MS20

New **24 bit** **Datalogger**
Integrated monitor **Touch screen display**
Integrated battery **Lithium**

Data acquisition system 10-20 channels

Welcome to the future of professional data acquisition. The MS20 represents excellence in precision measurement, combining cutting-edge technology and uncompromising versatility. With the ability to manage up to 20 independent channels and extraordinary precision guaranteed by 24-bit ADC technology, the MS20 is the definitive tool for professionals who do not accept compromises on data quality.

Main Features:

• Simultaneous acquisition on 20 channels

• 10" touch display with intuitive interface

• Dashboard or graph display in real time

• Dust protection for construction site environments

• Integrated wireless connectivity

• Autonomy starting from 8 hours in continuous acquisition

Designed to excel in the laboratory as well as in the field, the MS20 is perfectly suited to the needs of engineers, researchers and specialized technicians who require precise and reliable measurements in all operating conditions.

Its versatility is expressed through support for a wide range of sensors - from voltage to temperature, from current loop sensors to load cells - while the MAE graphical interface guarantees a modern and familiar user experience. When precision meets innovation: MS20, the tool that transforms the way you acquire and analyze data.

Methodologies
Load tests
Crack monitoring

General

General	
Available channels	Up to 20 independent channels
Measurement mode	Continuous with real-time display or manual measurement
Technology and operating system	Based on Android CPU with ability to display real-time data on Windows system
Display	10" with touch system
Internal memory	Approximately 15M readings
Data format	.csv
Physical interfaces	2xUSB, 1xEthernet
Wi-Fi interfaces	Integrated antenna
Power supply	Internal 12V li-ion battery / External power supply 220 Vac-15 Vdc / External 12V battery
Operating time	Continuous display , up to 8 hours
Operating environmental conditions	-20°C | 80°C
Environmental protection	IP68 (connectors)
Weight	5 kg
Dimensions	40x33x17 cm

Acquisition	
ADC technology	24-bit Delta-Sigma
Measurement dynamic range	144 dB theoretical, 115 dB (@1Hz sampling)
Input signal	Up to +/- 10V (depending on set gain)
Input impedance	> 20MΩ
Sample rate	Starting from 1 sample per second
Adjustable gain	From 0dB to 42dB

General	
Resolution	< 0.001 % (FS)
Accuracy	< 0.005 % (FS)
Non-linearity	< 0.001 % (FS)
Cross talk	> 100 dB
Common-mode rejection	> 110 dB
50 Hz and 60 Hz rejection	> 110 dB

Sensors	
Sensors with Single Ended output	From 0-10V to 0-100mV
Resolution (V)	1.5µV (Gain: 0dB) | 11nV (gain: 42dB)
Sensors with Differential output	From +/- 10V to +/- 100mV
Resolution (V)	1.5µV (Gain: 0dB) | 11nV (gain: 42dB)
Current Loop sensors	0 - 20 mA (100Ω internal shunt)
Resolution (mA)	< 0.00001 mA
Compatible temperature sensors	PT100, PT1000, NTC (<10kΩ)
Resolution (°C)	< 0.01°C (depending on probe used)
RTD calibration curve	Callendar
NTC calibration curve	Stainhart-hart β-equation

Sensor power specifications	
HV sensors power supply	24V
HV power output	Up to 6W total
Sensor power supply	2.5V, 5V, 10V

General	
Power output	Up to 5W total
Impressed current supply	0.250 mA
Maximum voltage for impressed current	5V

Additional features	
Sensor calibration	Multi-point linear calibration system with automatic calculation of calibration coefficients
Data transmission	Real-time wireless communication with PC/laptop for acquisition
Electrical insulation	3kV galvanic protection between input circuits (sensors) and processing circuits
Configuration management	System for saving and recalling recording and acquisition settings
Quick setup	Integrated database to store and recall complete sensor and parameter configurations
Load channel	Dedicated input with option for manual value entry
Data visualization	Both in dashboard forma and through real-time graphs


MAE