



More than **sensors + automation**



Product Range

Sensor and automation solutions for your success



 – Your partner for
sensor and automation solutions

True quality leads to success.

Since its founding in Fulda in 1948, JUMO has developed into a successful global player. Today, our company is represented on all 5 continents.

Anyone wishing to make a name for themselves in the competitive markets of the world with products and services must bring all their expertise to the table. The most important factors here are an innovative development department, products of superior quality, and reliable service. To achieve all of this, you must have one thing: highly motivated employees.

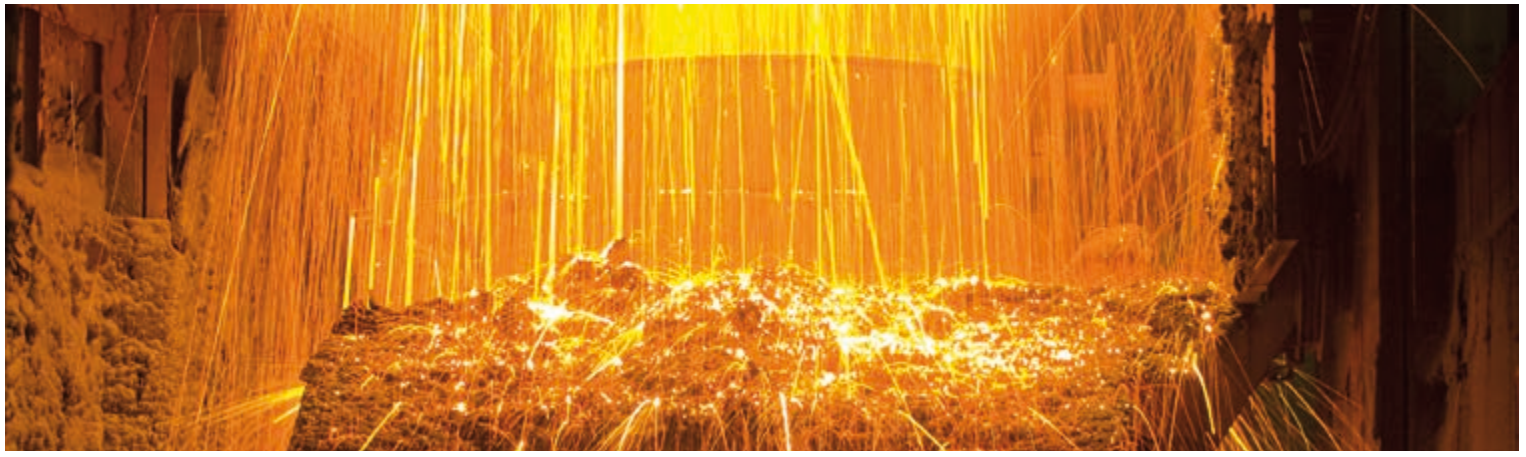
Today, our strong teams in all areas allow us to be placed among the leading manufacturers of industrial sensor and automation technology. We have over 2400 employees in 5 branch offices and 1 subsidiary in Germany as well as 24 subsidiaries and more than 40 agencies abroad.

The cornerstone of our corporate philosophy is the principle of holism. At JUMO we provide all-in-one solutions – from product development and production to Services & Support. This way, we have full control over all processes at all times and are able to make use of synergistic effects which benefit our customers.

The result is a product portfolio covering all aspects of measuring, controlling, and analyzing which is unparalleled in its scope and range. This brochure provides a clear introduction to this product range. Please feel free to contact us for further information.

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Temperature

Temperature is one of the most important measurands in a number of industrial areas. JUMO, your partner for precision temperature measurement, offers a wide range of products in this segment – from room temperature measurement in building technology to high-temperature measurements in furnace construction. Quality and reliability are maintained at the highest level through continuous further development. We always focus on the customer in everything we do. Customer satisfaction and long-term collaboration are the driving forces that keep us achieving outstanding performance time and time again.

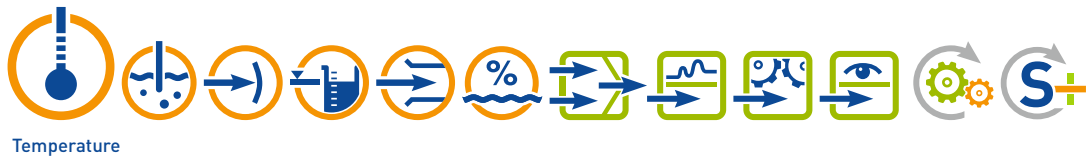
Portfolio:

- DAkkS calibration service
- Panel-mounted and surface-mounted thermostats
- Plastic temperature probes
- Temperature probes for wireless data transmission
- Thermocouples
- Platinum-chip temperature sensors
- RTD temperature probes
- Dial thermometers



Approvals:





Temperature sensors for industry, plant engineering, and vehicle engineering

JUMO has been producing high-quality RTD temperature probes and thermocouples since the mid-1960s. Temperatures up to approximately 500 °C are generally measured using RTD temperature probes. The platinum temperature sensor has established itself by ensuring a high degree of measuring accuracy and long-term stability. Thermocouples are suitable for measuring higher temperatures. Here, thermocouples of type L, J, K, N, S, or B are used depending on the requirement. The in-house DAkkS lab and our own temperature sensor thin film production facilities enhance JUMO's expertise and offer our customers a high degree of flexibility. JUMO is now one of the world's leading manufacturers in this field.

Thermocouples and RTD temperature probes with terminal head or connecting cable

Type 901020, 901030, 901120, 902020, 902023, 902030, 902120, 902123, 902820, 901150, 901190, 901210, 902050, 902150, 902153, 902190, 902210, 902350



RTD temperature probes with wireless data transmission

Type 902930, 902931, 707060



RTD temperature probes with plug connector

Type 902040, 902044



RTD temperature probes for industrial solutions

Type 902424, 902425, 902434, 902435, 902810, 902815, 902915, 902940



Electromechanical temperature monitoring

Decades of experience in the manufacturing of electromechanical thermostats and dial thermometers make JUMO a reliable partner. The ease with which our devices enable temperatures to be acquired and controlled without using auxiliary power has allowed these devices to become standard in various industry sectors. The product range here extends from mass-produced products to individual customer solutions in very small batches.

Indoor, outdoor, and channel RTD temperature probes

Type 902520



JUMO plastoSENS T01/02/03/04

Vibration-resistant, voltage-resistant, steam-tight, and surface-optimized plastic temperature probe
Type 904001, 904002, 904003, 904004



Platinum chip temperature sensors according to DIN EN 60751

Type 906121, 906122, 906123, 906124, 906125



Panel-mounted and surface-mounted thermostat

EM series, heatTHERM series
Type 602021, 603070



Dial thermometer

Type 608002





Liquid analysis

The JUMO range of analytical measurement products focuses on the most important chemical and electrochemical measurands in liquid media. This includes the pH value, redox potential, and ammonia as well as the electrolytic conductivity, dissolved oxygen, turbidity, free chlorine, total chlorine, chlorine dioxide, ozone, hydrogen peroxide, and peracetic acid. Sensors and measuring devices from JUMO are used in a variety of areas including the treatment of drinking, service, and process water. Today, JUMO is one of the leading manufacturers of measuring devices and sensors (including accessories) for electrochemical measurands.

