Manuals+ — User Manuals Simplified.

Danfoss 80G8650
Gateway Unit

Danfoss 80G8650 Gateway Unit Installation Guide

Contents

Danfoss 80G8650 Gateway Unit

Specifications

- Model: Gateway Unit Type X-Gate
- Dimensions:
  - Height: 75 mm (2.95 inches)
  - Width: 25.4 mm (1.0 inches)
  - Depth: 110 mm (4.33 inches)
- Ports:
  - 1 USB 2.0 OTG (Type C, 500 mA max.)
  - 2 Ethernet Ports (10/100 BaseT)
  - RS485/CAN ports
- Power Supply: L2 (-) 24 V, L1 (+)
- CPU: i.MX6UL ARM Cortex A7 Single Core 528 MHz
- Operating System: Linux Yocto
- Memory: 4GB Flash, 512MB RAM
- Real-Time Clock (RTC Back-up): Yes (SuperCAP)
- Weight: 0.140 Kg

Product Usage Instructions

Installation
Ensure the unit is grounded to earth using terminal 3 on the power supply terminal block.

Power Supply
Verify that the power supply can provide sufficient power for the equipment's operation.

Connection Setup
Connect ETH1/WAN via DHCP and ETH2/LAN with the IP Address 192.168.2.101, Subnet mask 255.255.255.0. Access settings at https://192.168.2.101/ with Username: admin and Password: PASS.

CAN Bus Termination
To enable CAN bus termination, connect pins 1-2 externally. The RS485 A+ has an internal pull-up resistor, and the RS485 B- has an internal pull-down resistor. RS485 +5V is optional for external bias resistors.

Optional Plugin Modules
The unit supports multiple optional plugin modules, allowing for various configurations.
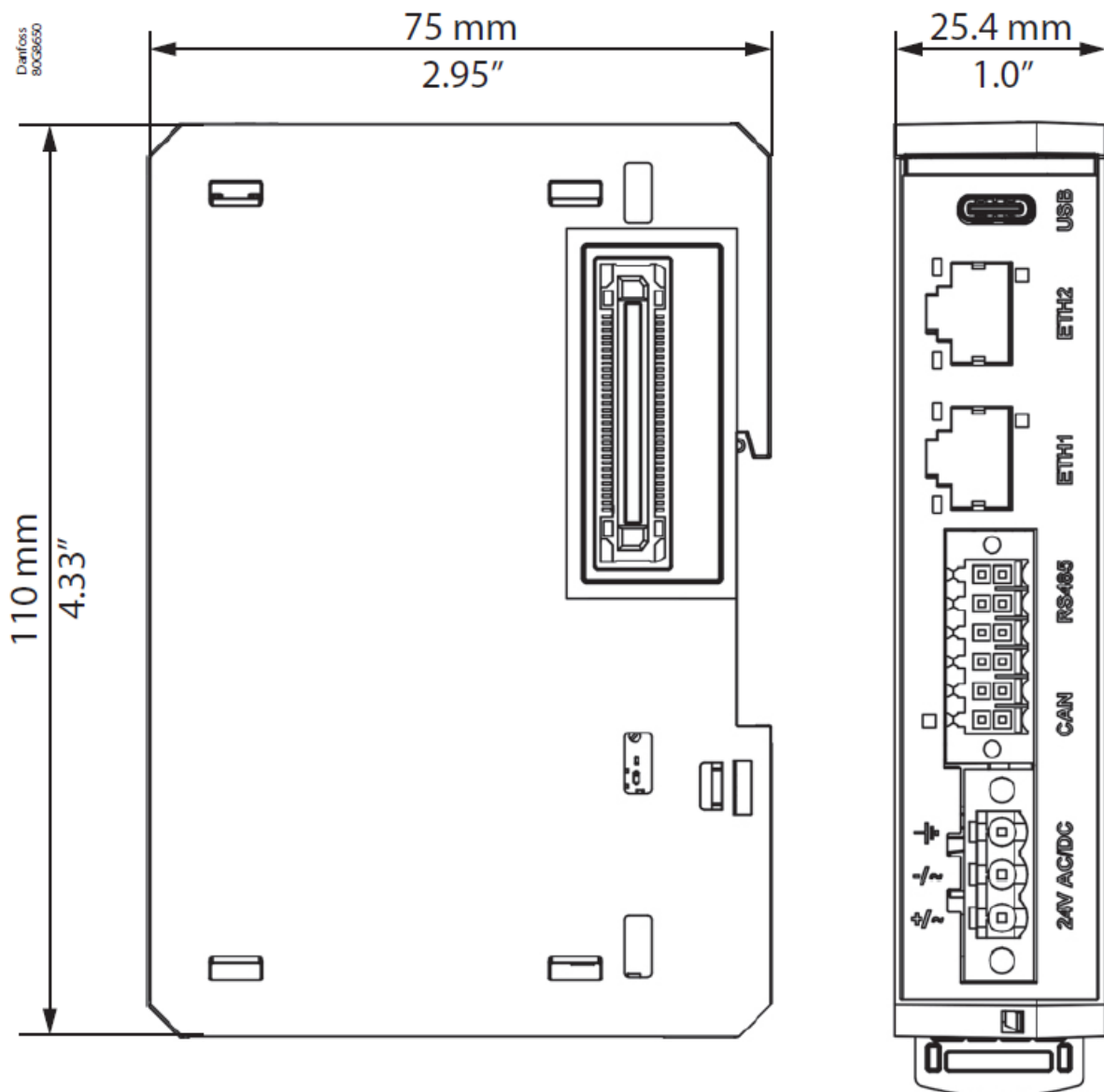
FAQ

