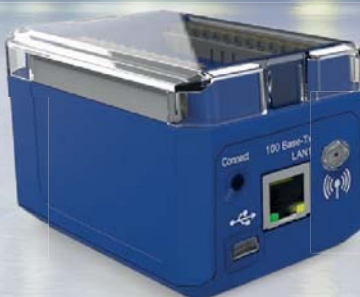


# Loggito



## **COMPACT** DATA ACQUISITION

Decentralised. Modular. Scalable.



# NETWORKED. **WIRELESS.** MODULAR.

Information acquisition in the era of Industrial IoT is also at the centre of measurement technology. As a result, continuous data acquisition from decentralised measurement points is becoming increasingly important. This is because individual measurement points are no longer only found in a central location, but are instead distributed and need to be networked. People are minimising the large number of cable harnesses in plants and machines. The world is becoming wireless.

Whether you need to centrally measure a low number of channels or have a complex task with many distributed measurement points: Loggito will help you get the job done. Loggito is tailored to your requirements. You can use it as a data logger for a low number of channels or to build a complex wireless or wired measurement network with distributed measurement points. Our system uses high-precision, universal sensor inputs – just as you would expect from Delphin Technology.

Delphin measurement technology specialists are distinguished by virtue of their excellent consulting capability in customer-specific applications. This, along with the seamless interaction between our hardware and software products, make us one of a kind in the market. Comprehensive services such as calibration and set-up help facilitate day-to-day operations.

## Measurement technology 4.0 for **distributed applications**



# A RANGE OF APPLICATIONS



## Areas where you can use the Loggito series

- Decentralised data acquisition and monitoring in situations requiring high levels of scalability, flexibility and extensibility
- Monitoring of decentralised, distributed systems
- Data acquisition with a low number of channels
- Process analysis with a flexible number of channels
- Experimental environments in schools and universities
- Low power applications, for example, environmental measurement technologies
- Monitoring of buildings
- Laboratory data acquisition
- Monitoring of construction sites (e.g., tunnels, bridges, dams, churches)
- Test stands
- Monitoring of cold storage facilities
- Monitoring of transformers
- Driving tests and mobile data acquisition

# SIMPLE TO CONFIGURE. **MODULAR.** EFFICIENT.

If you want to monitor machines or facilities, or analyse measurement data, you need flexible measurement systems: Loggito is tailored to your requirements and can be used as a data logger for a low number of channels. The device is equally ideal for complex, wireless or wired measurement networks with distributed measurement points – whether used in one test stand or in mobile operations.

The newly developed Loggito proves that good things do indeed come in small packages! The measurement system is easy to handle and is fitted with high-precision, universal inputs. Many different types of sensors, such as thermocouples and resistance thermometers, or sensors which pick up voltage or current signals can be connected. The devices in this series are excellent for monitoring distributed systems, data acquisition with a low number of channels and other low power applications in a wide variety of industries.

A particular highlight is the software ProfiSignal Web (optional), which you can use to display acquired measurement data and process parameters in real time on your tablet or smartphone. This is made possible by our new, web-based, client-server software ProfiSignal Web, which runs through the web browser on desktop PCs and all mobile devices.

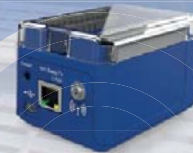
Data acquisition –  
all-purpose and  
**pocket-sized**



