



More than **sensors + automation**



Product Range

Sensor and automation solutions for your success





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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 five 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 2,000 employees in five branch offices across Germany as well as 24 subsidiaries and more than 50 agencies abroad.

The cornerstone of our corporate philosophy is our holistic approach. 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 spectrum. Please feel free to contact us for further information.



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Temperature

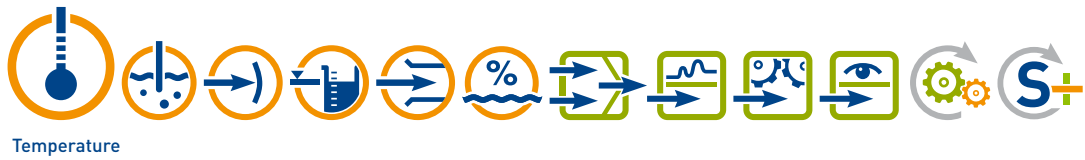
Temperature is one of the most important measurands in a number of industrial areas. JUMO, your partner for precision temperature measurement, offers a wide range of products in this segment – from room temperature measurement in building technology to high-temperature measurements in furnace construction. The highest quality and reliability of our products is maintained by continuously developing them. 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:

- Thermocouples
- RTD temperature probes
- Wireless data transmission
- Approvals: ATEX, EHEDG, GL, EAC, etc.
- Platinum temperature sensors
- DAkkS calibration service
- Dial thermometers
- Contact dial thermometers
- Bimetal temperature switches
- Panel-mounted and surface-mounted thermostats

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 proven its worth by ensuring high measuring accuracy and long-term stability. Thermocouples are used 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 temperature sensor and thin-film production facilities enhance JUMO's expertise and offer our customers ultimate flexibility. JUMO is now one of the world's leading manufacturers in this field.

Electromechanical temperature monitoring

JUMO's decades of experience in manufacturing electromechanical thermostats and dial thermometers has made it a reliable partner. The ease with which our devices allow temperatures to be recorded and controlled without using auxiliary power has caused these devices to become standard in various industry sectors. The array of products ranges from mass-produced products to individual customer solutions in small-scale production.

Thermocouples and RTD temperature probes with terminal heads or connecting cables

Types 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

Types 902930/902931/707060



RTD temperature probes with plug connectors

Types 902040/902044



RTD temperature probes for industrial solutions

Types 902424/902425/902434/902435/902810/902815/902915/902940



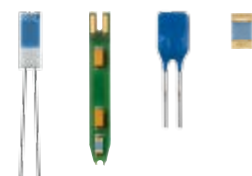
Indoor, outdoor, and channel RTD temperature probes

Type 902520



Platinum temperature sensors according to DIN EN 60 751

Types 906121/906122/906123/906124/906125



Panel and surface-mounted thermostat

Types 602021/603070



Dial thermometer

Type 608002



Bimetal temperature switch

Type 608301



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 ranging from drinking, service, and process water preparation. JUMO is now one of the leading manufacturers of measuring devices and sensors (including accessories) for electrochemical measurands.

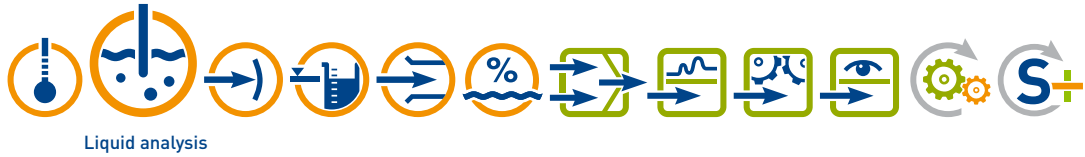
Portfolio:

- pH value and redox measurement
- Electrolytic conductivity measurement (inductive and conductive)
- Membrane-covered sensors
- Turbidity measurement
- Multichannel measuring devices
- Intelligent, bus-compatible connection system for digital 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 percent 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 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 a desired 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.

With the JUMO CTI-500/750 series of inductive conductivity measuring devices JUMO has earned a permanent spot with the plant manufacturers and operators in the food and beverages industry. Here, JUMO consistently meets the special hygienic requirements.

JUMO ecoLine/BlackLine/tecLine/tecLine HD pH and redox electrodes

Types 201005/201020/201021/201030/201050



JUMO ecoLine/BlackLine/tecLine

Conductivity sensors – conductive and inductive

Types 202922/202923/202924/202925/202930/ 202941/202942/202943



Membrane-covered and optical sensors

For measuring free chlorine, total chlorine, chlorine dioxide, ozone, hydrogen peroxide, peracetic acid, ammonia, bromine, turbidity, and dissolved oxygen

Types 201040/202610/202613/202630/202631/202634/202636/202637/202670



JUMO CTI-500/750

Inductive conductivity and concentration transmitters

Types 202755/202756



**JUMO ecoTRANS Lf 01/02/03
JUMO ecoTRANS pH 03**

Transmitters/switching devices
Types 202723/202731/202732



JUMO AQUIS 500 pH/CR/Ci/AS

Transmitters/controllers in surface-mounted case

Types 202560/202565/202566/202568



JUMO dTRANS pH/CR/AS 02

Transmitters/controllers
Types 202551/202552/202553



JUMO AQUIS touch P/S

Modular multichannel measuring device with integrated controllers and recording function

