

Terminal dimensions

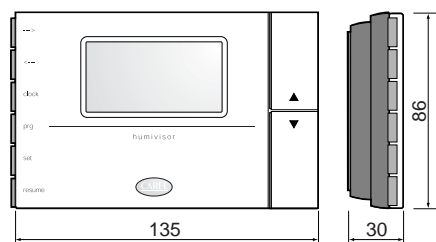


Fig. 1

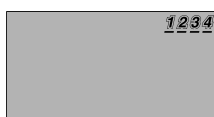


Fig. 2

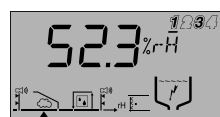


Fig. 3



Fig. 4

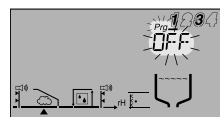


Fig. 5

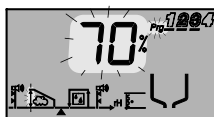


Fig. 6



Fig. 7



Fig. 8



Fig. 9



Fig. 10



Fig. 11



Fig. 12



Fig. 13



Fig. 14



Fig. 15

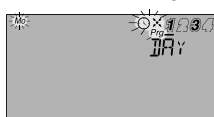


Fig. 16



Fig. 17



Fig. 18



Thank you for your choice. We trust you will be satisfied with your purchase.

Introduction

The Humivisor terminal is a Carel microprocessor-based electronic supervisor (code URT0000000), which allows up to 4 series U humidifiers to be controlled at the same time (humiSteam, heaterSteam, gaSteam, humiFog).

The unit allows the following functions:

- setting of the number of humidifiers connected;
- setting of the parameters/functions of the terminal;
- setting of the current time and day;
- setting of weekly on/off times with up to two cycles per day;
- display of the current time and day and the on/off status of the output timer;
- global display of the on/off and alarm status of all the humidifiers connected;
- detailed display of the status of one humidifier;
- setting of the main parameters and enabling/disabling of the humidifier;
- display and setting of all the humidifier parameters, with password access.

Description buttons

- > - display next value/parameter
- <--- - display previous value/parameter
- clock - clock display/setting
- prg - display/setting humidifiers on/off - parameter display/setting
- set - Set-point display/setting - confirm parameter modification
- resume - cancel current operation - silence buzzer - reset alarm

- ▲ - select next humidifier - increase (with autorepeat)
- ▼ - select previous humidifier - decrease (with autorepeat)

First start-up

Before activating the connection to the humidifiers, set their addresses by parameter C3: the value of the address must be 1, 2, 3 or 4.

Check, in addition, that parameters C4 and C5 have been set to the default value.

Physically connect the humidifier or humidifiers required, then move on to the "Activation/De-activation Connection" phase.

The first time the terminal is turned on the flashing message "OFF LINK" appears, indicating that no connection has been made to any humidifier.

On completing the setting or the next time the unit is switched on, the terminal will be in Display Humidifier mode, relative to the humidifier with the lowest address.

To enable the operation of the connected humidifiers they must each be set individually to ON or AUTO, as described in the paragraph "Setting manual or automatic on/off".

Display global humidifier status (Fig. 2)

The digits one 1, 2, 3 and 4 in the top right of the display are used to display the global status of all the humidifiers connected. Each digit features a border, an inside and a dash, which relate to the following information:

- **border:** connection to the humidifier enabled;
- **inside:** humidifier in function;
- **dash:** humidifier selected.

If one or more humidifiers are in an alarm condition or the connection has been interrupted, the relative digit will flash.

If the current alarm does not disable the operation of the unit, the inside of the digit also flashes.

Display selected humidifier (Fig. 3)

The default measurement (selected by the parameter C0 on the humidifier), the current status and any current alarms, relative to the humidifier selected, are displayed.

If the humidifier is disabled, the default measurement is displayed, alternating with the message "- OFF" (only for humidifiers with type H or T control).

If more than one alarm is active, these are displayed in a cyclical sequence.

If the humidifier is being programmed locally (by keypad or remote control), the message "- LOCAL" is displayed. In this case do not modify the humidifier's parameters from the terminal.

The various measurements and parameters featured (see table on parameter display/setting), can be scrolled by pressing the ---> and <--- buttons. After 30 seconds from the pressing of the last button, or pressing "resume", the default is displayed again. The various measurements or parameters are identified by the unit of measure and, where possible, by the flashing of the relative symbol. The number and the sequence of the measurements and parameters which can be displayed is controlled by the humidifier.