Q: What are the recommended IT security practices for the X-Gate series?
A: The X-Gate device should be installed behind a router and firewall, following general IT security recommendations and best practices to ensure secure operation.
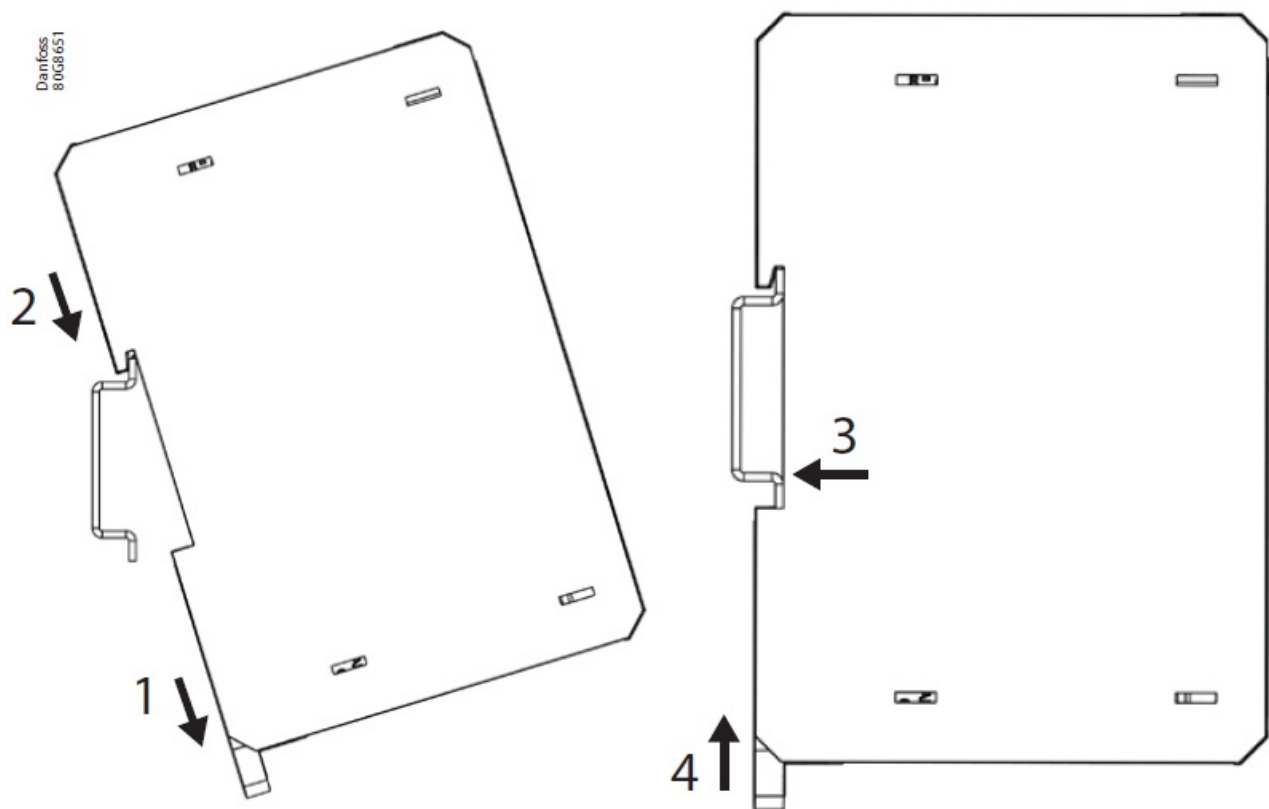
Q: How do I configure the network settings for the X-Gate?
A: Connect ETH1/WAN via DHCP and ETH2/LAN with specific IP settings as mentioned in the manual. Access further settings using the provided URL, Username, and Password.
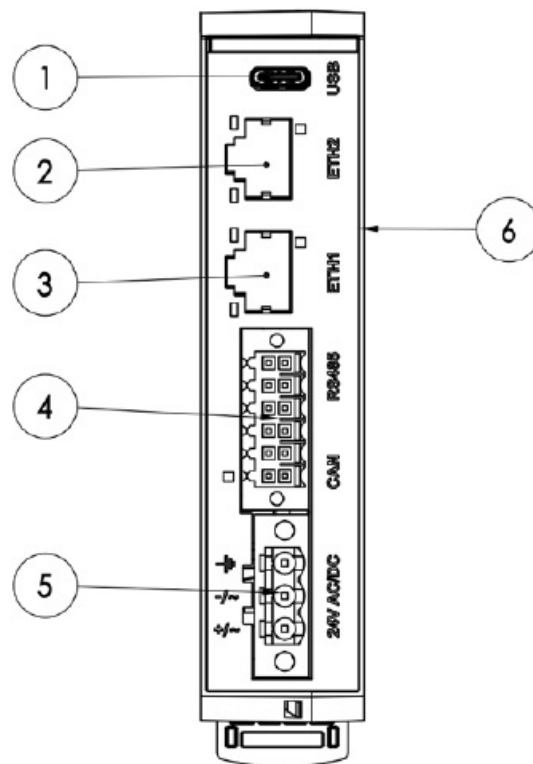
DIMENSION

