Technical brochure

# Programmable controller MMIGRS

Danfoss' range of universal MCX programmable controllers offers the functionality and reliability you need to get the best out of your heating, ventilation, air-conditioning and refrigeration (HVAC/R) equipment. With the MCX range, Danfoss is widening the concept of programmability and applying it to as many environments as possible

MMIGRS is MCX's family remote interface. It's fitted with a graphic display that allows a complete customization of the user interface. The connection with every unit of the MCX range is made through the CANbus network. All the information about the user interface is loaded inside the MCX controller. MMIGRS is powered from the controller which it is connected to and automatically shows its user interface; but it can also show the interface of any other device connect to the same network
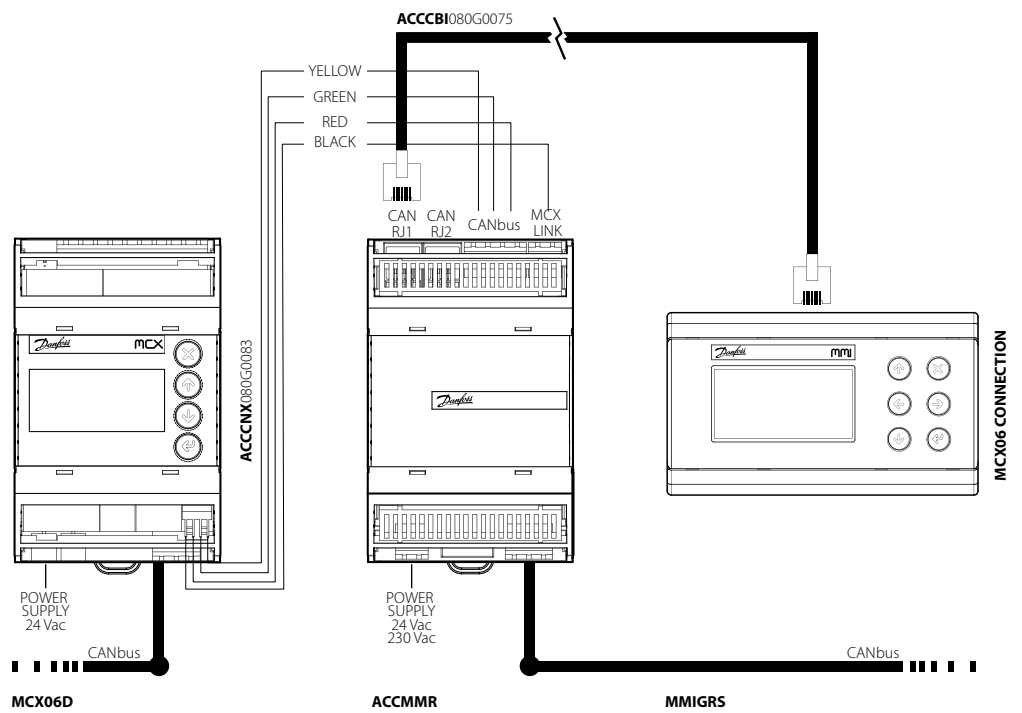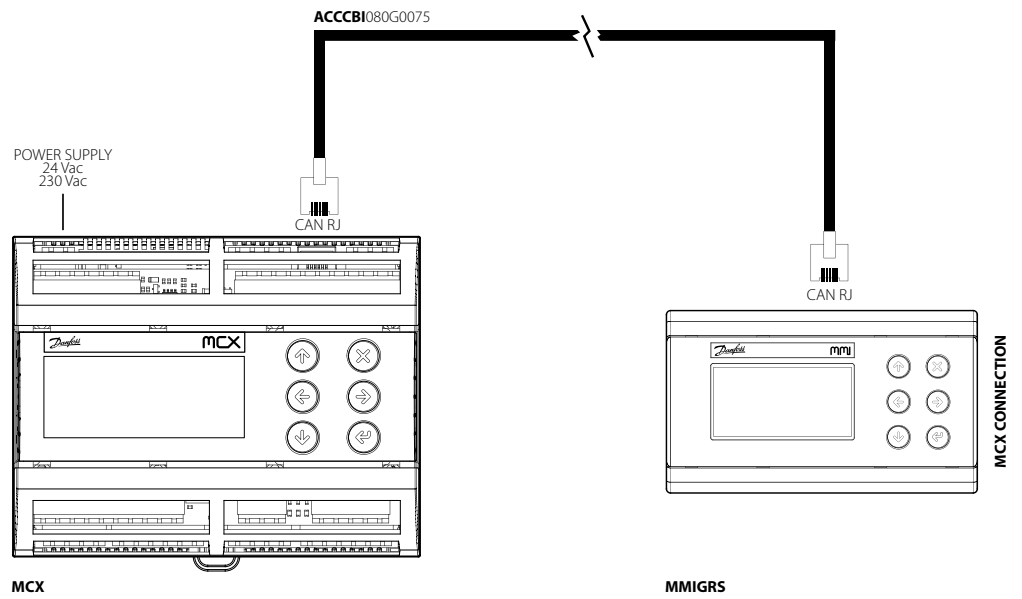
**Features MMIGRS**

