

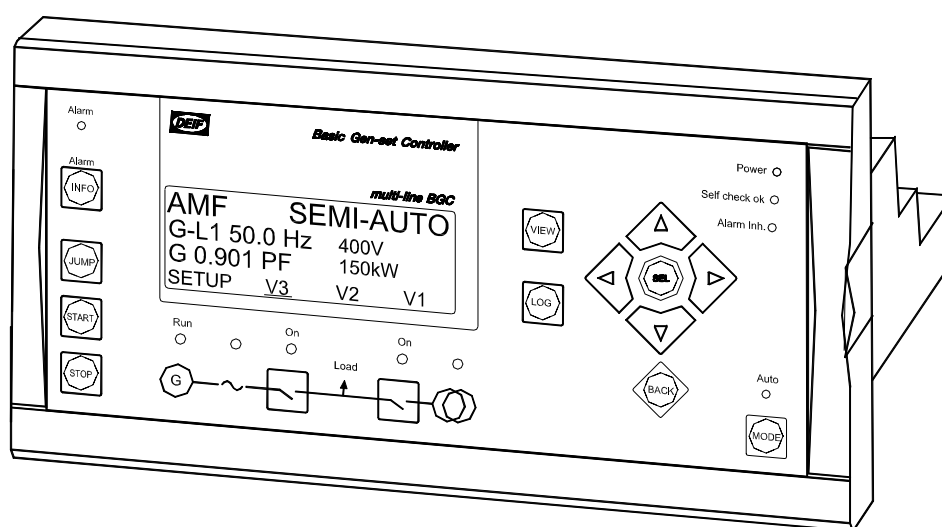
## Description of options



-power in control

### Option M13, Configurable binary inputs Basic Gen-set Controller

4189340312B



- Description of option
- 7 digital inputs
- 14 digital inputs
- PC utility software configuration



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## 1. Warnings and legal information

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This chapter includes important information about general legal issues relevant in the handling of DEIF products. Furthermore, some overall safety precautions will be introduced and recommended. Finally, the highlighted notes, which will be used throughout this document, are presented.

### Legal information and responsibility

DEIF takes no responsibility for installation or operation of the generator set. If there is any doubt about how to install or operate the generator controlled by the BGC unit, the company responsible for the installation or the operation of the set must be contacted.

**The BGC units are not to be opened by unauthorized personnel. If opened anyway, the warranty will be lost.**

### Electrostatic discharge awareness

Sufficient care must be taken to protect the terminals against static discharges during the installation. Once the unit is installed and connected, these precautions are no longer necessary.

### Safety issues

Installing the BGC unit implies work with dangerous currents and voltages. Therefore, the installation of the BGC should only be carried out by authorized personnel who understand the risks involved in the working with live electrical equipment.

### Notes

Throughout this document a number of notes with helpful user information will be presented. To ensure that these notes are noticed, they will be highlighted in order to separate them from the general text.



XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

## 2. Description of option

This option includes 7 configurable binary inputs if M13 is selected once during ordering.  
This option includes 14 configurable binary inputs if M13 is selected twice during ordering.

### Terminal description

| Term.   |         | Function         | Description  |
|---------|---------|------------------|--------------|
| Slot #2 | Slot #3 |                  |              |
| 47      | 55      | Digital input 11 | Configurable |
| 48      | 56      | Digital input 12 | Configurable |
| 49      | 57      | Digital input 13 | Configurable |
| 50      | 58      | Digital input 14 | Configurable |
| 51      | 59      | Digital input 15 | Configurable |
| 52      | 60      | Digital input 16 | Configurable |
| 53      | 61      | Digital input 17 | Configurable |
| 54      | 62      | Common           |              |

| Term.   |         | Function         | Description  |
|---------|---------|------------------|--------------|
| Slot #2 | Slot #3 |                  |              |
| 47      | 55      | Digital input 18 | Configurable |
| 48      | 56      | Digital input 19 | Configurable |
| 49      | 57      | Digital input 20 | Configurable |
| 50      | 58      | Digital input 21 | Configurable |
| 51      | 59      | Digital input 22 | Configurable |
| 52      | 60      | Digital input 23 | Configurable |
| 53      | 61      | Digital input 24 | Configurable |
| 54      | 62      | Common           |              |