INSTALLATION

The X-Gate is suitable for mounting on a DIN rail.

REAR VIEW

1	USB 2.0 OTG (500 mA max., Type C)[1]	4	RS485/CAN ports
2	Ethernet Port 2 (10/100 BaseT	5	Power supply
3	Ethernet Port 1 (10/100 BaseT)	6	Expansion slot for plug-in modules

for maintenance only

FACTORY SETTINGS

- ETH1 / WAN : DHCP
- ETH2 / LAN : IP Address 192.168.2.101
- Subnet mask : 255.255.255.0
- Settings : https://192.168.2.101/
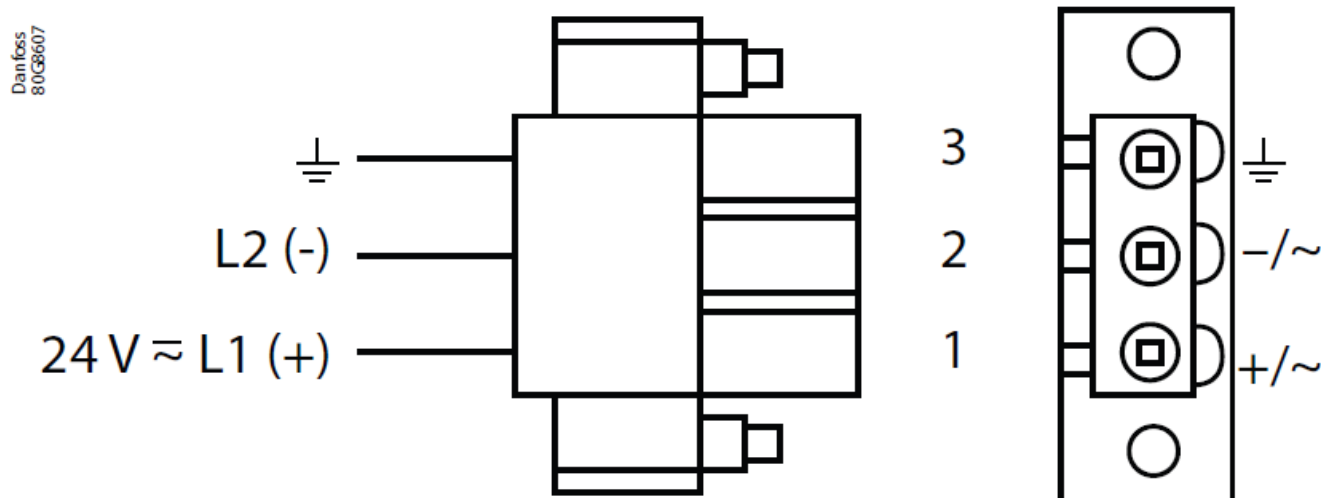- Username : admin
- Password : PASS

Don't open the panel rear cover when the power supply is applied.

