Panasonic

Technical Description

MEW00529

Revision 1

Addressable 2 voltage outputs unit 3364

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1 Introduction

This document[1] describes the Addressable 2 voltage outputs unit **3364**.

Also the shorter expression **AOU** might be used in this document.

For more information see chapter "General description", page 5.

[1] Original file name: K:\PRO\FIRE\EBL\Doc\Eng\MEW00529 (Rev 1).doc

2 Definitions / Explanations

Definitions / explanations / abbreviations / etc. frequently used or not explained elsewhere in the document.

C.i.e. Control and indicating equipment (=control unit)

C.U. Control unit (=Control and indicating equipment)

S/W Software

H/W Hardware

3 General description

The Addressable 2 voltage outputs unit 3364 can be used in the systems EBL512, EBL128 and EBL1000. Two 3364 units and one External power supply 3366 are intended to succeed the current Addressable 4 voltage outputs unit 2262.

The 3364 unit is connected to a COM loop, i.e. it is monitored from the c.i.e.

3.1 Addressable 2 voltage outputs unit 3364

Figure 1. Addressable 2 voltage outputs unit 3364 and the supplied grey plastic protection cover.

The Addressable 2 voltage outputs unit 3364 consists of a p.c.b. mounted in a black plastic housing with screw terminals for all connections. A grey plastic protection cover (with 10 cable inlets) is supplied.

The 3364 unit can be used in different modes, see chapter "Mode setting", page 9.

4 Inputs / Outputs / Connectors

All connections are done on 14 screw terminals. See also chapter "Connections", page 11.

4.1 COM loop

A COM loop is connected to the screw terminals 1-4:

- **1**. (L / SA) COM loop in
- **2**. (C / SB) COM loop in
- **3**. (L / SA) COM loop out
- **4**. (C / SB) COM loop out

Up to 1.5 mm^2 conductor area can be used.

4.2 24 V DC power supply, Earth & /Mains OK inputs

External 24 V DC power supply[2] is connected to the screw terminals 5-8:

- **5**. +24 V power supply. (Allowed voltage: 18-30 V DC.)
- **6**. 0 V
- **7**. Earth (For future use only!!)
- **8**. /Mains OK. To be connected to the corresponding output (J7:4) on the 3366 unit. Triggers the fire door closing function (ABDL)[3]. This input is normally low.
  High input (max. 4.5 V, 12 mA) = Ext. power supply is powered by its backup battery, i.e. no mains. The 3364 unit's fire door output (VO2) will then be powerless after 30 sec.
  NOTE! If this terminal is not connected to a 3366 unit (J7:4) it has to be connected to 0 V (i.e. terminal 6).

Up to 1.5 mm^2 conductor area can be used.

4.3 Programmable supervised voltage outputs (VO0 & VO1)

Screw terminals 9-12:

Two programmable supervised 24 V DC outputs (VO0 & VO1) are individually programmable like any other programmable output in the EBL system respectively. The outputs are intended for alarm devices

[2] E.g. External power supply 3366, screw terminals "J7:1-4".

[3] This function is described in the Planning Instructions, Technical Description, etc. for the system / unit respectively.

(e.g. sirens). An end-of-line capacitor (470nF) is to be mounted in the last device alt. a capacitor (470nF) in up to five alarm devices. For each capacitor is also a series diode required, see figure 2, page 11.

- **9**. VO0 (+24 V; supervision voltage ≤ 0.6 V DC)
- **10**. VO0 (0 V)
- **11**. VO1 (+24 V; supervision voltage ≤ 0.6 V DC)
- **12**. VO1 (0 V)

Normally low or high (i.e. 24 V DC) output is programmable.
Max. 1 A on each output.[4]

Calibration of supervised voltage outputs

Calibration has to be done via menu H5/A* in the EBL system respectively. One to five 470nF capacitors have to be connected on each output. A calibration value outside the range (470 to 5x470nF) will generate a fault in the c.i.e.

If the actual value at any time differs from the calibrated value ± a tolerance[5] or if there is a break or short-circuit on the line, a fault will be generated.

4.4 Special voltage output VO2

Screw terminals 13-14:

This output is intended for fire door closing only.

- **13**. VO2 (+24 V)
- **14**. VO2 (0 V)

This "fire door closing output" is as default normally high (24 V DC, max. 1 A[4]) and will be powerless (low) when the programmed control expression is true. (Regarding the fire door closing function, see Planning Instructions for the EBL system respectively). It will also be powerless approx. 30 sec. after:

- the input "/Mains OK" (terminal 8) goes high = Loss of the main power source (230 V AC) in the External power supply 3366
- the COM loop communication is interrupted = no connection / communication with the c.i.e.

(Regarding the output "VO2", see also chapter "Addressable 2 voltage outputs unit 3364 in different systems", page 10.)

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[4] 1 A cont. and 1.4 A during 10 ms. **NOTE!** Electromechanical alarm devices (e.g. alarm bells) may have a very high start up current. See data sheet for the device respectively. For this reason ≤ 6 devices are recommended.

[5] Tolerance = ± 12 % (approx.).

