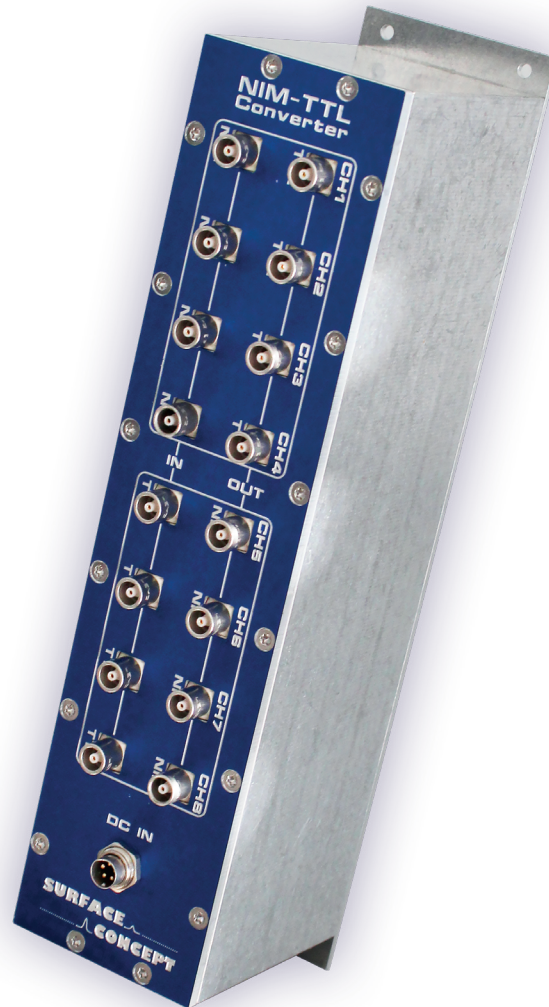

8 Channel Logic Level Translator Module (Release 001)



Manual



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User Manual for the
8 Channel Logic Level Translator Module
Release: 001
Manual Version 2.0
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2 General Information

2.1 General Information

This manual is intended to assist users in the operation of the Release 001 of the 8 Channel Logic Level Translator Module. It is divided into 3 chapters. The chapter "Introduction" contains a brief description of the device. The chapter "Installation" refers to installation and cabling. The other chapters contain amongst others technical details and the description of the device layout.

2.2 Safety Instructions

Please read this manual carefully before performing any electrical or electronic operations and strictly follow the safety rules given within this manual. Surface Concept declines all responsibility for damages or injuries caused by an improper use of the module due to negligence on behalf of the User.

The following symbols may appear throughout the manual:



Note

The "note symbol" marks text passages, which contain important information/hints about the operation of the detector. Follow these information to ensure a proper functioning of the detector.



Caution

The "caution symbol" marks warnings, which are given to prevent an accidental damaging of the detector or the readout system. Do **NOT** ignore these warnings and follow them **strictly**. Otherwise no guarantee is given for arose damages.



The "high voltage symbol" marks warnings, given in conjunction with the description of the operation/use of high voltage supplies and/or high voltage conducting parts. Hazardous voltages are present, which can cause serious or fatal injuries. Therefore only persons with the appropriate training are allowed to carry out the installation, adjustment and repair work.