General IT security recommendations

The X-Gate series device is an embedded controller designed to be installed behind an appropriate router and firewall. Whilst the X-Gate offers many IT industry security technologies, Danfoss strongly recommends the deployment using IT security best practices and protocols.
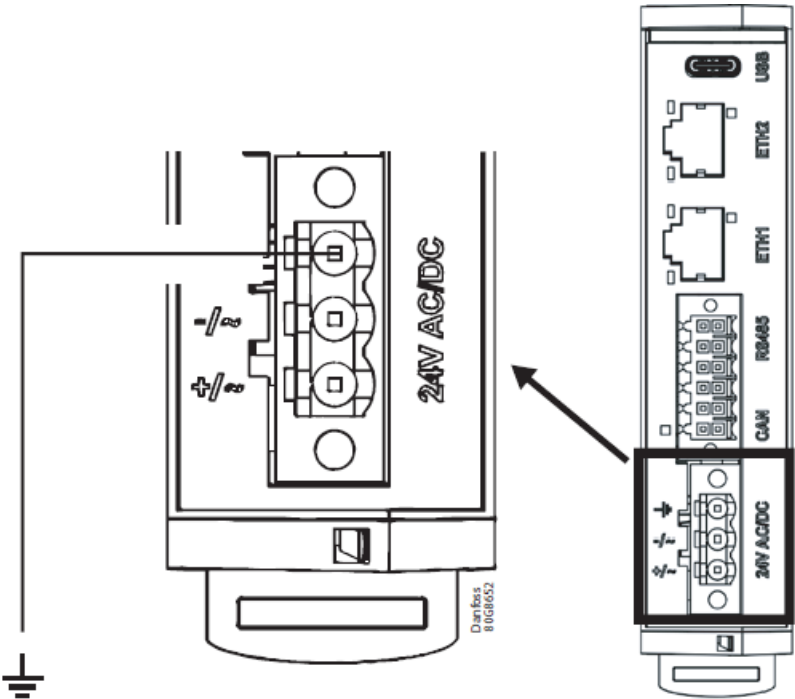
POWER SUPPLY

-

Power Connector, Female – R/C Terminal Blocks (XCFR2), manufactured by Weidmuller Inc., Cat. No. BLZ 5.08, torque 4.5 lb-in.
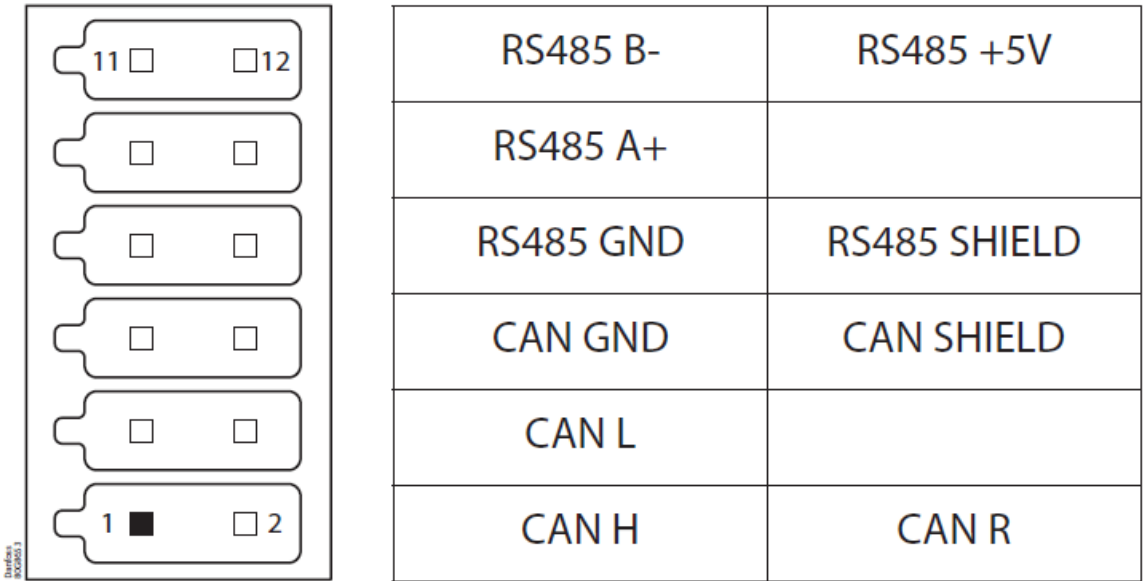
- 3 conductor 1,5 mmq wire size minimum, minimum temperature conductor rating 105 °C.
- Do not open the cabinet while the system is powered up.
- WARNING: Do not separate when energized.