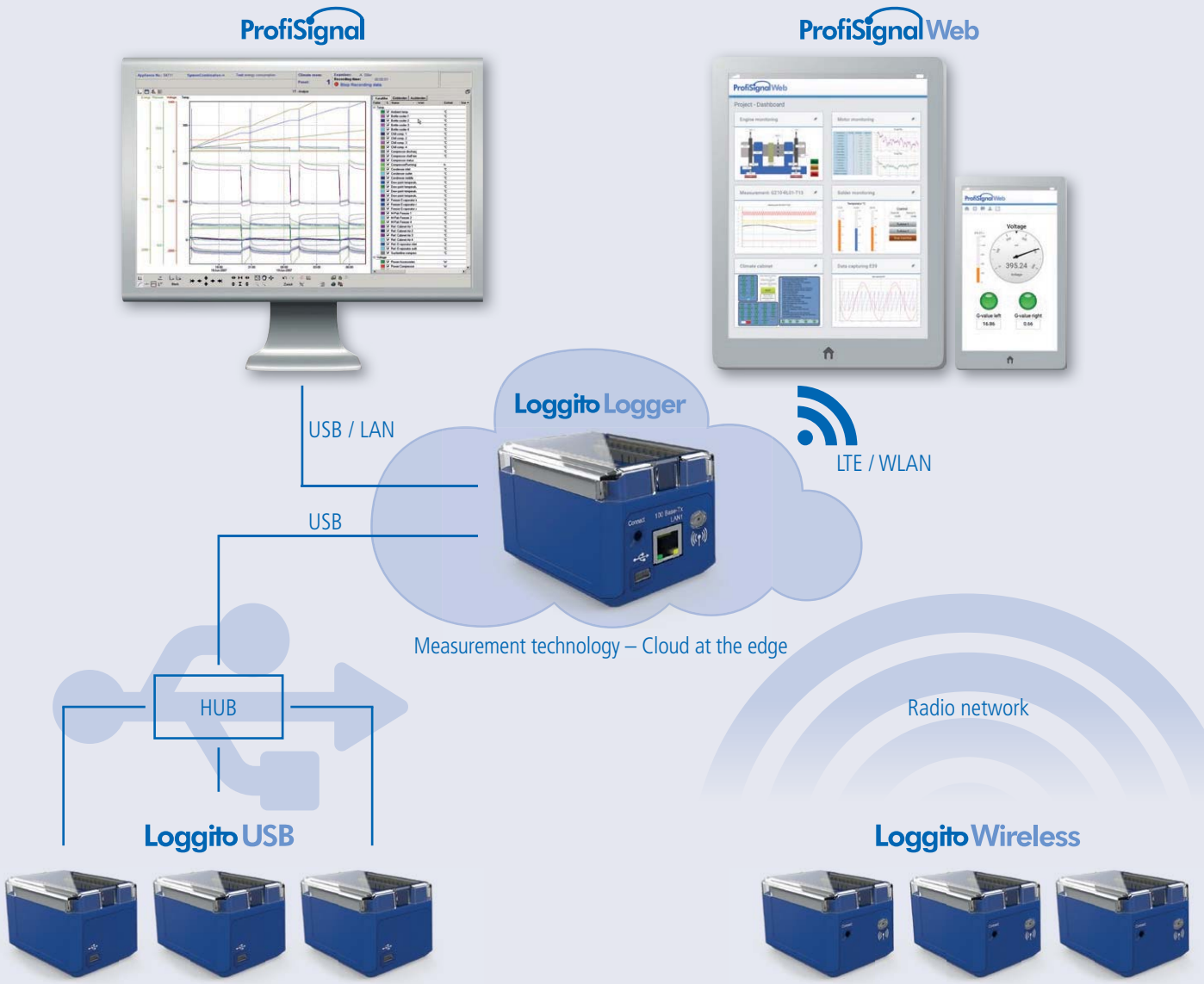
# Loggito Series

## Product highlights

- Flexible measurement system for everything from low channel count data logging to complex, networked data acquisition systems
- Innovative networking capabilities and range extension using radio, LAN and WLAN
- High-precision, universal, analog and digital I/Os
- Integrated software channels for real-time processing / monitoring and calculating derived channels
- Web-based display of measurement data (optional)
- Uninterruptible power supply and stand alone operation by internal battery possible (optional)
- Available in a PC-supported version without logging function
- Ultra-compact, modern design



# Loggito – THE NETWORKING SPECIALIST



# Little logger – acquire measurement data via USB or wirelessly via radio

**Delphin's new Loggito series resolves a lot of issues related to centralised or distributed data acquisition.**

## **Loggito Logger**

The focal point of the series is the Logger module, which is equipped with internal data storage. The storage medium forms the basis of your own self-contained system for data acquisition. It can be used with conventional software channels, which means that it can internally pre-process and calculate measurement channels. The module can also act as the coordinator for your measurement network and is the interface to the data acquisition software ProfiSignal and ProfiSignal Web.

