

Micro Automation Sets

For Measuring and Sensor Technology

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MICRO AUTOMATION SET

SIEMENS

Micro Automation Sets

Compact Solutions for your success

Micro Automation Sets are carefully matched combinations of automation components from the Siemens portfolio. They are tailored to solve various automation issues and can be used for applications in the fields of industry, machine building and building services technology – simple, inexpensive and tested.

Lots of value added:

- You can solve small automation tasks faster and easier.
- An integrated, tested solution package is available which you can fully rely on.
- You receive all information and data from one source.
- By combining standard components in one network, you safely can solve your automation task whilst making interesting cost saving.

Our Micro Automation Sets not only help you to find the right product quickly – we also support you in using them with our “plug-and-play” tools for a fast start-up:

Functions in detail – Micro Application Examples

The Micro Application Examples show you what a concrete application can look like. All Sets are based on real-world applications as well as extensive tests and simulations. In this way, you benefit from detailed documentation and perfectly matched products.

Plug and Play for every phase – free start-up software examples

We offer codes and parameter sets for programming the application. This means “plug and play” at your ease – whether at the planning, engineering or commissioning.

www.siemens.com/microset

Micro Automation Sets can be used for applications in industry, machine building and building services technology – with the most varied of products from our wide-ranging portfolio.

■ Drive Technology

Starting, controlling and positioning with standard drives

■ Building Automation

Controlling, monitoring and signaling in building applications

■ Remote Control

Remote monitoring and control of distributed plants

■ Communication

Human machine interfacing in industrial applications and simple networking

■ Measuring & Sensor Technology

Recording, measuring and evaluation of non-electrical values

Measuring & Sensor Technology

Recording, measuring and evaluation of non-electrical values

Automation solutions are becoming progressively more comprehensive and processes increasingly complex. Complete control of all processes is becoming all the more important. If you want to keep a close watch on things, all available senses must be used optimally.

Applications

Industry

- Wood Working Machines
- Screwdriving Robots
- Drying Chambers
- Compressors
- Vibratory Finishing Systems
- Bottling Systems
- Injection Moulding Machines

Building Services Engineering, Infrastructure

- Cooling and Heating Systems
- Energy Management
- Ventilation Control
- Booster Stations
- Mechanisms for Shading
- Irrigation Plants

Sensors are the sense organs of machines and plants, e.g.:

- Proximity Switches SIMATIC PX: recording, counting, measuring, monitoring or positioning of substances.
- Machine Vision Systems SIMATIC MV: control, monitor and secure the material flow as well as the quality of your industrial production.
- Weighing System SIWAREX: SIWAREX MS the MicroScale for SIMATIC S7-200. Main applications are bin scales, weigh control in the process, quality control.

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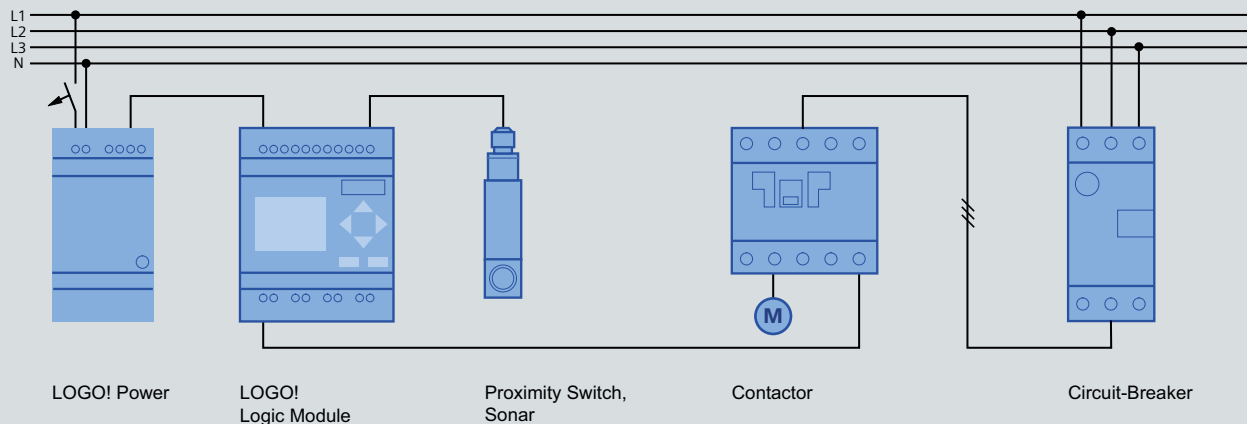
Distance and level measurement in industrial applications

Measuring and evaluating distances and filling levels with SIMATIC PXS300 Ultrasonic Proximity Switch and LOGO! Logic Module

- Direct connection of the ultrasonic proximity switch to a digital input of LOGO!.
- Cost-effective solution through the use of a sensor with frequency output.
- Intelligent combination of measurements through integrated special functions in LOGO!, such as timer, counter and threshold functions.
- Direct output of measurements on the LOGO! display.
- Easy modification of switching thresholds directly via the LOGO! keypad.
- Flexible customization of proximity switch through parameterization interface.
- Fast and clearly structured control program generation with LOGO! Soft Comfort.
- Motor switching and protection with SIRIUS contactors and circuit-breakers.