- The unit must always be grounded to earth. Earth connection will have to be done using terminal 3 on the power supply terminal block.

- Ensure that the power supply has enough power capacity for the operation of the equipment.

CONNECTIONS

RS485 B-	RS485 +5V
RS485 A+	
RS485 GND	RS485 SHIELD
CAN GND	CAN SHIELD
CAN L	
CAN H	CAN R

To enable CAN bus termination (R120Ω) pins 1-2 must be connected externally. The RS485 A+ comes with an internal pull-up/bias resistor of 680 Ω enabled by software.
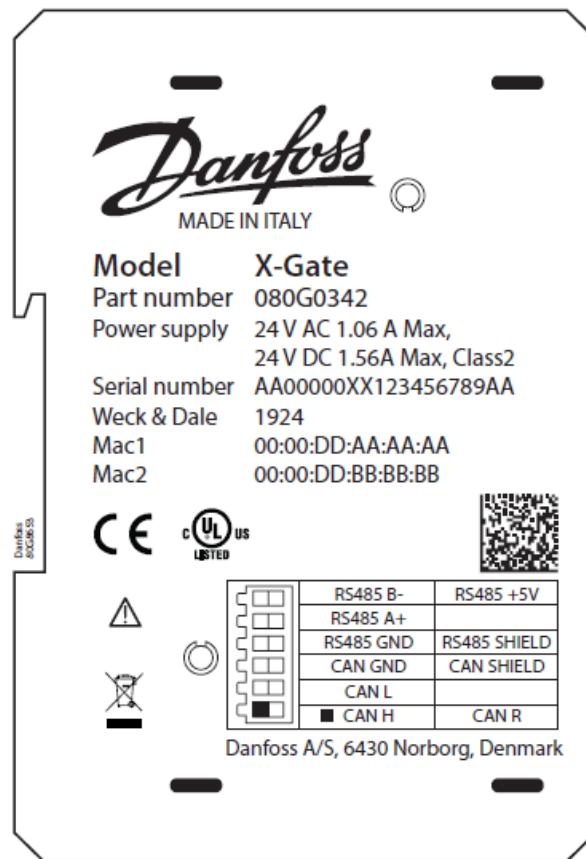
OPTIONAL PLUGIN MODULE

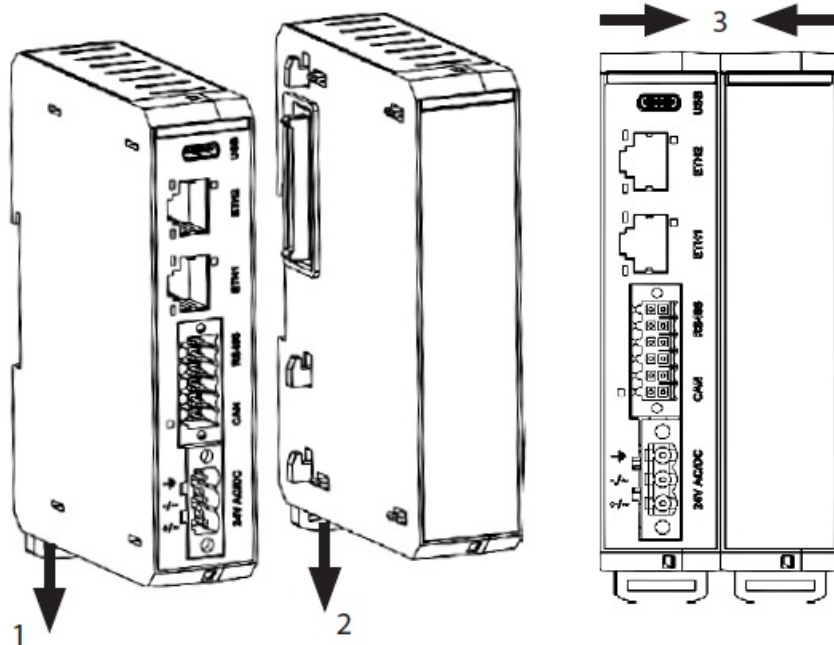The panels have several optional plugin module, multiple modules configurations are possible.