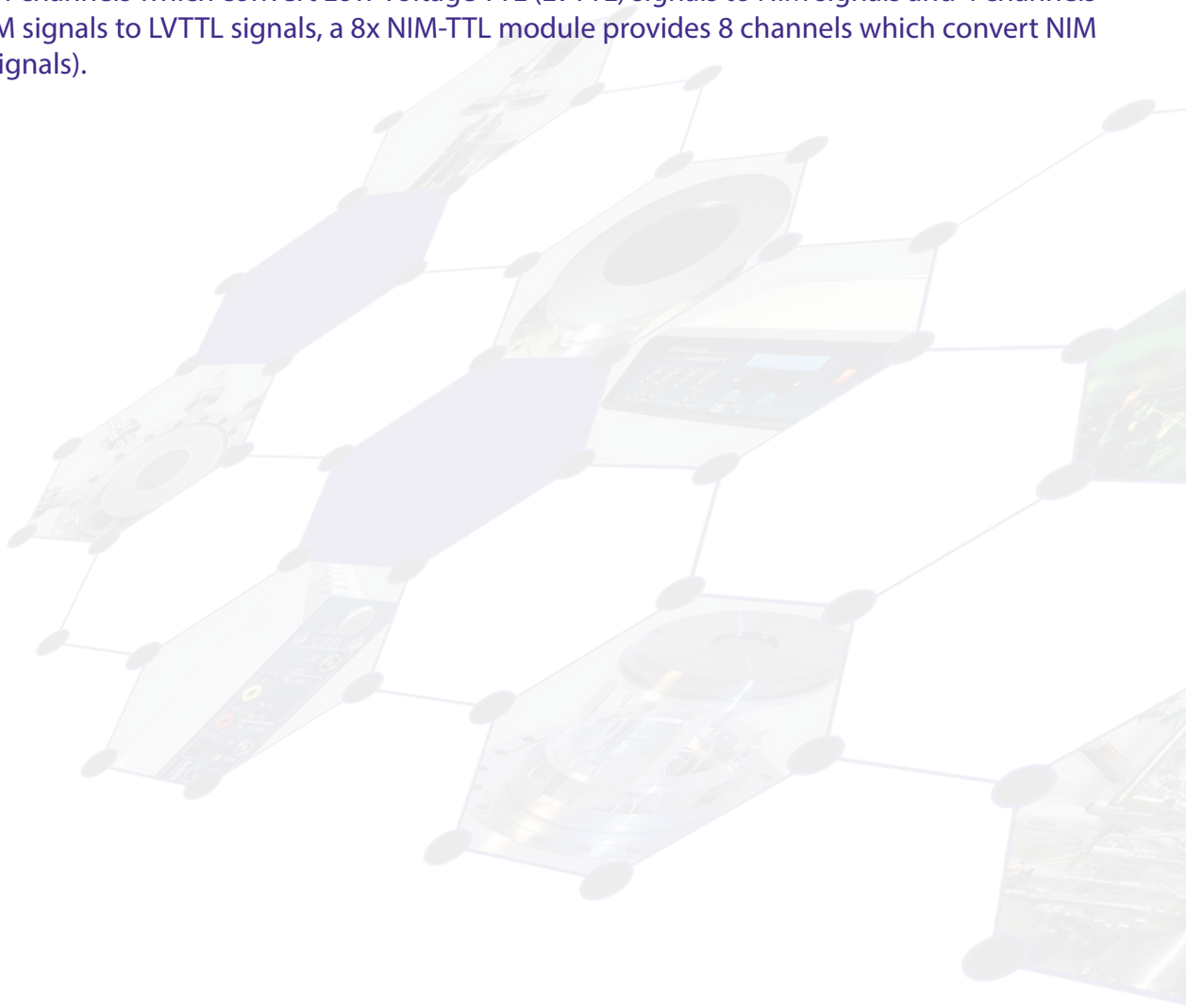
Note

Please also respect the Surface Concept Device Safety Instructions Manual in addition and all given safety rules within it.

2.3 General Overview of the System

The Surface Concept 8 Channel Logic Level Translator Modules are stand alone devices which provide input and output channels for the translation of digital signals. The overall number of 8 channels is fixed while the individual assignment and layout of the single channels is dependent on the specific device release. The input and output connector types are LEMO 00.

Different input/output levels as well as different channel layouts are available (e.g. a 4x NIM-TTL 4x TTL-NIM module provides 4 channels which convert Low voltage TTL (LVTTTL) signals to NIM signals and 4 channels which convert NIM signals to LVTTTL signals, a 8x NIM-TTL module provides 8 channels which convert NIM signals to LVTTTL signals).