MAS 3 Hardware components





Application areas

The Micro Automation Set is especially suited for distance and level measurements in the industrial environment, e. g.:

- Stack height detection
- Silo filling with fluids or solids
 - level monitoring
 - pump control
- Collision protection
- Distance monitoring for conveying equipment



Technical specification

Product

LOGO! Power (24 V/1.3 A), primary-switched power supply	6EP1 3 31-1SH02
Supply voltage Output voltage Output current	85 ... 264 V AC 24 V DC 1.3 A
LOGO! Logic Module (12/24 RC)	6ED1 052- 1MD00-0BA6
Supply voltage inputs/outputs	12/24 V DC 8 DI/4 DO (relays) Expandable to 24 DI/16 DO
SIMATIC PXS300 Proximity Switch, Sonar	3RG6 0 13-3RS00
Supply voltage/current Application range Frequency output	24 V DC/300 mA 200 ... 1300 mm 20 ... 130 Hz
SIRIUS 3RT10 Contactor Motor switching	3RT1 0 15-1BB42
SIRIUS 3RV Circuit-Breaker Overload protection for motor	3RV 1011-0KA10

Accessories

Line Protection Switch Standard DIN Rail 35 mm	5SX2 116-6 6ES5 710-8MA11
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Configuration software/tools

LOGO! Soft Comfort LOGO! PC cable	6ED1 058-0BA02-0YA0 6ED1 057-1AA00-0BA0
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ABC-123:

You can find ordering information for variants in the Mall.

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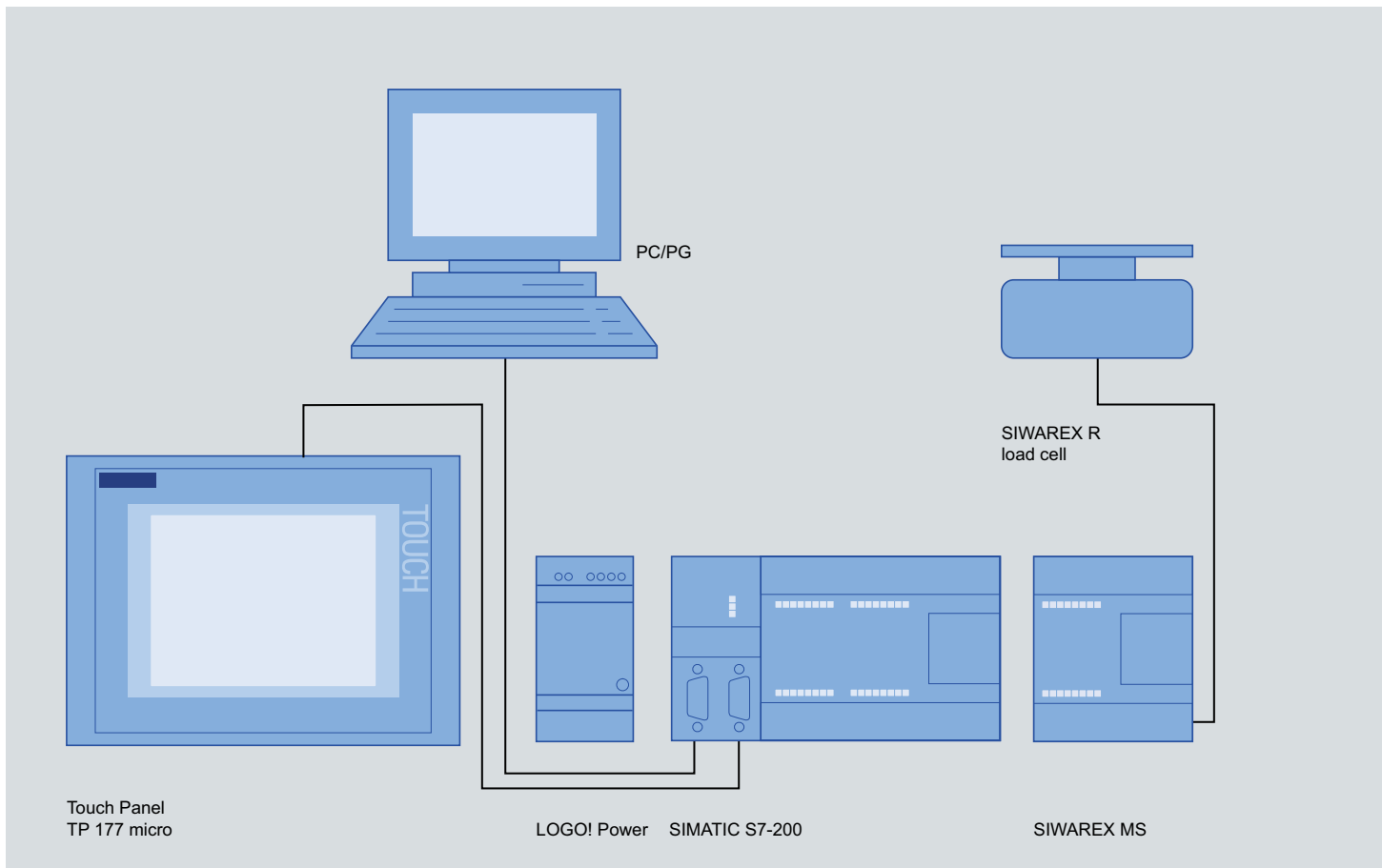
Quality assurance through weighing, controlling and recording

