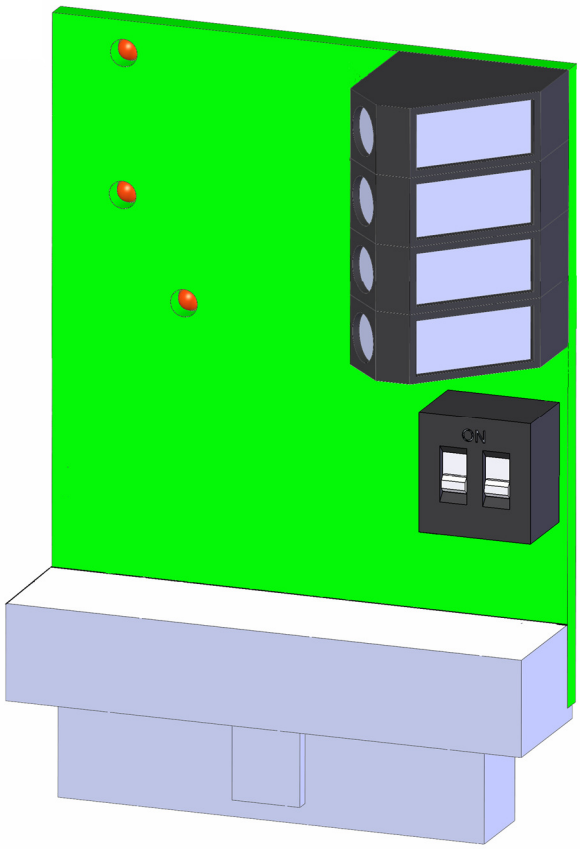
Installation- and user manual

Alarm Pulse Extension module



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Preface

- This manual provides important information. Read this manual carefully.
- In this manual various notes and warnings are marked with symbols. Read them carefully and take any measures necessary.

  The symbols used have the following meanings:

	NOTE	Suggestions and advice to make it easier to complete tasks.
	ATTENTION	A note that draws the user's attention to possible problems.
	WARNING	If the action is not correctly completed, data or settings can be lost.
	ESD	A note that draws the user's attention to measures that must be taken e.g. for electrostatic discharge.

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1 Introduction

The Alarm Pulse Extension module is a module for the ISC230 B and UNILOG 300 models N33, N34 or N35. The module is equipped with 2 galvanically isolated outputs. The outputs can be set as pulse output or as pulse extension output.

The module has been specially designed for use with UNIGAS 300 to extend alarm pulses from the alarm outputs of UNIGAS 300 to the end of a clock hour.

The Alarm Pulse Extension module itself takes care of synchronizing its clock to the clock of UNIGAS 300. Two mechanisms are used:

- When the module is turned on or placed, the time of the connected UNIGAS 300 is read. This will be repeated every hour at 10 s in the new hour. This will be postponed if there is already communication with the UNIGAS 300.
- When communication takes place via the ISC230 B or UNILOG 300 with UNIGAS 300, the module automatically takes over the time from the messages. If one of the outputs extends a pulse, this function is disabled until the end of the extension period.

By doing so, the module's clock is always synchronous with the UNIGAS 300 clock. The state of the clock is shown by a status led, it flashes when the clock is synchronous.

If one of the outputs extends a pulse, then after the end of the extension period the registration of pulses is suppressed for 10 s. This to prevent unintentional extension of an alarm pulse at the start of a new hour.

Both pulse outputs are settable for the extension function. It is possible to set one output for the extension of an alarm pulse and the other output for the transmission of pulses of gas consumption.

The pulse outputs can switch both direct and alternating current and can easily be connected to the equipment of the consumer of gas. For example, a lamp can be switched on via a relay to indicate that the contract hour consumption will be reached.

The pulse outputs are equipped with a solid state relay. A solid state relay does not experience contact bounce and has in principle an unlimited operational lifetime.

The order number of the device is NN2568.

2 Installation

2.1 Placing the module

Electrostatic discharges (ESD) can cause damage to internal electrical components if you do not take preventative measures. ESD is caused by static electricity and the damage caused is usually permanent.

Inside the device in which the Alarm Extension module is to be placed there are parts that are connected with the main power supply. Disconnect the mains power supply temporarily during any work. See the user handbook for the device in which the Alarm Extension module is to be placed.

Depending on the device in which the Alarm Pulse Extension module shall be place, the Alarm Pulse Extension module must be installed as follows:

- Mains supplied UNILOG 300 model N33, N34 or N35 (see type plate left exterior): there are 1 or 2 open connections at the forward placed PCB. Place the Alarm Extension module on an open connection.
- ISC230 B (see type plate left exterior): there are 3 connections. Other modules may be present. Place the Alarm Extension module on an open connection.