Types 202580/202581



JUMO digiLine

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

With JUMO digiLine, JUMO presents a bus-compatible connection system for digital sensors used in liquid analysis which also offers Plug and Play functionality. JUMO digiLine allows for the simple creation of sensor networks by connecting a wide array of sensors in various 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

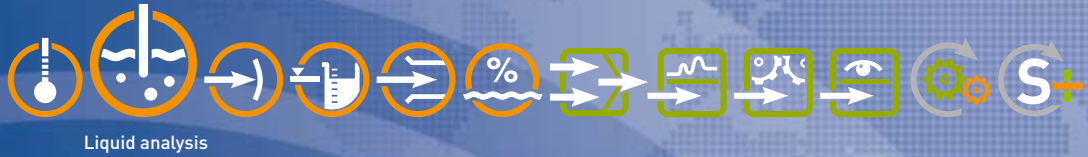
- Measurands: pH value, temperature, redox potential, conductivity, oxygen concentration, turbidity, disinfection measurands
- For industrial applications in the process, food, pharmaceutical, and water industry
- Fail-safe digital data transfer for optimal process monitoring
- Modular system: for both individual measuring points and for setting up 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
- The digiLine electronics can continue to be used even when the sensor becomes worn
- Simple and reliable calibration of sensors and comprehensive measuring point management can be completed easily on a PC with the JUMO DSM (Digital Sensor Management) software tool

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

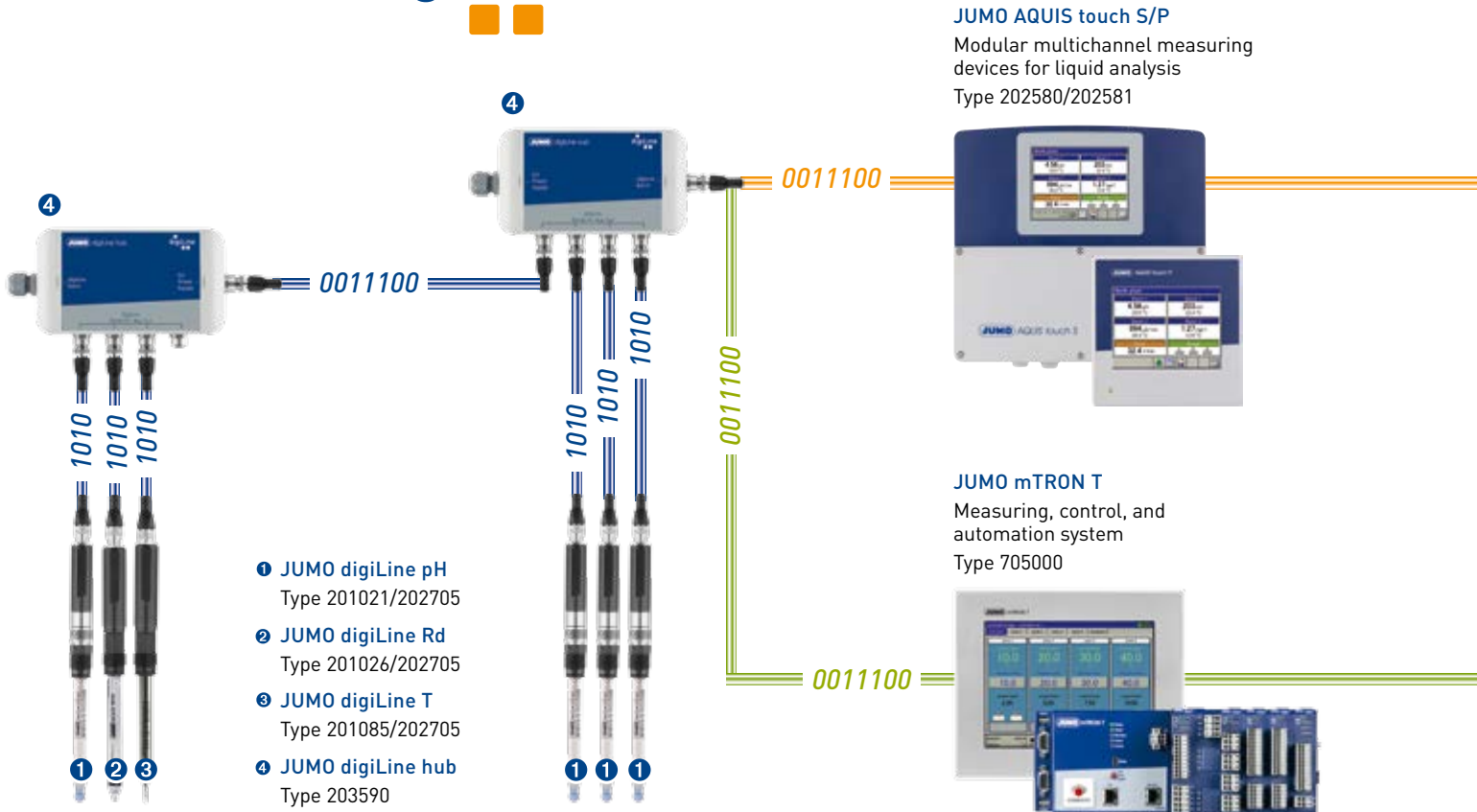
1. Connect sensor
2. Sensor is detected automatically
3. Sensor is linked and ready for measurement