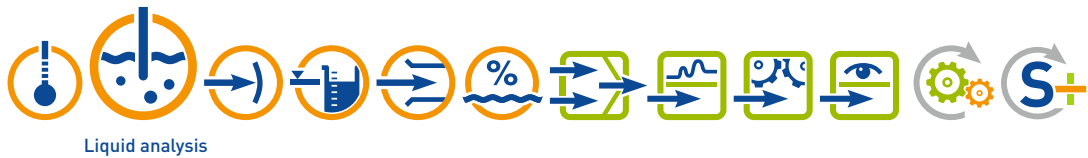
Portfolio:

- Fittings
- Digital sensors
- Dissolved oxygen sensors
- Conductive and inductive conductivity sensors
- Transmitters and controllers
- pH and redox electrodes
- Sensors for chlorine, chlorine dioxide, bromine, ozone, hydrogen peroxide, and peracetic acid
- Turbidity sensors



Approvals:





From sensors to the modular multichannel measuring device

Water is the basis of all life on the planet. It is sufficiently available when you consider that approximately 70 % of the Earth's surface is covered with seawater. The water, however, is not evenly distributed and is not suitable for immediate use in every state. This places a wide range of demands on measurement technology. Whether one is dealing with drinking water, swimming pool water, tap water, ultra-pure water, service water, process water, or cooling water – every sector has its own requirements when it comes to the sensors and devices for measuring key quality parameters.

Before water can be used, it often needs to be treated or brought to an intended state using chemical additives. The JUMO analytical measurement sensors and controllers help with these procedures in an established manner. From a simple top-hat rail transmitter to the multichannel controller and recorder, the user has a wide range of options from which to select.

The JUMO CTI-500 and JUMO CTI-750 series of inductive conductivity measuring devices have allowed JUMO to earn a permanent place among the plant manufacturers and operators in the food and beverage industry. Here, JUMO consistently meets the special hygienic requirements.

JUMO ecoLine/BlackLine/tecLine/tecLine HD
pH and redox electrodes
Type 201005, 201020, 201021, 201030, 201050



Membrane-covered and optical sensors

For measuring free chlorine, total chlorine, chlorine dioxide, ozone, hydrogen peroxide, peracetic acid, ammonia, bromine, turbidity, and dissolved oxygen
Type 201040, 202610, 202614, 202630, 202631, 202634, 202636, 202637, 202670



JUMO ecoTRANS Lf 01/02/03, JUMO ecoTRANS pH 03
Transmitter and switching devices
Type 202723, 202731, 202732



JUMO dTRANS pH/CR/AS 02
Transmitters and controllers
Type 202551, 202552, 202553



JUMO ecoLine/BlackLine/tecLine/digiLine
Conductivity sensors – conductive and inductive
Type 202760, 202761, 202922, 202923, 202924, 202925, 202928, 202930, 202931, 202941, 202942, 202943



JUMO CTI-500/750

Inductive conductivity and concentration transmitters
Type 202755, 202756



JUMO AQUIS 500 pH/CR/Ci/AS

Transmitters and controllers in surface-mounted case
Type 202560, 202565, 202566, 202568



JUMO AQUIS touch P/S

Modular multichannel measuring devices with integrated controllers and recording function
Type 202580, 202581





JUMO digiLine

Intelligent, bus-compatible connection system for digital sensors used in liquid analysis

JUMO digiLine is a bus-compatible connection system for digital sensors used in liquid analysis which simultaneously offers Plug and Play functionality. JUMO digiLine allows for the simple establishment of sensor networks in which a wide variety of sensors can be interconnected in different bus

topologies (linear, star). A single shared signal line is used for communication with the next evaluation unit or controller. This way plants in which several parameters need to be measured at the same time in different places can be wired efficiently and quickly.

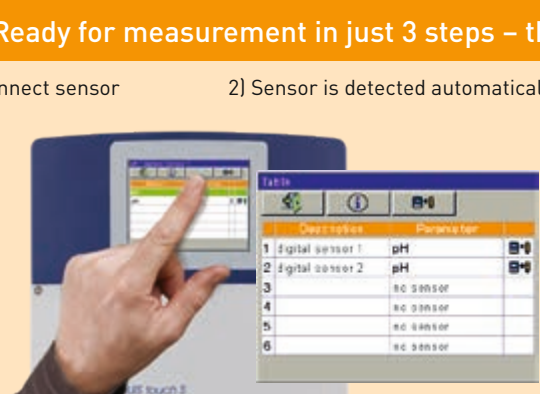
Measure various liquid analysis measurands with just one system

- Measurands: pH value, temperature, redox potential, conductivity, oxygen concentration, turbidity, disinfection measurands
- For industrial applications in the process, food, pharmaceutical, and water industry
- Fail-safe digital data transfer for optimal process monitoring
- Modular system: for individual measuring points as well as for establishing sensor networks
- Plug and Play function for connection to transmitters from the JUMO AQUIS touch series: facilitates the replacement of expended sensors or the brief exchange of sensors for calibration purposes
- JUMO digiLine electronic components can continue to be used even when the sensor becomes worn
- Simple and reliable calibration of sensors as well as comprehensive measuring point management: both can be easily done on a PC with the JUMO DSM (Digital Sensor Management) software tool

Ready for measurement in just 3 steps – thanks to Plug and Play



1) Connect sensor



2) Sensor is detected automatically

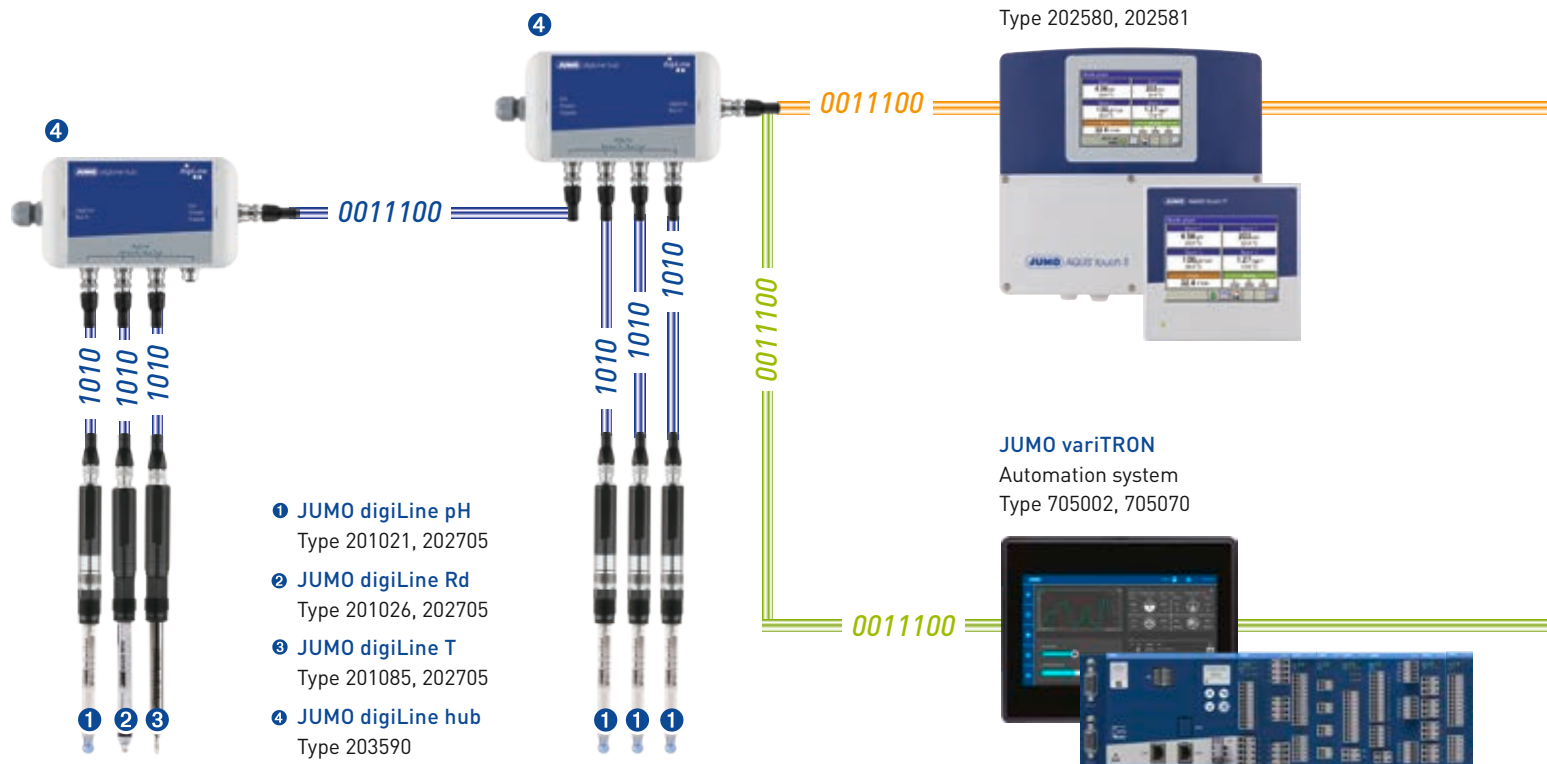
Detected	Parameter	Unit
1	digital sensor 1	pH
2	digital sensor 2	pH
3	no sensor	
4	no sensor	
5	no sensor	
6	no sensor	



