDU 107 Extended Installation Instruction for power supply connections and mounting of TDU units.

1.4 Legal information

Trademarks

DEIF is a trademark of DEIF A/S.

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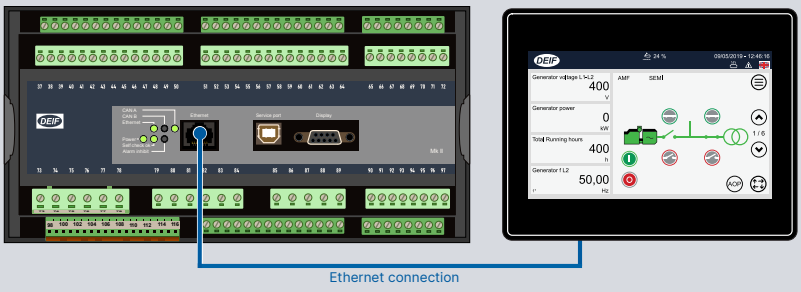
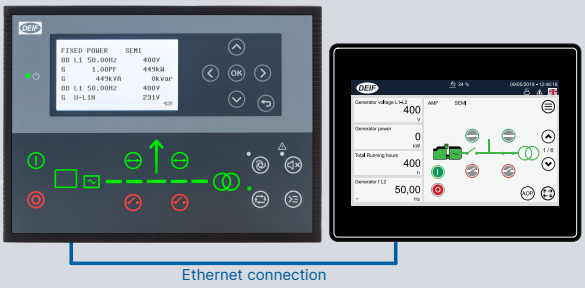
2. About the TDU

2.1 Compatible controllers

This information applies to TDU software version **1.4.1** or later.

Controller	Controller types	Software version	TDU Asset mode	TDU Supervision mode	Notes
AGC 150	Generator, Mains, BTB	1.11 or later	●	●	
ASC 150	Solar, Storage	1.18 or later	●	●	
AGC-4 Mk II	Generator, Mains, BTB	6.00 or later	●	●	
ASC-4	Solar, Battery	4.27 or later	●	●	
AGC-4	Generator, Mains, BTB	4.72 or later	●	●	AGC-4 requires the Ethernet option N for connection.
ALC-4	Automatic load controller	4.13 or later		●	Only supports showing a symbol for the ALC-4, with no operating data.

AGC-4 / AGC-4 Mk II / ASC-4 / ALC-4	AGC 150 / ASC 150
	
Ethernet connection	Ethernet connection

2.2 Supervision mode and Asset mode

Asset

A single controller controlling e.g. a genset or a photovoltaic inverter is referred to as an asset.

Asset mode

In asset mode, the display shows the operation of the selected asset.

Supervision mode

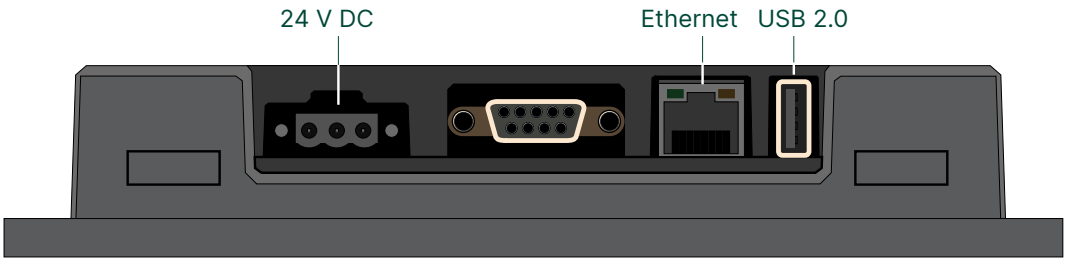
When the display is set to supervision mode, it shows and monitors the entire plant. A single plant can have up to 40 assets. See the AGC-4 Mk II data sheet for the number of different assets possible in a single power management system.

