SIEMENS

Symaro – innovative sensors, measurable quality

A structured range of sensors for all typical HVAC measurements and applications

Answers for infrastructure and cities.

Symaro – energy-efficient, innovative measurement that pays off over the long term

Saving energy thanks to highly accurate measurements – Symaro™ sensors record and transmit readings extremely quickly and accurately, providing an optimal basis for precise and therefore energy- and cost-efficient control of the entire HVAC plant.

With innovations such as integrated self-monitoring and highly versatile multisensors for different applications, Symaro sensors are a secure investment in the future. And thanks to an installation concept that has remained unchanged for decades, they can be quickly installed and put into operation – so your investment pays off right from the start.

Symaro – simply a better way to measure

A range of sensors to meet every need

Whether for measuring temperature, pressure, humidity, air quality or flow in rooms, ducts or outside areas, Symaro offers a transparent, clearly structured range of sensors for typical HVAC measurements and applications. The range also includes multisensors that measure mixed gases, as well as sensors for special areas, for example in the pharmaceutical industry. Digital correction algorithms guarantee clean, clear measurement signals. Tested applications ensure full compatibility with all HVAC controllers from Siemens. In addition, the connection to standard commercial third-party systems is always an option thanks to standardized output signals.

High room comfort and user-friendly operation

Symaro provides a solid foundation for optimum comfort when it comes to room climate. The sensors allow energy-efficient, demand-controlled ventilation for an optimum room atmosphere. They automatically compensate for changes in building occupancy, building usage or plant characteristics.

Multisensors with a value display offer a direct insight to the measured temperature, humidity and air quality readings. And the temperature display can be switched from °C to °F.

Measurable quality based on many years of experience

Symaro reflects Siemens' more than 60 years of experience in developing and producing sensors: Symaro sensors are highly reliable and designed for simple, standardized, cost-saving installation with low cabling effort and fast start-up. They have also been tested in the in-house HVAC laboratory. Symaro complies with all international standards such as CE, UL, C-Tick and RoHS.

Comprehensive support in every respect

With Symaro, you are assured of Siemens' comprehensive support, whether it's intensive training courses, practical tools, extensive documentation or expert assistance. Worldwide – if you want.

Highlights

- Perceptible energy savings thanks to fast, high-precision measurement and efficient measuring techniques
- Innovative sensor technology – with self-monitoring, service mode, integrated installation concept
- High level of room comfort – provided by demand-controlled ventilation
- Reduced installation and cabling effort thanks to multisensors
- Guaranteed quality – the result of many years of experience, in-depth applications expertise and systematic sensor tests

		Temperature		Humidity			Air quality		Pressure			Flow			Solar
		Sensors	Switching sensors[1)]	Sensors	Switching sensors	Certified sensors	Sensors	Switching sensors	Sensors	Switching sensors	Certified sensors	Flow sensors	Flow switches	Velocity sensors	Solar sensors
Air	Room	■	■	■	■	■	■	■							
	Duct	■	■	■	■	■	■		■	■	■			■	
	Outside	■		■		■									■
Water	Immersion	■							■			■	■		
	Strap-on	■			■										
	Cable	■													

[1)] see separate overview of thermostats

Symaro temperature – reliable and precise measurement at any place

Flexible sensors for temperature measurement

Symaro offers temperature sensors with all important active and passive output signals. The active sensors can be quickly adapted to the situation at hand using a number of different, easily adjustable measurement ranges.

Exact measuring results in every application

– The best possible comfort even during dynamic processes is ensured by the optimum weighting of room and wall temperatures.
– In addition to outside temperature, to keep heat requirements economical, the outside sensors measure wind, wall temperature and solar radiation.
– Strap-on, immersion and cable sensors optimize control thanks to their sophisticated design and short reaction times.
– The air duct sensors deliver precise results with their mean value measurement, regardless of temperature stratification or flow conditions. The duct sensors can therefore be flexibly positioned.

Innovative and simple installation

All temperature sensors can be quickly, securely and easily mounted – saving time and money during installation.
– The mounting plate allows the room sensors to be wired in advance. Then, after all plastering and painting work is finished, the sensor is snapped on.
– When it comes to preinstalled protection pipes, immersion sensors are simply snapped in place.
– Strap-on sensors can be fixed fast and securely, regardless of the pipe diameter, using the supplied clamping strip.