**Delphin offers two different types of modules so that you can build a good measurement network in a wide range of situations or increase the number of channels:**

## **Loggito Wireless**

The Wireless modules are ideal for those situations which call for decentralised data acquisition with distributed measurement points. You can connect the Loggito Wireless modules to the central Logger module. Suddenly you have a complex and cable-free logging system which uses state-of-the-art radio network technology. The great thing about it is that the modules can communicate with one another and use so-called 'hops' to drastically increase their range.

## **Loggito USB**

The USB modules can be connected to a Logger module via a cable. They are ideal for those situations where it is better to increase range via cable rather than wirelessly, for example, with most electrical control cabinets. In addition, you can connect the USB modules directly to a PC if you have no need for a self-contained logging function.

# Loggito – UNIVERSAL DATA ACQUISITION

## Multiple I/O options for any sensors or counter inputs

Regardless of which analog and digital I/Os you need: Loggito's modular design means you can configure the channel combination that is just right for you.

Loggito's key feature is that you can employ the same I/O inputs in all three types of module. You can select the desired channel types for your Loggito Logger, as well as for all of the expansion modules. Any combination is possible. The table below has an overview of the available I/O options.

You can get an additional board for channel options 8 AI-R, 8 AI, 4 AI-R and 4 AI, which has an active feed and an internal shunt for connecting to passive current sensors.

Channel types	8 AI-R	8 AI	4 AI-R	4 AI	6 DI	6 DO
Analog inputs (mV, mA (passive), thermocouples, RTDs)	8 (max. 4* RTD)	0	4 (max. 2* RTD)	0	0	0
Analog inputs (mV, mA (passive), thermocouples)	0	8	0	4	0	0
Analog outputs	1	1	1	1	0	0
Digital inputs	0	0	0	0	6	2
Digital outputs	0	0	0	0	2	6
Digital inputs / outputs (dual)	2	2	2	2	0	0
Number of terminals	24	24	16	16	20	20



## Loggito USB



## Loggito Logger



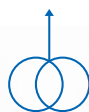
## Loggito Wireless



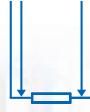
Sensors



Voltages  
[mV]



