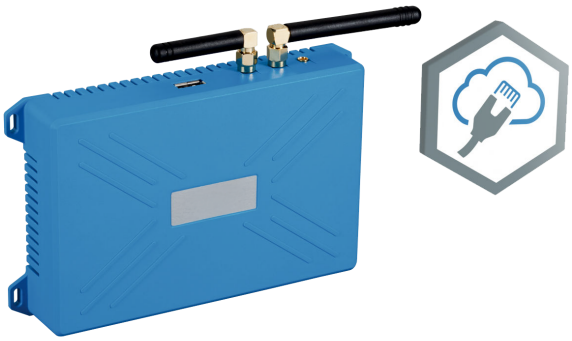
Operating Instructions **SSG-E210xC**

Gateway system



Endress+Hauser

Described product
Product name: SSG-E210xC
Smart Service Gateway

Manufacturer
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Legal information

Original document
This document is an original document of Endress+Hauser SICK GmbH+Co. KG.

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1 About this document

1.1 Information on the operating instructions

Read these operating instructions carefully before starting any work in order to familiarize yourself with the product and its functions.

The operating instructions are an integral part of the product and should remain accessible to the personnel at all times. When handing this product over to a third party, include these operating instructions.

These operating instructions do not provide information on the handling and safe operation of the machine or system in which the product is integrated. Information on this can be found in the operating instructions for the machine or system.

1.2 Scope

This document describes the Smart Service Gateway (SSG) for use with the Endress +Hauser Monitoring Box.

The TDC-E is the product on which the SSG is based. The TDC-E operating instructions contain further information to which reference is made.

1.3 Target group

This document is intended for persons who commission, install, operate and maintain the product.

1.4 Further information

The product page with further information can be found at: www.endress.com.

The following information is available depending on the product:

- Data sheets
- This document in all available language versions
- CAD files and dimensional drawings
- Certificates (e.g., declaration of conformity)
- Other publications
- Software
- Accessories

1.6 Symbols and document conventions

Warnings and other notes

DANGER
Indicates a situation presenting imminent danger, which will lead to death or serious injuries if not prevented.

WARNING
Indicates a situation presenting possible danger, which may lead to death or serious injuries if not prevented.

CAUTION
Indicates a situation presenting possible danger, which may lead to moderate or minor injuries if not prevented.

NOTICE
Indicates a situation presenting possible danger, which may lead to property damage if not prevented.

NOTE
Highlights useful tips and recommendations as well as information for efficient and trouble-free operation.

Instructions to action

► The arrow denotes instructions to action.

1. The sequence of instructions is numbered.
2. Follow the order in which the numbered instructions are given.

✓ The tick denotes the results of an action.

1.7 Definition of terms and components

SSG: Smart Service Gateway (TDC-E with Monitoring Connect)

TDC-E: Telematic Data Collector

Monitoring Connect: Software package for establishing the connection between devices, TDC-E and Monitoring Box

Monitoring Box: Digital service for monitoring, analyzing and predicting service data and process data from connected devices

2 Safety information

2.1 Basic safety notes

Please observe the safety notes and the warnings listed here and in other sections of this product documentation to reduce the possibility of risks to health and avoid dangerous situations.

CAUTION
Failure to observe the relevant work safety regulations may lead to physical injury or cause damage to the system.

Precautionary measures

- Do not expose the device to extreme temperatures or moisture.
- Do not use the device in dusty or dirty areas.
- The antennas must not come into contact with cables, metal objects, insulation or brackets.
- Do not expose the device to water, rain, splashing water or spilled drinks. It is not waterproof.
- Do not spray anything on the device.
- Dropping, knocks, violent shaking and any rough handling can damage the device.
- Do not transport or store flammable gases, liquids or explosives in the vehicle compartment in which the device is installed.
- Before using the device in a vehicle that transports liquid gas (such as propane or butane), make sure the vehicle complies with the applicable fire and safety regulations of the country in which the vehicle is used.
- In the event of a fault, contact an authorized customer service center.

Mounting and electrical installation

DANGER
Death or severe injury due to electrical voltage and/or an unexpected startup of the machine

► Make sure that the machine is (and remains) disconnected from the voltage supply during mounting and electrical installation.
► Make sure that the dangerous state of the machine is and remains switched off.

