

dydaqlog[®]

THE IIoT DATA LOGGER



„We make data acquisition easy.“

dydaqlog try it out –
online at logger.dydaqlog.de

dydaqtec[®]
MESSTECHNIK

IIoT DATA LOGGER



High-accuracy data acquisition + usability + connectivity = **dydaqlog**.

Our **dydaqlog** data logger unites the advantages of flexible adjustable sensor inputs, accurate and reliable data recording with simple, intuitive setup and operation, as well as seamless connectivity to industrial cloud solutions. The measured data are available anytime, anywhere in the Industrial Internet of Things IIoT.

Analog Inputs

The **dydaqlog** data logger provides 16 differential analog inputs with 24 bit resolution and up to 20 Hz sampling rate. Every channel can be configured individually for direct connection of thermocouples, RTDs or strain gauges in bridge circuit. External Sensors and I/O-Modules can be connected via MQTT or Modbus protocol.

Processor and Firmware

Inside the **dydaqlog** data logger a powerful ARM® processor handles the preparation and processing of measured data. The measuring channels can be calculated online or monitored for threshold values (limits). Alarms trigger actions like switching digital outputs or sending e-mails. In addition to the internal storage the measurement data can also be transmitted directly to a higher-level server or into a data cloud.

Connectivity

The communication with **dydaqlog** takes place via WLAN or LAN. For initial operation the data logger starts as WLAN hotspot. After connecting with a notebook, smartphone or tablet the further configuration can be done via a web browser. For data transfer into a cloud the MQTT protocol is supported. An optional LTE module allows data, messages and alarms to be transmitted via mobile communications.

Webinterface / Mobile App

Each **dydaqlog** is not just a data logger, it is a powerful web server at the same time. All functions can be set up and managed in a browser via the modern web interface. Measurement data can easily be represented online or offline. A convenient editor allows the design of meaningful and elegant reports.

dydaqlog with 16 analog inputs, digital I/O and powerful ARM® processor





Convenient and intuitive configuration
of data acquisition application in webbrowser

Numerous dashboards for online display of mea-
surement data all over the world

Features at a glance

- 16 independently configurable analog inputs
- 24-bit resolution, max. 20 Hz sampling rate per channel
- 24 V external sensor supply
- Direct connection of thermocouples, Pt50/100/500/1000 sensors, and strain gauges
- Wire-break detection for thermocouples
- Communication via Modbus RTU; Modbus TCP and MQTT optional
- WLAN/LAN interface for configuration and data transmission
- Powerful ARM® processor with integrated web server
- Diverse mathematical functions for real-time processing of measurement data
- Flexible monitoring functions with automatic alarms via email or SMS
- User-friendly web interface for configuration and data visualization

Specifications

Analog Inputs

Channels	16 differential (16 Inputs for 4-wire measurements)
A/D Converter	Sigma-Delta
Resolution	24 Bit
Sampling Rate (max.) per Channel (Voltage and current)	20 Hz at reduced Channel Count 10 Hz at full Channel Count
Voltage Input Ranges	$\pm 10 / 5 / 3 / 1,6 \text{ V}$ $\pm 800 / 400 / 200 / 100 \text{ mV}$
Current Input Ranges	$\pm 20 \text{ mA} / 0 \sim 20 \text{ mA} / 4 \sim 20 \text{ mA}$
Input Impedance	1 M Ω
Input Coupling	DC
Sensor Connection	Thermocouples Type B, E, J, K, N, R, S, T PT50 / 100 / 500 / 1000 Resistors Resistive Bridge Transducers

External Inputs

Connection of external Sensors (24V) and I/O-Modules via MQTT or Modbus

Digital Inputs

Channels	6 opto coupled
Level	TTL, L: < 0,8 V / H: > 2,4 V (max.)

Counter Inputs

Channels	6 (alternative usage of digital Inputs)
Input Frequency max..	1 kHz

Digital Outputs

Channels	3 electronic Relays
Switching Power	40 V max. @ 1 A

Data Memory

Type	eMMC internal
Size	1 G Samples

Processor

Type	ARM® Cortex-A72 Quad Core, 1,5 GHz
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Host Interface

Type	LAN - 1 x Gigabit Ethernet (RJ45) WLAN - 802.11 b/g/n/ac (2,4 and 5 GHz)
Cellular Radio 4G/LTE (optional)	Configuration and operation via web interface, Transmission of messages, e-mails, Data Transmission via MQTT, FTP

General

Unit Power	10 ~ 36 V _{DC}
Operating Temperature	0 to +40 °C
Enclosure	Aluminium, splash-proof
Dimensions (W x H x D)	182 x 95 x 146 mm
Weight	1,4 kg

Order Information

Part Number.	Description
DL-160-16-E	dydaqlog IIoT Data Logger with 16 analog Inputs, 6 digital Inputs, 3 digital Outputs
Shipment	dydaqlog IIoT Data Logger WLAN-Antenna, Power Supply

Hardware Extensions

DL-V-MO-001	Mobile radio extension 4G/LTE
DL-V-Z001-A1	Outdoor case (Polypropylen)
DL-V-Z003-A1	DIN-Rail mounting set

Software Extensions

DL-V-SO-001	Definition of own sensor types
DL-V-SO-002	Data import via MQTT
DL-V-SO-003	Local MQTT broker
DL-V-SO-005	data import via Modbus TCP
DL-V-SO-011	data export via Modbus TCP
DL-V-SO-013	Modbus TCP interface
DL-V-SO-007	Process visualisation
DL-V-SO-010	Process control
DL-V-SO-012	Report generation