TECHNICAL DATA

Features	Description
Model	X-Gate
CPU	i.MX6UL ARM Cortex A7 Single Core – 528 MHz
Operating System	Linux Yocto
Flash	4GB
RAM	512MB
Real Time Clock (RTC Back-up)	Yes (SuperCAP)
LED	1 – RGB
Ethernet port	2 – 10/100 BaseT
USB port	1 – USB 2.0 OTG (500 mA max., Type C)
RS485 port	1 (isolated, Modbus Master/Slave configuration)
CAN/CAN-FD port	1 (isolated)
Expansion port	Yes
Power supply	24 V AC/DC (not isolated) +/-15%
Current Consumption	1.06A max. at 24 V AC, 1.56 A max. at 24 V DC
Input Protection	Electronic Fuse
Operating Temp	-20 – +60 °C
Storage Temp	-30 – +70 °C
Operating / Storage Humidity	5 – 90% RH, non-condensing
Protection Class	IP20
Weight	0.140 Kg

PRODUCT IDENTIFICATION

RS485 B-	RS485 +5V
RS485 A+	
RS485 GND	RS485 SHIELD
CAN GND	CAN SHIELD
CAN L	
■ CAN H	CAN R

Danfoss A/S, 6430 Norborg, Denmark
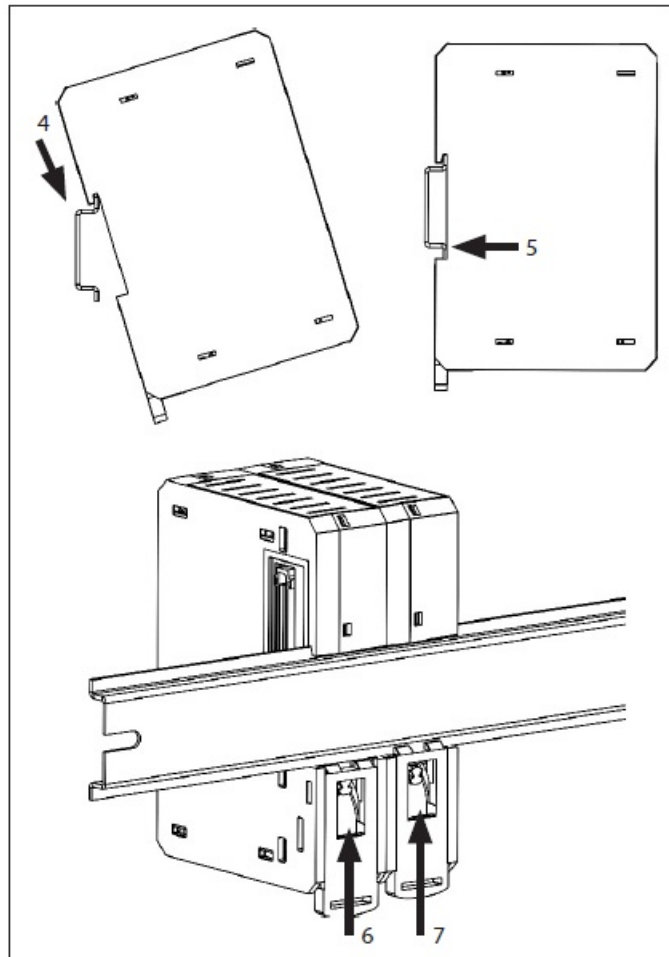
INSTALLATION PROCEDURE

The products have been designed in compliance with:

- EN 61000-6-3
- EN 61000-6-2
- FCC Part 15 Subpart B Class A
- ICES-003 issue7 Class B

This device cannot be disposed of as a domestic waste but according to WEEE European Directive 2012/19/EU

User Manual available on su: **www.danfoss.com**

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Documents / Resources

Danfoss 80G8650 Gateway Unit [pdf] Installation Guide
80G8650, 80G8651, 80G8607, 80G8652, 80G8653, 80G8650 Gateway Unit, 80G8650, Gateway Unit, Unit

References

- **Engineering Tomorrow | Danfoss**
- **Engineering Tomorrow | Danfoss**
- **User Manual**