During the display of the various measurements, any codes and/or symbols indicating current alarms or humidifier disabled are suspended.

With more than one humidifier connected, the display can scroll from one humidifier to the next, by pressing the ▲ and ▼ buttons.

Setpoint setting (only for humidifiers working in regulator mode) (Fig. 4)

Starting from the default display (press "resume" if necessary to arrive at this point):

1. press "set" for 1 second until the symbol Prg starts to flash, the current value of the Setpoint and the relative symbol are displayed, both flashing;
2. press ▲ or ▼ to modify the value;
3. press "set" or "prg" to confirm the changes and return to the default display.

If no button is pressed for more than 30 seconds or if "resume" is pressed, the unit returns to the default display without confirming the current changes.

Setting manual or automatic on/off (Fig. 5)

Starting from the default display (press "resume" if necessary to arrive at this point):

1. press "prg" for 1 second until the symbol Prg starts to flash and "ON" or "OFF" or "AUTO" appears on the display, flashing, depending on the current mode ("AUTO" only if the clock is enabled);
2. press ▲ or ▼ to change mode as desired;
3. press "set" or "prg" to confirm the changes and return to the default display.

If no button is pressed for more than 30 seconds or if "resume" is pressed, the unit returns to the default display without confirming the current changes.

The off command is equivalent to the disabling of the humidifier (as for the remote disabling contact) and thus disables all the humidifier outputs, including the alarm contact.

The default setting sees the humidifiers in "OFF" mode.

Setting the frequently-used humidifier parameters (Fig. 6)

Starting from the default display (press "resume" if necessary to arrive at this point):

1. press "prg" for 3 seconds (after 1 second the on/off setting phase is accessed) until symbol Prg starts flashing and the current value and the symbol of the first parameter available are displayed, both flashing;
2. press ---> or <--- to scroll the available parameters, identified by the flashing of the relative symbol;
3. press ▲ or ▼ to modify the value of the displayed parameter;
4. press "set" or "prg" to confirm the changes and return to the default display;
5. repeat steps 2, 3 and 4 for other modifications (---> and <--- confirm the value).

If no button is pressed for more than 30 seconds or if "resume" is pressed, the unit returns to the default display without confirming the current changes.

The number and the sequence of the parameters which can be modified depends on the humidifier selected (see table on parameter display/setting). In any case, only the more frequently-used parameters can be set. To display and modify all the parameters of the connected humidifier, a different procedure must be followed (see Setting the humidifier parameters).

Connection activation/de-activation (Fig. 7 - Fig. 8)

Starting from the default display (press "resume" if necessary to arrive at this point):

1. press "set" and "resume" at the same time for 3 seconds until the local programming symbol flashes and the message "SEt LINK" appears (only the general status of the connected humidifiers remains on);
2. press "set" - the dash relative to humidifier 1 flashes - the other dashes are on and the digits (borders and insides) corresponding to the currently connected humidifiers are displayed;
3. press ▲ or ▼ to activate or de-activate the connection to the humidifier identified by the flashing dash, (digit on or off). When the connection is de-activated the display shows "OFF LINK", when it is activated the display shows "On LINK" if communication occurs correctly, otherwise it displays "Err LINK";
4. press ---> or <--- to move the dash to the next or previous humidifier;
5. repeat steps 2 and 3 until the programming is complete;
6. press "set" or "prg" to confirm the changes and return to the default display;

If no button is pressed for more than 30 seconds or if "resume" is pressed, the unit returns to the default display without confirming the current changes.

Terminal setting (Fig. 9)

Starting from the default display (press "resume" if necessary to arrive at this point):

1. press "set" and "resume" at the same time for 3 seconds until the local programming symbol flashes and the message "SEt LINK" appears (only the general status of the connected humidifiers remains on);
2. press ---> or <--- to scroll the available sub-menus, until "SEt REMOT" is displayed
3. press "set"; the value of the first available parameter (see table) and its identifier code are displayed;
4. press ---> or <--- to select the desired parameter;
5. press ▲ or ▼ to modify the value of the selected parameter;
6. press "set" or "prg" to confirm the changes and return to the default display; otherwise, press or and repeat steps 4, 5 and 6 for further modifications.

If no button is pressed for more than 30 seconds or if "resume" is pressed, the unit returns to the default display without confirming the current changes.

