



-power in control



## APPLICATION NOTES



## DELOMATIC 4, DM-4 GAS/HYDRO

### SMS alarm messages



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## 1. About this document

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### General purpose

This document contains the application notes for DEIF's Delomatic 4, DM-4, used in GAS or HYDRO applications.



**For functional descriptions, the procedure for parameter setup, complete standard parameter lists, etc., please see the Installation Instructions.**

The general purpose of the application notes is to offer the designer information about TCP/IP DSL-DSL communication.



**Please make sure to read this handbook before working with the DM-4 controller and the gen-set to be controlled. Failure to do this could result in damage to the equipment or human injury.**

### Intended users

The document is mainly intended for the person responsible for designing DM-4 systems. In most cases, this would be a panel builder designer. Naturally, other users might also find useful information in this document.

### Contents/overall structure

The document is divided into chapters, and in order to make the structure of the document simple and easy to use, each chapter will begin from the top of a new page.

## 2. Warnings and legal information

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### 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 set controlled by the unit, the company responsible for the installation or the operation of the set must be contacted.

**The DM-4 is not to be opened by unauthorised 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 unit implies work with dangerous currents and voltages. Therefore, the installation should only be carried out by authorised personnel who understand the risks involved in working with live electrical equipment.



**Be aware of the hazardous live currents and voltages. Do not touch any AC measurement inputs as this could lead to injury or death.**

### Definitions

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

### Notes



**The notes provide general information which will be helpful for the reader to bear in mind.**

### Warnings



**The warnings indicate a potentially dangerous situation which could result in death, personal injury or damaged equipment, if certain guidelines are not followed.**

### 3. Abstract

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For alarming purposes, the DM-4 offers the function "SMS alarm handling". To use this, an external GSM modem (e.g. Siemens MC531) can be connected to the DM-4. Using a converter between the DM-4 and the modem, information like PIN number, telephone number and message text can be transferred to the GSM modem, and an SMS message can be sent via the GSM network.

An SMS alarm will be transmitted under the following conditions:

- The SMS option is activated
- The generator set is running parallel to grid
- A common alarm for shutdown is activated
- The generator set is being stopped due to this alarm

The SMS message is always in clear text showing the alarm text and the identity number of the alarm.

Example:

SMS text: "Low oil pressure ID 20040".

This function enables the operator of a generator set to have a message at the moment of the fault, and thereby initiate a fast correction of the error.

## 4. GSM Modem

### Conditions

- GSM modem (e.g. Siemens MC351)
- GSM antenna
- Mobile access with SIM card (capable of data transmission) and PIN number
- Interface converter TTL/RS232 (PI-1 converter from DEIF)
- Connection cable from modem to converter (RS232)
- Connection cable from converter to DM-4 (TTL)

### Installation

In the following it is assumed that a Siemens MC351 modem is used in conjunction with the DEIF PI-1 converter.

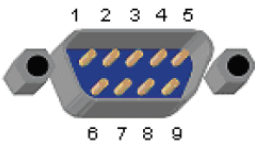
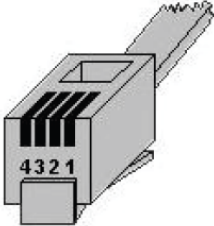
Install the GSM modem according to the instructions from the supplier.

Connect the modem and the PI-1 converter. For this, you need a serial cable SUB-D 9-pole (male-female). DEIF option J1 (3m) or J2 (6m) can be used.

Connect the PI-1 converter to the display port of the DM-4. For this you need a 4-wire cable with a 4P4C plug in one end and a SUB-D 9-pole male at the other end.

The following pin layout is needed:

(SUB-D 9-polig)	4P4C
1	1
2	2
3	3
6	4

### Configuration

Configuration of the modem is normally not needed. If needed, follow the instructions in the modem manual.

## 5. DM-4 controller

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### Conditions

- DM-4 GAS/HYDRO
- User password level 2 (service)
- Access via HMI client

### Installation

In this chapter, it is assumed that the DM-4 controller is powered up with 24V DC supply, and a HMI access (PC connection) is established.

### Configuration

Log on the overview side with password level 2 (service) activated.

Go to sub-pages:

Navigator => Parameter => Project parameters

In the parameter "Modem-PIN", key-in the 4-digit PIN code for your SIM card.

For the parameter "Tel. – number", key-in the telephone number of the mobile phone that is to receive the alarm messages.

Activate the SMS option. In the parameter "SMS-option" (54010), set the value to "1".

## 6. Functional test

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For functional test, the DM-4 offers the function "Test-SMS send".

Go to the following sub-menus:

Navigator => System diagnostics => Modem

For testing, press the button "SEND\_SMS"



**The SMS option must be activated.**



**Access level 1 (user) is needed.**

Provided the installation and configuration is correct, the following SMS message will be transmitted to the mobile phone:

"Watchdog for Software Update ID 102".

If the transmission fails, check that the installation and configuration of the modem and the PI-1 converter is correct.

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