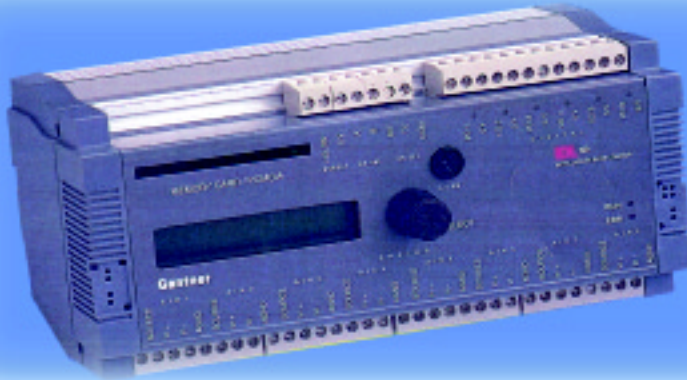


# INTELLIGENT DATA ACQUISITION- AND LOGGING SYSTEM

## Data Acquisition Using Fieldbus

*The intelligent modules for data acquisition and logging are especially suitable where measured values and sensor signals occur decentral and the acquisition should be realized at one central place. There are various types of in- and output channels available. Therefore all measuring tasks can be realized with this system.*

*The high resolution (16 bit), multifunctional analog inputs, linearization and scaling direct within the modules, alarm report at cabling defects or surpassing of threshold values, RS 485 fieldbus with industrial used protocols, easy configuration and direct connection of numerical displays via fieldbus are some of the highlights of this system.*



## Description of Function

The intelligent data acquisition system consists of the dataloggers (IDL 100, ITL 104) and the registration modules (ISM, IDM and IMX). The system was especially designed for the acquisition of distributed signals, that should be logged at a central place.

The architecture of such a system as well as the configuration by using the Windows™-Software ICP 100 is quite simple. The multi-channel modules have multifunctional analog (16 bit resolution) and digital I/O ports for the measurement of current, voltage, resistance, bridges, frequency, counter etc.

The data acquisition is very exact because the pre-processing of the signals is realized within the registration modules. Simple linearizations or scalings can be managed within the decentral modules as well as more complicated mathematical linking and PID regulating. Due to this pre-processing the central datalogger is exonerated from data processing.

Additionally the registration modules detect different faults such as defect cabling, short-circuit and supervising of threshold values. Even in case of communication problems between the datalogger and the decentral modules the whole system can be shut down in a safe manner.

The data acquisition system can use different data transfer modes such as line, radio or GSM modems.

With the PCMCIA-Slot of the datalogger IDL 100 the memory capacity can be increased easily. By using specific firmware the IDL 100 is able to control numeric LED and LCD displays.

With the 32 bit-Software ICP 100 all parameters of each measuring channel is defined. Every datalogger and registration module gets its own configuration. Therefore the whole system can easily be adapted to the special requirements. During the start of the software the fieldbus is automatically scanned to find all connected modules.



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# INTELLIGENT DATALOGGER

IDL 100  
IDL 101

## Technical Data

- Modular system with two-wire fieldbus (easy realization of wide distributed data acquisition systems)
- Datalogger usable stand-alone or as central master
- RS 485 and RS 232 port
- Direct connection to a PC via RS 232 and to external numerical displays via RS 485
- Extension of memory and data transport by PCMCIA cards (2 MB SRAM, up to 10 MB Flash)
- Remote data transmission by using line, radio or GSM modem
- Comfortable, easy to use configuration software for Windows 95 and NT (also with remote data control), automatic busscan at software start
- Extension up to 60 channels
- Mathematical and logical linking of channels
- Very low power consumption (depending on the sampling rate)

Type	Input Channels	Output Channels	Ports	Specialities
IDL 100	8*analog <sup>1,3</sup> 6*digital <sup>2</sup>	6*digital <sup>2</sup>	RS 232, RS 485	Complete datalogger PCMCIA slot
IDL 101	6*analog <sup>1</sup> 16*digital <sup>2</sup>	16*digital <sup>2</sup>	RS 232, RS 485	Complete datalogger 1*analog output
ISM 111	4*analog <sup>1</sup> 4*digital <sup>2</sup>	4*digital <sup>2</sup>	RS 485, Infrared	Additional mathematical functions
ISM 112	4*analog <sup>1</sup> 2*digital <sup>2</sup>	2*digital <sup>2</sup> 1*analog	RS 485, Infrared	Configurable analog output (14 bit resolution)

<sup>1</sup> Multifunctional

<sup>2</sup> Usable as input or output

<sup>3</sup> 10bit resolution

# INTELLIGENT REGISTRATION MODULE

ISM 111, 112

## Technical Data

- Modular system with two-wire fieldbus (easy realization of wide distributed data acquisition systems)
- Multifunctional analog inputs (current, voltage, resistance, temperature with Pt100 or thermocouple )
- Scaling and linearization direct within the module
- RS485 port, via converter IRK 100 also connectable to RS232 ports