2.2 Intended use

The SSG is used for communication between the connected devices and the Monitoring Box.

The SSG is a gateway unit for Endress+Hauser devices. It is used to record and transfer data from various Endress+Hauser devices to a cloud. The SSG is used to collect data from devices at various interfaces such as Ethernet, CAN, RS-485, RS-232, 1-Wire, digital inputs and outputs and analog inputs.

The product must only be used within the limits of the prescribed and specified technical specifications and operating conditions at all times.

Incorrect use, improper modification or manipulation of the product will invalidate any warranty from Endress+Hauser; in addition, any responsibility and liability of Endress +Hauser for damage and secondary damage caused by this is excluded.

2.3 Improper use

Impermissible ambient conditions

- Outdoor areas
- Direct UV radiation (sunlight)
- Precipitation
- Inadequate protection against moisture and contamination
- Publicly accessible areas
- Explosion-hazardous area
- Corrosive environment
- Storage in dusty or dirty areas

2.4 Qualification of personnel

Any work on the product may only be carried out by personnel qualified and authorized to do so.

Qualified personnel are able to perform tasks assigned to them and can independently recognize and avoid any potential hazards. This requires, for example:

- technical training
- experience
- knowledge of the applicable regulations and standards

2.5 Cybersecurity

Overview

To protect against cybersecurity threats, it is necessary to continuously monitor and maintain a comprehensive cybersecurity concept. A suitable concept consists of organizational, technical, procedural, electronic, and physical levels of defense and considers suitable measures for different types of risks. The measures implemented in this product can only support protection against cybersecurity threats if the product is used as part of such a concept.

You will find further information at https://www.endress.com/en/pages/security e.g.:

- General information on cybersecurity
- Contact option for reporting vulnerabilities
- Information on known vulnerabilities (security advisories)

3 Mounting and electrical installation

3.1 Scope of delivery

The following components and accessories are included in the scope of delivery:

- Connecting cable
- WireSet - SSG PWR power cable
- LTE antenna
- GPS antenna
- WLAN+WPAN antenna
- User manual / Quick start document

3.2 Installing the SSG

Overview

The device can be mounted on any sufficiently stable surface.