- Full graphic LCD display, 128x64 dots resolution
- Easy connection to MCX CANbus network through telephone plug
- No need to be programmed: information about user interface is loaded from the MCX controller

- Powered by the MCX which it is connected to
- Dimensions 88x150 mm
- Panel and wall mounting
- IP64 protection rating on panel version

| Programmable | Protection degree | CAN bus | Graphic display | Multilanguage | MYK connection |
|---|---|---|---|---|---|
| PRG | IP64 | CAN | | | |

**General features**

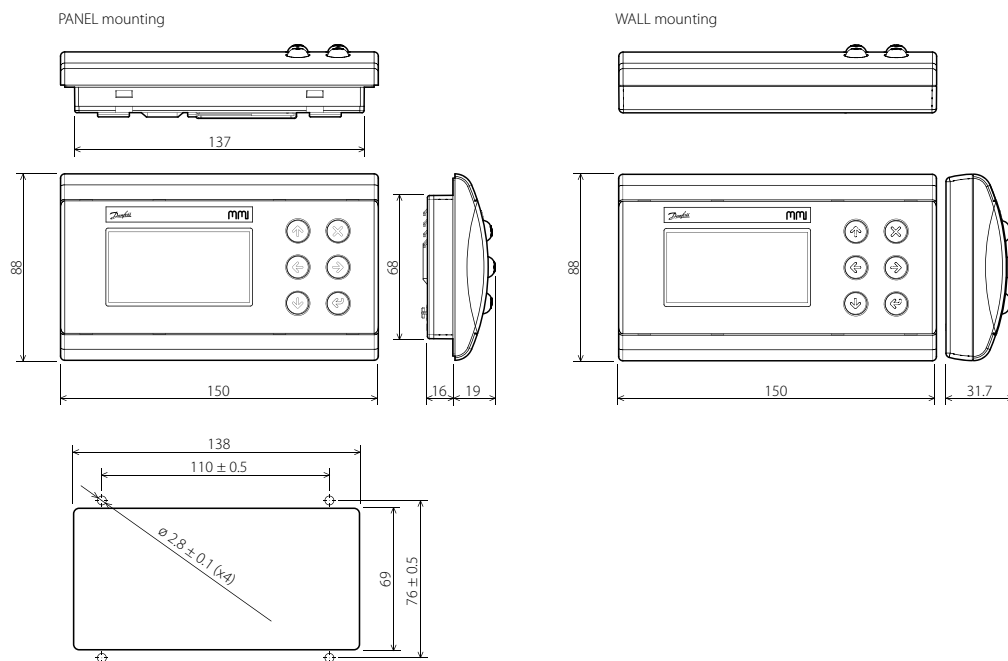| FEATURES | DESCRIPTION |
|---|---|
| Power supply | From the MCX through the RJ11 telephone connector |
|  | 12 Vdc ± 20% external power supply |
|  | 12 Vac ± 15% external transformers |
|  | Maximum power consumption: 1.5 W |
| Plastic housing | Self extinguishing V0 according to IEC 60695-11-10 and glowing/hot wire test at 960 °C according to IEC 60695-2-12 |
| Ball test | 125 °C according to IEC 60730-1. Leakage current: ≥ 250 V according to IEC 60112 |
| Operating conditions | CE: -20T60 / UL: 0T55, 90% RH non-condensing |
| Storage conditions | -30T80, 90% RH non-condensing |
| Integration | In Class I and/or II appliances |
| Index of protection | IP64 ~ NEMA3R (panel version) |
|  | IP40 (wall version) |
| Period of electric stress across insulating parts | Long |
| Resistance to heat and fire | Category D |
| Immunity against voltage surges | Category I |
| Software class and structure | Class A |
| Approvals | CE compliance:<br>This product is designed to comply with the following EU standards:<br>- Low voltage guideline: 73/23/EEC<br>- Electromagnetic compatibility EMC: 89/336/EEC and with the following norms:<br>  • EN61000-6-1, EN61000-6-3<br>   (immunity for residential, commercial and light-industrial environments)<br>  • EN61000-6-2, EN61000-6-4<br>   (immunity and emission standard for industrial environments)<br>  • EN60730 (Automatic electrical controls for household and similar use) |
|  | UL approval:<br>- UL file E31024 |