5 Commissioning of a new unit

The address and mode settings require the 3364 unit to be **powered but not connected to a COM loop**.

Regarding connections, see chapter "Connections", page 11.

Here follows a recommended sequence of actions:

1. Mount the unit on the wall etc.
2. Connect the 24 V DC power supply unit, e.g. 3366. (Also the "/Mains OK" connection when required.)
3. Do the address and mode settings according to chapter "Settings", page 9. Use the Address setting tool 3314 (and its connection cable).
4. Do the remaining connections, i.e. the COM loop (in and out) and the required outputs VO0, VO1 and VO2 connections.
5. Put on the plastic protection cover.

NOTE! The 3364 unit has also to be programmed in the EBL system it is connected to. See the chapter for the system respectively.

6 Settings

Since the 3364 unit can be used in different EBL systems it is important to read chapter "Addressable 2 voltage outputs unit 3364 in different systems", 10 before the address and mode settings are carried out.

The address and mode settings require the 3364 unit to be **powered but not connected to a COM loop**. For a recommended sequence of actions, see chapter "Commissioning of a new unit", page 8.

The address and mode settings are carried out at the same time.

6.1 Address setting

The COM loop address is set with the Address setting tool 3314 (and its connection cable). The address can be set between 001 and 127. The unit has an address label where the address is to be written.

NOTE! Regarding the COM loop address, see Planning Instructions for the EBL system respectively.

6.2 Mode setting

Depending on the system and S/W version one of the following modes has to be set:

NORMAL mode: This mode is to be used in system **EBL512** with S/W version ≥ **2.3** and in system **EBL128**. The unit is programmed in Win512 / 128 as an "Addressable 2 voltage outputs unit 3364" (AOU). The unit will in Win512 / 128, via "Check all loop units" be identified as an "Addressable 2 voltage outputs unit 3364" (AOU).

2330 mode: This mode is to be used in system **EBL512** with S/W version ≤ **2.2.x** and in system **EBL1000**. The unit is programmed in Win512 and PLAN1000 respectively as an "Addressable 4 voltage outputs unit 2262 / 2263" (SU4). The unit will in Win512, via "Check all loop units" be identified as an "Addressable 4 voltage outputs unit 2262 / 2263" (SU4).[6]

2312 mode: This mode must not be used for the 3364 unit.

[6] Two 3364 units (in 2330 mode) and one external power supply unit 3366 (in 2330 mode) can "replace" the outgoing 2262 unit. **NOTE!** Each unit has to have its own address, i.e. in total three addresses instead of one address for the 2262 unit.

7 Addressable 2 voltage outputs unit 3364 in different systems

7.1 Systems EBL512 (S/W version ≥ 2.3) & EBL128

NORMAL mode

This mode is to be used for the systems **EBL512, version ≥ 2.3 and EBL128**.

One or more units can be connected to the COM loops. Each unit has to have an address. The address and the mode are set in each unit with the Address setting tool 3314 (and its connection cable).

The 3364 unit require external 24 V DC power supply, e.g. 3366.

7.2 Systems EBL512 (S/W version ≤ 2.2.x) & EBL1000

2330 mode

This mode is to be used for the systems **EBL512, version ≤ 2.2.x and EBL1000**.

Two 3364 units and one power supply 3366 can "replace" the outgoing "Addressable 4 voltage outputs unit 2262 / 2263" (SU4).
The 2262 unit has a built-in power supply, four programmable voltage outputs (0-3) and two special fire door voltage outputs (HOLD1 & HOLD2). (The 2263 unit has no built-in power supply.)

The two fire door outputs (HOLD1 & HOLD2) are not programmable. Instead they "follow" the programmable voltage output 3, i.e. when output 3 is activated the outputs HOLD1 & HOLD2 will also be activated. HOLD1 & HOLD2 are normally high (24 V DC) and will become powerless (low) when activated.

NOTE!

On the 3364 unit the special output "VO2" has no output 3 to follow, as on the output units 2262 / 2263, i.e. a control expression has to be programmed for the output "VO2".

Detailed information for the systems EBL512 (S/W version ≤ 2.2.x) and EBL1000 are found in the document MEW00717 and MEW00534 respectively.

8 Connections

All connections are done on screw terminals.
Up to 1.5 mm^2 conductor area can be used.

See also chapter "Inputs / Outputs / Connectors", page 6.