Bezeichnung	Parameter	
1 digitaler Sensor 1	pH	
2 digitaler Sensor 2	pH	
3	kein Sensor	
4	kein Sensor	
5	kein Sensor	
6	kein Sensor	

Sensor	IP-Adresse
pH	00001 A
pH	00001 B



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 six 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 recording, up to four 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 universal measuring, control, and automation system JUMO mTRON T. This means that entire automation solutions can be implemented. Thanks to its scalability, the system also allows individual adaptation to a particular task. An integrated PLC is used to integrate up to 62 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.

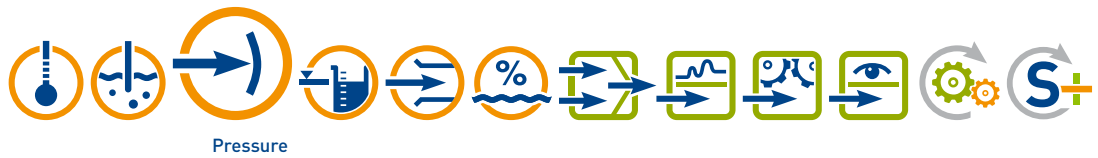
Portfolio:

- Pressure transmitters
- Pressure switches
- Pressure measuring cells
- Pressure separators and accessories
- Pressure transmitters with ATEX approval
- Pressure transmitters for wireless data transmission



Approvals:





Quality through attention to detail

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

Our sophisticated vertical integration 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 600 bar can also be recorded. Various outputs, including analog signals as well as HART or CAN interfaces, are available. The wide variety of possible electrical and process connections allows the pressure transmitters to be adjusted to almost every application.

JUMO pressure transmitters are frequently used in the compressor industry, autoclave equipment, the heating/cooling/air-conditioning industry, the food and chemical industry, and in clean-rooms.

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

JUMO pressure measuring cells

Type 404410



JUMO MIDAS series

Pressure transmitters

Types 401002/401005/401008/ 401009/
401010/401011/401012/401020/401021/
401050/404710



JUMO DELOS series

Pressure transmitters

Types 405052/405054



JUMO dTRANS p30 series

Pressure transmitters

Types 402050/402058/404366/404753



JUMO dTRANS p20 series

Pressure and differential pressure transmitters

Types 403022/403023/403025/403026



JUMO Wtrans p

Pressure transmitters with wireless data transmission

Type 402060



JUMO pressure separators

Types 409772/409774/409776/
409778/409780/409782/409784



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 depressurized containers, wells, and waterbodies. You can record the level with level probes or pressure transmitters depending on the application.

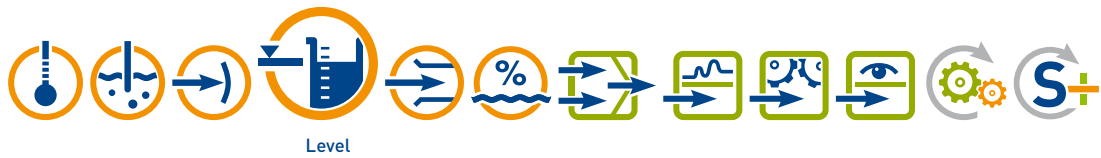
Portfolio:

- Level probes (hydrostatic)
- Pressure measuring devices, optionally available with ATEX approval (hydrostatic)
- Differential pressure transmitters (hydrostatic)
- Floats (mechanical)



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 depressurized tanks or open bodies of water. The rack purification plant 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.

A high level of accuracy, reliability, and quality are crucial for every measurement. If the measured values are not correct then the individual steps within an entire process chain can come to a complete standstill.

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

JUMO MAERA series

Level probes

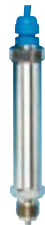
Types 401015/402090/404391/404392/404393



JUMO dTRANS p33

Level probes for use in Ex-areas

Type 404753



JUMO dTRANS p30

Pressure transmitters for mounting on depressurized tanks

Type 404366



JUMO DELOS SI/dTRANS p20

Pressure transmitters with a display for mounting on depressurized tanks

Types 405052/403025/403026



JUMO MIDAS DP10/dTRANS p20 DELTA

Differential pressure transmitters for mounting on pressurized tanks

Types 401050/403022/403023



Flow

JUMO offers you products with various features for flow measurement. In addition to differential pressure transmitters, JUMO's product range also includes paddle-wheel flow sensors and electromagnetic flowmeters. As such, we have the right solution for all your applications, regardless of whether you're measuring the flow of gas, liquids, or slurry.