**Connection diagram:**
**MCX and MCX06 connection**

ACCCBI080G0075

POWER SUPPLY
24 Vac
230 Vac

CAN RJ

CAN RJ

**MCX**

**MMIGRS**

MCX CONNECTION

ACCCBI080G0075

YELLOW
GREEN
RED
BLACK

CAN    CAN    CANbus    MCX
RJ1    RJ2              LINK

ACCCNX080G0083

POWER
SUPPLY
24 Vac

CANbus

POWER
SUPPLY
24 Vac
230 Vac

CANbus

**MCX06D**

**ACCMMR**

**MMIGRS**

MCX06 CONNECTION

**Connection**

| CONNECTORS | TYPE | DESCRIPTION |
|---|---|---|
| CAN connector | 6/6 way telephone RJ11 plug type | |

## Dimensions

PANEL mounting

WALL mounting

## User interface

| TYPE | FEATURES | DESCRIPTION |
|---|---|---|
| LCD display | Display | Graphical LCD blue transmissive |
| | Backlight | White LED backlight adjustable via software |
| | Contrast | Adjustable via software |
| | Format | 128x64 dots |
| | Active visible area | 66.5x33.2 mm |
| Keyboard | Number of keys | 6, white LED backlight keys individually managed via software |
| | Keys function | Set by the application software |
| Mounting | Panel mounting | (see the drilling template in figure), using the screws supplied in the packaging |
| | Wall mounting | On a standard 3 modules box |

## Ordering

| DESCRIPTION | CODE NR. |
|---|---|
| MMIGRS, REMOTE DISPLAY, PANEL, S | 080G0010 |
| MMIGRS, REMOTE DISPLAY, WALL, S | 080G0020 |

## Accessories

| DESCRIPTION | CODE NR. |
|---|---|
| ACCCNX, WIRED CONNECTORS FOR MCX06D TO MMIGRS, 2m CABLE | 080G0083 |
| ACCCBI, TELEPHONE CABLE USER INTERFACE CONNECTOR, 0.8m CABLE | 080G0074 |
| ACCCBI, TELEPHONE CABLE USER INTERFACE CONNECTOR, 1.5m CABLE | 080G0075 |
| ACCCBI, TELEPHONE CABLE USER INTERFACE CONNECTOR, 3m CABLE | 080G0076 |
| ACCCBI, TELEPHONE CABLE USER INTERFACE CONNECTOR, 6m CABLE | 080G0077 |