

iE 150

Remote display

Data sheet and user manual



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Tomorrow



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1. iE 150 Remote display

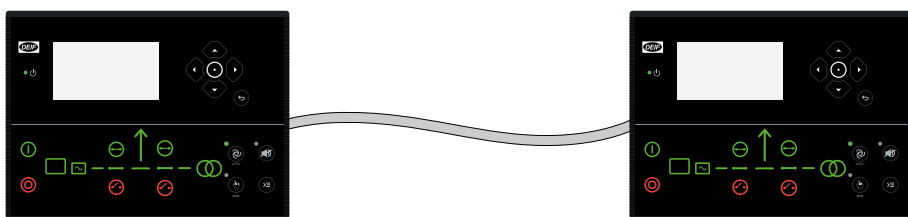
1.1 About

The iE 150 remote display is a controller used as a second display unit for an iE 150 master controller. It mirrors the master controller and gives you access to all of its features. This enables a fast response from a remote location. Connecting the controllers is simple and a connection is established within seconds.

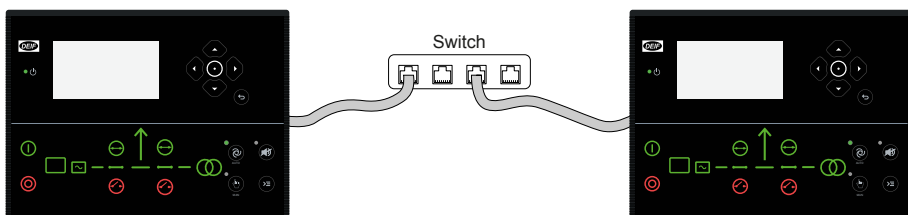
1.2 Connect the controllers

Connect the master controller and the remote display with an Ethernet cable. The connection can be point-to-point or through a switch. You can only connect one remote display to the master controller.

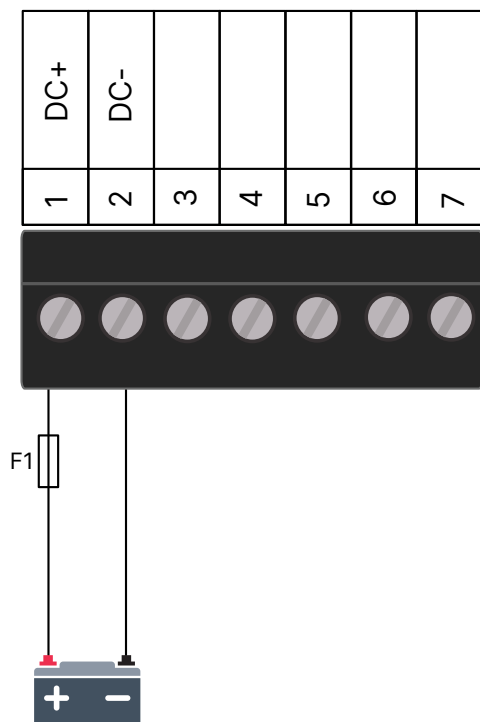
Point-to-point connection



Connection through a switch



See the iE 150 installation instructions for information on how to mount the display. Use the following diagram to connect the display to the power supply:



1.3 Configure the controllers

1.3.1 Configure the master controller

You need to configure the master controller for use with a remote display.

Settings > Communication > Remote display setup

Parameter	Text	Range	Default	Details
9159	Remote display setup	OFF ON view only ON view + controls	OFF	OFF: The master controller does not connect to a remote display. ON view only: Settings and actions on the master controller are shown on the remote display. ON view + controls: Settings and actions are mirrored between the master controller and the remote display.

1.3.2 Configure the IP addresses

The master controller and the remote display must have different IP addresses. You can configure the IP addresses locally on the controller or using the utility software.

Configure the IP addresses on the controllers

On the master controller:

1. Configure the IP address under **Settings > Communication > Ethernet setup**.

On the remote display:

Make sure that the controller type is set to remote display. You can select the controller type under **Parameter > Basic settings > Controller settings > Type**.

1. Press and hold the *Shortcut*  button.
2. Select *Ethernet setup* to configure the IP address for the remote display.

Remote unit local menu

Service view

IP: 192.168.18.8

Port: 22000

3. Once the IP address has been configured press the *OK*  button to save.
4. The other parameters under *Ethernet setup* can also be change using the same method as for the IP address.
5. Press the *Back*  button to return to the settings menu.
6. Select *Remote display setup* to verify the IP address for the master controller.