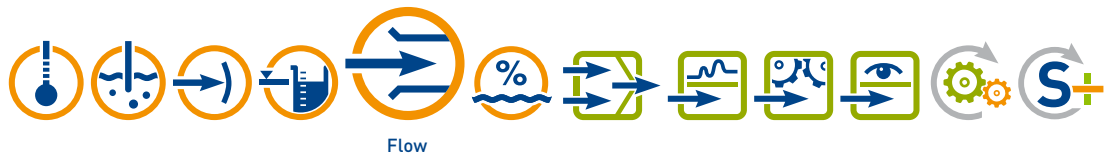
Portfolio:

- Flowmeters for vapors, gases, and liquids
- Electromagnetic flowmeters
- Paddlewheel flow sensors
- Differential pressure transmitters



Approvals:





Precision flow measurement for continuous monitoring and controlling

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

The JUMO product range comprises a wide range of devices. Orifice plates and Pitot probes offer the greatest device variety. When these are combined with differential pressure transmitters they also provide the best measuring accuracy.

We also offer electromagnetic flowmeters for flow measurements in liquids in particular. The 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.

JUMO flowTRANS MAG S01
Electromagnetic flowmeter for industrial applications
Type 406012



JUMO flowTRANS MAG H01
Electromagnetic flowmeter for hygienic applications
Type 406015



JUMO dTRANS p02/p20
Differential pressure transmitters
Types 404382/403022/403023



JUMO PINOS L01
Calorimetric flow sensor
Type 406040



MID flow transmitters
Type 406010



Fittings for flow sensors
Type 406090



Paddle wheel sensor
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.

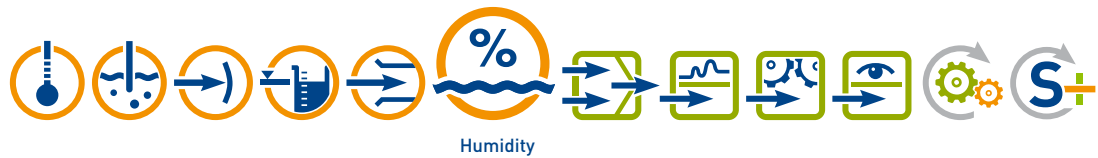
Portfolio:

- Measuring probes (capacitive) for air-conditioning measurement technology and building automation
- Measuring probes (capacitive) for air-conditioning and CO₂ monitoring
- Measuring probes (capacitive) for sophisticated industrial applications
- Intrinsically safe industrial measuring probes (ATEX)
- Measuring probes (capacitive) with intelligent interchangeable probes
- Measuring probes (hygrometric) for air-conditioning and ventilation technology
- Hygrostats (hygrometric) for monitoring air humidity
- Measuring probes with wireless data transmission



Approvals:





Measuring probes for humidity

As a leading manufacturer of measurement and control technology, JUMO also offers a comprehensive range of measurement technology products designed for air humidity and carbon dioxide measurement in the air-conditioning and ventilation sector as well as for building automation. Depending on the application, various measuring probes are available with both capacitive and hygrometric sensor technology. Hygrostats as pure switching devices are also available. CO₂ measuring probes use a proven infrared technology.

Very high-quality and robust micro-processor-controlled measuring probes are available for sophisticated industrial measuring tasks. They can also be used to output additional measurands such as absolute humidity, dew point temperature, mixing ratio, etc. The outstanding features include stable and reliable measurements, high measuring accuracy, traceable measuring results, and a wide range of configuration options directly on the measuring probe.

Devices equipped with intelligent interchangeable probes, devices with intrinsically safe measuring probes for applications in Ex-areas, and devices with wireless data transmission round off the product range.

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.

Hygro and hygrothermal transducer (capacitive) for air-conditioning applications

Type 907020



Hygro and hygrothermal transducer and CO₂ measuring probe for climate monitoring

Type 907021



Humidity and temperature measuring probe for industrial applications

Type 907023



Intrinsically safe industrial measuring probe for humidity, temperature and derived variables

Type 907025



Capacitive hygrothermal transducer with intelligent interchangeable probes

Type 907027



Hygro and hygrothermal transducer hygrostats (hygrometric)

Types 907031/907032



JUMO Wtrans E01

Measuring probe for humidity, temperature, and CO₂ with wireless data transmission
Type 902928



Control

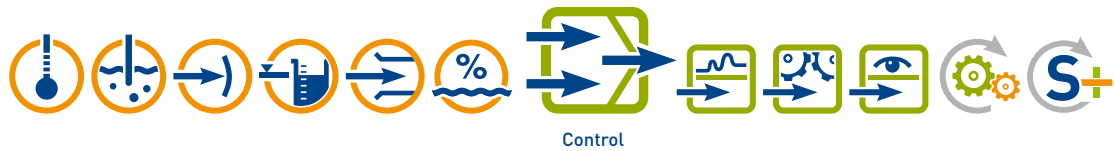
However different the production processes in various industries may be, they all have in common that process variables such as temperature, pressure, humidity, flow, and level often need to be controlled with the highest levels of accuracy. You will be sure to find the right controller for your application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