The operator can tap any asset shown on the plant supervision screen to open that asset's control panel (does not apply to the ALC-4).

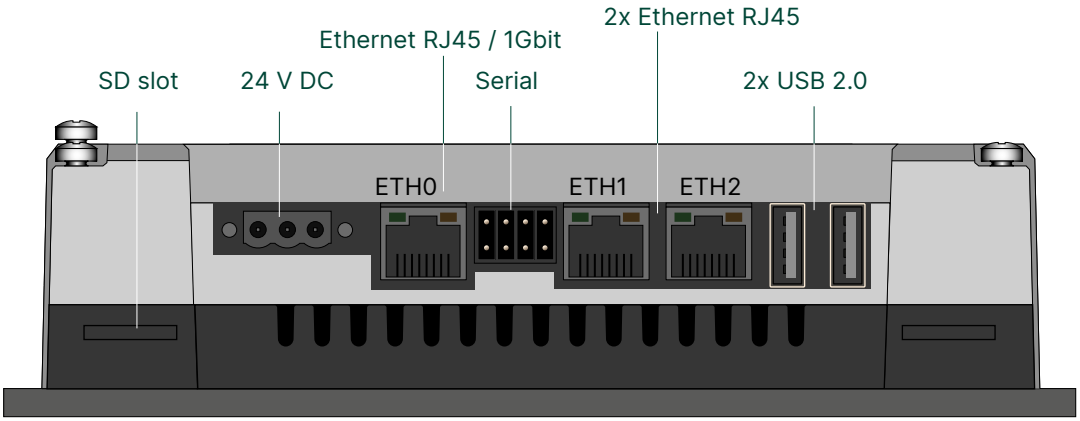
More information
See the TDU Operator's manual for how to operate asset mode or supervision mode.

3. Connections

TDU 107 Core connections



TDU 107 Extended, TDU 110 Extended and TDU 115 Extended connections



3.1 Ethernet cable requirements

The cables must not be longer than 100 metres from point-to-point.

The cable bend radius must not be tighter than the minimum bend radius specified by the cable manufacturers.

We recommend that you always follow the cable manufacturer's bend radius requirements and use use velcro-strips (and not cable-ties) for the Ethernet cables.