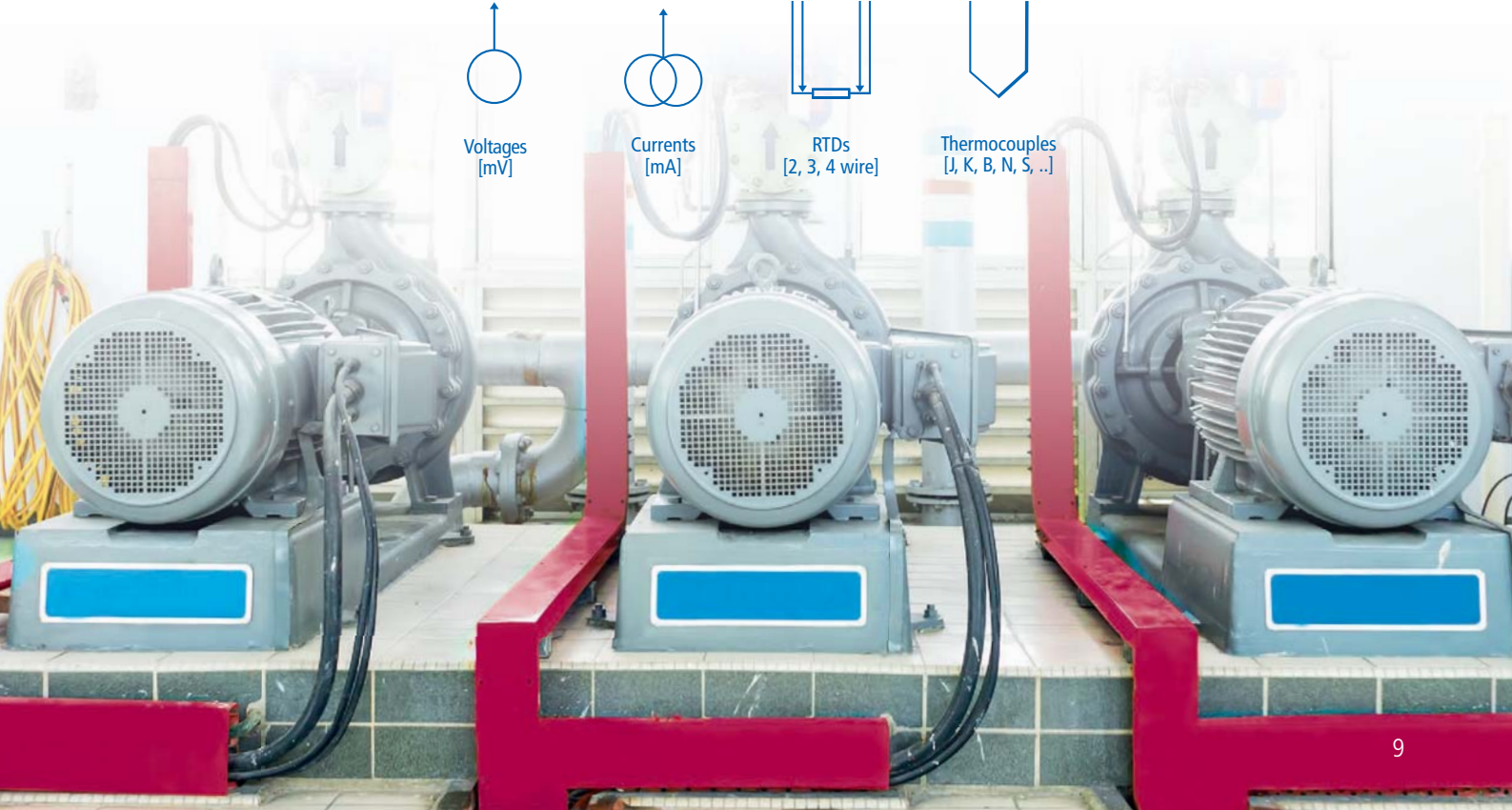
Currents  
[mA]



RTDs  
[2, 3, 4 wire]



Thermocouples  
[J, K, B, N, S, ..]



# ProfiSignalWeb – WEB-BASED DISPLAY



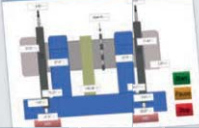
ProfiSignalWeb

Home Help Messages John Doe

- Search
- Analysis
- Automated Report
- Chlorine gas cells
- Climate cabinet
- Data capturing E39
- Engine monitoring
- Measurement: G210-RL01-T13
- Motor monitoring
- Pump monitoring
- Solder monitoring
- Statistical evaluation
- Temperature monitoring
- Turbine monitoring

Project - Dashboard

Engine monitoring



Motor monitoring



Temperature monitoring

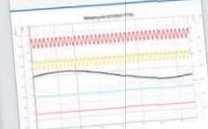


New Project New Trend

Pump monitoring



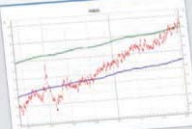
Measurement: G210-RL01-T13



Solder monitoring



Analysis



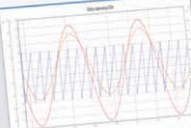
Chlorine gas cells



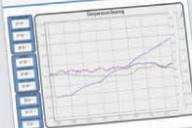
Climate cabinet



Data capturing E39



Automated Report



Turbine monitoring



# Your mobile device simply becomes a **dashboard**

Is your mobile phone or tablet your constant companion at work? Then you will always have your dashboard with your personal project-selection widget with you and will be able to analyse data and monitor processes using your Web browser, without the need for special software. Visually modern graphics and presentation make for intuitive operation. You can turn your measurement module system into an intelligent Web data logger with the optional addition of 'ProfiSignal Web for Measuring Devices'.