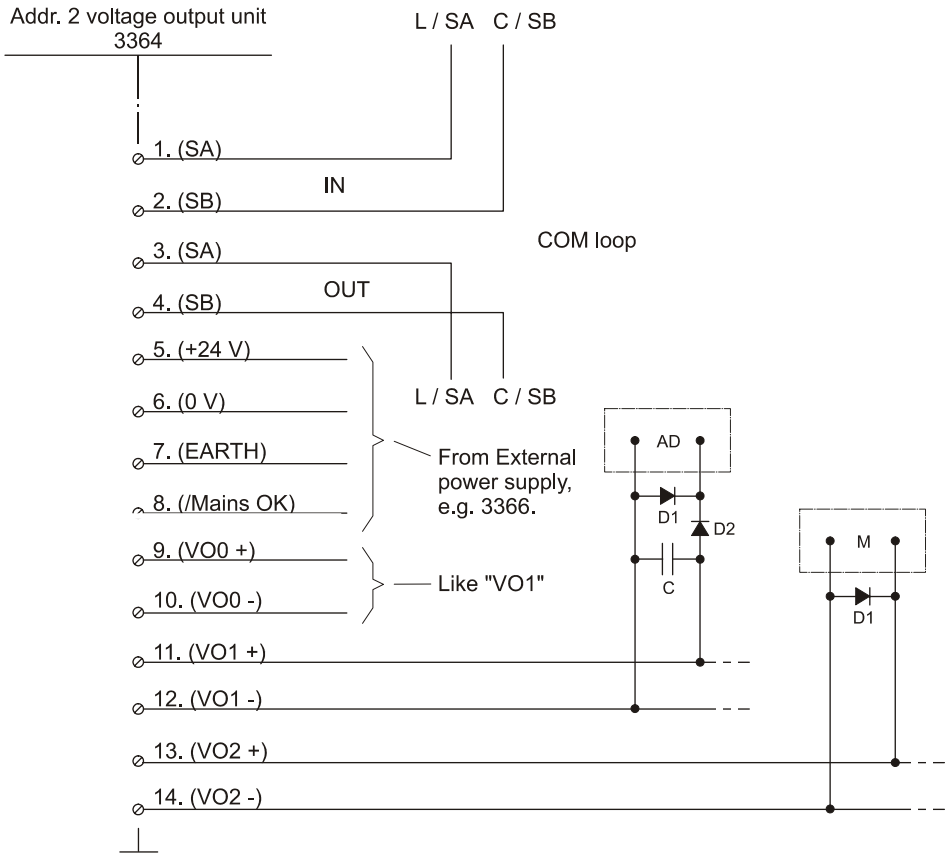

Figure 2. The Addressable 2 voltage outputs unit 3364 connections.
***NOTE!* a.** *Terminal 7 (EARTH) is for future use only, i.e. do not connect to earth.*
b. *If terminal 8 (/Mains OK) is not connected to a 3366 unit (J7:4) it has to be connected to 0 V (i.e. terminal 6).*

VO0 and **VO1**: Programmable and supervised voltage outputs, intended for **A**larm **D**evices (**AD**). **D1** = Protective diode (1N4004), when required. **D2** = Series diode (1N4004). **C** = Capacitor (470nF), to be connected in the last unit (end-of-line capacitor) or to be connected individually in up to five units. Normally low or high output is programmable. 24 V DC and max. 1 A per output.

VO2: Programmable but not supervised special voltage output, intended for fire door closing. **M** = Fire door release magnet with a protective diode "**D1**"connected, see figure 2.) Normally high output. 24 V DC, 1 A.[7]

[7] 1 A cont. and 1.4 A during 10 ms.

9 Technical data

COM loop voltage
Normal / System: **24** V DC
Allowed voltage: 12-30 V DC

COM loop current consumption
Quiescent / active: ≤ 6 mA / ≤ 6 mA

24 V DC input (from ext. power supply)
Normal / System voltage: **24** V DC
Allowed voltage: 18-30 V DC.
0.015 - 3 A.[8] (Depending on the programming and the equipment connected to the voltage outputs.)

24 V DC outputs (VO0-VO2)
Normal / System voltage: **24** V DC (NOTE! The output voltage is depending on the input voltage and also the output current.
Max. 1 A per voltage output [9]

Ambient temperature (°C)
Operating: -10 to +55
Storage: -20 to +60

Ambient humidity (%RH)
Max. 90, non condensing

Ingress protection rating
IP 54 (estimated) with the plastic protection cover
IP 66/67 when mounted in an optional waterproof box 3362

Size L x W x H (mm)
90 x 70 x 32 (the unit itself)
129 x 73 x 45 (the plastic protection cover)
175 x 125 x 75 (the optional waterproof box 3362)

Weight (g)
110 (the unit itself)
45 (the plastic protection cover)

Colour
ABS / Black (the unit itself)
ABS / Grey, N8 Munsell colour code (the plastic protection cover)
Polycarbonate / Grey

Approvals
CE; Conforms to prEN54-18.

[8] 3 A cont. and 4.2 A (3 x 1.4 A) during 10 ms.

[9] 1 A cont. and 1.4 A during 10 ms.

NOTE!

All current consumptions are valid by nominal voltage 24 V DC and by 25°C.

When Ext. power supply 3366 is used: The rated output voltage for the main power source (rectifier) is 24 V ± 1%. Max. 500 mV ripple. The rated output voltage for the second power source (the backup battery) is 18 – 28 V DC. **NOTE!** The voltage will however, decrease to approx. 15 V before the output is switched off in order not to damage the battery.

10 Revision history

The changes in conjunction with the latest revision are, when possible, marked red in the document.

Revision 1

The following chapters are affected:

4.2 Revised and added information.

4.3 Footnote revised.

4.4 Footnote added.

8 Figure text; Added information.
Footnote added.

9 24 V input & outputs: Revised and added information.
Footnotes revised.

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