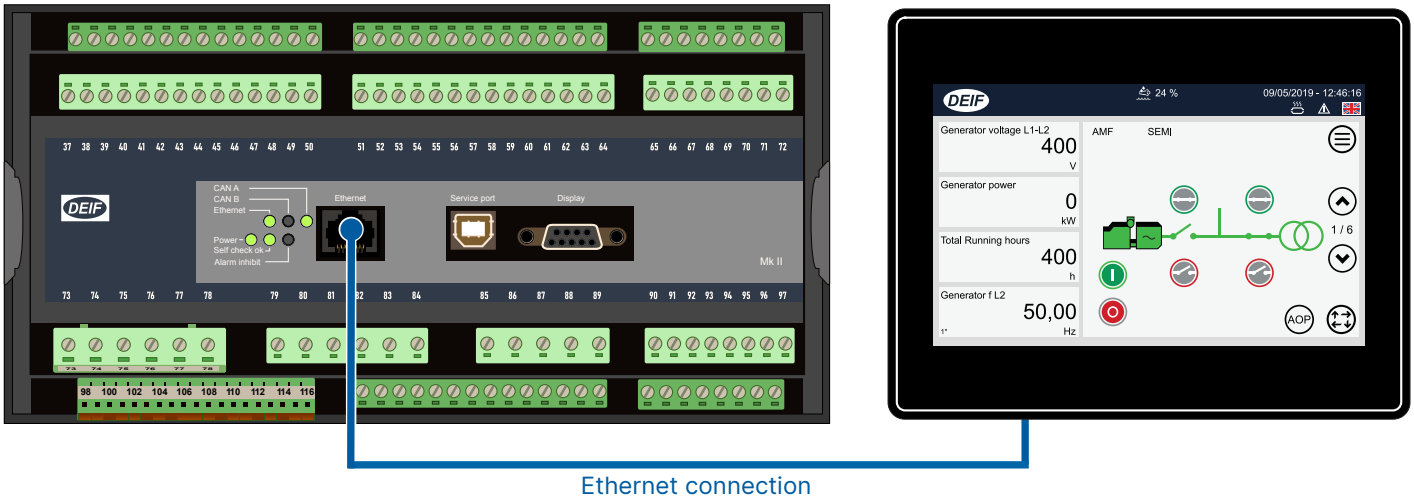
3.2 Direct connection

Connect the TDU directly to the DEIF controller for automatic functionality.

TDU model	Number of Ethernet ports	Comments
Core	1	
Extended	2	Bridged ports (ETH0 and ETH1)

NOTE For dynamic host configuration protocol (DHCP) you must use TDU Extended and connect the controller to ETH2 on the TDU Extended.

