



## MS-Connect2

Technical reference

# 1. General information

Visualization system MS-Connect2 is designed for use with the controllers series MS-XXX and master controller MS-4CMPXv2. MS-Connect2 realizes the visualization and acquisition of the device data using the Modbus RTU transmission protocol.

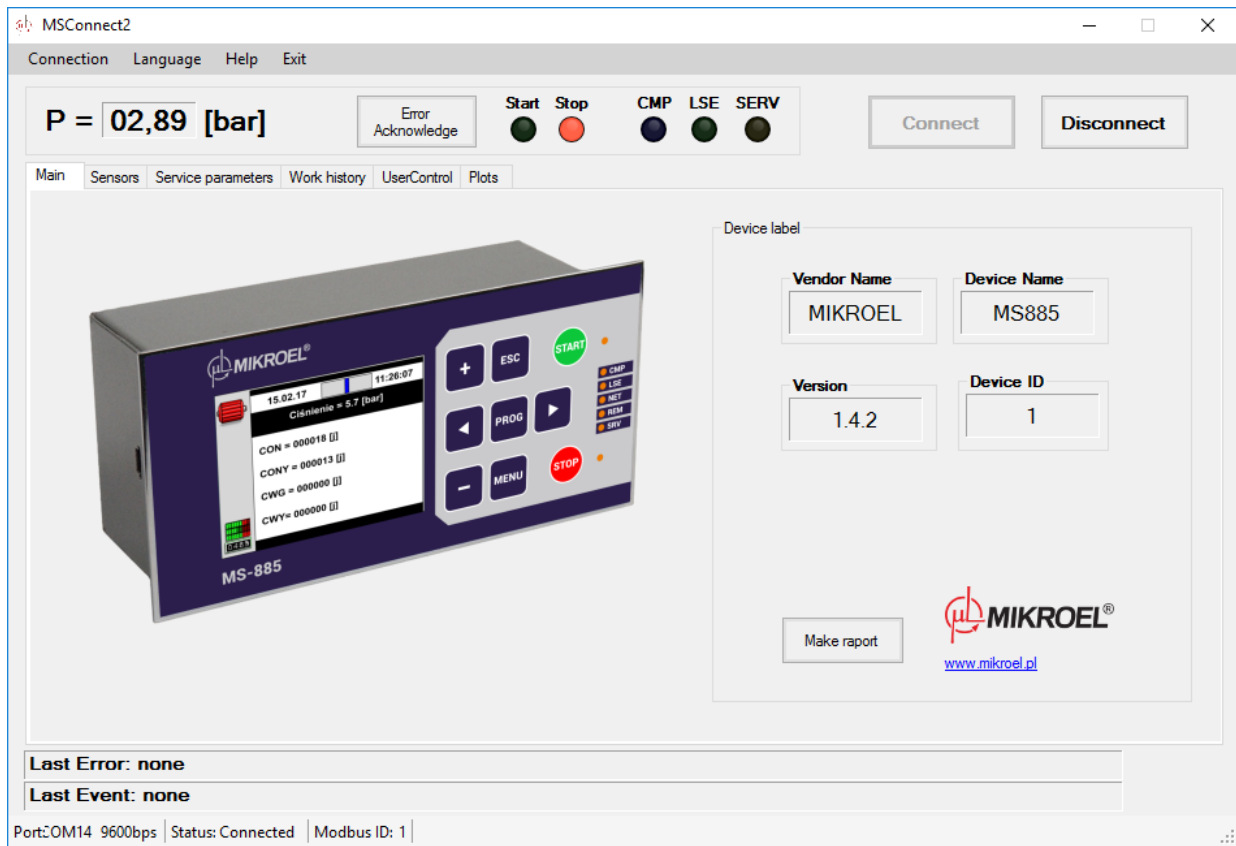


Figure 1: MS-Connect2 Main screen

The software allows for readout of:

- pressure,
- temperature,
- motor current,
- service counter values,
- user and service parameter setpoints,
- error list readout,
- change of date and time,
- remote control of compressor operation parameters.

## 1.1. Functions

Main functionalities of the software:

- communication with MS series controllers using Modbus RTU protocol:
  - MS-185
  - MS-585
  - MS586FRQ
  - MS-587FRQ
  - MS4CMPXv2
  - MS385V24
  - MS386V24
- readout of controller ID,
- readout of sensors connected to the controller,
- preview of user and service parameters,
- remote modification of user parameters,
- preview of error history,
- ability to start and stop controller operation,
- ability to remotely acknowledge the most recent compressor error,
- backup of controller configuration,
- create a graph of the current or archived variable,
- generate .csv data export,
- generate text report, containing every available user parameter and operation history.

## 1.2. Requirements

### 1.2.1. General requirements

In order to start using the software make sure that user has the following:

- MS - series controller equipped with communication interface RS-485 and with Modbus RTU protocol support,
- MS-CONNECT signal converter containing valid license key,
- USB A - B cable

## 1.2.2. PC Requirements

PC Requirements:

- 1GHz CPU, 512MB RAM,
- Windows operating system (Win7, Win10 with administrative account access), 5MB of available disk space,
- .NET Framework v2.0 or newer,
- FTDI VCP device drivers

## 2. MS-Connect Converter



Figure 2: MS-CONNECT Converter view

### 2.1. General information

MS-CONNECT Converter allows for a connection with any device using EIA-485 communication protocol. Additionally, MS-CONNECT Converter contains a license key to MSConnect2 software.