Highlights

- Wide choice of products covering all usual measurement ranges and output signals
- Energy-efficient heat requirements and high room comfort – the result of balanced measurement weighting, short reaction times and high measuring precision
- Innovative and simple installation thanks to a construction and housing design

Model	Room sensor	Room sensor	Duct sensor	Immersion sensor	Outside sensor	Outside sensor	Strap-on sensor	Cable sensor
Type	QAA	QAA...D	QAM	QAE	QAC3...	QAC2...	QAD	QAP

	Type	Output						Range	Category	Supply		Length		Protection	MA [1]
		LG-Ni1000	Pt100	Pt1000	NTC 10k	DC 0...10 V	DC 4...20 mA	°C	High quality	AC 24 V	DC 13.5...35 V	Sensor mm	Cable mm		
Room	QAA2010		■					0...+50						IP30	
	QAA2012			■				0...+50						IP30	
	QAA2030				■			0...+50						IP30	
	QAA2061					■		0...+50		■	■			IP30	
	QAA2061D					■		0...+50		■	■			IP30	
	QAA2071						■	0...+50			■			IP30	
	QAA24	■						0...+50						IP30	
Duct	QAM2110.040		■					−50...+80				400		IP54	■
	QAM2112.040			■				−50...+80				400		IP42	■
	QAM2112.200			■				−50...+80				2000		IP42	■
	QAM2120.040	■						−50...+80				400		IP42	■
	QAM2120.200	■						−50...+80				2000		IP42	■
	QAM2120.600	■						−50...+80				6000		IP42	■
	QAM2130.040				■			−40...+80				400		IP42	■
	QAM2161.040					■		−50...+50		■	■	400		IP54	■
	QAM2171.040						■	−50...+50			■	400		IP54	■
Immersion	QAE2111.010		■					−30...+130				100		IP42	
	QAE2111.015		■					−30...+130				150		IP42	
	QAE2112.010			■				−30...+130				100		IP42	
	QAE2112.015			■				−30...+130				150		IP42	
	QAE2120.010	■						−30...+130				100		IP42	■
	QAE2120.015	■						−30...+130				150		IP42	■
	QAE2121.010	■						−30...+130				100		IP42	
	QAE2121.015	■						−30...+130				150		IP42	
	QAE2130.010				■			−30...+125				100		IP42	
	QAE2130.015				■			−30...+125				150		IP42	
	QAE2164.010					■		−10...+120		■	■	100		IP54	
	QAE2164.015					■		−10...+120		■	■	150		IP54	
	QAE2174.010						■	−10...+120			■	100		IP54	
	QAE2174.015						■	−10...+120			■	150		IP54	
	QAE3010.010		■					−50...+200	■			100		IP65	■
	QAE3010.016		■					−50...+200	■			160		IP65	■
	QAE3075.010						■	0...+200	■		■ [2]	100		IP65	■
	QAE3075.016						■	0...+200	■		■ [2]	160		IP65	■
	QAE26.90	■						−50...+180				65	2000	IP64	■
	QAE26.91	■						−50...+180				125	2000	IP64	■
	QAE26.93	■						−50...+180				240	2000	IP64	■
	QAE26.95	■						−50...+180				465	2000	IP64	■
Strap-on	QAD2010		■					−30...+130						IP42	■
	QAD2012			■				−30...+130						IP42	■
	QAD2030				■			−30...+125						IP42	■
	QAD22	■						−30...+130						IP42	■
Outside	QAC2010		■					−50...+70						IP54	
	QAC2012			■				−50...+70						IP54	
	QAC2030				■			−40...+70						IP54	
	QAC3161					■		−50...+50	■	■	■			IP65	
	QAC3171						■	−50...+50	■		■			IP65	
	QAC22	■						−50...+70						IP54	
Cable	QAP1030.200				■			−25...+95					2000	IP65	
	QAP2010.150		■					−30...+130					1500	IP65	
	QAP2012.150			■				−30...+130					1500	IP65	
	QAP21.2	■						−30...+180					1500	IP67	
	QAP21.3	■						−30...+130					1500	IP65	
	QAP22	■						−25...+95					2000	IP65	
	QAZ21.682/101	■						−50...+80					2000	IP67	■

[1] including mounting accessories [2] DC 7.5...30 V

Symaro humidity – highly stable measurement under all conditions

Robust sensors with a long life cycle

When it comes to energy-optimized control concepts, Symaro humidity sensors guarantee fault-free operation for years, even in critical applications. Thanks to the capacitive measurement element, they feature excellent long-term stability with high accuracy, freedom from maintenance and high precision. Microprocessor technology and a sophisticated algorithm for temperature compensation ensure very high accuracy not only in the comfort range, but over the entire measurement range. Additionally, the sensors are impervious to dust and most chemicals.