Direct connection

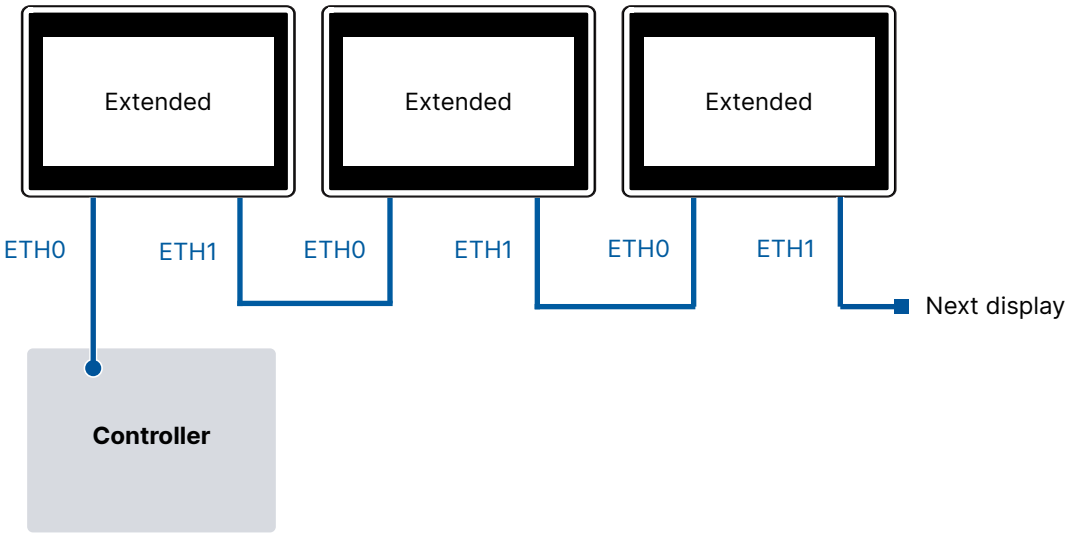


3.3 Multiple display connection

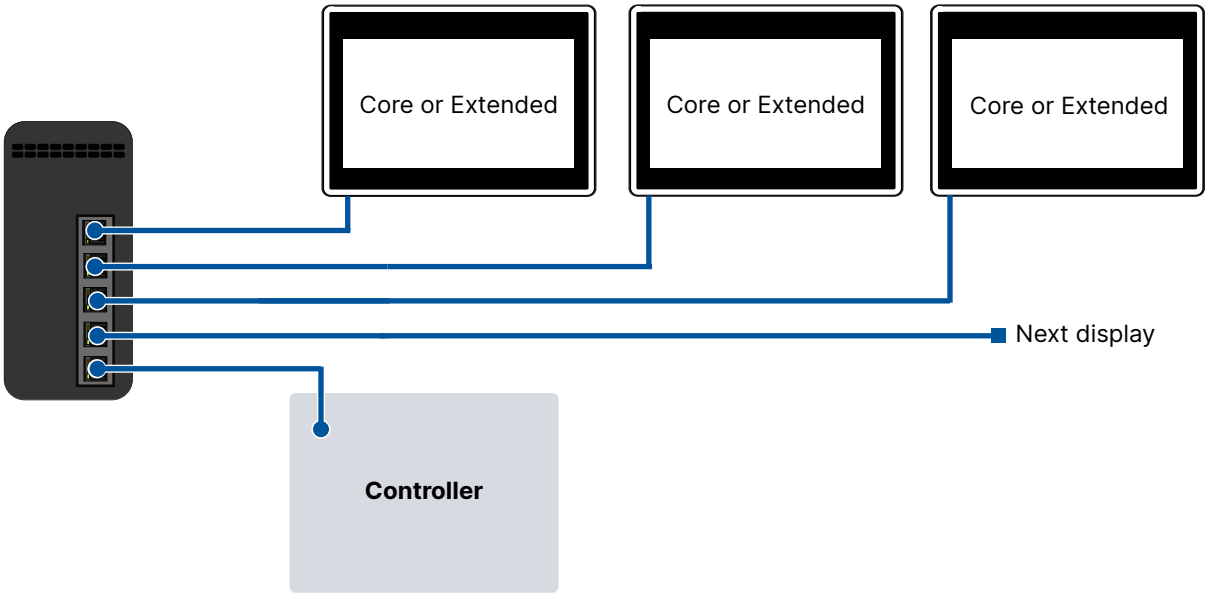
Up to 10 displays can be connected to a single controller.

Series connection

The series connection is only possible with TDU Extended models. All displays act as the primary (master) display.