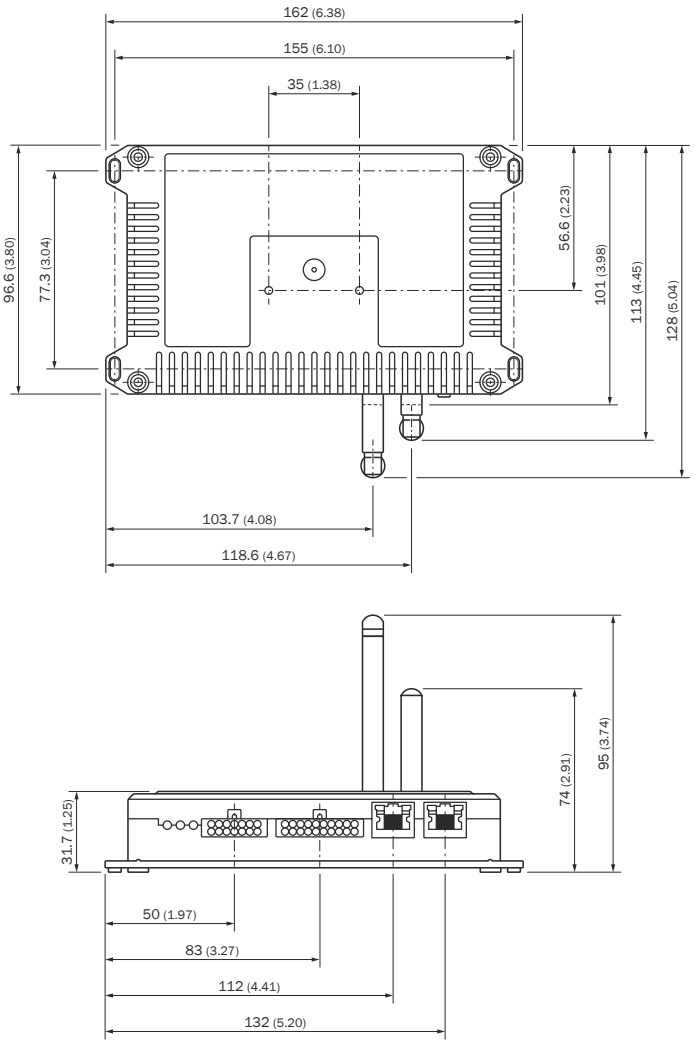


Figure 1: TDC-E, dimensions and mounting holes

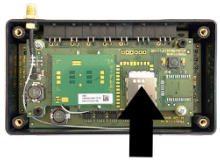
All dimensions in millimeters (inches)

Procedure

► Screw the device to the mounting holes on the housing.

3.3 Connecting devices to the SSG

Overview



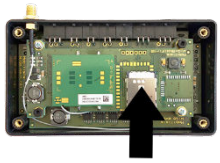
Procedure

Direct connection

► Connect the communication interface to the corresponding connection terminal of the SSG device.
Use the supplied cables or an additional extension cable if required.

3.4 Installing the power supply unit

Overview



Important information

DANGER
Death or serious injuries due to electrical voltage

► The power supply (SELV limited, with exact voltage specification) may only be installed by a qualified electrician.
► When working on electrical installations, the usual safety regulations must be observed.
► When installing in the vehicle or on the battery, the special installation requirements in the operating instructions must be observed.

Procedure

1. Connect a suitable cable (WireSet-SSG PWR or WireSet-SSG PWR+AIN/DIO) to the PWR connection of the device.

✓ The current operating status is indicated by three LEDs:

Status	Green LED	Yellow LED	Red LED
Pre-boot device	ON	OFF	OFF
Boot device	Fast flashing	OFF	OFF
Device ready	Heartbeat	OFF	OFF
Restoring the backup	Fast flashing	Fast flashing	OFF
Resetting the device (factory, data or system reset)	Fast flashing	Fast flashing	OFF
Software update	Fast flashing	Fast flashing	OFF
The device is in error state	OFF	ON	ON

Status	Green LED	Yellow LED	Red LED
User-defined on the 'Interfaces' web page	-	ON/OFF/heart-beat	ON/OFF/heart-beat

Complementary information

The SSG does not have its own mains switch. To switch off the device, the power supply cable must be disconnected from the PWR connection or the power supply must be disconnected.

4 Commissioning

Procedure

1. Request commissioning from the local Endress+Hauser representative if no information about the process is available. Add the desired customer name for the asset tree to the request.

✓ You will receive a link to a commissioning form for entering device and network information.
The configuration for commissioning is created using the information provided (this can be done in parallel with the other steps).

2.
   a) If the Internet connection is established via the mobile network, the PIN lock on the SIM card must be deactivated and this must be installed. Further information can be found in the corresponding section (see "Replacing/inserting the SIM card", page 16).
   b) Installation (see "Installing the SSG", page 8)

3.
   a) Connect the communication interfaces of the devices to the corresponding interfaces of the SSG. Use the supplied cables or, if necessary, additional extension cables (see "Device overview and interfaces", page 20 and see "Overview of connections, pin assignment and design", page 20).
   b) If the Internet connection is to be established via LAN, connect the required cables.

4. For the power supply of the SSG: Connect the electrical supply to the PWR connection of the device using the supplied cable.
5. Configuring device connectivity: Connect the computer to the Eth0 port of the SSG via an Ethernet cable. Access the device manager at http://192.168.0.100 (subnet mask 255.255.255.0) via a browser (recommendation: latest version of Google Chrome).
   Username: tdce
   Password: tdceCustomer315!
6. If the Internet connection is established via LAN or WLAN, the following connections must be permitted by the firewall:

   Table 1: Firewall settings

Target	Port	Protocol	Service
monitoringbox.endress.com	443	TCP	Data transfer, software download
manage.gateway.monitoringbox.endress.com 180.72.131.71	*target_port*[1)]	TCP	Remote Service
[configurable]	53	TCP/UDP	DNS (name resolution)
pool.ntp.org [configurable]	123	TCP/UDP	NTP (time synchronization)
[configurable]		[2)]	Sensor connection

   1) Port for Remote Service: is assigned specifically to each customerr.
   2) Protocol depends on sensor protocol.