3 Installation

3.1 Initial Inspection

Visual inspection of the system is required to ensure that no damage has occurred during shipping. Should there be any signs of damage, please contact our provider immediately. Please check the delivery according to the packing list (see **Table 1**) for completeness.

- 8 Channel Logic Level Translator Module
- 1x Wall Power Supply

Table 1: Packing list for the 8 Channel Logic Level Translator Module

3.2 Cabling

The general connection scheme of the 8 Channel Logic Level Translator Module devices is given in **Figure 1**.

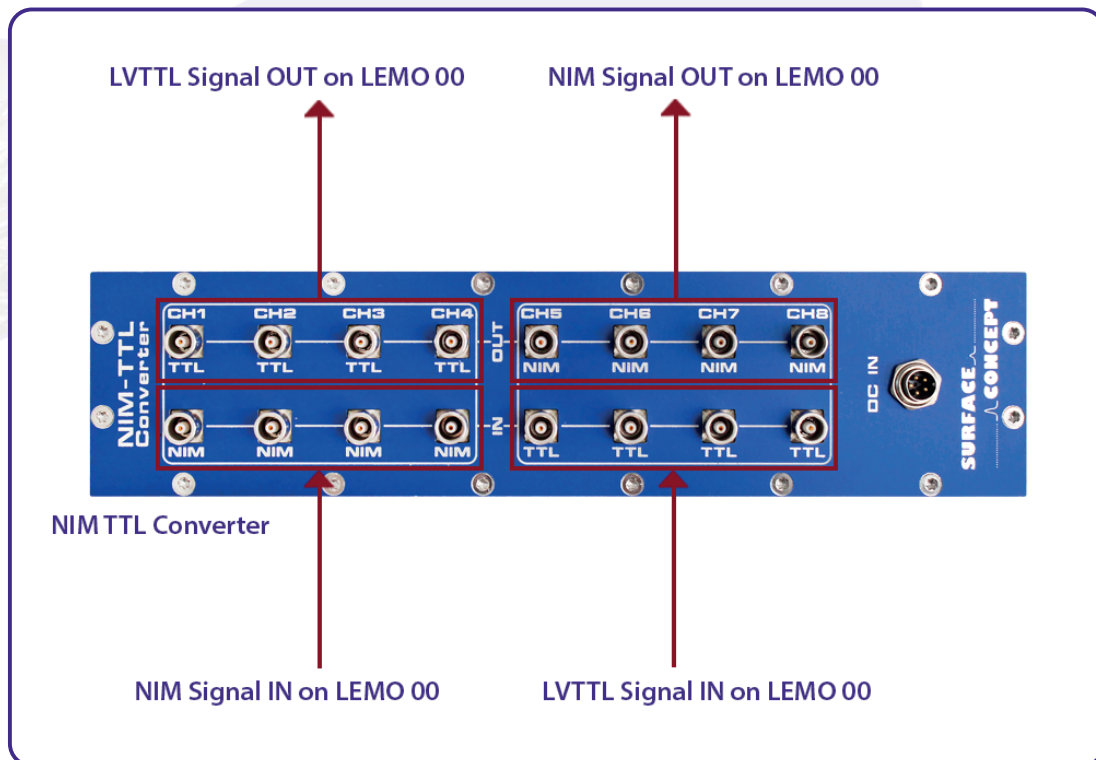
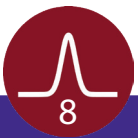


Figure 1: General connection scheme of the 8 Channel Logic Level Translator Module.