3) Sensor is linked up and ready for measurement

Sensor	HM-Adresse
pH	00001A
pH	00001B

System structure **digiLine**



Connection option 1

The multichannel measuring devices in the JUMO AQUIS touch series were designed especially for liquid analysis. They are ideal as a central platform for the display and further processing of measurement data. Up to 6 JUMO digiLine sensors can be connected to the modular devices and as many as 25 sensors can be connected using corresponding input modules and interfaces. In addition to measured value acquisition, up to 4 independent control loops can be implemented and process values can be recorded in a tamper-proof manner with an integrated paperless recorder.

Connection option 2

JUMO digiLine sensors can also be connected to the JUMO variTRON automation system. This way entire automation solutions can be implemented. Thanks to its scalability, the system can be individually adapted to the respective task. An integrated PLC is used to include up to 62 JUMO digiLine sensors.

Pressure

Pressure measurement is one of the most important tasks in almost all industrial sectors. High-quality pressure measuring devices ensure reliable and safe measuring results regardless of whether you are dealing with high-precision solutions for the process industry, hygienic solutions for the food and pharmaceutical sectors, or universal solutions for mechanical and plant engineering. JUMO also has the right solution for your specific application. We supply special solutions based on customer requirements for the OEM market.

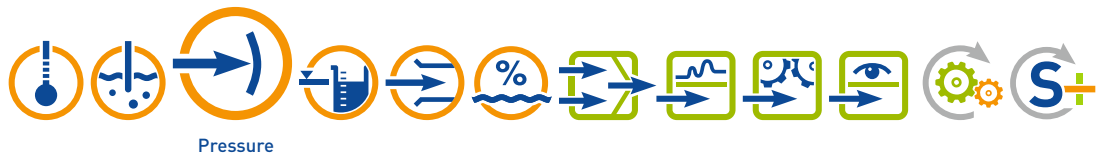
Portfolio:

- Differential pressure transmitters
- Pressure transmitters
- Pressure transmitters for wireless data transmission
- Pressure measuring cells (analog and digital)
- Diaphragm seals and accessories
- Pressure switches
- Process pressure transmitters



Approvals:





Quality through attention to detail

A key part of automation technology focuses on acquiring process pressure with a high degree of accuracy and reliability. With a host of applications, continuous pressure monitoring can guarantee process reliability and therefore increase product quality.

Our sophisticated production depth allows us to ensure all quality processes and results in increased flexibility. This in turn enables us to give special consideration to customer requirements and application-orientated conditions. In addition to low measured values in the Pascal range, pressures up to 1000 bar can be acquired as well. Analog signals, but also interfaces such as HART® or CAN, are available as outputs. The wide variety of possible electrical and process connections allows the pressure transmitters to be adjusted to almost every application.

Pressure transmitters from JUMO are frequently used in the compressor industry, autoclave equipment, the heating/cooling/air-conditioning industry, the food and chemical industry, and in cleanrooms.

Depending on the operating conditions in the various industries, the devices offer application-oriented approvals such as ATEX or DNV GL.

Pressure measuring cells

Type 404410, 405101, 405104, 405106



JUMO MIDAS series

Pressure transmitters

Type 401002, 401005, 401008, 401009, 401010, 401011, 401012, 401020, 401021, 401050, 404710



JUMO DELOS series

Pressure transmitters

Type 405052, 405054



JUMO dTRANS p30 series

Pressure transmitters

Type 402050, 402058, 404366, 404753



JUMO dTRANS p20 series

Pressure and differential pressure transmitters

Type 403022, 403023, 403025, 403026



JUMO Wtrans p

Pressure transmitter with wireless data transmission

Type 402060



Diaphragm seals

Type 409772, 409774, 409776, 409778, 409780, 409782, 409784



JUMO TAROS series

Pressure transmitters

Type 402071, 402072



250

Level

Our decades of experience with pressure measurement technology forms the basis for our developments in the field of hydrostatic level measurement. We offer solutions for pressurized and unpressurized containers as well as for wells and waterbodies. You can acquire the level with level probes or pressure transmitters depending on the application.

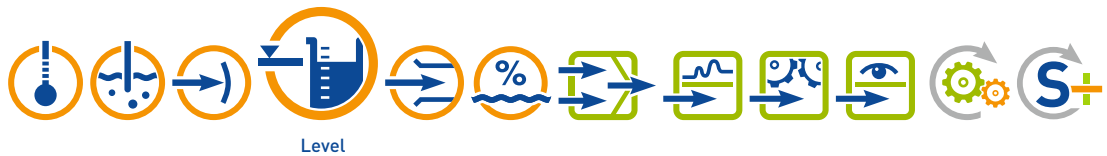
Portfolio:

- Differential pressure transmitters (hydrostatic)
- Pressure measuring devices (hydrostatic)
- Level probes (hydrostatic)
- Floats (mechanical)
- Float switches and level transmitters



Approvals:





Hydrostatic level measurement:

pressure as a means to an end

When taking level measurements, pressure measuring devices operate according to the hydrostatic principle. The hydrostatic pressure is created in a liquid by a liquid column located above a sensor and always behaves in proportion to the sensor's immersion depth.

The pressure measuring device is selected depending on the measuring task. Level probes and pressure measuring devices developed especially for determining the level are available for unpressurized tanks or open bodies of water. The rack cleaning system of a water works is one example of an application.

JUMO MIDAS DP10 or JUMO dTRANS p20 DELTA differential pressure measuring devices are the preferred solution for use on pressurized tanks. For hygienic reasons, the level can also be recorded from the outside using a relative pressure or differential pressure measuring device.