Code	Default	Limits	Description
LCD-C	5	1-10	display contrast
LCD-L	5	1-10	display back-lighting luminosity
LCD-T	1	0-10	display back-lighting timer (10 second steps)
KEYS	2	0-2	button back-lighting
BUZZ	1	0-1	buzzer enabling
CLOCK	1	0-1	clock enabling
RESET	0	0-1	enable Reset to humid.

Setting the humidifier parameters (Fig. 10-11-12)

Starting from the default display (press "resume" if necessary to arrive at this point):

1. press "set" and "resume" at the same time for 3 seconds until the local programming symbol flashes and the message "SEt LINK" appears (only the general status of the connected humidifiers remains on);
2. press ---> or <--- to scroll the available sub-menus, until "SEt LOCAL" is displayed;
3. press "set" - the digit 0 and the message "CODE" appear, and the symbol "prg" and the local programming symbol flash;
4. press ▲ or ▼ to enter the password (77);

5. press "set" to confirm the password (or "resume" to cancel the operation and return to the default display) - the code identifying the first available parameter appears and the programming symbol flashes;
6. press ---> or <--- to scroll the available parameters;
7. press "set" or "prg" to display the value and the unit of measure;
8. press ▲ or ▼ to modify the displayed value;
9. press "set" or "prg" to confirm the changes, or "resume" to cancel and re-display the identifier code;
10. repeat steps 6, 7, 8, and 9 for further modifications;
11. press "resume" to return to the default display.

If no button is pressed for more than 30 seconds, point 11 is automatically performed.

The codes used refer to the parameter codes described in the humidifier manual.

Parameter C3 relative to the serial address of the humidifier can also be identified in this way. Naturally, as soon as the new address is confirmed, the connection to the humidifier is interrupted, accompanied by the relative malfunction signal. To reset the unit the new address must be activated, as described in "Connection activation/de-activation".

This feature is especially useful for controllers UR*C, URC* and CP*, which do not allow access to the parameters from the keypad or the remote control.

In this case, as the serial address of all the humidifiers is pre-set to 1, simply activate connection 1, set parameter C3 of the humidifier to the desired value and, then, activate the associated connection.

Clock display (Fig. 13)

Starting from the default display (press "resume" if necessary to arrive at this point):

1. press "clock" - the time and day are displayed, and the clock symbol flashes - the On/Off status of the timer is also displayed;
2. press "resume" or wait 30 seconds to return to the default display.

Clock setting (Fig. 14-15)

Starting from the default display (press "resume" if necessary to arrive at this point), or from the clock display:

1. press "clock" per 3 seconds until the current time and day are displayed, the clock and the local programming symbols flash, the message TIME appears and the hour digits flash;
2. press ▲ or ▼ to modify the hour;
3. press "set" or "prg" to confirm the changes and end the setting phase; otherwise, press ---> to confirm the changes and move on to the minutes - the message TIME is displayed and the minute digits flash;
4. press ▲ or ▼ to modify the minutes;
5. press "set" or "prg" to confirm the changes and end the setting phase - otherwise, press ---> to confirm the changes and move on to the day setting - the message DAY appears and the current day flashes;
6. press ▲ or ▼ to modify the day;
7. press "set" or "prg" to confirm the changes and end the setting phase - otherwise, press ---> and repeat the previous steps for further modifications.

If no button is pressed for more than 30 seconds or if "resume" is pressed, the unit returns to the default display without confirming the current changes.

Weekly timer setting (Fig. 16-17)

Starting from the default display (press "resume" if necessary to arrive at this point), or from the clock display:

1. press "clock" and "prg" at the same time for 3 seconds until the message DAY appears and the day to be programmed (Monday), the clock symbol, the local programming symbol and Prg flash;
2. if the day displayed is not that desired, press ▲ or ▼ to scroll the days;
3. press ---> to confirm the changes and move on to the next field - the day or days selected remain on, the message ON1 appears and the relative time flashes;
4. press ▲ or ▼ to modify the time if necessary;
5. press ---> to confirm the changes and move on to the next field - the message OFF1 appears and the relative time is displayed;
6. press ▲ or ▼ to modify the time if necessary;
7. press ---> to confirm the changes and move on to the next field - the message ON2 appears and the relative time is displayed;
8. press ▲ or ▼ to modify the time if necessary;
9. press ---> to confirm the changes and move on to the next field - the message OFF2 appears and the relative time is displayed;
10. press ▲ or ▼ to modify the time if necessary;
11. press ---> to confirm the changes and move on to the next field - the message DAY is displayed and the day to be programmed flashes (the day after the previous);
12. repeat steps 2 to 11 until completing the desired programming. By pressing ---> or <--- it is possible to set or display the days and the relative times again, before returning to normal operation;
13. press "set" or "prg" to confirm the changes and return to Display mode.

