

SecuriFire

Surveyed output board B3-OM8

Technical Description



Imprint



Notice

This document, T 811 104, is valid only for the product described in Section 1.

This documentation is subject to change or withdrawal without prior notice. The validity of the statements made in the documentation applies until the statements are revised by a new edition of the documentation (T number with new index). Users of this documentation are responsible for staying up-to-date with the current status of the documentation via the editor/publisher. We accept no responsibility for claims against any possible incorrect statements in this documentation which were unknown to the publisher at the time of publication. Handwritten changes and additions have no validity. This documentation is protected by copyright.

Foreign language documentation as listed in this document is always released or changed at the same time as the German edition. If there are inconsistencies between the foreign language documentation and the German documentation, the German documentation is binding.

Some words in this documentation are highlighted in **blue**. These are terms and designations which are the same in all languages and are not translated.

Users are encouraged to contact the editor/publisher if there are statements which are unintelligible, misleading, incorrect, or if there are errors.

© Securiton AG, Alpenstrasse 20, 3052 Zollikofen, Switzerland

This document, T 811 104¹, is available in the following languages:

German	T 811 104 de
English	T 811 104 en
French	T 811 104 fr

Current edition: Index a 14.05.2013 Rd

¹ Reference document: B3-OM8, V 1.0

Safety information

Provided the product is deployed by trained and qualified persons in accordance with technical documentation T 811 104 and the danger, safety and general information in this technical documentation is observed, there is no danger to persons or property under normal conditions and when used properly.

National and state-specific laws, regulations and guidelines must be observed and adhered to in all cases.

Below are the designations, descriptions and symbols of general, danger, and safety information as found in this document.



Danger

If the danger information is not properly observed, persons and property may be endangered by the product and any other installation elements, or the product or installation elements may be damaged to the extent that malfunctions could represent a danger to persons and property.

- Description of which dangers can occur
- Measures and preventative actions
- How dangers can be averted
- Other safety-relevant information



Warning

The product may be damaged if the safety information is not heeded.

- Description of which damage can occur
- Measures and preventative actions
- How dangers can be averted
- Other safety-relevant information



Notice

The product may malfunction if this notice is not observed.

- Description of the notice and which malfunctions can be expected
- Measures and preventative actions
- Other safety-relevant information



Environmental protection / recycling

Neither the product nor product components present a hazard to the environment provided they are handled properly.

- Description of parts for which there are environmental issues
- Description of how devices and their parts have to be disposed of in an environmentally-friendly way
- Description of the recycling possibilities

Document history

First edition Date 27.05.2010

Index “a” Date 14.05.2013

Most important changes compared with first edition:

Section	New (n) / changed (c) / deleted (d)		What / Reason
• all	c	Document number previously T131440, new T811104	Administrative
	d	Programming	Section removed and not replaced
• 3	c	Fault displays	Text adjusted

Table of contents

1	General information	9
1.1	Validity	9
1.2	General information	9
1.3	Compatibility notice	9
2	Design and function	10
2.1	Overview	10
2.2	Redundancy	10
2.3	Interfaces	11
2.3.1	Jumper setting of the load ranges	11
2.3.2	Service pin	12
3	Fault displays	13
4	Connection examples	13
4.1	Connection of monitored outputs	13
4.1.1	Quiescent current monitored output	13
4.1.2	Electronic loads	13
5	Technical data	14
6	Article numbers / spare parts	15
7	List of figures	15

1 General information

1.1 Validity

The following documentation is valid for the SecuriFire B3-OM8 surveyed output board with edition EG072813-A.

1.2 General information

The B3-OM8 ([Output Monitored 8 lines](#)) can be fitted in the unit rack of each SecuriFire 3000 at slots 2 to 9 of the unit rack. When relay boards (B3-REL10, B3-REL16, B3-REL16E) are used, the board must NOT be fitted at slot 9.

1.3 Compatibility notice



Notice

The B3-OM8 is supported beginning with EG072813-A and SecuriFire Studio V 1.0.

2 Design and function

The B3-OM8 surveyed output board is for connecting up to 8 peripheral devices (sirens, flashing lights, etc.). It includes 8 quiescent current surveyed control outputs for max. 1.5 A and for loads of $20\ \Omega$ to $1'000\ \Omega$ in 3 load ranges. It is important to note that the monitored consumers are supplied with power directly from the B5-PSU power supply unit (maximal current 7 A). This must be taken into account when planning the simultaneously actuated surveyed outputs.