Float switches are used for point level measurement and level transmitters via floats for quasi-continuous level measurement of liquids. The measurement is based on the Archimedes' principle and is suitable for unpressurized and pressurized tanks.

In addition to end devices, JUMO also offers mechanical floats for producing float switches.

JUMO MAERA series

Level probes

Type 401015, 402090, 404391, 404392, 404393



JUMO dTRANS p30 series

Pressure transmitters

Type 404366, 404753



JUMO DELOS SI and JUMO dTRANS p20

Pressure transmitters with display for mounting on unpressurized tanks

Type 405052, 403025, 403026



JUMO MIDAS DP10 and dTRANS p20 DELTA

Differential pressure transmitters for mounting on pressurized tanks

Type 401050, 403022, 403023



JUMO NESOS series

Float switches and level transmitters

Type 408301, 408302, 408303, 408304, 408320, 408340





Flow

JUMO offers you products with various features for flow measurement. In addition to differential pressure transmitters and paddlewheel sensors, the JUMO product range also includes electromagnetic and ultrasonic flowmeters. The result is that we have the right solution for all your applications, regardless of whether you're measuring the flow of gas, liquids, or slurry.

Portfolio:

- Differential pressure transmitters
- Flowmeters for steam, gases, and liquids
- Paddlewheel flowmeters
- Electromagnetic flowmeters
- Flow sensors
- Ultrasonic flowmeters



Approvals:



JUMO helps you safely design your process technology with sensors known for their long-term stability and precision. Depending on the application, we can offer you the right flowmeters for liquids, gases, or vapors. If adjusted to the corresponding evaluation devices and controllers, the devices allow the flow to be measured, displayed, controlled, or recorded.

We offer both electromagnetic and ultrasonic flowmeters specifically for flow measurements in liquids. The magnetic-inductive devices were developed for industrial and hygienic applications. They are particularly flexible and available with a large variety of nominal widths, measuring tube linings, materials, and process connections.

While the magnetic-inductive measuring method requires conductivity, ultrasonic devices also measure the flow of non-conductive media such as ultra-pure water. Our ultrasonic sensors can even be used with corrosive media thanks to their tube being made of high-performance plastic and a wide range of nominal widths.

Electromagnetic flowmeters for industrial and hygienic applications
Type 406060, 406061



Ultrasonic flowmeters
Type 406050, 406051



Differential pressure transmitters
Type 403022, 403023



Calorimetric flow sensor
Type 406041



MID flow transmitter
Type 406011

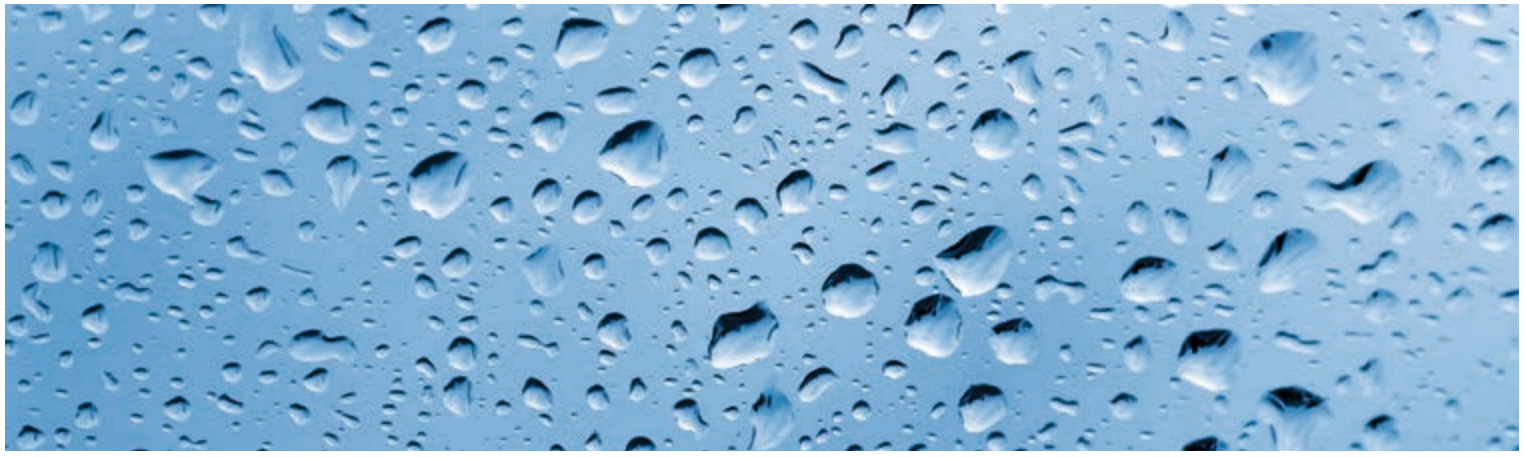


Type 406090



Type 406020





Humidity

For several decades, JUMO has been offering a very comprehensive and cutting-edge range of devices for measuring relative humidity and the measurands associated with air humidity. The devices are designed for most applications in air-conditioning and ventilation technology as well as for sophisticated industrial applications.

Portfolio:

- Intrinsically safe industrial measuring probes (ATEX)
- Hygrometric humidity measuring probes
- Hygrostats
- Capacitive humidity measuring probes
- Measuring probes for wireless data transmission

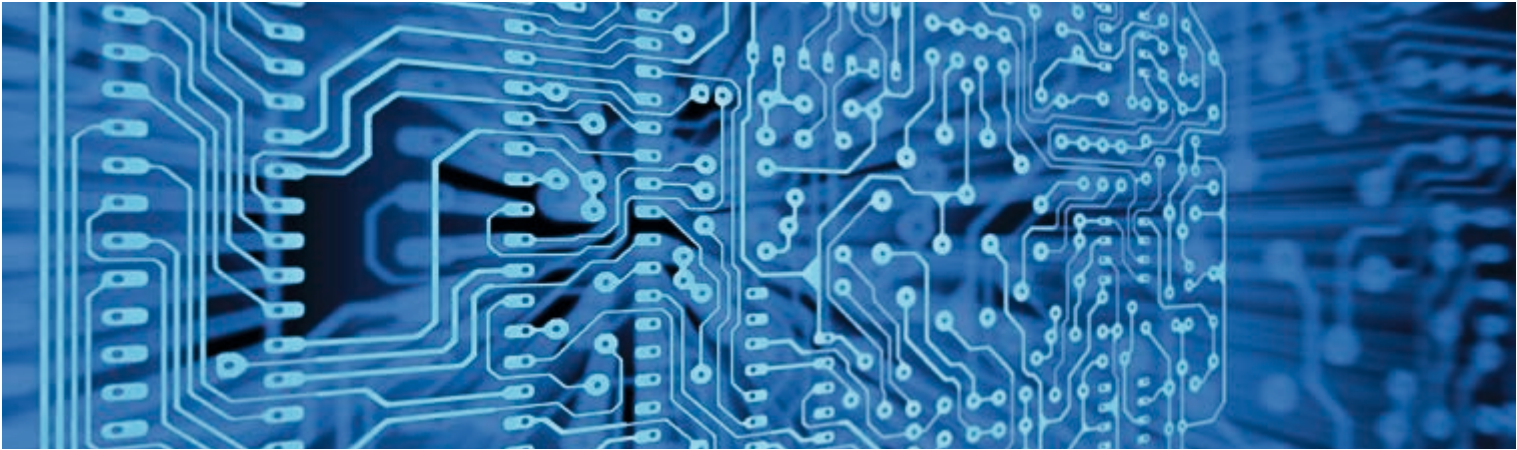


Approvals:



A reliable after-sales service for maintenance and calibration purposes completes the range. With JUMO as your partner in humidity measurement technology you are in the best hands possible.