### Input function selection

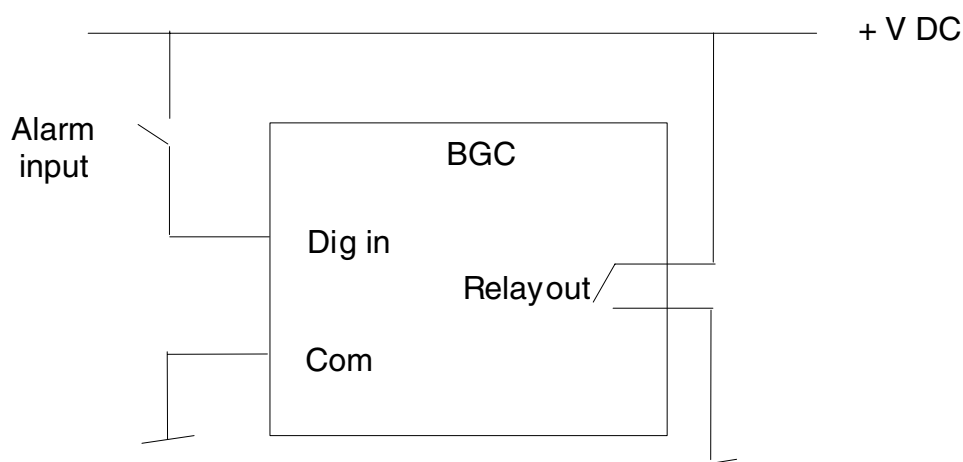
Digital input alarms can be configured with a possibility to select when the alarm is to be activated. The possible selections of the input function are normally open or normally closed.

The drawing below illustrates a digital input used as an alarm input. The input can be configured to activate the relay output in one of the following ways:

1. Digital input alarm configured to NC, normally closed  
*This will activate an alarm, when the signal on the digital input disappears.*  
(PC software = 'low alarm')
2. Digital input alarm configured to NO, normally open,  
*This will activate an alarm, when the signal on the digital input appears.*  
(PC software= 'high alarm')



The relay output function cannot be changed. It will always be an NO relay that closes, when the alarm occurs, Alarm = CC (closed circuit).



### Configuration

#### 1600-1660 Digital input No11 – No17

The table below indicates possible settings for the digital inputs. Only one table is presented, but all the digital inputs are configured in the same way.

| No.  | Setting        |                | Min. setting | Max. setting | Third setting | Factory setting |
|------|----------------|----------------|--------------|--------------|---------------|-----------------|
| 1601 | Dig. input no. | Timer          | 0.0 s        | 100.0 s      | -             | 10.0 s          |
| 1602 | Dig. input no. | Relay output A | R0 (none)    | R3 (relay3)  | -             | R0 (none)       |
| 1603 | Dig. input no. | Relay output B | R0 (none)    | R3 (relay3)  | -             | R0 (none)       |
| 1604 | Dig. input no. | Enable         | OFF          | ON           | RUN           | OFF             |
| 1605 | Dig. input no. | Fail class     | 1            | 5            | -             | 2               |
| 1606 | Dig. input no. | NO/NC          | NO           | NC           |               | NO              |

#### 1890-1950 Digital input No18 – No24

The table below indicates possible settings for the digital inputs. Only one table is presented, but all the digital inputs are configured in the same way.

| No.  | Setting        |                | Min. setting | Max. setting | Third setting | Factory setting |
|------|----------------|----------------|--------------|--------------|---------------|-----------------|
| 1891 | Dig. input no. | Timer          | 0.0 s        | 100.0 s      | -             | 10.0 s          |
| 1892 | Dig. input no. | Relay output A | R0 (none)    | R3 (relay3)  | -             | R0 (none)       |
| 1893 | Dig. input no. | Relay output B | R0 (none)    | R3 (relay3)  | -             | R0 (none)       |
| 1894 | Dig. input no. | Enable         | OFF          | ON           | RUN           | OFF             |
| 1895 | Dig. input no. | Fail class     | 1            | 5            | -             | 2               |
| 1896 | Dig. input no. | NO/NC          | NO           | NC           |               | NO              |

