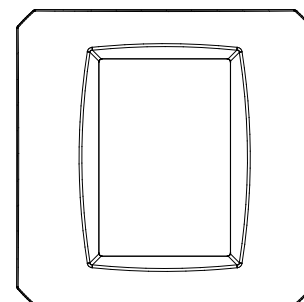**AMiT**

Industrial
Control Systems

AMR-OP70B/xx

Programmable on-wall controller

- **Graphical black & white LCD**
- **Touch screen operation**
- **RS485 communication interface**
- **Room temperature measurement**
- **On-wall mounting**
- **Power supply 24 V DC**

TECHNICAL DATA

Display	Graphical black & white LCD
Resolution	(64 × 132) pixels (non-symmetric point)
Display area	(58 × 38) mm
Backlight / lifetime	LED / min. 50 000 hours *)
Temperature measurement	Electronically
Measurement range	-10 °C to 50 °C
Temperature measurement precision	±0.5 °C
Settling time	45 min.
RTC	CPU
Precision (25 °C)	±20 ppm
RAM + RTC back-up	Replaceable lithium battery CR1632
Battery lifetime	4 years in normal environment
Operation	
Touch panel	Resistive
Communication	RS485
Galvanic isolation	No
Number of devices on segment RS485	256
Power supply	10 V DC to 30 V DC
Maximum power consumption	40 mA at 24 V DC
Others	
Ingress protection rate	IP20
Operating temperature range	-10 °C to 50 °C
Maximum ambient humidity	< 95 %, non-condensing
Mounting	On the wall
Weight	0.10 kg
Dimensions (w × h × d)	(90 × 90 × 32) mm
Programming	DetStudio / EsiDet

*) Luminance drop to 50 %

ORDERING INFORMATION

AMR-OP70B/xx	On-wall controller
MN1	Tool for dismounting AMR-OP70B/xx cover

	rear cover colour		front cover colour	
AMR-OP70B/01	grey	RAL 7005	white	RAL 9003
AMR-OP70B/02	ivory	RAL 1013	ivory	RAL 1013
AMR-OP70B/03	grey	RAL 7005	grey	RAL 7005
AMR-OP70B/04	white	RAL 9003	white	RAL 9003
AMR-OP70B/05	brown-red	RAL 8015	brown-red	RAL 8015
AMR-OP70B/06	light blue	RAL 5014	light blue	RAL 5014
AMR-OP70B/07	dark blue	RAL 5011	dark blue	RAL 5011

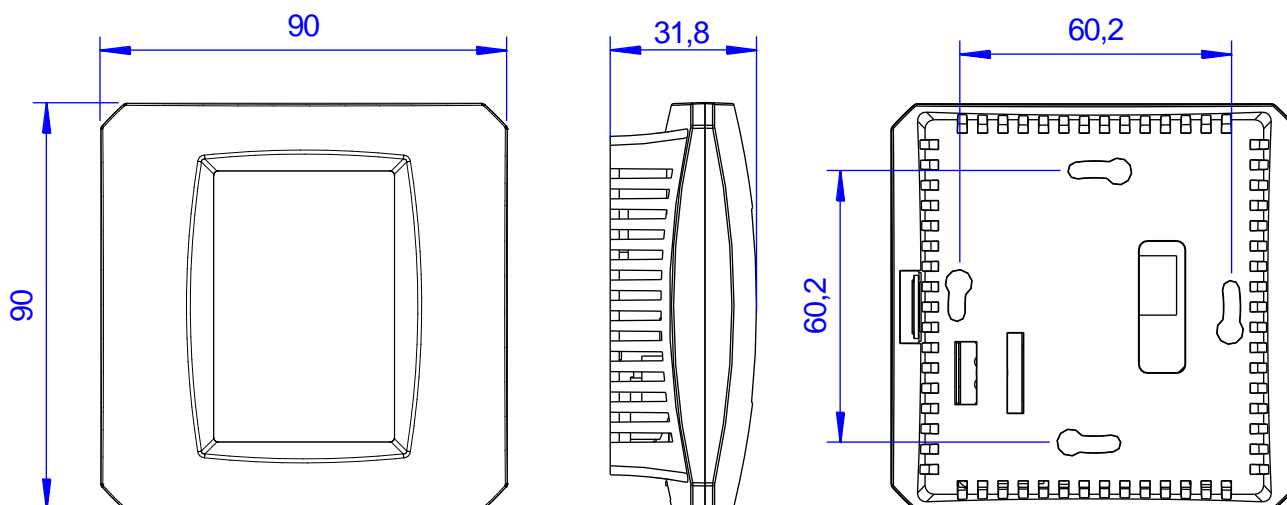Note: small recesses on the surface and colour inhomogeneity are not a reason for warranty claim.
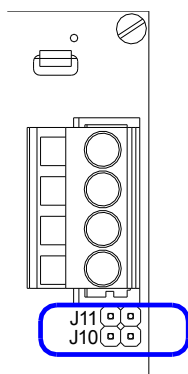
RECOMMENDED DRAWING SYMBOL

