ⒼⒷ Operating Instructions
MIL 72 A/1 digi 42
MIL 72 E/1 digi 42

WA-EKF 2921/10.97/S:MMS/D:Ko/80.10.0698.7/97/00538

1. Putting into operation

Electrical units may only be installed and assembled by a skilled electrician. (The term "skilled electrician" is defined in VDE 0105).
Notes:
The unit contains well-designed electronic components which are largely protected against external interference. However, it must be remembered that extremely high interference voltage peaks can be superimposed on the mains voltage, depending on the installation site. Interference which, despite all internal protective measures, can also effect an electronic unit also arises when contactors are switched. In order to guarantee the greatest possible operational reliability, the following details must be observed:

a) In the case of larger systems, a suitable varistor or RC element must be used to provide interference suppression for contactor coils directly switched by the time switch.

b) If inductive direct current loads are switched, a suppressor diode must be installed.

c) Inductive loads and particularly fluorescent lamps place particular demands on the output contacts. In each individual case, check whether it is appropriate to install an isolating relay or contactor.
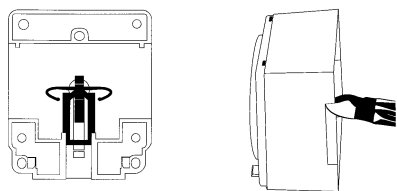
2. Assembly and connection

2.1 Surface-mounting for the A version

Fit the base in accordance with local conditions.
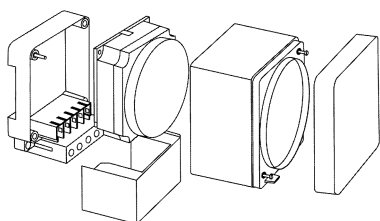
2.2 Multi-terminal busbar with accessory latch

Push the lock, article number 01.46.0036.6, onto the base. It must engage. Break out a part of the casing as required (see diagram).
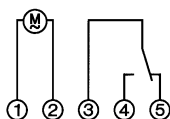

2.3 Flush-mounting for the E version

Push the unit into the recess from the front.
Push both securing latches (A) inwards with a screwdriver and turn them clockwise. Push the supplied plugs (B) into the holes.
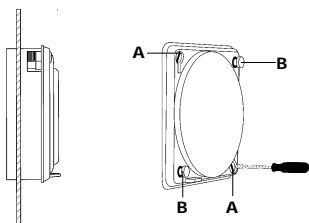
2.4 Connection for the E version

See unit imprint/circuit diagram
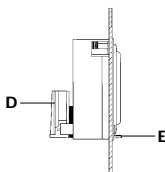(6,3 mm flat connector in accordance with DIN)

2.5 Installation and connection with flush-mounting base as an accessory for the E version

See 2.3 for installation.
Connect the flush-mounting base (D) in accordance with the unit imprint/circuit diagram, attach it to the rear and secure it with the screws (E)
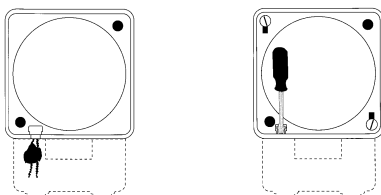
article number
01.79.0002.2.

3. Sealing with sealing glass – IP 40

Seal using the accessory sealing glass – attach and seal the sealing glass, article number 01.78.0016.6.
The sealing glass can only be removed with a suitable tool.


4. Operating the time switches

The steps marked with the symbol ▶ are necessary to carry out a switching program.

▶ 4.1 Reset

Press the **"Reset"** key with a pencil or similar object. This sets the time switch to its basic setting.

– before every restart
– to delete all switching times and the time (with the exception of the standard program)

The following appears after approximately 2 seconds:
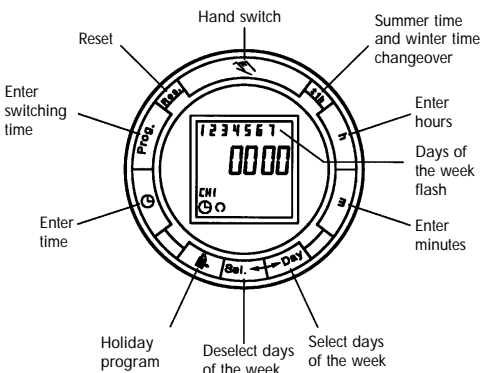
▶ 4.2 Entering the time and current day of the week

❶ After pressing the **"Res"** key (see 4.1):

❷ During the summer time period: press the **"±1h"** key once.

❸ Keep the **"🕒"** key pressed during steps ❹, ❺ and ❻.

❹ With the **"h"** key: enter the hours

❺ With the **"m"** key: enter the minutes

❻ With the **"Day"** key: enter the current day 1 = Mo … 7 = Su

❼ Release the **"🕒"** key

The colon now flashes at one second intervals.

> Note:
> If the **"h/m"** keys are pressed for longer than 2 seconds, the display will enter fast-forward scroll mode.

▶ 4.3 Entering the switching times

42 memory locations are available
Each switching time occupies 1 memory location.

❶ Keep pressing the **"Prog."** key until a free memory location **"– – : – –"** is shown in the display.

❷ Select the switching functions **" ◉"** (ON) or **" ○"** (OFF) with the **"✎"** key.

❸ With the **"h"** key: enter the hours

❹ With the **"m"** key: enter the minutes

If a switching command is to be executed every day, proceed with step ❺. If 1 switching command is to be executed only on one day or on certain days skip step ❺ and continue with step ❻.

❺ Save with the **"Prog."** key   **or**

❻ With the **"Day"** key, select 1 day on which the switching command is <u>not</u> to be carried out (cursor flashes)

❼ Confirm this day with the **"Sel."** key (day of the week and cursor flash)

❽ Press the **"Day"** key (day is deselected).