7. Open the user interface for commissioning at http://192.168.0.100:5000.
   a) If the devices are connected via Ethernet or WLAN, the PING tool can be used to check the connection.
   b) Ensure that the required connections to the Internet services are available.

8.
   a) A Endress+Hauser ID is required to use the services.
      ► visit www.endress.com
      ► If a Endress+Hauser ID is available, enter the login data and click on "Login".
      ► To create a Endress+Hauser ID, click on "Register".
   b) Follow the instructions on the website and accept the terms of use. Make a note of the Endress+Hauser ID user name.
9. Once the gateway connection has been established and the commissioning form has been completed, contact your local Endress+Hauser representative for further instruc-tions.

Complementary information

The SSG does not have its own mains switch. To switch off the device, the power supply cable must be disconnected from the PWR connection or the power supply must be disconnected.

5 Configuration

5.1 Equipment and tools required

Depending on the type of connection, different devices or tools are required to help with the setup:

- Notebook
- Ethernet cable
- Switch
- Wi-Fi hotspot
- SIM card
- Screwdriver (Philips head 3)

5.2 SSG web interfaces

Device Manager

http://192.168.0.100 (left LAN connection, standard configuration)

Username: tdce

Password tdceCustomer315!

UI commissioning

http://192.168.0.100:5000 (left LAN connection, standard configuration)

All web interfaces can be accessed via any configured IP address.

5.3 LAN connection

Procedure

Configuration of two LAN interfaces

1. Connect a LAN cable to Eth0 (192.168.0.100) of the SSG and the notebook.
2. Connect a LAN cable to Eth1 (DHCP) of the SSG for the Internet gateway.
   By default, Eth0 has a fixed IP address (192.168.0.100) and Eth1 is set to DHCP.
3. Configure the necessary settings on the notebook to establish a connection with the SSG.
4. Set the subnet mask to 255.255.255.0.
5. Open the device manager (default: http://192.168.0.100) and log in with the specified login data.
6. Set up the ability to connect to the device when both LAN ports are in use.
   This depends on the respective facility. See for example see "Complementary information", page 14.
7. Configure the required settings for Eth0 and Eth1 under "Network - Segments".
8. Set a DNS server under "Network - DNS" if the gateway does not provide DNS.
9. Set an NTP server under "System - Time" (default: pool.ntp.org).
10. Remove the LAN cable between the SSG and the notebook.
11. Connect a LAN cable to Eth0 of the SSG for the device network.
12. Use the connection method defined in step 5 to establish a connection with the Monitoring Box Commissioning UI (default: http://192.168.0.100:5000).
13. Check whether all required services (see table 1, page 11) are available.
14. Check whether the device information has been entered via the web form.
15. For further instructions, contact your local Endress+Hauser representative or click on "Install Monitoring Box" when prompted.

Example

LAN0: Device

LAN1: Internet gateway

Complementary information

- Connect to the SSG web interfaces for configuration if both LAN ports are in use:
  - Depending on the setup, the web interface can be accessed via the local network.
  - A connection to a network and to the notebook can be established simultaneously via a switch.
  - By setting up a Wi-Fi hotspot on the SSG and the notebook, both devices can be connected to each other.
- The connection to the devices or Internet services is not working.
  - If a firewall is present, check whether the desired connections are permitted (see "Commissioning", page 11).

5.4 Wi-Fi connection

Procedure

1. Install the WLAN antenna (see "Device overview and interfaces", page 20 and see "Overview of connections, pin assignment and design", page 20).
2. Connect the LAN cable to Eth0 (192.168.0.100) of the SSG and the notebook.
3. Open the device manager (default: http://192.168.0.100) and log in with the specified login data.
4. Activate the WLAN under "Network - WLAN".
5. Activate the "Periodic scan" option under "Network - WLAN".
6. Select the network from the list under "Network - WLAN".
7. Activate "auto-reconnect" and enter the passphrase for the login.
8. Set a DNS server under "Network - DNS" if the gateway does not provide DNS.
9. Set an NTP server under "System - Time" (default: pool.ntp.org).
10. Note the IP address assigned under "Network - Segments" for the WLAN0 interface.
11. Remove the LAN cable between the SSG and the notebook.