2.1 Overview

The B3-OM8 has a front panel made of galvanised sheet steel. The system connection to the B5-BUS is on the rear side using a 64-pin male connector. The outputs are connected on the front side of the board with a 16-pin plug-in terminal.



Fig. 1 B3-OM8

2.2 Redundancy

The B3-OM8 is built to be redundant to ensure system availability. This means that all logical functional blocks with the exception of the peripheral electrical circuits are doubled. Both system halves have a program and data memory which are loaded with the same program when the SCP launches. A [Watchdog](#) continuously monitors both controllers. If there is a fault, a switch is made automatically to the second system, and the operability remains fully in tact in this case.

2.3 Interfaces

- X1** B5-BUS connector
- X2** Plug for surveyed outputs
- X3 to X18** Jumper setting of the load ranges (for outputs OM1 to OM8)
- X19** Service pin

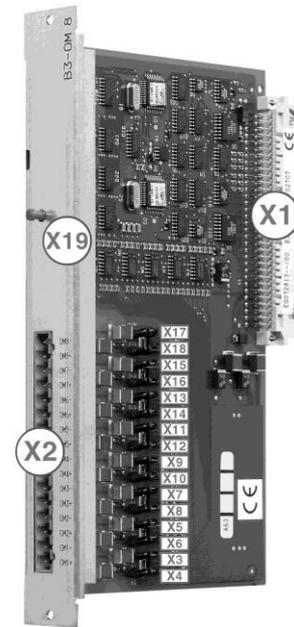


Fig. 2 B3-OM8 interfaces

2.3.1 Jumper setting of the load ranges

Jumper setting X3 to X18 for surveyed outputs:

Delivered with outputs OM1 to OM8 set to load range 354–1'000 Ω (no jumper).

Output	Load range	Line resistance	Jumper inserted
OM1	354–1000 Ω	max. 50 Ω	None
	85–354 Ω	max. 20 Ω	X3
	16–85 Ω	max. 5 Ω	X4
OM2	354–1000 Ω	max. 50 Ω	None
	85–354 Ω	max. 20 Ω	X5
	16–85 Ω	max. 5 Ω	X6
OM3	354–1000 Ω	max. 50 Ω	None
	85–354 Ω	max. 20 Ω	X7
	16–85 Ω	max. 5 Ω	X8
OM4	354–1000 Ω	max. 50 Ω	None
	85–354 Ω	max. 20 Ω	X9
	16–85 Ω	max. 5 Ω	X10
OM5	354–1000 Ω	max. 50 Ω	None
	85–354 Ω	max. 20 Ω	X11
	16–85 Ω	max. 5 Ω	X12
OM6	354–1000 Ω	max. 50 Ω	None
	85–354 Ω	max. 20 Ω	X13
	16–85 Ω	max. 5 Ω	X14
OM7	354–1000 Ω	max. 50 Ω	None
	85–354 Ω	max. 20 Ω	X15
	16–85 Ω	max. 5 Ω	X16
OM8	354–1000 Ω	max. 50 Ω	None
	85–354 Ω	max. 20 Ω	X17
	16–85 Ω	max. 5 Ω	X18

Design and function

Protection: EMC, ESD by means of [Transzorp](#) diodes and high-voltage capacitors
Mechanical: 16-pin plug-in terminal

Jumper for surveyed outputs (X2)

Designation	Output no.	Terminal	Jumper
OM8 -	8	1	X17, X18
OM8+		2	
OM7 -	7	3	X15, X16
OM7+		4	
OM6 -	6	5	X13, X14
OM6+		6	
OM5 -	5	7	X11, X12
OM5+		8	
OM4 -	4	9	X9, X10
OM4+		10	
OM3 -	3	11	X7, X8
OM3+		12	
OM2 -	2	13	X5, X6
OM2+		14	
OM1 -	1	15	X3, X4
OM1+		16	

2.3.2 Service pin

Pulling the service pin changes the surveyed outputs on the board to the QUIESCENT state. The physical state of the controls is re-adjusted to the logical state after inserting the pin. This is how logical tests for checking fire incident controls can be performed. In addition, the service pin provides protection against unintentional triggering during service work.