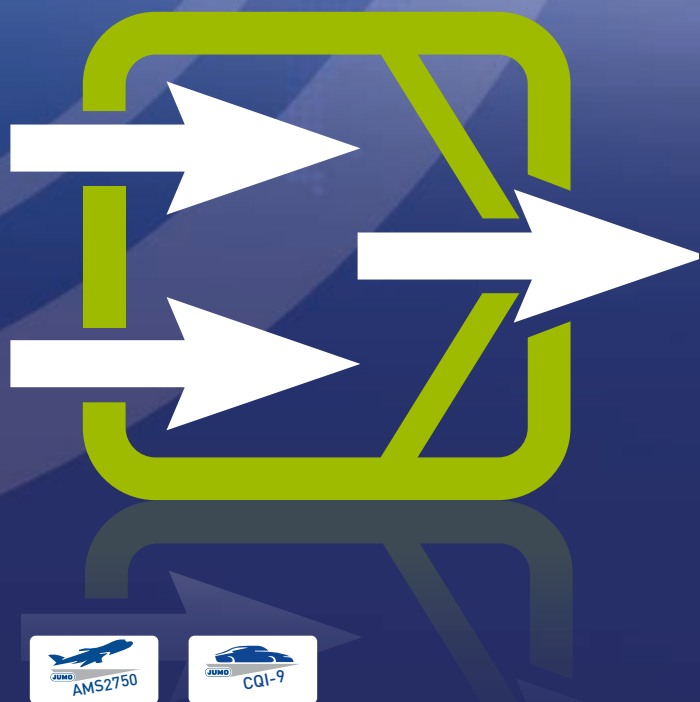
Control

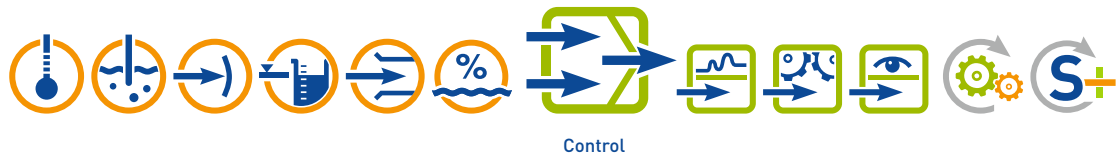
However different the production processes in various industries may be, one thing they all have in common is that process variables such as temperature, pressure, humidity, flow, and level often need to be controlled with the highest levels of accuracy. You will be sure to find the right controller for your application in the JUMO product range, which spans from inexpensive electromechanical and electronic thermostats to digital compact controllers and multichannel automation systems.

Portfolio:

- Surface-mounted thermostats
- Panel-mounted thermostats
- Single channel and multichannel controllers
- Frost protection thermostats
- Process and program controllers
- Contact dial thermometers

Approvals:





Programmable electronic controllers

The precise control of a wide variety of process variables such as temperature, pressure, humidity, level, and many more as well as many other measurands in today's industrial and process applications is crucial for consistent product quality. With our array of electronic controller products ranging from single channel controllers to multichannel screen controllers we provide the right solutions for your control requirements. Fast startup and cost savings are ensured at the same time due to the integrated autotuning function. The universal measurement input enables the connection of a wide range of sensors while providing a high level of application flexibility. Optional interface technology allows for integration into the management and control systems and thereby reduces the load placed on the control technology.

Electromechanical thermostats

Electromechanical thermostats are used in both the heating and air-conditioning industry as well as in building automation. Temperatures in a variety of processes can be controlled without using auxiliary energy. Explosion-protected surface-mounted thermostats enable the maximum temperature control of electrical heating cables in industrial applications. Here, the thermostat stands out with its resistance to electromagnetic interference.

JUMO IMAGO 500

Multichannel process and program controller
Type 703590



JUMO DICON touch

Two-channel/four-channel process and program controller with paperless recorder and touchscreen
Type 703571



PROFI
NET

JUMO meroTRON

Modular one-channel/two-channel controller with PLC function
Type 703051, 703052, 703053, 703054