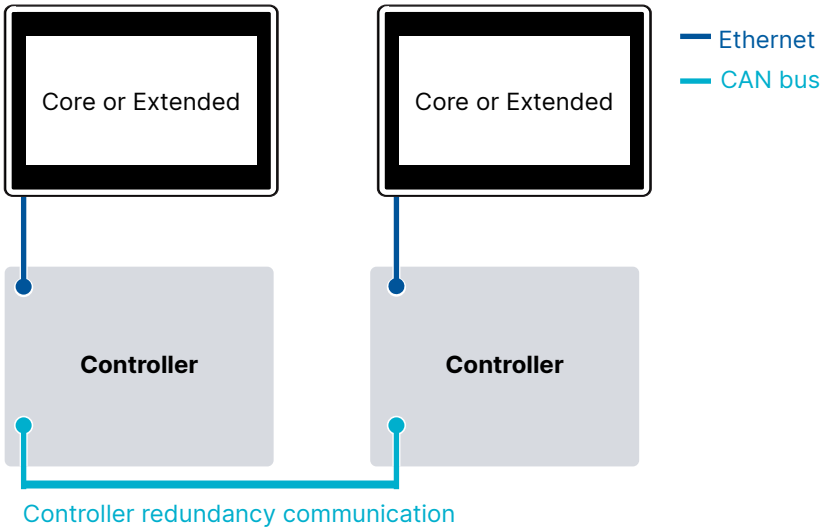


Ethernet switch connection



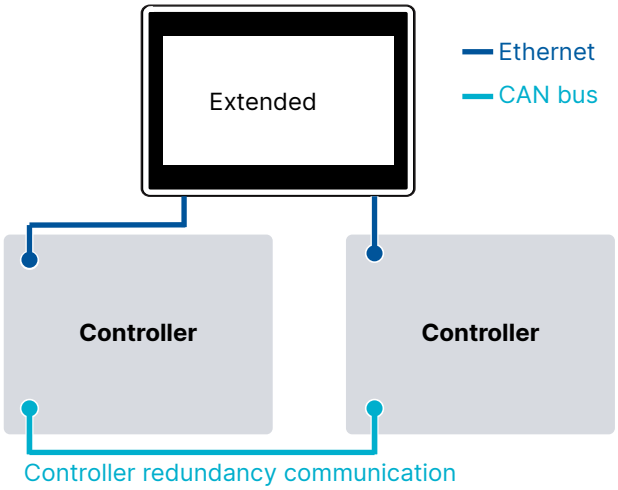
3.4 Multiple controller connection

Redundant controller connection with two displays



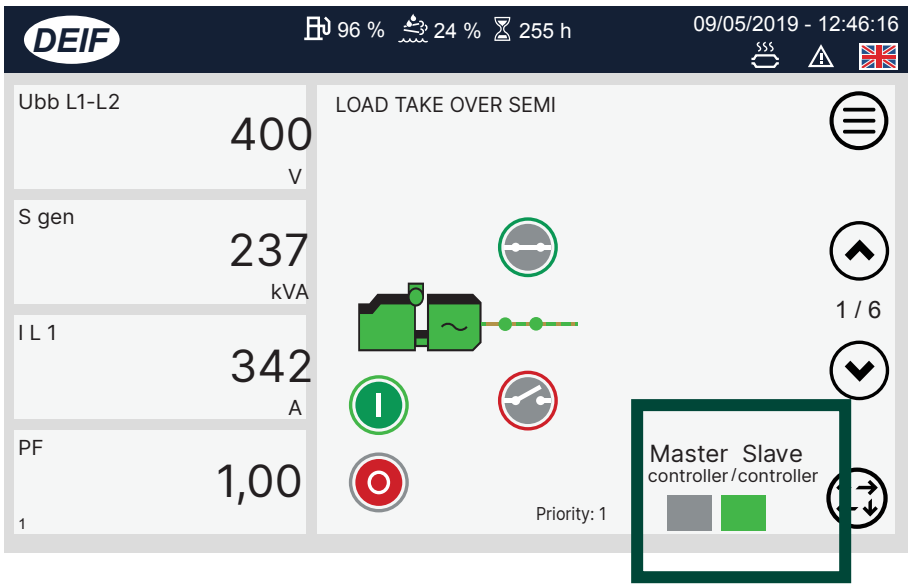
Each controller is connected to one TDU. No redundancy configuration is needed in the TDUs.

Master and slave connection with one display



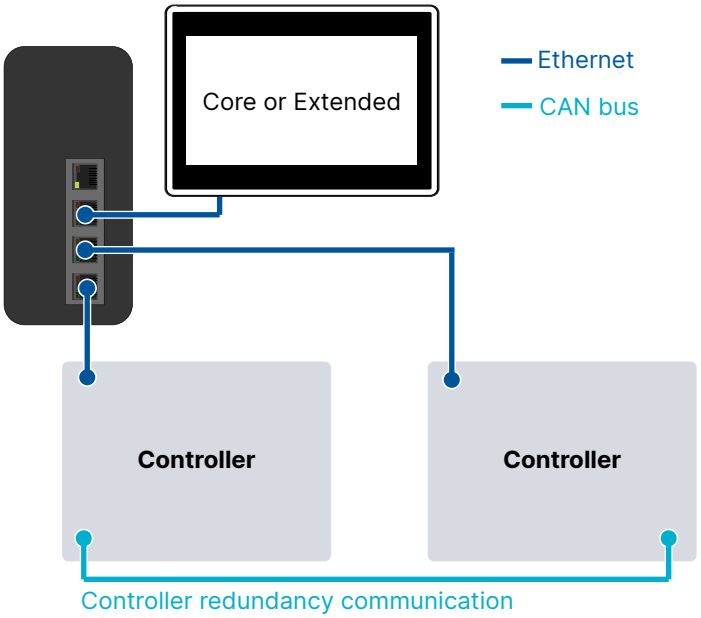
You can connect one TDU to both the master (primary) and the redundant controller. Configure the IP addresses for the *Master* and *Slave* controllers in the *Communication settings* box (*Setup > Connect to controller)*.