Portfolio:

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

Approvals:





Programmable electronic controllers

Precision control of a wide range of measured values such as temperature, pressure, humidity, level, and many other measured values is crucial in today's industrial and process applications for consistently-high 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. The integrated self-optimization function ensures fast startup and cost savings at the same time. The universal measurement input enables the connection of a wide range of sensors while providing a high level of application flexibility. The 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 make it possible to control the maximum temperature 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 process and program controller with paperless recorder and touchscreen
Type 703571



JUMO dTRON 304/308/316

Compact controller with program function
Type 703041



JUMO cTRON 04/08/16

Compact controller
Type 702070



JUMO heatTHERM

Surface and panel-mounted thermostats
Type 602031/603070



JUMO exTHERM-AT

Explosion-protected surface-mounted thermostat
Type 605055



JUMO EM panel-mounted thermostat

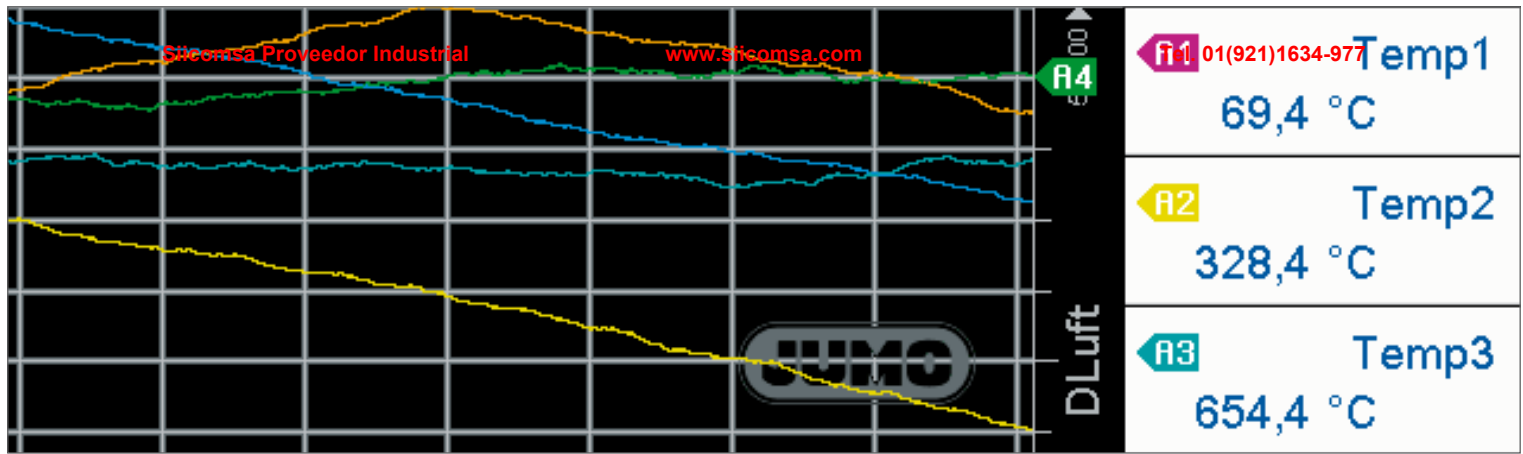
Type 602021



JUMO frostTHERM-AT/-DR/-ATE

Frost protection thermostats
Type 604100/604170





Recording

Are you familiar with the JUMO LOGOSCREEN series? With the devices in this family of paperless recorders you are ideally equipped to collect, archive, and evaluate measured values that must be verified in a tamper-proof manner. The numerous approvals that the devices have received allow them to be used in any number of ways in nearly every industry.

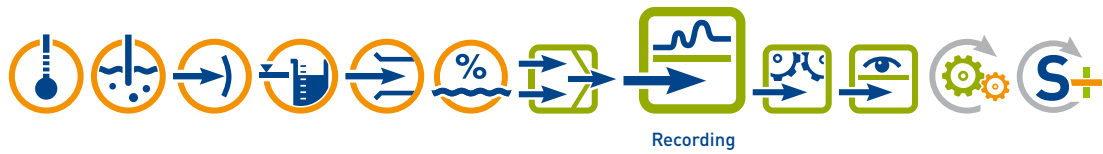
Portfolio:

- Paperless recorders
- Paperless recorders with FDA approval
- Paperless recorders with ATEX approval



Approvals:





Recording, archiving, and evaluating...

... are well-known concepts in measurement technology, defined by the recorder device group. JUMO paperless recorders quickly and securely record process data, save/archive it, and make it accessible to the PC for tamper-proof evaluation.

JUMO LOGOSCREEN 600...

... was designed as a high-quality replacement for paper recorders and is the basic device in the JUMO paperless recorder series. It features a maximum of 6 universal inputs, a 5.7" TFT color display with touchscreen operation, and the option to monitor limit values. The paperless recorder is also network-compatible.