If no button is pressed for more than 30 seconds or if "resume" is pressed, the unit returns to the default display without confirming the current changes.

Using the <--- button instead of the ---> button scrolls the times and days in reverse (... ON2, ON1, previous day, OFF2, OFF1, ON2, ON1, previous day, OFF2, OFF1, ON2, ...).

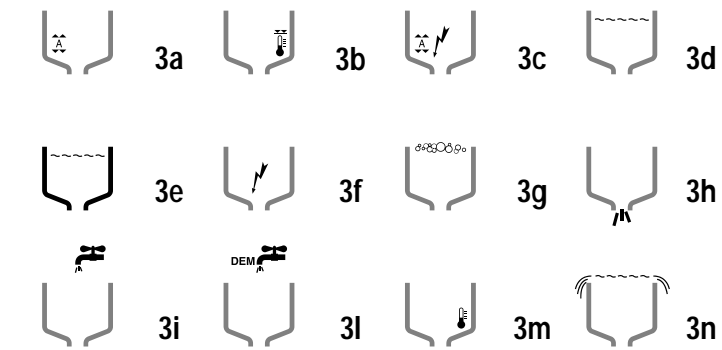
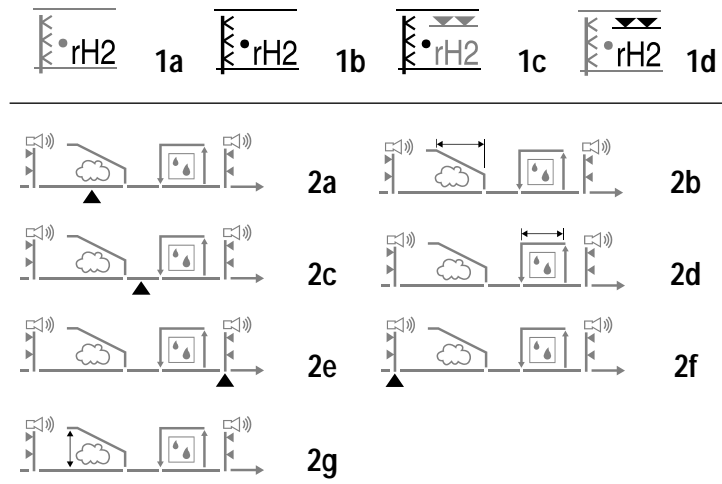
The resolution of the ON and OFF times is 10 minutes.

A maximum of two on and off times are allowed per day.

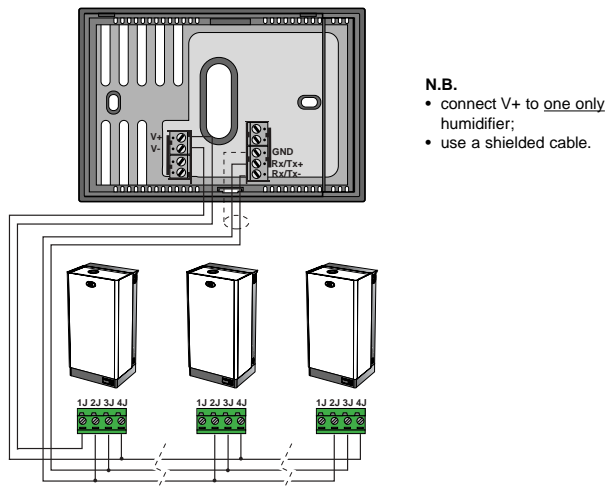
The disabling of an On or Off time is represented by the symbol "—:—".

This symbol is displayed when passing from 24:00 to 00:10 or vice-versa.

References



Connection



N.B.
 • connect V+ to one only humidifier;
 • use a shielded cable.