JUMO diraTRON

Compact controllers
Type 702110



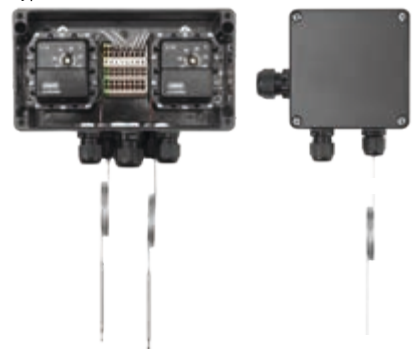
JUMO heatTHERM

Surface-mounted and panel-mounted thermostat
Type 602031, 603070



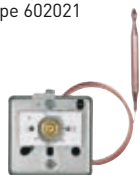
JUMO exTHERM-AT

Explosion-protected surface-mounted thermostat
Type 605055



Panel-mounted thermostat

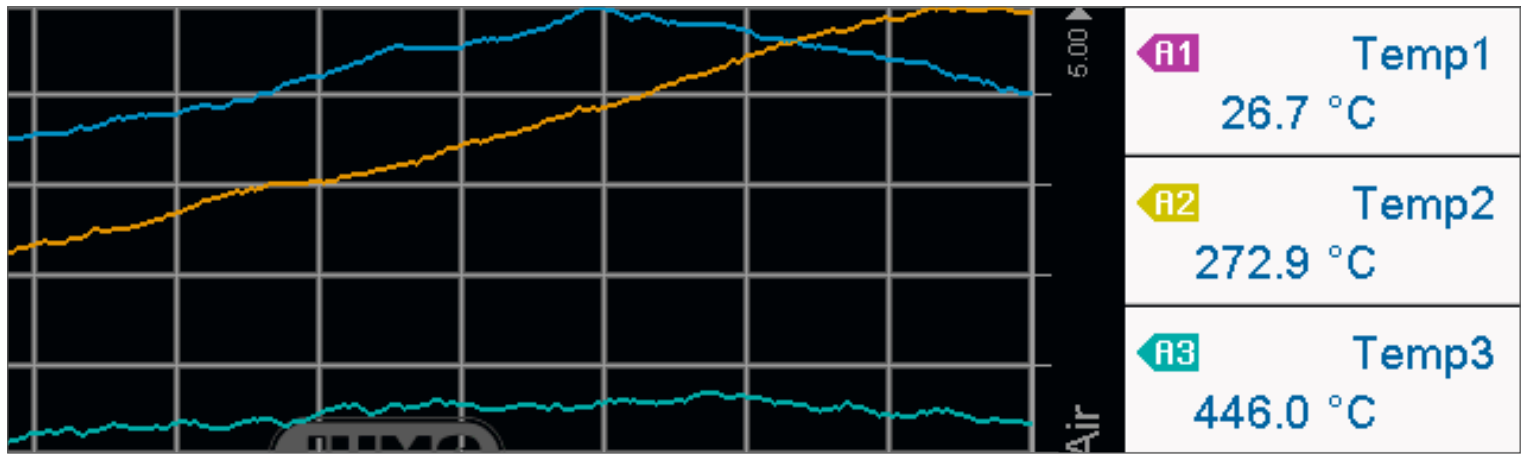
EM series
Type 602021



JUMO frostTHERM-AT/-DR/-ATE

Frost protection thermostats
Type 604100, 604170





Recording

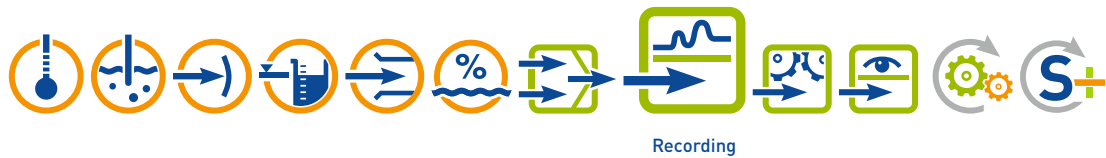
Are you familiar with the JUMO LOGOSCREEN type series? The devices in this paperless recorder family are ideally equipped to acquire, archive, and evaluate measured values that must be verified in a simple and tamper-proof manner. The devices can be used without restriction in almost all industries due to their flexibility and various approvals.

Portfolio:

- Paperless recorders
- Paperless recorder with AMS2750 and CQI-9 approval
- Paperless recorders with FDA approval
- Measuring, control, and automation systems with extensive recording functions and intuitive software for measured value visualization and evaluation

Approvals:





Recording and visualization, evaluation and archiving

The recording and archiving of measurement data – especially when the obligation to provide evidence must be met – has long been part of JUMO's measurement technology and portfolio. Paperless recorders were designed as a high-quality replacement for paper recorders. They have developed significantly with plant visualization, monitoring functions, and web server connection.

JUMO LOGOSCREEN 601

Paperless recorder with touchscreen
Type 706521



JUMO LOGOSCREEN 700

Highly scalable paperless recorder
Type 706530



JUMO LOGOSCREEN 601

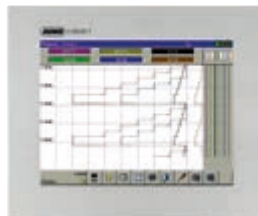
In addition to its 5.7" touchscreen, the basic device of the series offers various digital interfaces, up to 6 universal inputs, the recording of a batch report, plant visualization, and limit value monitoring.

JUMO LOGOSCREEN 700

The flagship of the series is highly scalable and can be equipped with up to 18 measurement inputs. It is also possible to generate 10 customer-specific process screens and up to 5 batch reports. JUMO screen recorders meet the requirements of FDA 21 CFR Part 11 for the electronic recording of process data as the latest hash algorithms make the data tamper-proof.

JUMO mTRON T – Multifunction panel 840

Measuring, control, and automation system
Type 705060



JUMO mTRON T – Central processing unit

Measuring, control, and automation system with controller module as well as input and output modules
Type 705001



JUMO variTRON and JUMO smartWARE Evaluation

Automation system and software for evaluation and visualization of measurement data recorded by JUMO variTRON
Type 705002, 705003, 701840



Automation systems

Our proven JUMO mTRON T measurement, control, and automation system offers comprehensive recording functions. JUMO variTRON allows you to benefit not only from the recording in the device, but also from the intuitive visualization and evaluation in the software. JUMO smartWARE Evaluation also ensures tamper-proof archiving of measured values and other data.



Automation

To ensure smooth process and production operations you need reliable systems. From thyristor power controllers and temperature transmitters, to digital indicators, to our JUMO mTRON T and JUMO variTRON automation systems. JUMO meets all your automation and visualization demands.

Portfolio:

- Indicating devices
- Electronic transformers
- Transmitters
- Measurement, control, and automation systems
- Transmitters for wireless data transmission
- SCADA and cloud solutions
- Software and accessories
- System technology
- Thyristor power controllers and solid state relays



Approvals:





Thyristor power controllers and solid state relays

In many electrically operated heating systems, solid state relays ensure wear-free switch operations with large currents and therefore play a key role in ensuring a high degree of heater availability. In thermal applications, in which (a) precise dosing of the electrical heat output for product quality and (b) the additional assurance of energy efficiency are important, the use of the JUMO TYA 200 series brings decisive advantages.

JUMO TYA 200 series

Single-phase and three-phase thyristor power controllers
Type 709061, 709062, 709063



JUMO TYA 432

Thyristor power switch
Type 709010, 709020, 709051



EtherCAT[®] PROFIBUS

Temperature transmitter

The JUMO dTRANS T series offers the right transmitter for your specific application. Regardless of whether the transmitter is mounted in the probe head, in the line, or on a mounting rail, it converts the temperature measured by the connected sensor into a precise standard signal for further processing in your production facility. The JUMO dTRANS T09 cable transmitter is ideal for retrofitting or digitization existing plants. JUMO dTRANS T06 Ex is used, for example, in safety-relevant areas (SIL/PL) and Ex applications. In Ex applications, the JUMO Ex-i repeater power supply and input isolating amplifier also ensures safe isolation between the Ex and non-Ex areas.

JUMO IPC 300

Electronic transformer
Type 709051



JUMO Ex-i repeater power supply and input isolating amplifier

Type 707530, 707540



JUMO dTRANS T06J, T06, T06 Ex

Multifunctional four-wire transmitter in mounting rail case
Type 707070, 707071, 707075



JUMO dTRANS T09

Cable transmitter for temperature
Type 707090



Digital indicating device

Digital indicators enable a precise on-site display of process values. They also allow you to keep an eye on values that are important for a smooth production process.

JUMO diraVIEW

Digital indicator
Type 701510





JUMO variTRON 300 and 500

Automation system

The automation system from JUMO has a modular design and is highly scalable. JUMO variTRON is based on the JUMO JUPITER hardware and software platform. CODESYS PLC transforms the system into a PLC, which can implement a wide range of control applications.



Features:

- High speed performance
- Flexible operating philosophy
- Simultaneous operation of more than 120 control loops
- Modern communication interfaces (e.g. OPC UA and MQTT)
- Integration of various fieldbus systems such as PROFINET, EtherCAT, Modbus TCP/RTU, and BACnet
- Many degrees of freedom in software and hardware
- Easy integration of new software functions via CODESYS PLC
- Easy adaptation of hardware inputs and outputs
- Customer-specific operation and visualization of several operator stations via CODESYS Remote TargetVisu and CODESYS WebVisu
- More than 30 intelligent connection modules
- Panels in various formats (portrait or landscape, 4:3 or 16:9)
- JUMO Web Cockpit
- Integrated measurement recording with up to 240 channels, up to 20 batches, and up to 10 measurement groups
- Optional wireless interface (JUMO variTRON 300)

Highly-scalable and high-performing IoT solutions

Enhance JUMO variTRON with the right IoT solution: use the JUMO Cloud for worldwide access to your measurement data and benefit from data management by JUMO – including backups. Or operate JUMO smartWARE SCADA on your own servers. The software also offers many different interfaces and protocols.