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4 Technical Specification

4.1 Layout of Front Panel

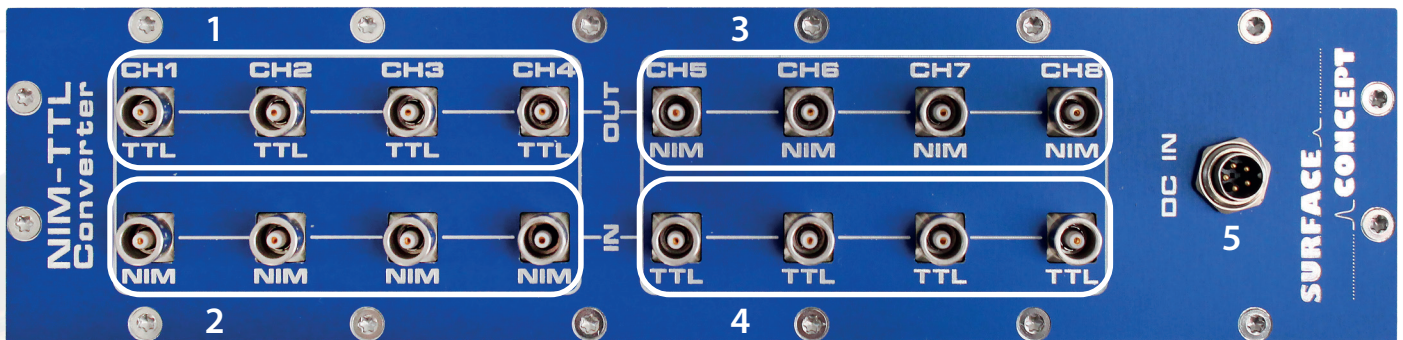


Figure 2: Front Panel of the 8 Channel Logic Level Translator Module (4x NIM-TTL 4x TTL-NIM).

1. LEMO 00 Output for digital signals with LVTTTL level (4x)
2. LEMO 00 Inputs for digital signals with NIM level (4x)
3. LEMO 00 Output for digital signals with NIM level (4x)
4. LEMO 00 Input for digital signals with LVTTTL level (4x)
5. 5 PIN Power Connector

4.2 Input/Output Features

4.2.1 Input Features

Input Signal:

4x LVTTTL (LEMO 00), 4x NIM (LEMO 00)

Input Termination:

500hm (LVTTTL), 620hm (NIM)

4.2.2 Output Features

Output Signal: 4x NIM (LEMO 00), 4x LVTTTL (LEMO 00)

Output Termination: all outputs are high ohmic

4.2.3 Measurement Parameters

Input Signal Frequency (max.): 70MHz

4.3 Power Requirements

The 8 Channel Logic Level Translator Module is supplied by a wall power supply (input: 100 – 240V, 50 – 60Hz, 1.0A max) with a maximum output of 15W (+5V, 3A).