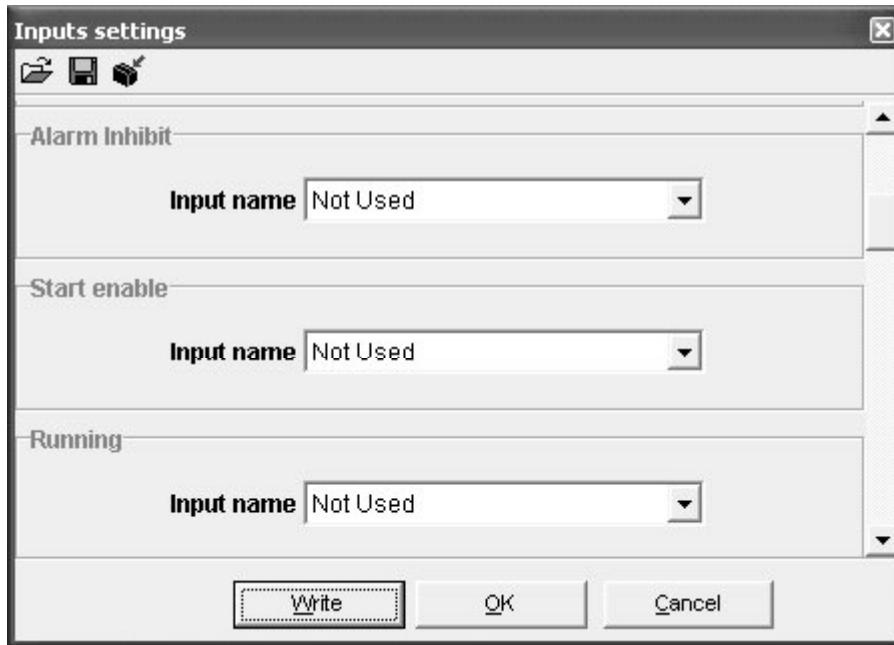
## PC utility software configuration

The PC utility software is a Windows® based software, which can be downloaded from our website [www.deif.com](http://www.deif.com).

To adjust the inputs via the utility software, a computer must be connected to the BGC.

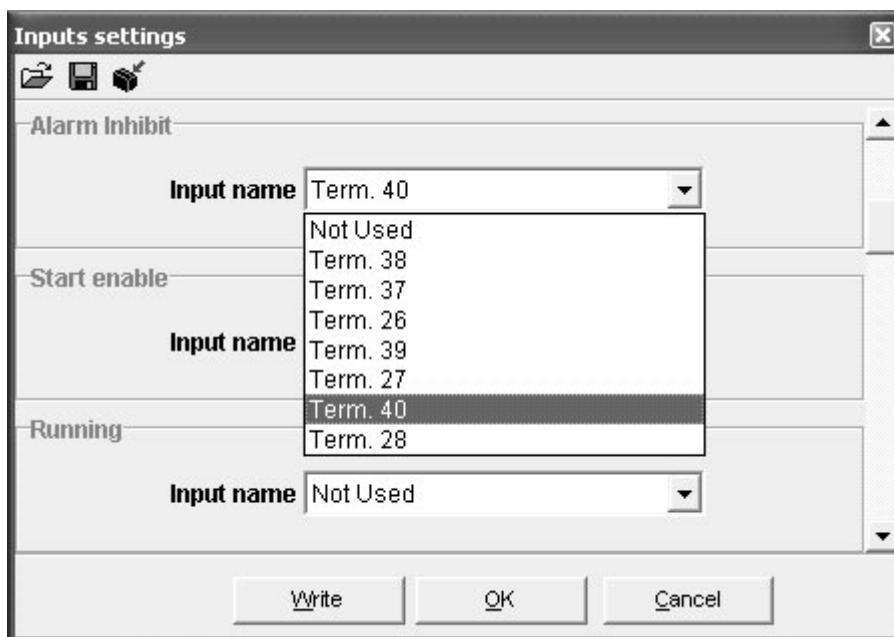
### Configuration, predefined functions

The dialogue box used when configuring the BGC:



### Input function

The settings are easily changed:

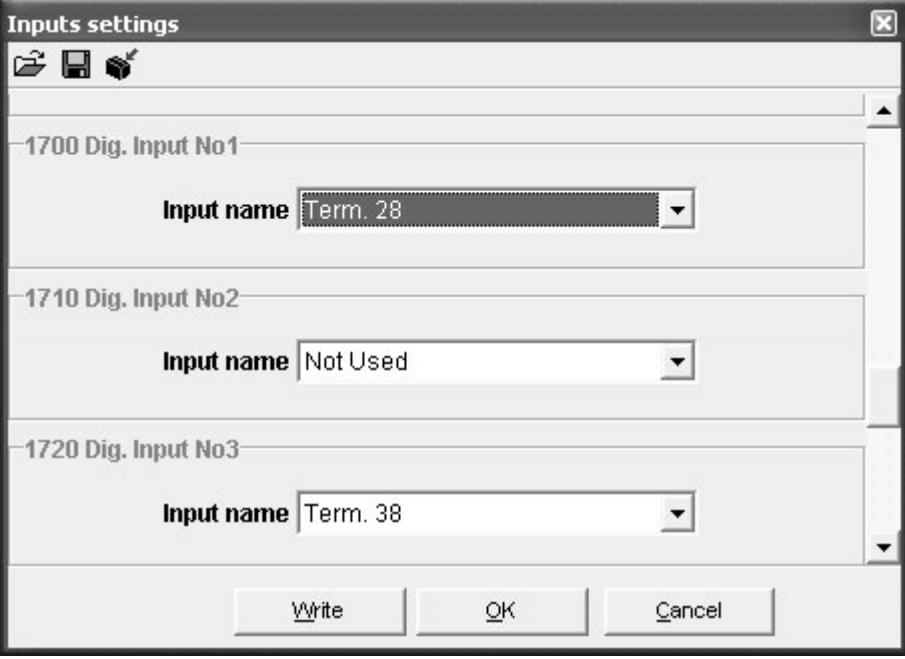


In this example the input terminal for 'Alarm acknowledge' has been configured to the digital input on terminal 40. When this is communicated to the unit, the alarm acknowledge will be activated when terminal 40 is activated.

### Configuration, alarm functions

If the digital inputs are to be used as alarm inputs, follow the procedure illustrated below.

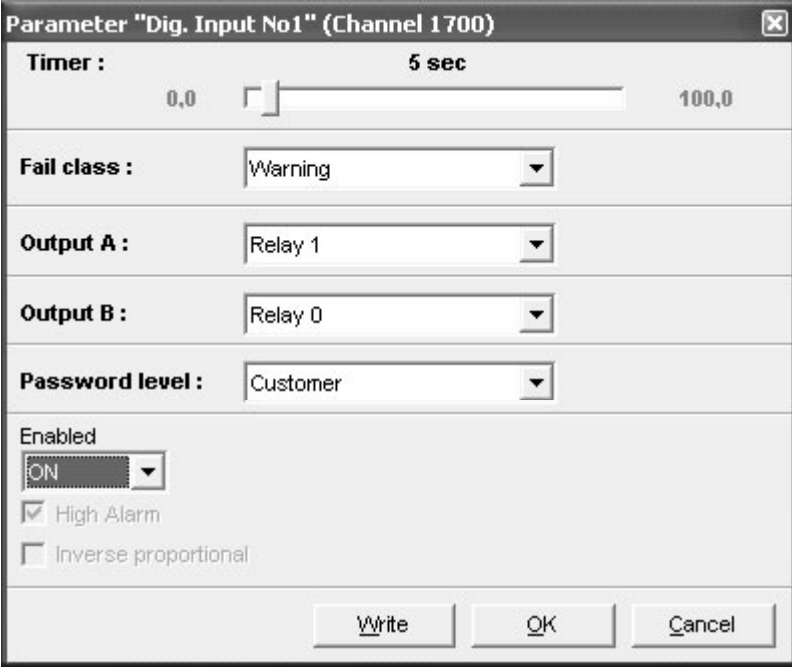
1. Select the correct input terminal number in the *inputs setting list*:



The 'Inputs settings' dialog box shows three digital input channels. Channel 1700 (Dig. Input No1) is configured with 'Term. 28' as the input name. Channel 1710 (Dig. Input No2) is set to 'Not Used'. Channel 1720 (Dig. Input No3) is configured with 'Term. 38' as the input name. At the bottom are 'Write', 'OK', and 'Cancel' buttons.

Here terminal 28 is used as an alarm input. The configuration of this alarm input is done in menu 1700, Dig. Input No1.

2. Open the correct menu number from the inputs setting list above.



The 'Parameter "Dig. Input No1" (Channel 1700)' dialog box contains the following settings: Timer is 5 sec (range 0.0 to 100.0); Fail class is Warning; Output A is Relay 1; Output B is Relay 0; Password level is Customer; Enabled is ON; High Alarm is checked; Inverse proportional is unchecked. At the bottom are 'Write', 'OK', and 'Cancel' buttons.

Configure the alarm parameters in this dialog box. When the settings have been communicated to the BGC, the digital input on terminal 28 is configured to be an alarm input.

The following parameters can be adjusted:

**Timer**

The timer can be adjusted by moving the glider left or right or by clicking the present set point. (Above click '5 sec').

**Fail class**

Select the appropriate fail class.

**Output A/output B**

Select which relay to activate at an alarm.

**Password level**

3 password levels are available. This specific alarm menu can only be entered, if the correct level of password is entered. If the current password level is not sufficient a notification will be displayed.

**Enable**

Mark this check box to enable the alarm function. The check box is only activated, if the input is used as an alarm input. If used for its default function, e.g. manual raise voltage, disable this setting to avoid alarm every time the input is activated.

**High alarm**

Mark this check box to receive an alarm, when the input is activated. Unmark this check box to receive an alarm, when the input is deactivated.

DEIF A/S reserves the right to change any of the above