Simply install the Delphin software onto the Loggito Logger in your measurement system and connect yourself directly to your system with your preferred mobile device (laptop, tablet, smartphone). Individually configurable dashboards instantly provide you with an overview of your current process parameters. You can view data in real time or as historic trends. An editor is available for the tablet and desktop versions, which you can use to put the graphical display elements together into your personal dashboard. And the great thing about it? You don't have to install any software onto your device. It is all done via your browser.

# ProfiSignal – INTELLIGENT SOFTWARE

So you need more flexibility, comprehensive measurement data analysis and process sequence controls – not just in low channel applications, but also in complex, mobile measurement networks? In addition to the new ProfiSignal Web online software, we have two further solutions for you for analysing and processing your measurement data:

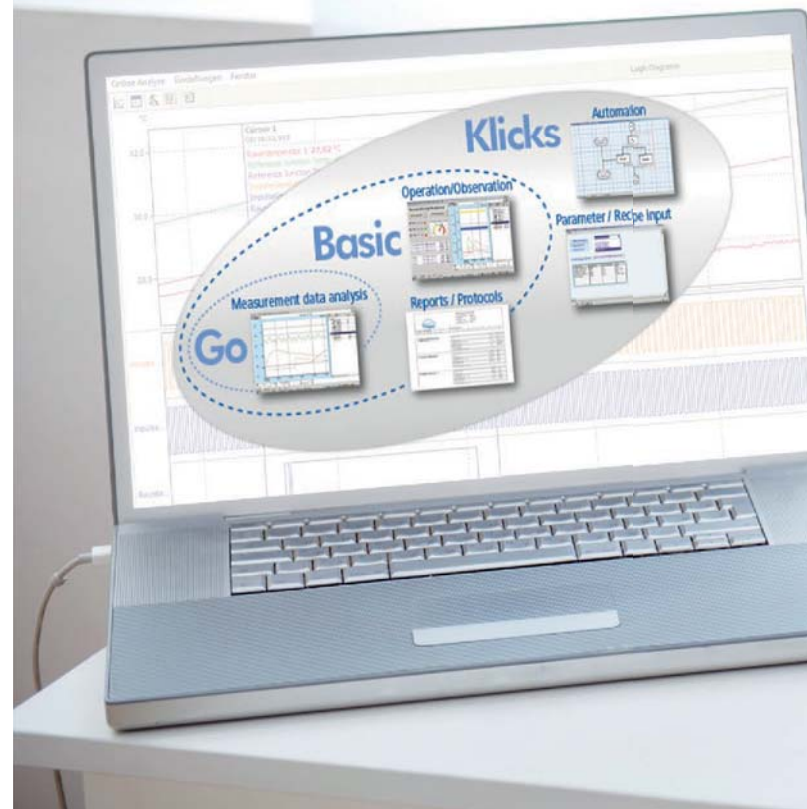
## Software channels in the Loggito Logger