JUMO LOGOSCREEN 600

Paperless recorder with innovative operating concept
Type 706520



JUMO LOGOSCREEN nt/fd

Paperless recorder with TFT display, CompactFlash card, USB interfaces, stainless steel front, and sensor control panel; FDA-compliant data recording with type fd
Types 706581/706585



JUMO LOGOSCREEN nt/fd...

... fulfills demanding recording tasks such as batch reporting, creates mathematical and logical links between process data, and can visualize data online via a web server. The "fd" version fulfills the requirements of FDA 21 CFR Part 11 concerning electronic recording of process data.

JUMO mTRON T...

... enables the construction of a decentralized system for collecting and archiving a maximum of 54 analog measuring channels and 54 digital channels.

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 and input/output modules
Type 705000



Automation

To ensure smooth process and production procedures you need dependable systems that JUMO can provide. These range from thyristor power switches, temperature transmitters, and digital indicators to our JUMO mTRON T automation system.

JUMO meets all your automation and visualization demands.

Portfolio:

- Indicating devices
- Automation software
- Power controllers/solid state relays
- System technology
- Transmitters
- Wireless transmitters
- Software and accessories



Approvals:





Thyristor power controllers and solid state relays

In many electrically operated heating systems, solid state relays ensure wearfree switching operations with high currents and therefore play a key role in ensuring high heater availability. Using the JUMO TYA 200 series provides key advantages in thermal applications where the precision dose of electrical heat output is vital for product quality and also for ensuring energy efficiency.

JUMO TYA 200 series
One and three-phase thyristor power controllers
Types 709061/709062/709063



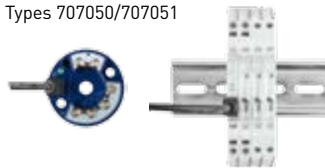
JUMO TYA 432
Thyristor power switch
Types 709010/709020



Temperature transmitters

The JUMO dTRANS T series offers the right transmitter for your specific application. Whether for head or mounting rail installation, the converter transforms the temperature determined by the connected temperature sensor into a precise standard signal for further processing in your production plant. In Ex-applications, the Ex-i repeater power supply/input isolating amplifier ensures secure separation of the Ex and non-Ex area.

JUMO dTRANS T05
Programmable two-wire transmitter
Types 707050/707051



Ex-i repeater power supply/ input isolating amplifiers
Type 707530



Digital indicators

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

JUMO dTRANS T02 Ex
Programmable four-wire transmitter
Type 707025



JUMO dTRANS T01 HART/Ex
Programmable two-wire transmitter
Types 707013/707016



JUMO mTRON T automation system

With the JUMO mTRON T system you can flexibly control your production system. The integrated PLC (CODESYS V3) allows you to create customized PLC programs according to IEC 61131-3.

JUMO mTRON T
Measuring, control, and automation system
Type 705000



JUMO di08/di308
Digital indicators
Types 701531/701550



JUMO mTRON T – Your System

The scalable measuring, control, and automation system

JUMO mTRON T combines a universal measured value recording system with a precise control system offering intuitive operation. It can also be expanded into a complete automation solution. The scalability of the JUMO mTRON T allows it to be individually adapted to a particular task. Tamper-proof data recording is just one of its outstanding features. Control and data recording therefore meet the requirements of the AMS 2750 and CQI-9 specifications.

The heart of the JUMO mTRON T is a **central processing unit** with a process map for up to 30 input/output modules. The CPU has superordinated communication interfaces including web server functionality. For individual control applications, the system has a **PLC (CODESYS V3)**, program generator, and limit value monitoring functions as well as math and logic modules.

Various components are available as **input/output modules** (e.g. **analog input modules** with galvanically isolated universal analog inputs for thermocouples, RTD temperature probes, and standard signals). As a result the same hardware can be used to precisely record and digitize a highly diverse range of process variables. Every **multichannel controller module** supports up to four PID control loops with a fast cycle time and proven control algorithms. The control loops here operate fully independently which means that they do not require resources from the central processing unit. Overall