✓ The SSG can be reached via the WLAN at the assigned IP address.

12. Open the Monitoring Box Commissioning UI (default: http://192.168.0.100:5000).
13. Check whether all required services (see table 1, page 11) are available.
14. Check whether the device information has been entered via the web form.
15. For further instructions, contact your local Endress+Hauser representative or click on "Install Monitoring Box" when the prompt appears.

Example

WLAN0: Device and Internet gateway

5.5 Modem connection

Procedure

1. Remove the PIN lock from the SIM card to be used.
2. Insert the SIM card (see Replacing/inserting the SIM card).
3. Install the mobile phone antenna (see "Device overview and interfaces").
4. Connect the LAN cable to Eth0 (192.168.0.100) of the SSG and the notebook.
5. Call up the device manager (default: http://192.168.0.100) and log in with the specified login data.
6. Activate the modem under "Network - Modem".
7. Enter the provider data (APN) for the SIM card under "Network - Modem" and click on "Connect".
8. Use one of the other connection types to connect devices to the SSG.

9. Open the Monitoring Box Commissioning UI (default: http://192.168.0.100:5000).
10. Check whether all required services (see table 1, page 11) are available.
11. Ensure that the device information has been entered via the web form.
12. For further instructions, contact your local Endress+Hauser representative or click on "Install Monitoring Box" when the prompt appears.

Example

LAN0: Device

PPP0: Internet gateway

Complementary information

- The connection to the mobile network does not work
  - Ensure the PIN lock on the SIM card is deactivated.
  - Check that the SIM card is inserted correctly.
  - Under "Network - Modem", check whether the correct provider data has been entered.

6 Maintenance

6.1 Maintenance and cleaning

The SSG housing does not contain any user-serviceable parts.

Clean the housing with a soft, dry or slightly damp cloth.

Do not use solvents or high-pressure cleaners.

6.2 Replacing/inserting the SIM card

Overview

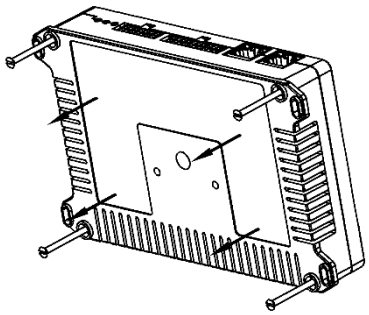
The SSG is supplied without a SIM card inserted.

Prerequisites

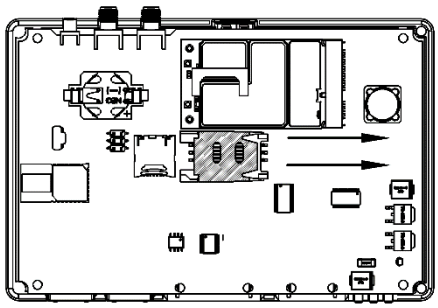
- Device is switched off.

Procedure

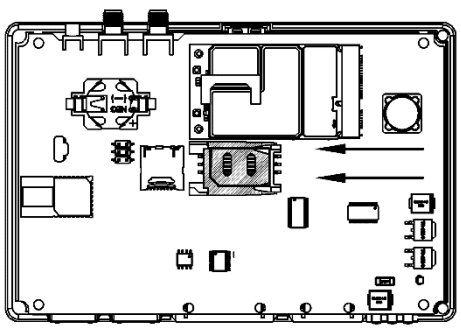
1. Unscrew and remove the plastic cover on the underside of the device.



2. Slide the plastic cover of the SIM card holder to one side. There is an indicator arrow on the holder.



3. Lift the plastic holder and insert the SIM card with the chip side facing down.



4. Replace and lock the SIM plastic cover.
5. Replace the plastic cover of the housing on the underside of the device and secure it with screws.
6. Set up the APN in the SSG device manager (see TDC-E operating instructions).