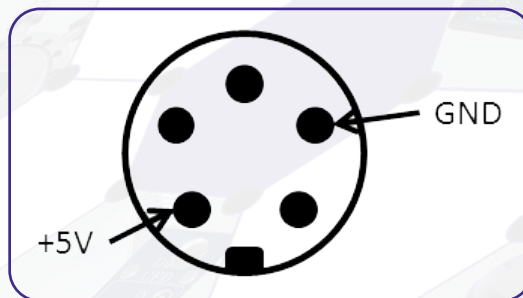
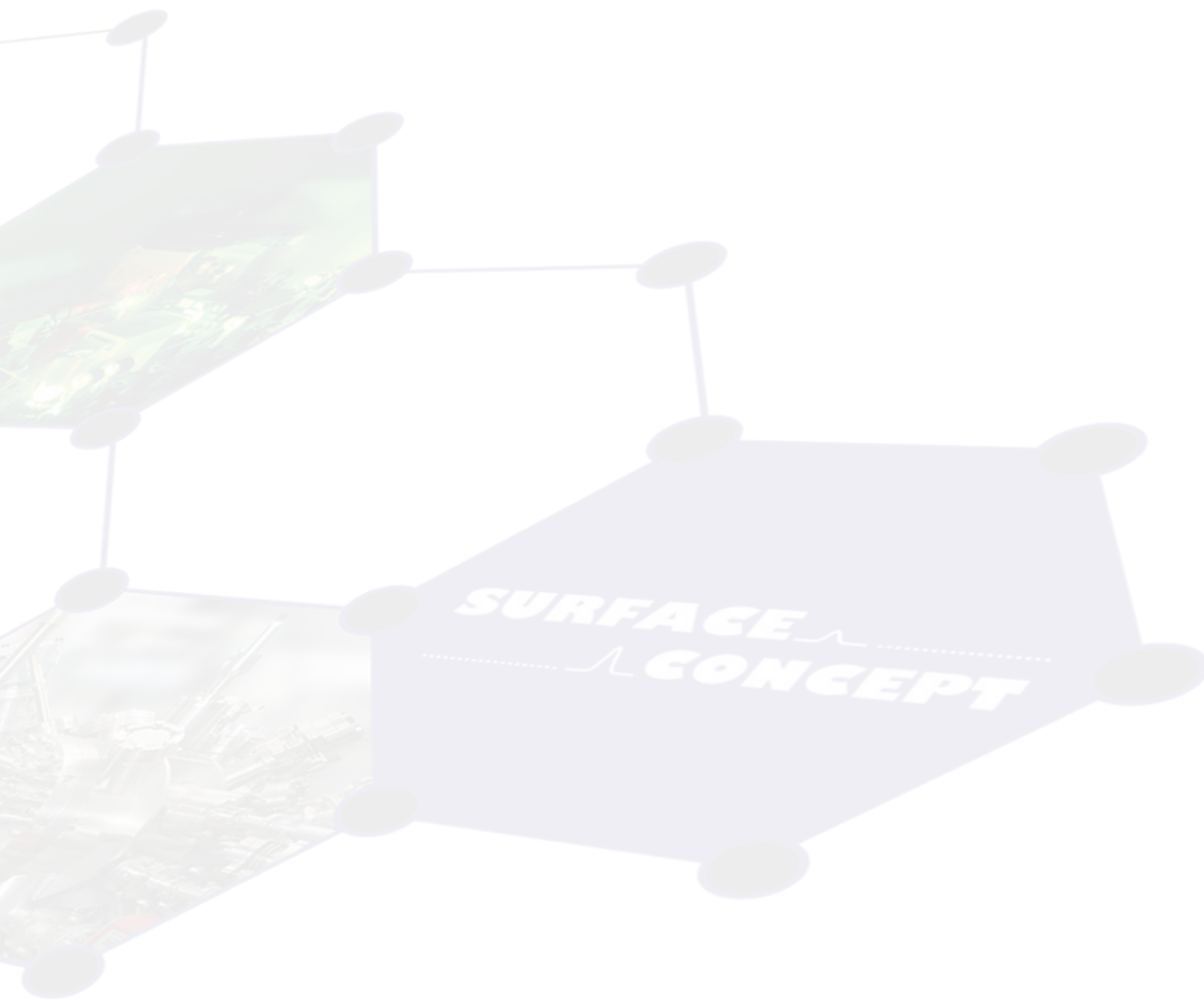


Figure 3: View of 5 Pin housing connector from outside.

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EC Declaration of Conformity

Manufacturer

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Product

8 Channel Logic Level Translator Module

The above named products comply with the following European directive:

89/336/EEC

Electromagnetic Compability Directive, amended by 91/263/ EEC and 92/31/ EEC and 93/68/EEC

73/23/EEC

Low Voltage Equipment Directive, amended by 93/68/EEC

The compliance of the above named product to which this declaration relates is in conformity with the following standards or other normative documents where relevant:

EN 61000-6-2:2005+AC:2005

Electromagnetic compatibility (EMC):
Generic standards - Immunity for industrial environments

EN 61000-6-4:2007+A1:2011

Electromagnetic compatibility (EMC):
Generic standards - Emission standard for industrial environments

EN 61010-1: 2010

Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use

For and on behalf of **Surface Concept GmbH**

Mainz,.....01.01.2020.....
(Date)

Legal Signature.....
(Dr. Andreas Oelsner)

This declaration does not represent a commitment to features or capabilities of the instrument. The safety notes and regulations given in the product related documentation must be observed at all times.