High-quality sensors for strictest standards

The portfolio also includes humidity sensors for applications with especially high requirements in the HVAC application area, for example in the pharmaceutical, food and paper industries as well as in clean room facilities. They even conform to the rigorous FDA and GMP guidelines.

Comfortable in handling

Combined temperature/humidity sensors offer exceptional flexibility and savings potential. They have three defined measurement ranges that are extremely simple to adjust with no need for additional tools.

Quality thanks to a high-precision calibration laboratory

Our in-house laboratory for measuring relative humidity is based on the Swiss Federal Office of Metrology's (METAS) [1)] standard for calibration laboratories. This serves as a reference system for the production of humidity sensors and multisensors. The result: documented process transparency and production reliability that translates into optimum quality, precision and reproducibility for Symaro humidity sensors.

Highlights

- Energy efficiency thanks to outstanding long-term stability with a high level of accuracy, freedom from maintenance and precision
- Reliable operation even in critical applications
- High degree of reliability thanks to innovative, FDA- and GMP-certified precision measuring sensors
- Best quality, accuracy and reproducibility thanks to high-precision calibration laboratory

[1)] equivalent internationally to LNE, PTB, NPL, NIST, BEV, etc.

								
Model	Room sensor	Room sensor	Duct sensor	Duct sensor	Room sensor	Room sensor	Outside sensor	Dew point sensor
Type	QFA2...	QFA2...D	QFM2...	QFM3...D	QFA3...	QFA3...D	QFA3... + AQF3100	QXA2...

	Type	Version		Output				Range		Category		Supply			Protection	MA [1]
		Humidity	Temperature	DC 0...10 V	DC 4...20 mA	Relay contact	Display	Humidity % r.h.	Temperature [2] °C	High quality	Certified	AC 24 V	DC 13.5...35 V	AC 230 V		
Room	QFA2000	■		■				0...95				■	■		IP30	
	QFA2001	■			■			0...95				■	■		IP30	
	QFA2060	■	■	■				0...95	–15...+50			■	■		IP30	
	QFA2060D	■	■	■			■	0...95	–15...+50			■	■		IP30	
	QFA2071	■	■		■			0...95	–15...+50			■	■		IP30	
	QFA3100	■		■				0...100		■		■	■		IP65	
	QFA3101	■			■			0...100		■			■		IP65	
	QFA3160	■	■	■				0...100	–40...+70	■		■	■		IP65	
	QFA3160D	■	■	■			■	0...100	–40...+70	■		■	■		IP65	
	QFA3171	■	■		■			0...100	–40...+70	■			■		IP65	
	QFA3171D	■	■		■		■	0...100	–40...+70	■			■		IP65	
	QFA4160	■	■	■				0...100	–40...+70		■	■	■		IP65	
	QFA4160D	■	■	■			■	0...100	–40...+70		■	■	■		IP65	
	QFA4171	■	■		■			0...100	–40...+70		■		■		IP65	
	QFA4171D	■	■		■		■	0...100	–40...+70		■		■		IP65	
Duct	QFM2100	■		■				0...95				■	■		IP54	■
	QFM2101	■			■			0...95					■		IP54	■
	QFM2160	■	■	■				0...95	–15...+60			■	■		IP54	■
	QFM2171	■	■		■			0...95	–15...+60				■		IP54	■
	QFM3100	■		■				0...100		■		■	■		IP65	■
	QFM3101	■			■			0...100		■			■		IP65	■
	QFM3160	■	■	■				0...100	–40...+70	■		■	■		IP65	■
	QFM3160D	■	■	■			■	0...100	–40...+70	■		■	■		IP65	■
	QFM3171	■	■		■			0...100	–40...+70	■			■		IP65	■
	QFM3171D	■	■		■		■	0...100	–40...+70	■			■		IP65	■
	QFM4160	■	■	■				0...100	–40...+70		■	■	■		IP65	■
	QFM4171	■	■		■			0...100	–40...+70		■		■		IP65	■
Outside	QFA3100 + AQF3100	■		■				0...100		■		■	■		IP65	
	QFA3101 + AQF3100	■			■			0...100		■			■		IP65	
	QFA3160 + AQF3100	■	■	■				0...100	–40...+70	■		■	■		IP65	
	QFA3171 + AQF3100	■	■		■			0...100	–40...+70	■			■		IP65	
Dew point	QXA2601	■				■		0...100				■			IP54	■
	QXA2602	■				■		0...100				■			IP54	■
	QXA2603	■				■		0...100						■	IP54	■
	QXA2604	■				■		0...100						■	IP54	■
Hygrostats	QFA1000	■				■		30...90 [2]							IP20	
	QFA1001	■				■		30...90 [2]							IP20	
	QFM81.2	■				■		15...95 [2]							IP30	■
	QFM81.21	■				■		15...95 [2]							IP55	■