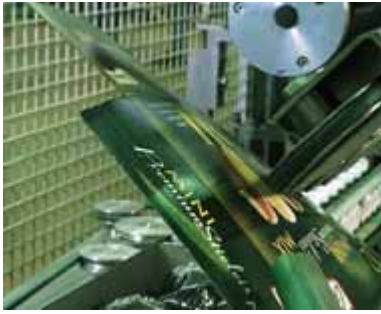
Recording and processing weights with SIMATIC S7-200 and SIWAREX MS

- By incorporating the SIWAREX MS weighing module beam into the S7-200 series, the full functionality and flexibility of the PLC world is made available for weighing applications as well.
- Almost every DMS load cell represented on the market can be connected to the standardized interface of SIWAREX MS.
- The data-logger function of the S7-200 makes it possible to save measurement results.
- Visualization of the measured values and input of data using the Touch Panel TP 177micro.



MAS 6 Hardware components





Application areas

The Micro Automations Set is particularly suitable for use on simple automation tasks in the field of quality assurance. For example, to check packages for completeness by monitoring their weight.

Further applications:

- Weighbridges
- Weighing hoppers
- Mixers
- Belt scales
- Roller scales
- Pressure measurement
- Monitoring of crane and cable loads

Technical specification

Product

LOGO! Power (24 V/1.3 A), primary-switched power supply	6EP1 3 31-1SH02		
Supply voltage, output voltage, output current	85 ... 264 V AC, 24 V DC, 1.3 A		
Touch Panel TP 177micro	6AV6 640-0CA11-0AX0		
Display Supply voltage Degree of protection as per EN 60529	5,7" STN-LCD/Blue mode, Touchscreen 20.4 ... 28.8 V DC Front IP65, rear IP20		
SIMATIC S7-200 224 XP	6ES7 214-2AD23-0XB0		
Supply voltage Interfaces	20.4 ... 28.8 V DC 2 x RS485 communication interfaces		
SIWAREX MS	7MH4 930-0AA01		
Supply voltage Load cell connection, Load cell feed	20.4 ... 28.8 V DC DMS full-bridge using 4-core or 6-core technology 6 V, max. 150 mA		
SIWAREX R-Series load cell, single point	7MH4 107-1LC01		
Design, Rated load, Rated characteristic C_n	Single Point, 6 Kg, 2 mV/V		
SIWAREX R-Series demo load cell, single point, 20 kg, aluminum 7MH4 107	7MH4 110-2DC01 Alternative to load cell above, to be used exclusively for demonstration and test purposes		
Memory module, 256 kB	6ES7 291-8GH23-0XA0		

Accessories

PROFIBUS connector cable 830-IT	6XV1 830-1CH30	Standard DIN Rail 35 mm	6ES5 710-8MA11
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Configuration software/tools

RS232 PC/PPI cable SIWAREX MS configuration package SIWATOOL conn. cable SIWAREX MS-PC	6ES7 901-3CB30-0XA0 7MH4 930-0AK01 7MH4 702-8CA	STEP 7 Micro/WIN WinCC flexible micro	6ES7 810-2CC03-0YX0 6AV6 610-0AA01-3CA8
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