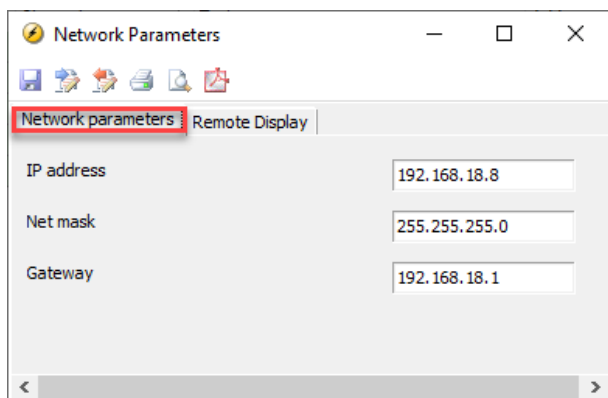
Configure the IP addresses with the utility software

The IP addresses have to be configured separately for the master controller and the remote display.

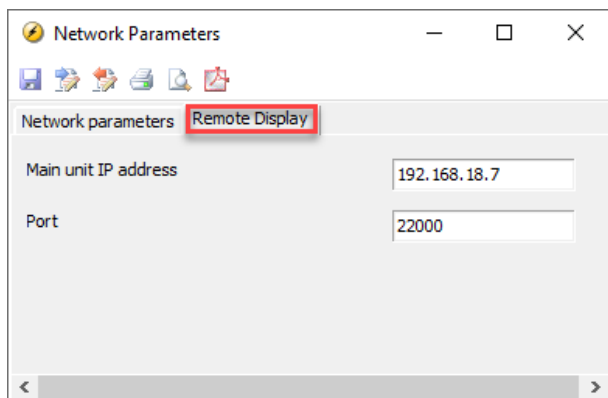
On the remote display:

1. Connect to the remote display using the utility software.

- This can be done with a USB connection or a TCP/IP connection, which requires an Ethernet cable.
 - When connecting with TCP/IP, you must know the remote display's IP address.
2. Select *Option N configuration*  button in the top toolbar.
 3. In the pop-up window, configure the network parameters for the remote display under the tab *Network parameters*.



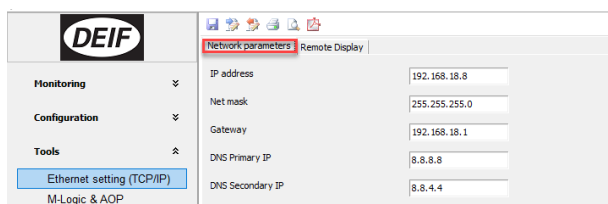
4. Select the *Remote Display* tab to verify the IP address for the master controller.



5. Click the *Write to device* button  in the top of the window. The controller will receive the new parameters.

On the master controller:

1. Connect to the master controller using the utility software.
2. Select *Tools > Ethernet setting (TCP/IP)* from the menu on the left.
3. Configure the network parameters for the master controller under the tab *Network parameters*.

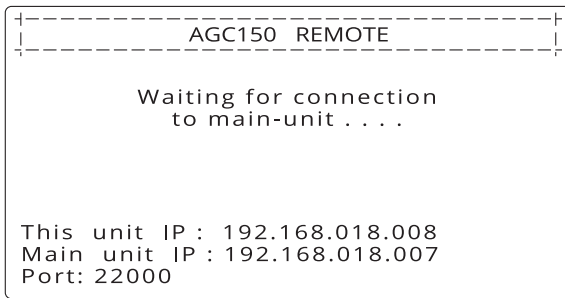


4. Select the *Write to device* button  in the top of the window. The controller will receive the new parameters.

Once you have configured the controllers, the remote display should be connected to the master controller and ready for use.

Troubleshooting

If the remote display is waiting for a connection to the master controller you will see this screen:



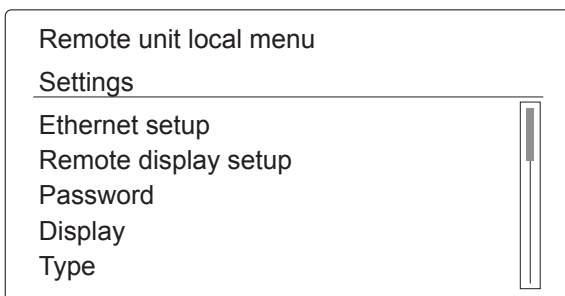
Verify the following:

1. The master controller is configured for use with the remote display. Ensure the master controller is not set to *OFF* in *Parameters > Communication > Remote display setup*.
2. The IP addresses are configured correctly. If the IP address for the master controller is changed after configuring the remote display, the IP address must be updated on the remote display.
3. The remote display and the master controller are connected correctly.