[1] including mounting accessories [2] measurements adjustable

Symaro air quality – energy efficiency and more comfort

Unique product range with stable measurement method

The air quality sensors cover all requirements and are suitable for every type of building. The high-precision multisensors (CO_2/VOC [1)], CO_2/T and CO_2/T/r.h.) are available for room and duct applications, and also with an attractive display.

Efficient in usage

Through infrared absorption measurement (NDIR), air quality sensors determine the CO_2 concentration. And because of an additionally integrated reference light source, they can also periodically recalibrate themselves. This ensures freedom from maintenance, long-term stability and maximum measuring accuracy. The sensors also deliver immediately, precisely measured values regardless of room occupation. Ultimately, you save substantial start-up, service and operating costs.

Comfortable and economical installation in the air duct

Fast, secure and cost-efficient installation – with no need for additional duct installation housing or sealing measures: The installation of air duct sensors is very easy thanks to their ergonomic, installation-friendly housing. Due to the infinitely variable immersion depth, the sensors can be optimally adapted to every installation situation. Additionally, because of the patented measurement system, alignment with the flow direction is no longer needed. Two totally separate chambers for measurement modules and connection terminals prevent air outside the duct from affecting the measurement accuracy.

Energy-saving room comfort

Optimum air quality with low energy consumption: Combined with systems from Siemens, controllers and variable speed drives, Symaro air quality sensors allow for optimized demand-controlled ventilation [2)]. Thus, 20 to 70 percent in energy and cost savings can be achieved.

Highlights

- Wide selection of multisensors for room and duct applications
- Cost efficiency with guaranteed measurement accuracy and long-term stability – through precise infrared measurement and self calibration
- High application and installation comfort – through patented technology
- Energy savings and maximum room comfort thanks to demand-controlled ventilation

[1)] VOC: Volatile Organic Compound (mixed gas)

[2)] www.siemens.com/symaro

					
Model	Room sensor	Room sensor	Duct sensor	Duct sensor	Room sensor
Type	QPA10.../20...	QPA20...D	QPM11.../21...	QPM21...D	QPA84

	Type	Version				Output			Range				Supply			Protection	MA [1]
		CO_2	VOC	Temperature	Humidity	DC 0...5 V or DC 0...10 V	Relay contact	Display	CO_2 0...2000 ppm	Temperature 0...50/ –35...+35 °C	Temperature passive [2]	Humidity 0...95% r.h.	AC 24 V	DC 15...35 V	AC 230 V		
Room	QPA1000		■			■							■	■		IP30	
	QPA2000	■				■			■				■	■		IP30	
	QPA2002	■	■			■			■				■	■		IP30	
	QPA2002D	■	■			■		■	■				■	■		IP30	
	QPA2060	■		■		■			■	■			■	■		IP30	
	QPA2060D	■		■		■		■	■	■			■	■		IP30	
	QPA2062	■		■	■	■			■	■		■	■	■		IP30	
	QPA2062D	■		■	■	■		■	■	■		■	■	■		IP30	
	QPA2080	■		■		■			■		■		■	■		IP30	
	QPA2080D	■		■		■		■	■		■		■	■		IP30	
	QPA84		■				■								■	IP30	
Duct	QPM1100		■			■							■	■		IP54	■
	QPM2100	■				■			■				■	■		IP54	■
	QPM2102	■	■			■			■				■	■		IP54	■
	QPM2102D	■	■			■		■	■				■	■		IP54	■
	QPM2160	■		■		■			■	■			■	■		IP54	■
	QPM2160D	■		■		■		■	■	■			■	■		IP54	■
	QPM2162	■		■	■	■			■	■		■	■	■		IP54	■
	QPM2162D	■		■	■	■		■	■	■		■	■	■		IP54	■
	QPM2180	■		■		■			■		■		■	■		IP54	■