7 Technical data

7.1 Technical data

Input voltage	9 V - 36 V DC
Maximum current consumption	2 A
Average power consumption	100 mA @ 24 V (without external load)
Protection	Overcurrent, overvoltage and ESD protection (4 kV IEC 61000-4-2)
Fuse	4 A (internal)
Operating temperature	-20 °C to +70 °C
Storage temperature	-40 °C to +85 °C
Material of the housing	PA6
Flammability class	UL 94 V-0
Dimensions without antennas (W×H×L)	162.0 x 31.7 x 101.0 mm 6.38 x 1.25 x 3.98 inches
Enclosure rating	IP20 according to DIN EN 60529
Weight without accessories	230 g
Mobile network[1)]	LTE-FDD: 700/800/850/900/1700/1800/1900/2100/2600 LTE-TDD: 1900/2300/2500/2600MHz Data transmission speed up to 150 Mbit/s (DL)/50 Mbit/s (UL) for LTE FDD
SIM[3)]	User replaceable, standard SIM card size (2FF)
Antenna	No cable allowed between antenna and plug
SMS	Text and PDU mode
GPS receiver type	72-channel u-blox M8 GPS, GLONASS, BeiDou, Galileo Satellite-based augmentation systems L1 C/A: WAAS, EGNOS, MSAS, GAGAN
Sensitivity	-148 dBm (detection) -164 dBm (tracking)
Time for the first repair	Hot start: 1 s Warm start: 3 s Cold start: 32 s
Maximum refresh rate	10 Hz
Antenna	Internal and external MCX option The antenna cable is limited to a maximum permissible length of < 3 m.
WPAN	Dual mode: IEEE 802.15.1
WLAN	IEEE 802.11 b/g/n

1 Full 4G service cannot be guaranteed at operating temperatures above 60 °C.
2 Not available for end users
3 SSG device is supplied without SIM card

7.2 Interfaces

TDC-E	Description
6 x AIN (analog input)[1)]	Analog measurement of voltage (0 - 36 V) with an accuracy of ±0.2 % (+ 30 mV) or current (0 - 32 mA), with an accuracy of ± 1 % (+0.1 mA) Virtual digital inputs (fully configurable high and low voltage levels) Input resistance 27.5 kΩ typical for voltage mode, 100 Ω typical for current mode
6 x DIO (digital input/output)[1)]	Digital input (high level > 3 V) or digital output (500 mA current carrying capacity, 1000 mA is the maximum load on all outputs together, high-side switch outputs the voltage from the device input), configurable via software, overcurrent-proof Pulse/frequency measurement (high level > 3 V) Input resistance: 22 kΩ typical for digital input
2x DOUT (additional digital output)	Additional digital output on LP_A/B pins Maximum current of 300 mA
2 x DIN (additional digital input)	Additional digital input on CQ_A/B pins
2xEthernet	2 x RJ45, 10/100/1,000 Mbit/s
RS-485/RS-422[1)]	Fully compliant with ANSI TIA/EIA 485-A ESD protection (± 6kV IEC 1000-4-2) Selectable baud rate up to 576 kbps
SSI[1)]	SSI master interface Available if RS-485/RS-422 is deactivated in the software[1)] The minimum clock rate is limited to 300 kHz, the maximum to 1 MHz.
RS-232	True RS-232 (EIA/TIA-232/V.28) level receive and transmit data lines ESD protection ± 8 kV (contact discharge) in accordance with IEC 61000-4-2 Selectable baud rate up to 250 kbps The cable is limited to a maximum permissible length of <3 m.
2xCAN bus	Compliant with ISO 11898-2 and ISO 11898-5 ESD protection ± 8 kV (contact discharge) in accordance with IEC 61000-4-2 Selectable baud rate up to 1 Mbps
1-wire	1-wire interface 28 V overvoltage protection ESD protection ± 4 kV (contact discharge) in accordance with IEC 61000-4-2 The cable is limited to a maximum permissible length of < 3 m.
USB	The USB port is only used for technical troubleshooting. ESD protection ± 8 kV (contact discharge) in accordance with IEC 61000-4-2

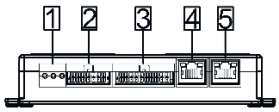
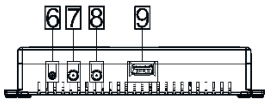
1 Software-configurable