1.4 Settings

1.4.1 Remote display local menu

You can change the remote display setup. Press and hold the *Shortcut*  button until the remote display local menu appears:



Text	Range
Ethernet setup	Configure the Ethernet address for the remote display .
Remote display setup	Configure the Ethernet address for the master controller .
Password	Configure the password for each password level. See General product information, Controller overview, Password in the Designer's handbook for more information about passwords.
Display	Configure light, contrast and so on for the remote display.
Type	Change type of controller (only for the PREMIUM and EXTENDED option).
Software info	Information about the software in the remote display .

1.4.2 Display settings

You can configure the display settings for the remote display by pressing and holding the *Shortcut*  button and selecting **Display**. Alternatively, you can use the utility software to connect to the remote display.

Parameter	Text	Range	Default
9151	Backlight dimmer	0 to 15	12
9152	Green LEDs dimmer	1 to 15	15
9153	Red LEDs dimmer	1 to 15	15
9154	Contrast level	-20 to +20	0
9155	Sleep mode timer	1 to 1800 s	60 s
9156	Enable (Sleep mode timer)	OFF ON	ON

2. Technical specifications

2.1 Electrical specifications

Power Supply	
Power supply range	Nominal voltage: 12 V DC or 24 V DC (operating range: 6.5 to 36 V DC)
Voltage withstand	Reverse polarity
Power supply drop-out immunity	0 V DC for 50 ms (coming from min. 6 V DC)
Power supply load dump protection	Load dump protected according to ISO16750-2 test A
Power consumption	5 W typical 12 W max.
RTC clock	Time and date backup

Supply Voltage monitoring	
Measuring range	0 V to 36 V DC (max. continuous operating voltage of 36 V DC)
Resolution	0.1 V
Accuracy	±0.35 V

Display unit	
Type	Graphical display screen (monochrome)
Resolution	240 x 128 pixels
Navigation	Five key menu navigation
Log book	Data log & trending facility
Language	Multi language display

2.2 Environmental specifications

Operation conditions	
Operating temperature (incl. display screen)	-40 to +70 °C (-40 to +158 °F)
Storage temperature (incl. display screen)	-40 to +85 °C (-40 to +185 °F)
Accuracy and temperature	Temperature coefficient: 0.2 % of full scale per 10 °C
Operating altitude	0 to 4000 m with derating
Operating humidity	Damp Heat Cyclic, 20/55 °C at 97 % relative humidity, 144 hours. To IEC 60255-1 Damp Heat Steady State, 40 °C at 93 % relative humidity, 240 hours. To IEC 60255-1
Change of temperature	70 to -40 °C, 1 °C / minute, 5 cycles. To IEC 60255-1
Protection degree	IEC/EN 60529 • IP65 (front of module when installed into the control panel with the supplied sealing gasket) • IP20 on terminal side
Vibration	Response: • 10 to 58.1 Hz, 0.15 mmpp

Operation conditions	
	58.1 to 150 Hz, 1 g. To IEC 60255-21-1 (Class 2) Endurance: 10 to 150 Hz, 2 g. To IEC 60255-21-1 (Class 2) Seismic vibration: 3 to 8.15 Hz, 15 mmpp 8.15 to 35 Hz, 2 g. To IEC 60255-21-3 (Class 2)
Shock	10 g, 11 ms, half sine. To IEC 60255-21-2 Response (Class 2) 30 g, 11 ms, half sine. To IEC 60255-21-2 Withstand (Class 2) 50 g, 11 ms, half sine. To IEC 60068-2-27, test Ea Tested with three impacts in each direction in three axes (total of 18 impacts per test)
Bump	20 g, 16 ms, half sine IEC 60255-21-2 (Class 2) Tested with 1000 impacts in each direction on three axes (total of 6000 impacts per test)
Safety	Installation CAT. III 600 V Pollution degree 2 IEC/EN 60255-27
Flammability	All plastic parts are self-extinguishing to UL94-V0
EMC	IEC/EN 60255-26

2.3 UL/cUL Listed

Requirements	
Installation	To be installed in accordance with the NEC (US) or the CEC (Canada)
Enclosure	A suitable type 1 (flat surface) enclosure is required Unventilated/ventilated with filters for controlled/pollution degree 2 environment
Mounting	Flat surface mounting
Connections	Use 90 °C copper conductors only
Wire size	AWG 30-12
Terminals	Tightening torque: 5-7 lb-in.
Current transformers	Use Listed or Recognized isolating current transformers
Communication circuits	Only connect to communication circuits of a listed system/equipment