AMR-OP70B/xx

AMiT

PWR, RS485

1	(+24V)
2	(GND)
3	(B)
4	(A)
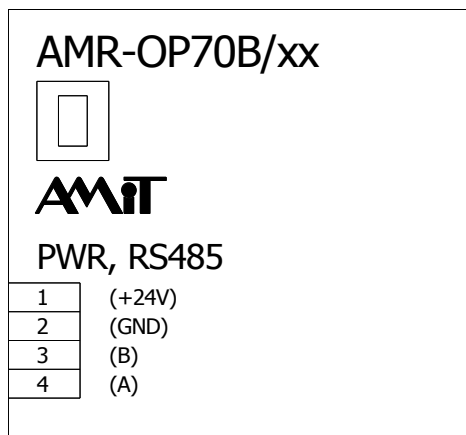
TERMINALS IDENTIFICATION

Terminal	Description
1	Power supply +24 V DC
2	Ground
3	RS485 interface, signal B
4	RS485 interface, signal A

MECHANICAL DIMENSIONS

RS485 CONFIGURATION JUMPERS

Each unit on RS485 network must have properly set the terminating resistors. The configuration jumpers, located under the cover, near the RS485 connector, are used for termination settings. If the jumpers are placed, RS485 termination is connected. The terminal stations must have always connected RS485 termination, intermediate stations – disconnected.
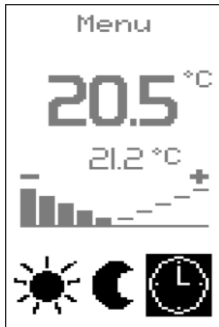
Jumper	Description
J10	Signal A idle state + termination
J11	Signal B idle state + termination

AMR-OP70B/xx

Programmable on-wall controller

OPERATION VARIANTS

Variant 1

Room mode

Highlighted icon indicates selected mode. Relevant mode is activated by pressing on a particular icon.

Icon	Mode	Description
☀	Comfort	Controlled to constant (comfort) temperature.
☾	Energy saving	Controlled to constant (energy saving) temperature.
🕐	Auto	Controlled according to time plan, adjusted by correction value.

Variant 2
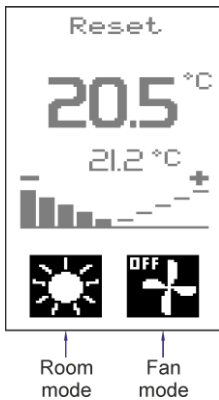
Room mode, fan mode

Three states can be switched by pressing the room mode icon.

Icon	Mode	Description
☀	Comfort	Controlled to constant (comfort) temperature.
☾	Energy saving	Controlled to constant (energy saving) temperature.
🕐	Auto	Controlled according to time plan, adjusted by correction value.

Five states can be switched by pressing the ventilation icon.

Icon	Mode	Description
ᴼᶠᶠ✛	OFF	Fan is off.
ᴬ✛	Auto	Fan is controlled automatically.
ᴵ✛	Speed 1	Fan speed is set to level 1.
ᴵᴵ✛	Speed 2	Fan speed is set to level 2.
ᴵᴵᴵ✛	Speed 3	Fan speed is set to level 3.

Room mode   Fan mode

Variant 3

Room mode, switch

Three states can be switched by pressing the room mode icon.

Icon	Mode	Description
☀	Comfort	Controlled to constant (comfort) temperature.
☾	Energy saving	Controlled to constant (energy saving) temperature.
🕐	Auto	Controlled according to time plan, adjusted by correction value.

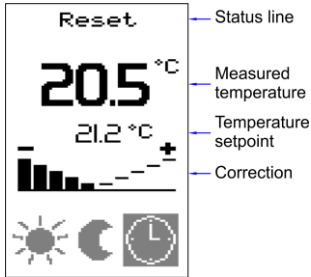Two states can be switched by pressing the power-off icon.

Icon	Mode	Description
Off	Off	Switch is off.
On	On	Switch is on.