7.3 Embedded sensors

TDC -E	Description
Accelerometer	3 axis Full scale range: ± 2 g/± 4 g/± 8 g Resolution: up to 0.244 mg Detection rate: 1.56 Hz to 400 Hz
Magnetometer	3 axis Full scale range: ± 12000 mGa Resolution: up to 1 mGa Refresh rate: up to 100 Hz
Thermometer	Resolution: ± 0.5 °C Accuracy: ± 0.5 °C from -20 °C to +100 °C

1 for diagnostic purposes only

7.4 Device overview and interfaces

TDC-E front	TDC-E rear
	
1. LED display	6. MCX connection - GPS antenna
2.SSG PWR+AIN/DIO connection (14-pin connection)	(only available in the SSG200XX model)
3.SSG COMM connection (20-pin connection)	7. SMA connection LTE antenna (not available for models without LTE)
4.RJ45 GbE connection0 (Eth0)	8.SMA connection WLAN+WPAN antenna
5.RJ45 GbE connection1 (Eth1)	9. USB 2.0 connection

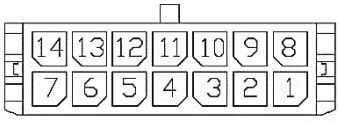
Port	Default IP address
GbE connection0 (Eth0)	192.168.0.100
GbE connection1 (Eth1)	through DHCP

7.5 Overview of connections, pin assignment and design

Overview

All ports/connections are described from the side of the device.

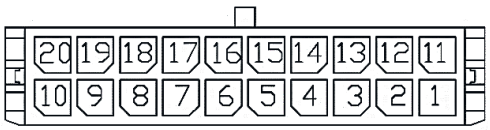
TDC-E PWR+AIN/DIO connection terminals:



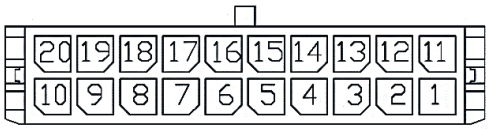
Group	Pin	Pin name	Description
PWR	14	VIN	Power supply for the device. Power supply range 9 V - 36 V DC
	7	GND	Earthing pin for the power supply

DIO	13	DIO_A	Digital input/output – Channel A
	6	DIO_B	Digital input/output – Channel B
	12	DIO_C	Digital input/output – Channel C
	5	DIO_D	Digital input/output – Channel D
	11	DIO_E	Digital input/output – Channel E
	4	DIO_F	Digital input/output – Channel F
AIN	10	AIN_A	Analog input - channel A
	3	AIN_B	Analog input - channel B
	9	AIN_C	Analog input - channel C
	2	AIN_D	Analog input - channel D
	8	AIN_E	Analog input - channel E
	1	AIN_F	Analog input - channel F

TDC-E COMM connection terminals:



Group	Pin	Pin name	Description
Additional DIO	20	LP_A	LP_A pin is used as a digital output
	10	CQ_A	CQ_A pin is a digital input



Group	Pin	Pin name	Description
Additional DIO	19	LP_B	LP_B pin is used as a digital output
	9	CQ_B	CQ_B pin is a digital input
GND	18	GND	GND pin
	8	GND	GND pin
+5 V DO	17	5 V	5 V digital output
1-WIRE	7	1W	Data pin for 1-WIRE
RS-232	16	TX	Data transmission output pin for RS-232 protocol
	6	RX	Data receive input pin for RS-232 protocol
	15	CTS	CTS clear to send output pin for RS-232 protocol
	5	RTS	RTS request to send input pin for RS-232 protocol
RS-485/ RS-422/ SSI[1)]	14	Y/CLK+	Data connection for RS-485/RS-422/SSI
	4	Z/CLK-	Data connection for RS-485/RS-422/SSI
	13	A/DATA+	Data connection for RS-485/RS-422/SSI
	3	B/DATA-	Data connection for RS-485/RS-422/SSI
CAN A	12	CANH_A	CAN high data pin - channel A
	2	CANL_A	CAN low data pin - channel A

CAN B	11	CANH_B	CAN high data pin - channel B
	1	CANL_B	CAN low data pin - channel B

Complementary information

RS-485/RS-422 assignment:

Half-duplex mode: The transceiver operates in transmit and receive mode with the Y and Z pins.