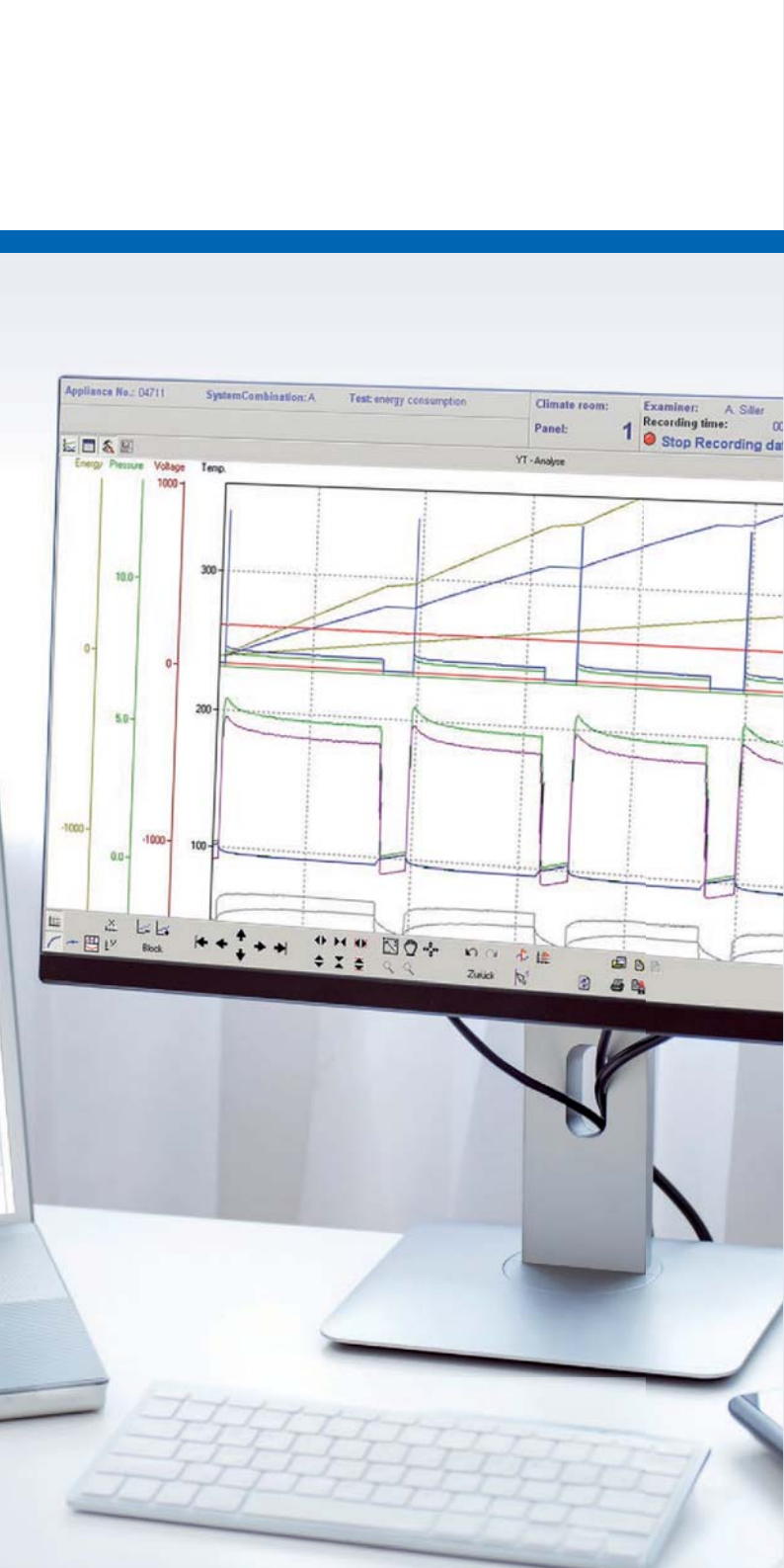
Software channels inside the device make a number of functions possible during the acquisition of data. You can use these on the measurement channels or compute, monitor, count and integrate them with one another. The results can be used as normal measurement channels.

## ProfiSignal

Our complete software package offers you a powerful measurement technology tool for displaying and evaluating data on a PC, as well as for creating automatic test sequences.

# Analysis, monitoring and automation in one package





## Selected software channels

- **Online analysis**
  - Calculation channel:** Any number of channels can be computed with each other, for example, temperature difference
  - Statistic channel:** Computation of moving and triggered statistical values for determining maximum test values
- **Monitoring**
  - Limit value:** Generation of an event when a limit value is exceeded, e.g., an alarm when a storage temperature gets too high
  - Status monitor:** Evaluation of the status of a measurement value and generation of an alarm when there is a wire break in an mA signal
- **Automation**
  - Setpoint channel:** Automatic execution of setpoint curves with reset, stop and start triggers
  - Timer channel:** Timing relay functions for the time-delayed start of testing sequences
- **All channels** can be found on our website, [delphin.com](http://delphin.com)