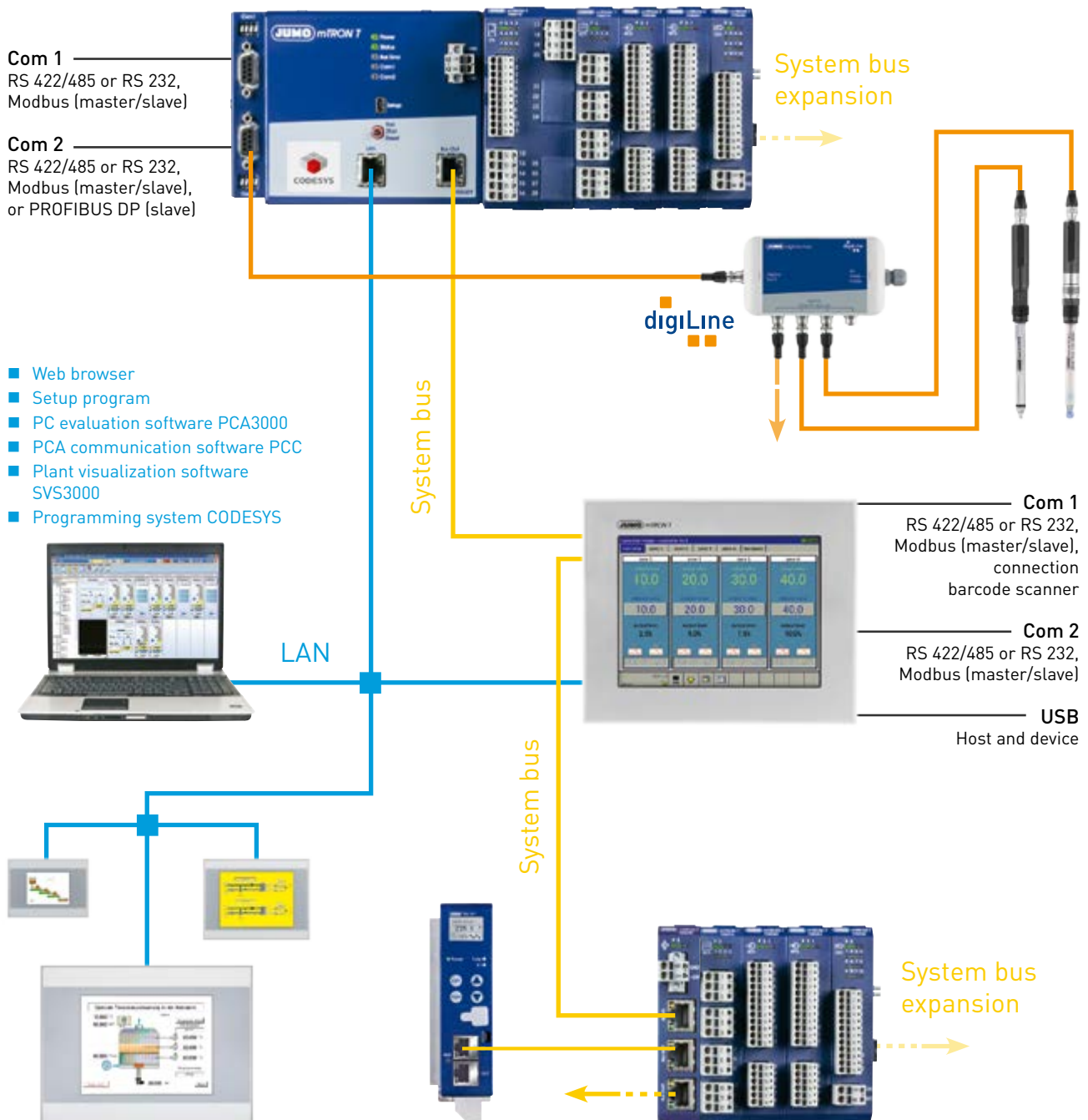
the system allows for simultaneous operation of up to 120 control loops so that it can also be used for sophisticated processes. Through expansion slots the inputs and outputs of each controller module can be individually expanded and adapted. **Power controllers** can also be connected directly via the system bus.

A **multifunction panel** visualizes the measured values and enables convenient operation of the overall system. User-dependent access to parameter data and configuration data can also be set up. Using standard predefined screen masks, startup times are considerably reduced. The recording functions of a fully-fledged paperless recorder, including additional web server functionality, are also implemented in the multifunction panel. The data recording function is tamper-proof and also provides comprehensive batch reporting. Proven PC programs are available for extracting and evaluating historical data. If required, the JUMO mTRON T can be made even more flexible with **additional operating panels**.

A setup program is used for **hardware and software configuration** as well as for project planning of the measurement and control tasks. Users can also develop their own highly efficient automation solutions with CODESYS editors according to IEC 61131-3. And last but not least, **JUMO digiLine sensors for liquid analysis** can also be connected directly to the JUMO mTRON T via PLC application.



System structure



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. With JUMO you can operate your plant safely, whether with electronic or electromechanical products.

Portfolio:

- Safety temperature limiters/monitors according to DIN 14597 with ATEX and SIL approval available as an option
- Electronic thermostats
- Panel-mounted thermostats
- Surface-mounted thermostats
- Ex thermostats
- Dial thermometers

Approvals:





Monitoring with electronic safety temperature limiters/monitors and electromechanical thermostats

Electronic temperature monitoring is vital in many applications. In particular when it involves 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 not observed. With the safetyM product line JUMO offers sophisticated electronic temperature limiters/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 shut down with the utmost precision.

In applications where no auxiliary energy can be supplied to power the electronics, the electromechanical thermostats reliably perform their tasks and therefore 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 microswitch which then safely shuts down the system.