2.4 Communication

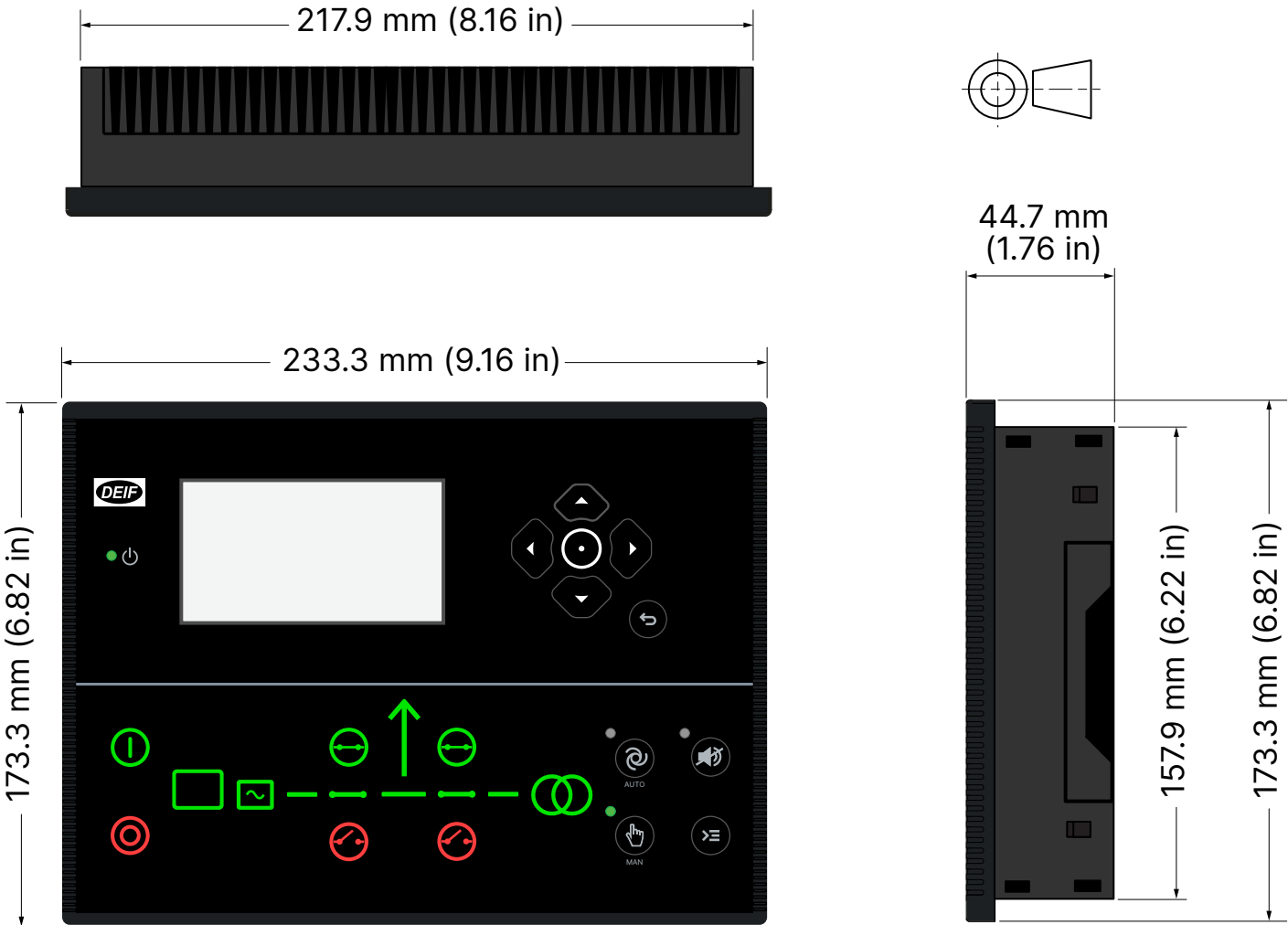
Communication	
RJ45 Ethernet	Isolated Auto detecting 10/100 Mbit Ethernet port
Connections	You can only connect one remote display to the master controller.

2.5 Approvals

Standards	
CE	
UL/cUL Listed to - UL/ULC6200:2019 1.ed. Controllers for Use in Power Production	

NOTE Refer to www.deif.com for the most recent approvals.

2.6 Dimensions and weight



Dimensions and weight	
Dimensions	Length: 233.3 mm (9.16 in) Height: 173.3 mm (6.82 in) Depth: 44.7 mm (1.76 in)
Panel cutout	Length: 218.5 mm (8.60 in) Height: 158.5 mm (6.24 in) Tolerance: ± 0.3 mm (0.01 in)
Max. panel thickness	4.5 mm (0.18 in)
Mounting	UL/cUL Listed: Type complete device, open type 1 UL/cUL Listed: For use on a flat surface of a type 1 enclosure
Weight	0.79 kg

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3.1 Disclaimer and copyright

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