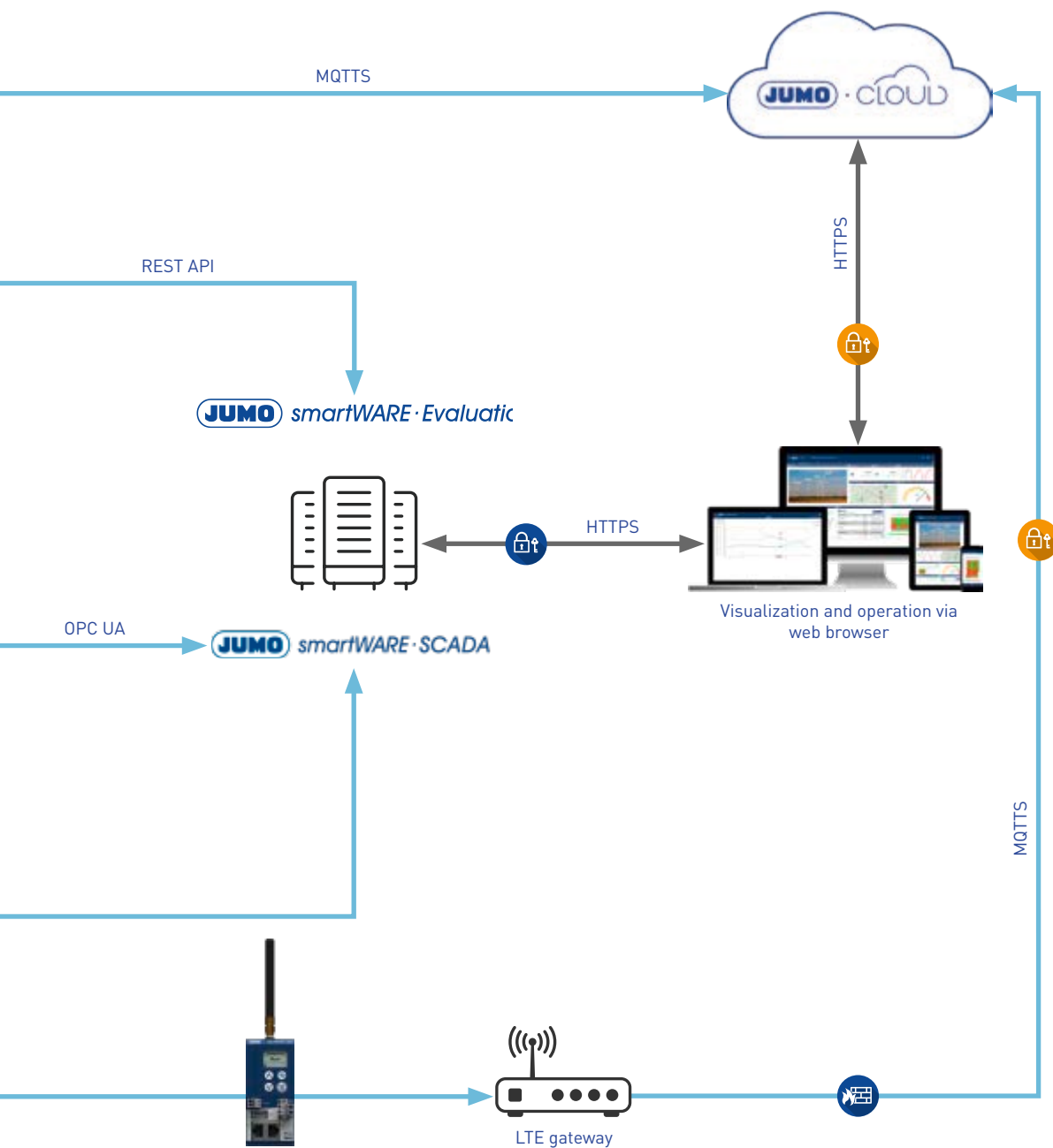


Features:

- Compatible with JUMO variTRON and connectable via Ethernet (JUMO variTRON as gateway)
- Maximum transparency in your processes with customizable user rights and dashboards
- Unlimited access to the dashboards using as many end devices (clients) as required – common web browsers are used so that installing software, browser plug-ins, or add-ons is not necessary
- More efficient reporting made possible due to outstanding report and export functions
- Alarm management through data evaluation, preparedness planning, and monitoring/remote alarm functions (text message, email, push message, phone call)
- Process visualization through editor with integrated animation and test tool as well as vector-based, self-scaling process screens
- End-to-end encryption, HTTPS, TLS, two-factor authentication (OTP)
- Extensive trend displays and reports with various diagrams, comparison functions, and export functions
- Timer and timer programs with unique events and series
- Modern drivers and protocols such as OPC UA, MQTT, and REST API