Fig. 19

Terminal mounting

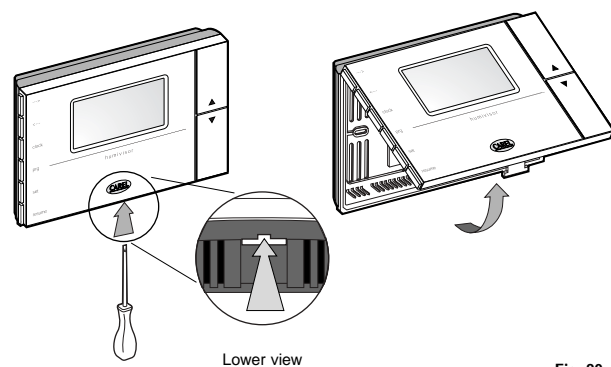


Fig. 20

The days can be programmed individually or in groups. When moving onto a new day, this is automatically updated according to the day or days programmed in the previous step:

Day/s being programmed (select with ▲ or ▼)	Proposed following day (scan with --->)	Proposed previous day (scan with <---)
Monday	Tuesday	Sunday
Tuesday	Wednesday	Monday
Wednesday	Thursday	Tuesday
Thursday	Friday	Wednesday
Friday	Saturday	Thursday
Saturday	Sunday	Friday
Sunday	Monday	Saturday
Monday...Sunday (all)	Monday	Sunday
Monday...Saturday	Sunday	Sunday
Monday...Friday	Saturday	Sunday
Saturday,Sunday	Monday	Friday

The on and off commands controlled by timer are only sent to the humidifiers which have been set to AUTO.

Alarms

Terminal alarms

The following alarms can be caused by terminal:

- No active connection (initial status)**
No connection has been made to any of the four possible humidifiers, the message "OFF LINK" flashes. The message disappears automatically as soon as at least one connection is enabled.
- Communication error**
If a humidifier, whose connection has been enabled, does not respond, the border of the relative digit flashes, and if the humidifier is selected, the message "Err LINK" is displayed. The message is reset by pressing "resume", if communication has been re-established.
- Parameter memory**
Each time the terminal is turned on and each time the internal parameters are modified, including the timer, the correct operation of the parameter memory is checked. This check is performed when the data is both read and written. Two different alarms are detected and signalled:
 "Err CKSUM" in the case of loss of stored data;
 "Err MEMO" in the case of memory malfunction.
 In both cases the alarm is signalled, connection to the humidifiers is interrupted and the default values are set for the terminal parameters.
 In the first case, the terminal parameters can be displayed and even reset. Disconnect the power to the terminal and check that when turning on again the alarms do not return.
 In the second case, disconnect the power to the terminal and check that when turning again on the alarms do not return.
- Clock**
In the case of a clock malfunction the message "Err CLOCK" is displayed. The terminal can still be used, excluding the automatic on/off function. To reset the alarm the clock must be disabled by setting the terminal accordingly. It is however recommended, before disabling the clock, to try to reset the clock itself, then disable the clock and disconnect the power to the terminal. The next time the terminal is turned on, re-enable the clock and check that the alarm does not return.
- Automatic on/off not allowed**
If one or more humidifiers have been set to AUTO and the clock is disabled, the message "Err CLOCK" is displayed. In this case, the humidifiers set to AUTO remain in the current status (ON or OFF) without being updated.
As well as the alarm message being displayed, the buzzer also sounds. Pressing the "resume" button silences the buzzer. The buzzer can be permanently disabled by setting the terminal accordingly.

Alarms relating to the connected humidifiers (Fig. 18)

These alarms are generated locally by the connected humidifiers.
 If the humidifier in the alarm condition is not selected, the only active elements are: the general humidifier alarm signal (flashing digit) and the buzzer (if enabled).
 If the humidifier in the alarm condition is selected and the unit is in default display mode, the relative code and graphic symbol are displayed. This may alternate with: the signalling of any other current alarms, the humidifier disabled signal, or the display of the default measurement.
 The alarm code is displayed as follows: "Enmm", where 'n' indicates the type of humidifier (1= immersed electrode; 2= electric heater; 4= atomiser; 5= gas); 'mm' indicates the type of alarm detected (see table on alarm codes). To silence the buzzer, press "resume".
 During the alarm the terminal can however be used as normal, yet in this case the signalling of the alarm is suspended until returning to the default display.
 The general humidifier alarm (flashing digit) always remains on in any case. The alarm signal remains until the humidifier is reset locally or, if enabled, from the terminal.
 If the terminal is enabled for the reset command, the unit must first be in default display mode. Press "resume" for at least 2 seconds, until the display flashes and the buzzer emits a short beep. The command is performed on the humidifier in the normal manner.