When the *Master/slave controller manual switch* is enabled, the TDU home screen has two buttons that show the active controller. You can use these buttons to change the active controller.

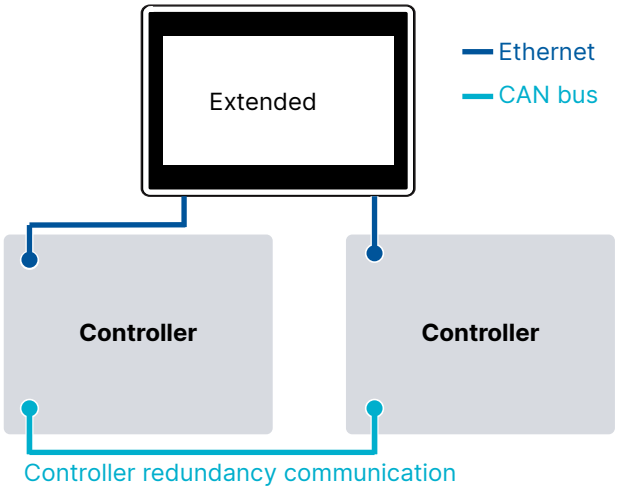


More information
See *Control panel configuration settings* in the TDU Operator's manual for how to configure the Master/slave controller manual switch.

Ethernet switch master and slave connection with one display



Master and slave direct connection with one TDU Extended

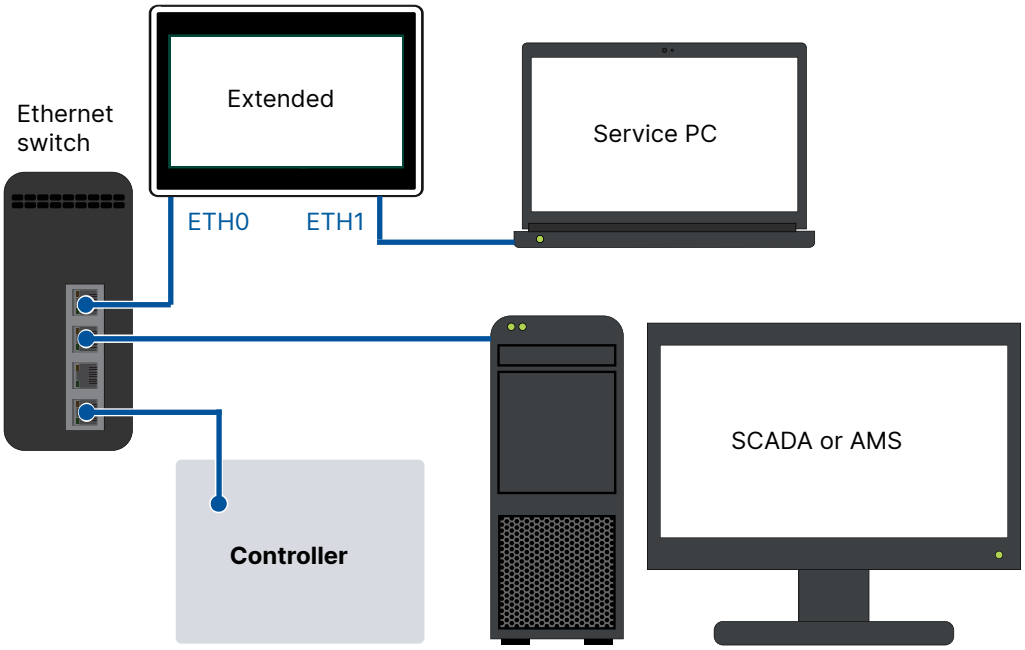


4. Data transfer loads

4.1 High data transfer loads

Connections that place a high data transfer load on the controller (for example, a SCADA system) should be connected to the controller through a switch.

Recommend wiring to connect a SCADA system to a controller



4.2 Low data transfer loads

For setups that place a low data transfer load on the controller, connect the TDU Extended model directly to the controller and a service PC.