Room mode   OFF switch

CONTROLLER AMR-OP70B/xx OPERATION

Basic screen

Basic screen design depends on application variant. This variant is set during the installation by an applicator. Basic screen part is common for all variants, part depends on chosen mode.

Common icons

Reset — Status line

20.5 °C — Measured temperature

21.2 °C — Temperature setpoint

— Correction

Status line

Room temperature is always displayed on LCD independently of communication.

Status	Description
Reset	Controller restart. No communication took place since the restart.
Error	Communication error. Time longer than Guard Time elapsed since last communication.
Menu	Flawless unit operation.

Measured temperature

Room temperature is always displayed on LCD independently of communication.

Error 20.5 °C 21.2 °C
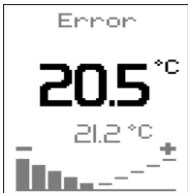
Temperature setpoint

Temperature is sent by the superior control system. During correction change, the hyphens are displayed until new value setpoint is received from the superior control system. The value could be shown with several second delays.

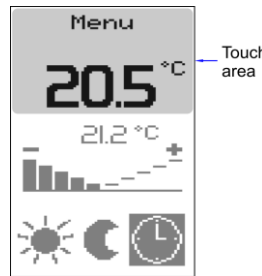20.5 °C 21.2 °C

Correction bar graph

Bar graph is displayed only for the room in the mode **Auto**. It is not displayed in other modes (**Energy saving** and **Comfort**).

Correction value is changed to plus or minus by pressing left or right bar graph part. After each correction change, instead of temperature setpoint, the hyphens are displayed until new temperature setpoint is received from the control system.

21.2 °C
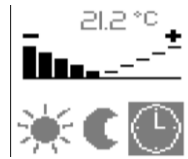
User menu

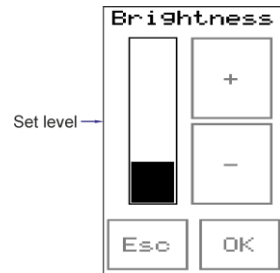User menu is called-out by pressing the area shown below.
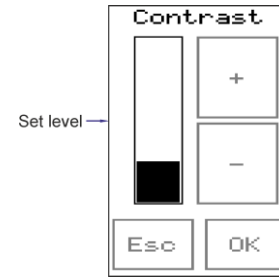
Menu 20.5 °C — Touch area

21.2 °C

Menu items

Brightness — Brightness
Contrast — Contrast
Language — Language
Display — Screensaver
Help — Firmware
Return — Back

Brightness

The display brightness can be set by item **Brightness**.

Brightness — Set level — + — − — Esc — OK

Contrast

The display contrast can be set by item **Contrast**.

Contrast — Set level — + — − — Esc — OK

Language

Item **Language** allows switching between Czech and English texts on the controller.

Language — Language selection — ◉ Česky — ○ English — Esc — OK

Display

Item **Display** allows setting the time, for which the screen saver is activated.

Dimming time — 0 — Set time — − — + — Esc — OK
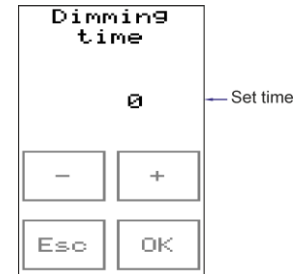
Following values can be set:

Value	Description
-1	Screensaver is off.
10 to 120	Time in seconds, when the screen saver is activated.

Help

Selecting item **Help** shows a firmware version loaded into the on-wall controller.

AMR-OP7x firmware: ver. 1.0.1 AMiT spol. r.o. www.amit.cz Return — Back

Return

It is possible to return back to the basic screen of on-wall controller by pressing item **Return**.

Screen saver

If the screen saver time is set (by item Display in user menu), the screen saver is displayed after pre-set delay of inactivity (screen saver is displayed, backlight is off).

Error — Status line
20.5 °C — Measured temperature
21.2 °C — Temperature setpoint
18:20 — Time
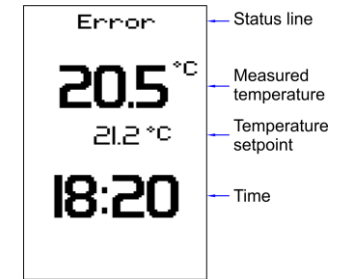
After the first touch of screen, backlight is turned on; after the second touch – basic screen is displayed.

Further information can be found in operational manual (**amr-op70bxx_g_en_xxx.pdf**). Documentation and examples can be downloaded from **www.amitomation.com**.