Full duplex mode: The transceiver operates in receive mode on pins A and B and in transmit mode on pins Y and Z.

8 Annex

8.1 Information on compliance with legal regulations

These products may only be operated in countries for which approval has been granted.

No.	Country	Type	Part number
1	European Union	TDC-E210GC SSG-E210GC	6070344 1124771
2	Singapore	TDC-E210GC SSG-E210GC	6070344 1124771
3	Australia	TDC-E210GC	6070344
4	United States	TDC-E210AC SSG-E210AC	6079357 1127750
5	Canada	TDC-E210AC SSG-E210AC	6079357 1127750
6	Taiwan	TDC-E210AC SSG-E210AC	6079357 1127750

Please observe the following country-specific operating instructions.

European Union

CE

Simplified EU Declaration of Conformity

Endress+Hauser hereby declares that the radio equipment type TDC-E210GC is in compliance with Directive 2014/53/EU.

The full text of the EU Declaration of Conformity is available at the following Internet address: www.endress.com.

Singapore

Complies with
IMDA Standards
DB107198

Information on RF exposure

The device must have a minimum distance of 20 cm between the radiation source and your body in order to limit the exposure of the human body to electromagnetic radiation.

Australia

ABN 81-006-054-468

The product complies with the requirements of the relevant ACMA standards under the Radiocommunications Act 1992 and the Telecommunications Act 1997.

These standards are referred to in notices pursuant to Section 182 of the Radio Act and Section 407 of the Telecommunications Act.

United States

FCC ID: 2AHDRTDCE210

NOTE

This device complies with the requirements of Part 15. Operation is subject to the following two conditions:

1 This device may not cause harmful interference, and
2 This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This device generates and uses high-frequency energy and can emit it. If it is not installed and used in accordance with the instructions, it may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this device does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Realign or relocate the receiving antenna.
- Increase the distance between the device and the receiver.
- Connect the device to a socket that is not connected to the circuit to which the receiver is connected.
- Contact the dealer or an experienced radio/TV technician for help.

NOTE

Changes or modifications to this device not expressly approved by Endress+Hauser could void the FCC authorization to operate this equipment.

Information on RF exposure

The device has been assessed as meeting the general RF exposure requirements. This device should be installed and operated with a minimum distance of 20 cm between the radiator and your body.

Canada

Declaration of compliance with Canadian legislation.

This device complies with the license-exempt RSS standard(s) of Innovation, Science and Economic Development Canada.

Operation is subject to the condition that this device may not cause harmful interference and must accept any interference, including interference that may cause undesired operation of the device.

The license-exempt radio receiver contained in this device complies with the Canadian Innovation, Science and Economic Development Regulations applicable to license-exempt radio receivers.

Use is permitted under the following two conditions:

1 The device must not cause any interference, and
2 The device must accept any radio interference that occurs, even if the interference could affect the operation of the device.

Information on RF exposure

The device complies with the ISED limits for radiation exposure in an uncontrolled environment. This device should be installed and operated with a minimum distance of 20 cm between the radiator and your body.

Explanation of radiation exposure

This device complies with the radiation exposure limits set for an uncontrolled environment. This device should be positioned and used with a minimum distance of 20 cm between the radiation source and your body.

CAN ICES-003B / NMB-003B

Taiwan

減少電磁波影響，請妥適使用

SSG-E210AC

CCAN234G0021T2

Endress+Hauser Telematic Data Collector TDC-E210/SSG-E210 Smart Service Gateway Device for connecting sensors and for wireless data transmission.

「取得審驗證明之低功率射頻器材，非經核准，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。低功率射頻器材之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。前述合法通信，指依電信管理法規定作業之無線電通信。低功率射頻器材須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。」

For 終端設備: 減少電磁波影響，請妥適使用 通訊介面規格: LTE FDD 700MHz(B28), 900MHz(B8), 1800MHz(B3), 2100MHz(B1), 2600MHz(B7)

裝置的輻射源與您的身體之間必須保持 20 cm 的最小距離，以約束電磁輻 射對人體造成的暴露

8029811/AE00/2024-01

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