# Loggito – TECHNICAL SPECIFICATIONS

Module type	Loggito series
<b>Analog inputs</b>	
Sensors	mV, mA, thermocouples, RTDs (no RTDs with channel types 8 AI and 4 AI)
Sampling rate	1/3 Hz .. 1 kHz
Voltage measurement range	±78 mV .. ±10 V
Current measuring range	0 .. 20 mA / 4 .. 20 mA / ±20 mA / any (with freely selectable or external shunts)
Optional additional boards (only with 24 V supply)	Software switchable internal shunt for active and passive 4 .. 20 mA sensors Software switchable feed for passive 4 .. 20 mA sensors
Resistance measurement range	0 .. 60 kΩ
Resolution	24 Bit
Input impedance	> 5 GΩ
Dielectric withstand voltage (tolerable overvoltage)	±24 VDC
Max. differential voltage channel to channel	±24 VDC
Galvanic isolation against FE	±400 VDC
Precision of current & voltage measurement	0.01% from measurement range end value
RTD precision	0.1 K
Thermocouples precision	0.3 K (external thermoblock), < 1.0 K (internal reference junction)
<b>Analog outputs</b>	
Resolution	12 bit
Max. output rate	1 Hz
Output range	4 .. 20 mA
Max. load	550 Ω
Galvanic isolation output to analog inputs	none
Galvanic isolation to system / FE	±400 VDC
<b>Digital / frequency inputs</b>	
Input signal low	low: 0 .. 1 V / high: 3.6 .. 100 VDC@3.5 mA
Frequency input measuring range (combined DI0s)	0.2 Hz .. 500 Hz
Frequency input measuring range (pure DI1s)	0.2 Hz .. 30 kHz
Counter width	64 Bit
Galvanic isolation	±400 VDC against FE / other channels (DI0s in groups of 2 channels)
<b>Digital / PWM outputs</b>	
Grouping	2 per group
Max. switching voltage / current	50 V / 2.5 A
PWM basic frequency / duty cycle	20 Hz .. 10 kHz / 1:100
Galvanic isolation	±400 VDC against FE / channels of other groups

Module type	Loggito Logger	Loggito Wireless	Loggito USB
<b>Interfaces</b>			
LAN	10 x Base-T / 100 Base-Tx	-	-
WLAN	802.11b/g/n, max. 72 MBit/s (optional, alternative to radio network interface)	-	-
Radio network interface	IEEE802.15.4, max. 256 kBit/s (optional, alternative to WLAN)	IEEE802.15.4, max. 256 kBit/s	-
USB device – mini socket	2.0 low/full/high speed	-	2.0 low/full speed
USB host – type A socket	2.0 low/full/high speed	-	-
<b>Protocols</b>			
RS 232/485 (via USB extension)	Modbus RTU Master, Modbus RTU slave, SCPI, ASCII	-	-
TCP/IP	Modbus TCP, OPC UA (DA) client server	-	-
<b>Data storage</b>			
Internal	4 / 8 / 16 GB / approx. 30 million measurement values per GB	-	-
External	USB, NFS, CIFS, (S)FTP	-	-
<b>General technical information</b>			
Dimensions	L x W x H approx. 96 mm x 68 mm x 65 mm		
Weight	without battery approx. 250 g, with battery approx. 300 g		
Fixing	mounting rail DIN EN 60715 or screw mounting horizontally / vertically or upwards		
Connecting terminals	plug-in spring terminals, max. 24 terminals in 2 rows, conductor cross-section (rigid / flexible) 0.2 .. 2.5 mm <sup>2</sup> , ferrule 0.25 .. 1.5 mm <sup>2</sup>		
Temperature range	-20 .. 60 °C		
Humidity	max. 90 % relative humidity, non-condensing		
Supply voltage	alternatively 12 .. 24 VDC / ±20 % or 5 VDC (via mini USB connector) or integrated accumulator 3.7 V, 2050 mAh (optional)	12 .. 24 VDC / ±20 % or integrated accumulator 3.7 V, 2050 mAh (optional)	5 VDC (via mini USB connector)
Power input	max. 3 watts plus power consumption of current loop for passive 4 .. 20 mA sensors, sleep mode max. 50 mW, hibernation mode max. 1 mW	max. 1 watt	max. 1 watt

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