Tables

Parameter display/setting

The symbols displayed are activated directly by the humidifiers. Any modifications to the software of the humidifiers, or the inclusion of new humidifiers, may therefore imply variations or additions to the indications described in the table.

Parameter	UOM	Flashing Symbols	Comments
ambient probe (d1)	% R.H.	none	display only only in independent regulation mode with ambient probe
command signal (d1)	%	none	only in slave regulation mode
outlet probe (d2)	% R.H.	1a	display only only in independent regulation mode with outlet probe
production in prog. (d3)	Kg/h Lb/h	none	display only
hour counter (d4)	h	none	display only
conductivity (d5)	µs	none	display only
water temperature (d6)	°C/°F	⬇	display only only for electric heater and gas humidifiers with pre-heating enabled
current (d6)	A	none	display only only for immersed electrode humidifiers
outlet pressure (d6)	bar/ PSI	none	display only atomizers only
recirculating water temperature (d7)	°C/°F	none	display only atomizers only
1 st -maintenance flag	none	none	display only atomizers only 0= first 50 hours of operation not yet elapsed 1= first 50 hours of operation elapsed
rated production (d9)	Kg/h Lb/h	⬇	display only
setpoint (S1)	% R.H.	2a	only in independent regulation mode with ambient probe
differential (P1)	% R.H.	2b	only in independent regulation mode with ambient probe
dehumidification dead zone (P5)	% R.H.	2c	only in independent regulation mode with ambient probe and dehumidification management enabled
dehumidification differential (P67)	% R.H.	2d	only in independent regulation mode with ambient probe and dehumidification management enabled
high threshold alarm (P2)	% R.H.	2e	display only only in independent regulation mode with ambient probe
low threshold alarm (P3)	% R.H.	2f	display only only in independent regulation mode with ambient probe
setpoint at outlet (P7)	% R.H.	1b	only in independent regulation mode with outlet probe
differ. at outlet (P8)	% R.H.	1c	only in independent regulation mode with outlet probe
threshold alarm at outlet (P9)	% R.H.	1d	display only only in independent regulation mode with outlet probe
max. production (P0)	%	2g	

Alarm display

The codes and relative symbols displayed are activated directly by the humidifiers: please, refer to the manual of the humidifiers for a complete list of alarms.

Cylinder status display

Not included for atomising humidifiers.

Graphic symbols	Description	Comments
3i	filling in progress	
3l	filling with demineralised water in progress	only where included
3h	discharge in progress	
3f	production in progress	
3m	pre-heating in progress	only for electric heater or gas humidifiers
3d	correct level	
3g	foam present or foam elimination in progress	for electrode humidifiers, if flashing slowly, indicates drop in production caused by the previous foam detection
3n	too full drop in production due to cylinder full	for electric heater or gas humidifiers

Atomiser status display

Only for atomising humidifiers.

Graphic symbols	Description	Comments
⬆	it indicates any atomizing humidifier	always on
⚙	atomization in progress	
⚡	VFD on	only atomizers with VFD

Regulator status display

Graphic symbols	Description	Comments
⬆	independent regulation with ambient humidity probe	
⬆	independent regulation with ambient temperature probe	
⬆	independent regulation with ambient probe and outlet humidity probe	
⬆	dehumidification management enabled	
⬆	humidification request (ambient probe below set-point)	
⬆	humid. not requested (ambient probe above set-point)	
⬆	dehumidification request (ambient probe above set dehum. threshold)	only with dehum. management enabled

Technical specifications

Power supply: 24Vdc ±10%
Maximum consumption: 4W (150mA)
Display: Custom LCD with programmable contrast and intensity of back-lighting
Buttons: 8 back-lit buttons
Clock: RTC with battery, minimum life 10 years
Serial communication: RS-485 standard, two lead "twisted" and shielded cable (max 1000m) 9600 baud, 8 bit/character, 2 stop-bit, no parity
Software structure: class A
Case: plastic, self-extinguishing according to UL94-V0 (category D), PTI of insulating materials > 250V
Mounting: wall
Index of protection: IP30
Operating conditions: T50 (0/50°C)
Storage conditions: -10T65 (-10/+65°C)
Operating humidity: 20%/80% R.H., non-condensing
Storage humidity: 0%/80% R.H.
Environmental pollution: normal
Connections: screw terminals for leads with max. cross-sect. of 1.5mm² and min. cross-sect. of 0.5 mm²
Classification according to protection against electric shocks: Class III
Period of stress across the insulating parts: long
Operating life: 60,000 hours