[1] including mounting accessories [2] resistance included: LG-Ni1000, Pt100, Pt1000, NTC 10k

Symaro pressure – highly precise and robust pressure measurement

Symaro pressure sensors are designed to quickly and accurately measure the pressure in all fields of use.

Precise pressure sensors for all requirements

Symaro covers the entire range of requirements for pressure measurement. It comprises sensors for measuring very low to high pressures in all kinds of different media such as liquids, gases, water, refrigerants and air. Measurement cells matched precisely to the pressure range increase the measurement accuracy. This eliminates the need for temperature or pressure calibration.

Innovations for very good long-term stability

Thanks to patented membranes, the operating points of the Symaro pressure differential switch for air are stable over a long period. And because of its gold-coated contacts, even frequent operating cycles pose no problem.

The individually laser-adjusted pressure difference sensors for air and non-aggressive gases use the patented ceramic bending bar technology. That allows a highly accurate pressure measurement, which is stable over a long period, even with highly dynamic processes.

Ideal measurement even during intensive load change

The robust pressure sensors for liquids and gases are based on a stainless steel, piezo-resistive measuring system. They are ideally suited for the measurement of static and dynamic overpressures with intensive load change. Their fully encapsulated electronics design permanently protects them against the effects of temperature and humidity.

Precise within use – even in refrigeration areas

When it comes to Symaro pressure sensors for use in refrigeration areas, the stainless steel membrane is welded to the housing with no need for a seal. This means they can be used in conjunction with all refrigerants, even ammonia and carbon dioxide, as well as at high process temperatures and with aggressive media.

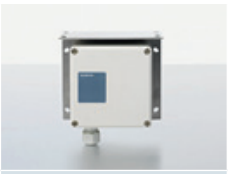
Highlights

- Optimum pressure sensor for every measuring and application area
- High measurement accuracy and best quality thanks to optimized measuring cells over the entire measurement range
- Great, long-term stability thanks to innovative and patented measuring elements

					
Model	Differential pressure sensor	Differential pressure sensor	Differential pressure sensor	Differential pressure sensor	Differential pressure switch
Medium	Air	Air	Air	Air	Air
Type	QBM3020	QBM3020..D	QBM4..	QBM2030	QBM81

	Type	Version		Output					Range		Category		Supply		Protection	MA [1]
		Relative	Differential	DC 0...10 V	DC 4...20 mA	Switchable root function	Relay contact	Display	Adjustable		High quality	Certified	AC 24 V	DC 18...33 V		
Air	QBM3020-1U		■	■		■				–50...+50 Pa	■		■	■	IP54	■
	QBM3020-1		■	■		■				0...100 Pa	■		■	■	IP54	■
	QBM3020-3		■	■		■				0...300 Pa	■		■	■	IP54	■
	QBM3020-5		■	■		■				0...500 Pa	■		■	■	IP54	■
	QBM3020-10		■	■		■				0...1000 Pa	■		■	■	IP54	■
	QBM3020-25		■	■		■				0...2500 Pa	■		■	■	IP54	■
	QBM3020-1D		■	■		■		■		0...100 Pa	■		■	■	IP54	■
	QBM3020-3D		■	■		■		■		0...300 Pa	■		■	■	IP54	■
	QBM3020-5D		■	■		■		■		0...500 Pa	■		■	■	IP54	■
	QBM3020-10D		■	■		■		■		0...1000 Pa	■		■	■	IP54	■
	QBM3020-25D		■	■		■		■		0...2500 Pa	■		■	■	IP54	■
	QBM4000-1		■	■						0...100 Pa		■	■	■	IP54	■
	QBM4000-3		■	■						0...300 Pa		■	■	■	IP54	■
	QBM4000-10		■	■						0...1000 Pa		■	■	■	IP54	■
	QBM4000-25		■	■						0...2500 Pa		■	■	■	IP54	■
	QBM4100-1U		■		■					–50...+50 Pa		■		■	IP54	■
	QBM4100-1D		■		■			■		0...100 Pa		■		■	IP54	■
	QBM2030-1U		■	■					■	–50...+50 Pa –100...+100 Pa 0...100 Pa			■	■	IP42	■
	QBM2030-5		■	■					■	0...200 Pa 0...250 Pa 0...500 Pa			■	■	IP42	■
	QBM2030-30		■	■					■	0...1000 Pa 0...1500 Pa 0...3000 Pa			■	■	IP42	■
	QBM81-3		■				■		■	20...300 Pa					IP54	■
	QBM81-5		■				■		■	50...500 Pa					IP54	■
	QBM81-10		■				■		■	100...1000 Pa					IP54	■
	QBM81-20		■				■		■	500...2000 Pa					IP54	■
	QBM81-50		■				■		■	1000...5000 Pa					IP54	■