JUMO safetyM STB/STW/Ex
Safety temperature limiter/monitor according to DIN EN 14 597
Types 701150/701155



JUMO safetyM TB/TW 08
Temperature limiter/monitor according to DIN EN 14 597 as panel-mounted and rail-mounted device
Type 701160/701170



JUMO surface-mounted thermostat ATH
Type 603021



JUMO heatTHERM-AT
Type 603070



JUMO panel-mounted thermostats EM series/heatTHERM series
Types 602021/602030/602031



JUMO frostTHERM-AT/-ATE
Frost protection thermostats
Type 604100/604170



JUMO bimetal temperature switch
Type 608301



JUMO dial thermometer
Type 608002

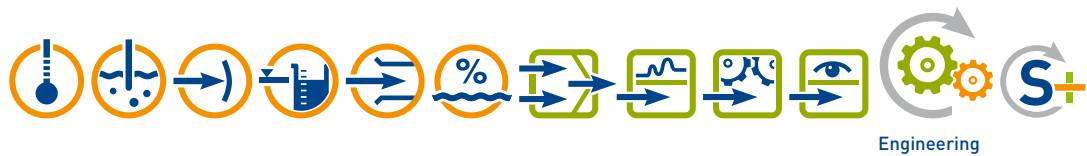


JUMO Engineering

JUMO Engineering, the new service area of JUMO GmbH & Co. KG, combines expertise and industry-specific experience in one team.

Our engineers and technicians develop customized solutions that are consistently based on your specific requirements. The JUMO Engineering team strongly believes in the importance of personalized support and advice for its customers, from initial contact and the development of a customized solution to successful completion.

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 with expertise

We always draw on the feedback from our customers to improve our products. This 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 and its range of services completes this comprehensive approach.

Our services

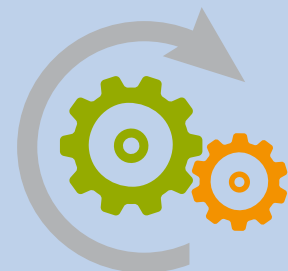
- Feasibility analysis
- Creating a technical concept including product requirements/specification sheet
- Complete project planning and documentation
- Project planning incl. PLC programming, visualization, network technology, etc.
- Continuous project management
- On-site startup
- Training course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

Your advantages

- JUMO, as the central contact partner, develops a technical system solution specifically for you
- You benefit from our extensive expertise with regard to all measurement and automation devices
- A global network of support from 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:
You benefit from fully reliable and secure project planning!
- Technology that has proven itself over decades reduces downtimes:
This provides you with high plant availability and process reliability!



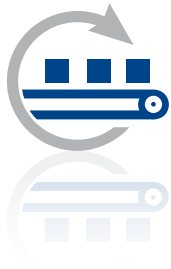


Services & Support

It is the quality of our products that is responsible for such a high level of customer satisfaction. But our reliable after-sales service and comprehensive support are also valued. Let us introduce you to the key services we provide for our innovative JUMO products. You can count on them – anytime, anywhere.

JUMO Services & Support – so that it all comes together!

Manufacturing Service



Are you looking for a competitive and efficient system or component supplier? Regardless of whether you seek electronic modules or perfectly fitting sensors – either for small batches or mass production – we are happy to be your partner. From development to production we can provide all the stages from a single source. In close cooperation with your business our experienced experts search for the optimum solution for your application and incorporate all engineering tasks. Then JUMO manufactures the product for you.

As a result you profit from state-of-the-art manufacturing technologies and our uncompromising quality management systems.

Customer-specific sensor technology

- Development of temperature probes, pressure transmitters, conductivity sensors, or pH and redox electrodes according to your requirements
- A large number of testing facilities
- Incorporation of the qualifications into application
- Material management
- Mechanical testing
- Thermal test



Electronic modules

- Development
- Design
- Test concept
- Material management
- Production
- Logistics and distribution
- After-sales service



Metal technology

- Toolmaking
- Punching and forming technology
- Flexible sheet metal machining
- Production of floats
- Welding, jointing, and assembly technology
- Surface treatment technology
- Quality management for materials



More than **sensors + automation**

Information & Training



Would you like to increase the process quality in your company or optimize a plant? Then use the offers available on the JUMO website and benefit from the know-how of a globally respected manufacturer. For example, under the menu item "Services and Support" you will find a broad range of seminars. Videos are available under the keyword "E-Learning" about topics specific to measurement and control technology. Under "Literature" you can learn valuable tips for beginners and professionals. And, of course, you can also download the current version of any JUMO software or technical documentation for both newer and older products.

Product Service



We have an efficient distribution network on all continents available to all of our customers so that we can offer professional support for everything concerning our product portfolio. Our team of professional JUMO employees is near you ready to help with consultations, product selection, engineering, or optimum use of our products. Even after our devices are commissioned you can count on us. Our telephone support line is available to give you answers quickly. If a malfunction needs to be repaired on site our Express Repair Service and our 24-hour replacement part service are available to you. That provides peace of mind.

Maintenance & Calibration



Our maintenance service helps you to maintain optimum availability of your devices and plants. This prevents malfunctions and downtime. Together with the responsible parties at your company we develop a future-oriented maintenance concept and are happy to create all required reports, documentation, and protocols. Because we know how important precise measurement and control results are for your processes we naturally also professionally calibrate your JUMO devices – on site at your company or in our accredited DAkkS calibration laboratory for temperature. We record the results for you in a calibration certificate according to EN 10 204.



www.jumo.net