3 Fault displays

The plain text information of a fault code can be called up with the “Additional info” MIC button (magnifying glass).

4 Connection examples

4.1 Connection of monitored outputs

4.1.1 Quiescent current monitored output

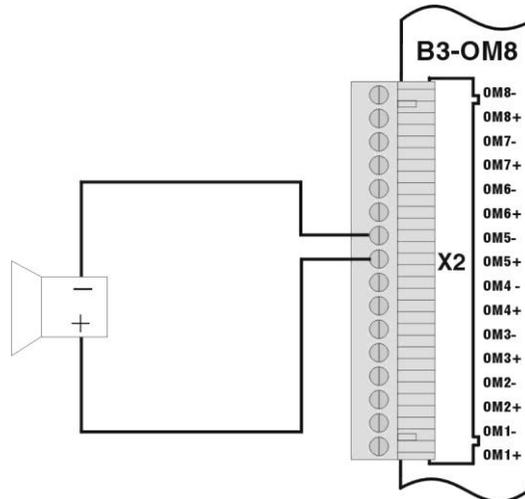


Fig. 3 Quiescent current monitored output

4.1.2 Electronic loads

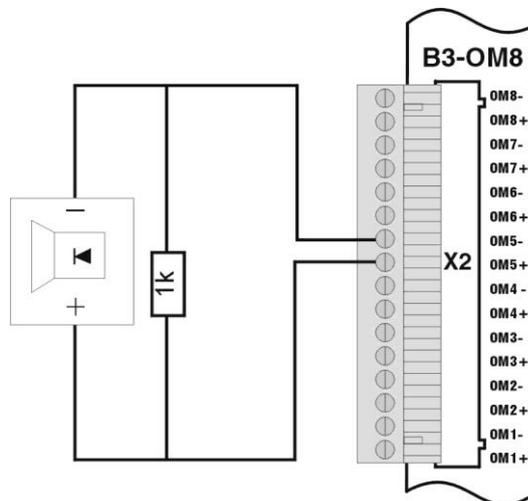


Fig. 4 Electronic loads

5 Technical data

Power supply

The power supply of the B3-OM8 surveyed output board is provided by the B5-PSU power supply unit via the B5-BUS.

Supply voltage:	VP	+22 V to +30 V
	VCC	+5.0 V ±5%

Quiescent current consumption: 9 mA

Power requirement



Notice

In the event of a power failure, the fire alarm control panel is powered by batteries. Depending on the configuration and connected peripheral devices (boards, detectors, sirens, etc.), it is important to ensure that the batteries have sufficient capacity to operate the fire alarm control panel for the specified time (e.g. according to a standard or directive).

The power requirement calculation is performed by entering the battery types in use and the necessary bridging time (according to the local standards and directives) in a power requirement tool.

Environmental conditions

Ambient temperature: -5°C to +50°C, measured at natural convection under the board.

Relative humidity: 5% to 95%, without condensation

Air pressure: ≥ 80 kPa, up to 2,000 m above sea level

Contact protection: IP00, no protection against contact, foreign matter or water

EMC:	EN 50130-4	Electromagnetic compatibility
	EN 61000-6-3	Emission standard for residential environments
	EN 61000-6-2	Immunity for industrial environments
	VdS 2110	Schutz gegen Umwelteinflüsse (Protection against environmental influences)

Security:	VDE 0800	Telecommunications – Security
	VDE 0804	Telecommunications – Additional definitions

Dimensions

Printed circuit board (H x D x W)	195 x 115 x 1.6 mm
Front panel (H x W x D):	215 x 27.5 x 1.0 mm

6 Article numbers / spare parts

Short designation	Art. number CH	Art. number
B3-OM8	115.242 390	EG072813
ST-OM8 Plug for outputs	239.239 674	FG74095
B3-SERVST Service pin	239.242 489	FG78801
Jumper	239.134 287	

7 List of figures

Fig. 1 B3-OM8.....	10
Fig. 2 B3-OM8 interfaces	11
Fig. 3 Quiescent current monitored output	13
Fig. 4 Electronic loads.....	13