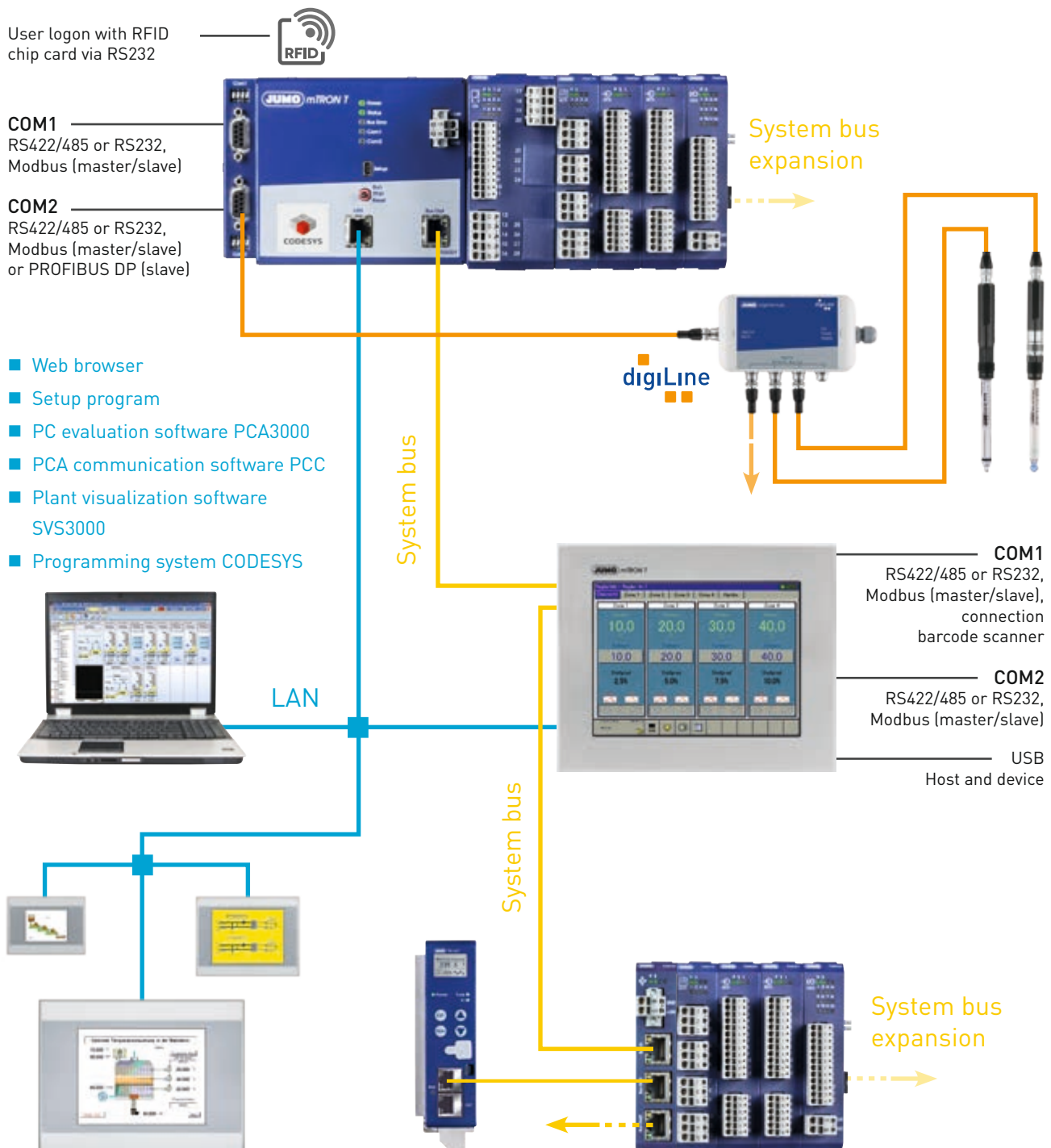


smartWARE Evaluation, JUMO Cloud, or JUMO smartWARE SCADA





System structure – JUMO mTRON T





Monitoring

To protect people, the environment, the plant, and the product, monitoring temperature limit values is especially important in numerous technical areas of plants and even required by legal regulations in many cases. JUMO enables you to operate your plant safely using either electronic or electromechanical products

Portfolio:

- Surface-mounted thermostats
- Bimetal temperature switches
- Electronic thermostats
- Panel-mounted thermostats
- Safety temperature limiters and monitors according to DIN 14597
- Dial thermometers

Approvals:





Monitoring with electronic safety temperature limiters and monitors as well as electromechanical thermostats

Electronic temperature monitoring is vital in many applications. This is particularly so with safety-related temperature monitoring of special system equipment which can pose an enormous hazard to people, the environment, the product, and production system when defined limit values are breached. The safetyM product line allows JUMO to offer sophisticated electronic temperature limiters and monitors to avoid such hazards. The advantage of SIL-certified devices: in case the plant's defined maximum or minimum temperature is exceeded or not reached, the electronics ensure that the plant is switched off with the utmost precision.

In applications in which no auxiliary energy can be supplied to power the electronic components, the electromechanical thermostats reliably perform their tasks and thereby play a crucial role in ensuring a safe production plant or equipment design. The thermostats operate according to the liquid expansion principle: the liquids in the measuring system expand when heated and transmission mechanics activate a micro-switch which then safely shuts down the system.

JUMO safetyM STB/STW Ex

Safety temperature limiters and monitors according to DIN EN 14597 and ATEX approval
Type 701150, 701155



JUMO safetyM TB/TW 08

Temperature limiter and monitor according to DIN EN 14597 as built-in and DIN-rail device
Type 701160, 701170



Surface-mounted thermostat

ATH series
Type 603021



JUMO heatTHERM-AT

Surface-mounted thermostat
Type 603070



Panel-mounted thermostats

EM series, heatTHERM series
Typ 602021, 602030/31, 602090



JUMO frostTHERM-AT/-ATE

Frost protection thermostats
Type 604100, 604170



Bimetal temperature switches

Type 608301



Dial thermometers

Type 608002





JUMO Safety Performance

The brand for increased safety

All products marked with the JUMO Safety Performance brand can be used in safety-related systems. Included here are devices that are SIL and PL certified, but also passive elements that are suitable for use in SIL and PL measuring chains. These are labeled with "SIL qualified" and "PL qualified".



Functional safety – hassle-free!

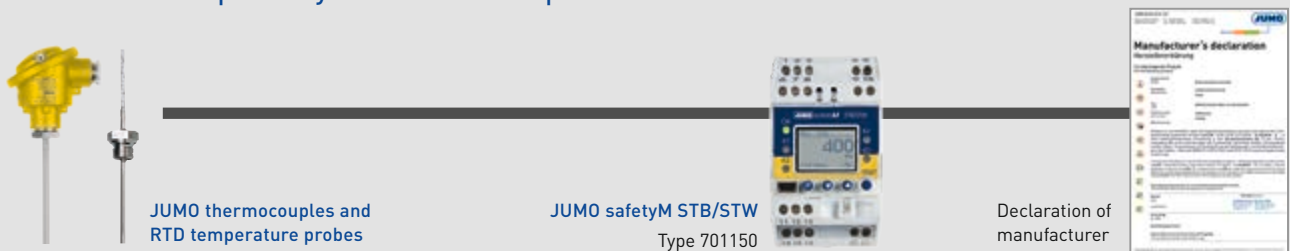
Advantages of the JSP (JUMO Safety Performance) brand

- Certified measuring chain protection up to SIL 3 and PL e possible
- Highest degree of flexibility for the configuration of the SIL components through comprehensive delivery program
- Safe monitoring and shutoff of systems
- Selectable security features (e.g. limiter or monitor function according to DIN 14597)
- Suitable for different measurands such as temperature, pressure, and level
- Variable, manufacturer-independent selection of sensor technology and actuators
- Certified measuring chain individually adaptable to the process requirement
- SIL calculation is no longer necessary by the user when the JUMO safetyM is used in combination with JUMO temperature probes
- Also available as explosion-protected compact solution according to ATEX directive in different ignition protection types such as [Ex i] and [Ex e]
- Individual assessment of the safety chain by the experienced JUMO Safety Performance team of experts



Safety-related switch-off up to SIL 3 (also in ATEX version)

Certified compact system for temperature



Compact system for temperature



Compact system for pressure



- The JUMO safetyM STB/STW has an output signal to control the downstreamed safety actuator systems.
- Additional output signal suitable for downstreamed visualization, controlling, and documentation.



JUMO Engineering

JUMO Engineering, the service division from JUMO GmbH & Co. KG, combines expertise and industry-specific experience in one team. Our engineers and technicians develop customized solutions that are strictly based on your specific requirements. The JUMO Engineering team strongly believes in personalized support and consulting for its customers – from initial contact and the development of a customized solution to its series production. When carrying out the many different industry applications we always strive for optimum results with maximum customer benefits. Our innovative engineering services allow us to achieve this goal.





Innovative system solutions which specific expertise

We always draw on the feedback from our customers around the world to improve our products. This strategy is reflected in our new developments. We view complex tasks as challenges that allow us to develop tailored solutions for you and at the same time improve our product portfolio. JUMO Engineering with its range of services completes this comprehensive approach.

Our services

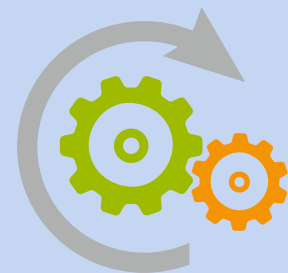
- Feasibility analysis
- Creating a technical concept including product requirements specifications and specification sheet
- Complete project planning and documentation
- Project planning including PLC programming, visualization, network technology, etc.
- Continuous project management
- On-site startup
- Training and support

Your advantages

- As a central contact partner JUMO develops technical system solutions
- Extensive expertise with all measurement and automation devices
- Global support through experienced specialists
- Flexible, tailored solutions to suit your individual needs and applications

In a nutshell

- Precise and prompt communication channels:
This saves you time and prevents mistakes!
- Highly developed expertise for maximum flexibility:
For fully reliable and proven project planning!
- Technology that has proven itself over decades reduces downtimes:
For excellent plant availability and process reliability!





www.jumo.net