2.2 Connection with UNIGAS 300

Depending on the setting of both outputs of the Alarm Pulse Extension module, the IN1 and IN2 inputs of the ISC230 B or UNILOG 300 are connected to the pulse outputs or alarm outputs of the UNIGAS 300.

If the ISC230 B is not used simultaneously for serial communication with the UNIGAS 300, the serial input of the ISC230 B must additionally be connected to a free optical port of the UNIGAS 300. In practice, this will be the top port 2. The connection is made with the optical connector, see manual of the ISC230 B. If optical port 2 is used an additional module must be placed in the UNIGAS 300. See manual UNIGAS 300.

2.3 Connection with external devices

The wiring for connecting with external devices is fed through a free cable gland from the UNILOG 300 or ISC230B and connected to one or more screw connectors to the outputs OUT 1 or OUT 2 of the Alarm Pulse Extension module. There are no specific demands for the wiring except that it is suitable for a watertight led trough by the cable gland.

The possible polarity of the connection with the external devices does not need to be taken into account.

Maximum values of the signal of the external devices:

- 125 V direct or alternating current
- 100 mA.

3 Settings and indicators

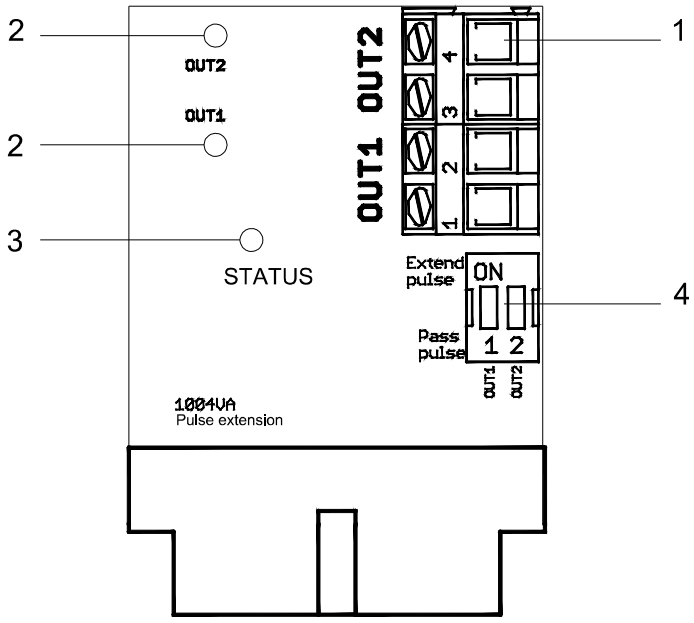

Figure 1. Jumpers and led indicators

1. Screw terminals of the outputs OUT 1 and OUT 2
2. Led indicators for the function of the outputs OUT 1 and OUT 2
3. Led indicator for the status of clock synchronisation to the UNIGAS 300 device:
    a. Continuous on: clock is not synchronous with the connected UNIGAS 300
    b. Flashing : clock is synchronous with the connected UNIGAS 300
4. DIP switch for the setting of the function of the outputs OUT 1 and OUT 2

Setting the Alarm Extension module

The module has a dual position DIP-switch to set the mode of operation:

- Setting the DIP switch position to PASS PULSE sets the module to copy every pulse from its input to its related output, with a pulse length of 125 ms.
    - The external pulse signals are connected to the pulse inputs IN1 and IN2 of the ISC230 B or UNILOG 300 (screw terminals 3 to 6). A pulse signal at input IN1 gives a pulse signal on output 1 and a pulse signal at input IN2 gives a pulse signal on output 2.
- By setting the DIP switch position to EXTEND PULSE, a pulse is extended until the end of the clock hour.
    - The alarm pulse signals of the UNIGAS 300 are connected to the pulse inputs IN1 and/or IN2 of the ISC230B or UNILOG 300 (screw terminals 3 to 6). An alarm pulse signal at input IN1 gives an extended alarm signal at output 1 and an alarm pulse signal at input IN2 gives an extended alarm signal at output 2.

4 Maintenance

The Alarm Pulse Extension module does not need maintenance. For maintenance of the devices in which the module is placed refer to the user manual of the devices in question.

5 Technical specification

• Outputs	2, optical solid state output, independent galvanically isolated
• Max contact signal	125 V AC and 100 mA_{eff}
• On resistance	< 30 Ω
• EMC Protection	400 W transient suppression
• Max. output frequency	2 Hz, pulse reshape to 125 ms
• Accuracy clock	+/- 20 ppm
• Operating temperature	- 25 °C to + 55 °C

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