Repeat steps ❻, ❼ and ❽ for every day to be deselected.

❾ Save with the **"Prog."** key (the next free memory location is displayed) **or**

❿ Save with the **"⌚"** key.

The time switch goes over to automatic mode and displays the current time.

Begin every additional switching time and the associated switching state ◉ = ON or ○ = OFF again with 4.3.

> Note:
> If an input is incomplete, the segments still not selected are displayed flashing

If you have deselected a day on which the switching command should be carried out,

❶ Reselect the deselected day with the **"Day"** key (day of the week and cursor flash).

❷ Confirm this day with **"Sel."** (cursor flashes).

❸ Press the **"Day"** key (day is reselected).

❹ Save with the **"Prog."** key (the next free memory location is displayed) **or**

❺ Save with the **"⌚"** key.

> Note:
> Note what position the switch is in, ON ◉or OFF ○.
> Depending on the switching program and the time of day, select the desired switch position with the key ✍.
> (For channel 1 and/or 2) e.g. ✍ ◉

5. Additional functions

5.1 Summer time and winter time setting
● Press the **"±1h"** key once.

5.2 Manual switch "✍"
The current switching state can be changed at any time with the **"✍"** key.
Use of this manual override facility does not alter any of the programmed information.

Automatic Mode ⌚	Manual Mode ✍	Continuous Operation ◉ ○
⌚ ◉ = ON	○ ✍ = OFF	◉ = Continuous ON
⌚ ○ = OFF	◉ ✍ = ON	○ = Continuous OFF
The switching times correspond to the entered program.	If the current switching state is changed manually, the next switching command is again executed automatically according to the entered switching program	You can only return to automatic mode from the ◉ and ○ switching modes by pressing the **"✍"** key.

5.3 Reading the programmed switching times
❶ Press the **"Prog."** key several times:
  – displays all entered switching times starting with the first memory location.
  – the first free memory location **"– – : – –"** is then displayed.
  – the number of memory locations still free is then displayed
  If the memory locations are occupied, the following appears in the display: **"FR 00 "**

❷ Press the **"⌚"** key:
The time switch changes to automatic mode and displays the current time.

5.4 Changing the programmed switching times
❶ Keep pressing the **"Prog."** key until the switching time to be changed is displayed.

❷ The new data can then be entered as described in Point 4.3.

> Note on saving switching times:
> If programming is <u>not</u> completed with the **"⌚"** key after the switching time is entered (1.4), the complete switching command is still automatically saved after approximately 90 seconds. The time switch then changes to automatic mode and shows the current time again

5.5 Deleting individual switching times
❶ Keep pressing the **"Prog."** key until the switching time to be deleted is displayed.

❷ Set to "– –" with the **"h"** or **"m"** key and then press the **"⌚"** key for about three seconds.

The switching time is deleted and the current time is displayed after the key is released.

5.6 AM/PM time display
If the **"±1"** key and the **"h"** key are pressed simultaneously, the time display is switched to AM/PM mode (used mainly in English-speaking countries).

5.7 Holiday program 🏖

> Note:
> The holiday program has priority over the standard week program. The holiday program can only be entered if all seven days of the week (1234567) are selected.

Enter switching times for the holiday period as described under 4.3. Whilst programming, the "🏖" key must be pressed to denote a holiday instruction.

The **"🏖"** key must be pressed for each switching time. Next, save the holiday switching times with the **"Prog."** or **"⌚"** key..

Entering the start and duration of the holiday program

❶ After entering the switching times for the holiday program

❷ Press the **"🏖"** key once. The following image appears:

Cursor of the current day of the week flashes — 1   🏖
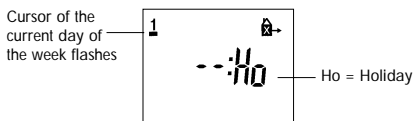
-- Ho —— Ho = Holiday

Image I

❸ If the holiday program is to start on a different day to the current one – max. 6 days ahead – use the **"Day"** key to select the day on which the holiday program is to commence.

If the holiday program is to be executed for up to max. 99 days, continue with steps ❹ + ❺.

If the holiday program is to be executed for an unlimited period, leave out step ❹ and continue with step ❺.

❹ Enter the required number of holiday days with the **"Sel."** key (1 to max. 99).

❺ Press the **"⌚"** key to save the entries.

If the current day of the week was entered as the holiday program start, the following appears:
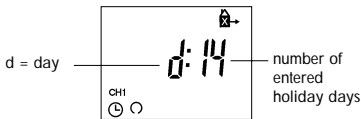
d = day —— d:14 —— number of entered holiday days

CH1 ⌚ ○

Image II

Image II remains until the holiday days have passed, for example d:10, d:09, d:08 .... etc.

Pressing the **"⌚"** key again and holding it down now allows the day of the week, the time and the <u>current</u> switching state – "◉" = ON or "○" = OFF – to be checked.

If a day of the week other than the current day was entered as the holiday program start, the current time is displayed after the **"⌚"** key is pressed. The holiday program is then started at midnight at the start of the selected day of the week and its duration is displayed (Figure II)

After the programmed holiday days have expired, the current time appears in the display.

Aborting the holiday program prematurely

<u>If the holiday program has already started:</u>

● Press the **"🏖"** key once

<u>If the holiday program has not yet started:</u>

● Press the **"🏖"** key twice

6. Technical data

Connection	see unit imprint
Switching capacity	see unit imprint
Ambient temperature	–10 °C to +55 °C
Running reserve	150 h at +20 °C
Memory locations	42
Shortest switching time	1 min.
Programmable	every minute
Protection	IP 20