### 2.2. Technical parameters

#### 2.2.1. Electrical characteristics

Table 1: MS-CONNECT Converter electrical characteristics

Parameter	Value
Power supply voltage	5V DC, USB-powered
Power consumptions	Up to 1W
Maximum USB current draw	250mA
EIA-485 - minimum allowed voltage on pin	-7V
EIA-485 - maximum allowed voltage on pin	12V

#### 2.2.2. Mechanical information

Table 2: MS-CONNECT Converter mechanical information

Parameter	Value
Enclosure dimensions	66x44x25 mm
Weight (without packaging)	65g
Enclosure type	Free-standing enclosure

### 2.2.3. Operating conditions

Table 3: Operating conditions

Parameter	Value
Operating temperature	-15 ÷ 50 °C
Storage temperature	-20 ÷ 70 °C
Relative humidity	10 ÷ 90 %, no condensation

### 2.3. Enclosure drawing

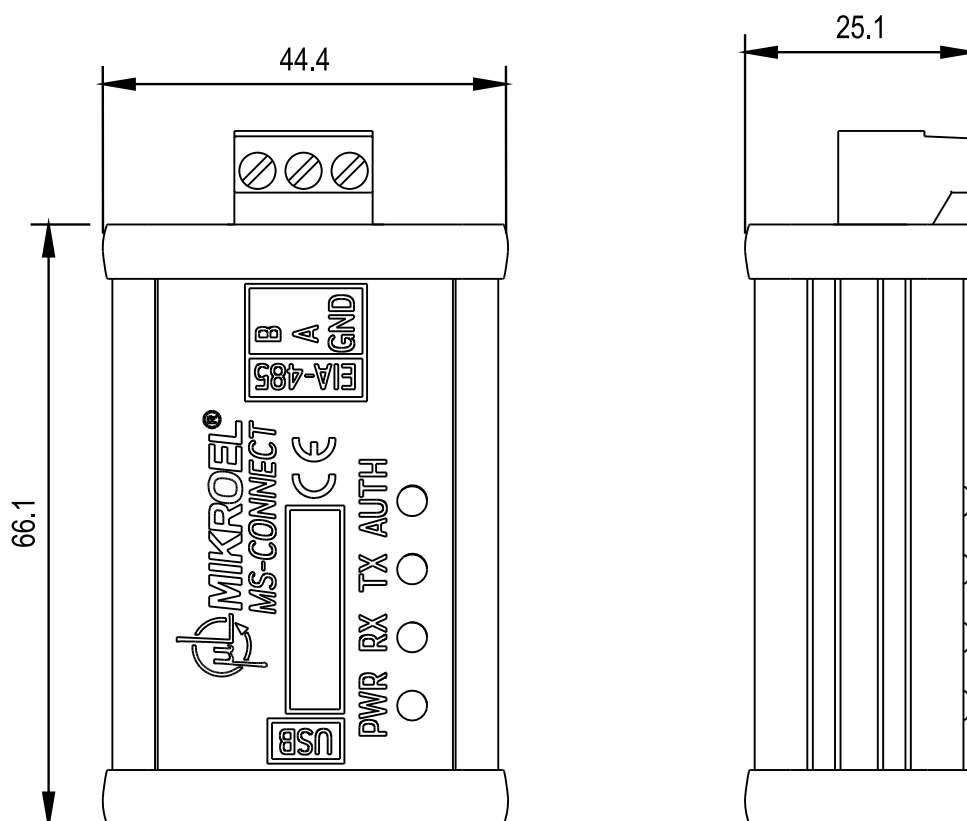


Figure 3: MS-CONNECT dimensions

## 3. Usage

### 3.1. For service department

Service department use case:

- sensor value preview:
  - quick assessment of compressor condition
  - real-time sensor readout
    - \* pressure
    - \* temperature
    - \* motor current
  - min-max setpoint
  - service counter values
  - diagnostics time saving
  - work planning of service groups
- preview of error and event list:
  - verification of communication with customer
  - readout of the exact time of event
  - event sequence reconstruction
- remote modification of user parameters
- remote start and stop of the compressor
- remote acknowledgement of the last error
  - comfortable work conditions
  - quick modification of main parameters
  - safety
- .csv data file generation,
- text report containing all parameters and operation history
  - tracking of compressor parameters
  - ease of data verification
  - quick selection of vital information
  - test of compressor operation based on plots
- archiving the controller parameters
- plotting the current value of the parameter or from the archived session
- .csv data file generation
- text report generation, containing all of the controller's parameters
  - ease of data transfer
  - ease of data verification
  - quick selection of crucial information

### 3.2. For end user

End user use-case:

- Remote compressor management
- Compressor operation supervision and quick response time in event of failures
- Compressor operation and sensor data analysis - operation optimization
- Sensor data analysis - cost optimizations
- Employee safety