[1] including mounting accessories

					
Model	Relative pressure sensor	Differential pressure sensor	Differential pressure sensor	Differential pressure sensor	Relative pressure sensor
Medium	Liquid/gas	Liquid/gas	Liquid/gas	Liquid/gas	Refrigerants
Type	QBE2x02-P	QBE61	QBE63	QBE3x00-D	QBE2x01-P

	Type	Version		Output					Range		Category		Supply		Protection	MA [1]
		Relative	Differential	DC 0...10 V	DC 4...20 mA	Switchable root function	Relay contact	Display	Adjustable		High quality	Certified	AC 24 V	DC 18...33 V		
Liquid/gases	QBE2002-P1	■		■						0...1 bar			■	■	IP65	
	QBE2002-P2	■		■						0...2 bar			■	■	IP65	
	QBE2002-P4	■		■						0...4 bar			■	■	IP65	
	QBE2002-P5	■		■						0...5 bar			■	■	IP65	
	QBE2002-P10	■		■						0...10 bar			■	■	IP65	
	QBE2002-P16	■		■						0...16 bar			■	■	IP65	
	QBE2002-P20	■		■						0...20 bar			■	■	IP65	
	QBE2002-P25	■		■						0...25 bar			■	■	IP65	
	QBE2002-P40	■		■						0...40 bar			■	■	IP65	
	QBE2002-P60	■		■						0...60 bar			■	■	IP65	
	QBE2102-P4	■			■					0...4 bar				■	IP65	
	QBE2102-P5	■			■					0...5 bar				■	IP65	
	QBE2102-P10	■			■					0...10 bar				■	IP65	
	QBE2102-P16	■			■					0...16 bar				■	IP65	
	QBE2102-P20	■			■					0...20 bar				■	IP65	
	QBE61.3-DP2		■	■						0...2 bar			■	■	IP54	
	QBE61.3-DP5		■	■						0...5 bar			■	■	IP54	
	QBE61.3-DP10		■	■						0...10 bar			■	■	IP54	
	QBE63-DP01		■	■						0...100 mbar			■	■	IP65	■
	QBE63-DP02		■	■						0...200 mbar			■	■	IP65	■
	QBE63-DP05		■	■						0...500 mbar			■	■	IP65	■
	QBE63-DP1		■	■						0...1 bar			■	■	IP65	■
	QBE3000-D1		■	■						0...1 bar			■	■	IP65	■
	QBE3000-D1.6		■	■						0...1.6 bar			■	■	IP65	■
	QBE3000-D2.5		■	■						0...2.5 bar			■	■	IP65	■
	QBE3000-D4		■	■						0...4 bar			■	■	IP65	■
	QBE3000-D6		■	■						0...6 bar			■	■	IP65	■
	QBE3000-D10		■	■						0...10 bar			■	■	IP65	■
	QBE3000-D16		■	■						0...16 bar			■	■	IP65	■
	QBE3100-D1		■		■					0...1 bar				■	IP65	■
	QBE3100-D1.6		■		■					0...1.6 bar				■	IP65	■
	QBE3100-D2.5		■		■					0...2.5 bar				■	IP65	■
	QBE3100-D4		■		■					0...4 bar				■	IP65	■
	QBE3100-D6		■		■					0...6 bar				■	IP65	■
	QBE3100-D10		■		■					0...10 bar				■	IP65	■
	QBE3100-D16		■		■					0...16 bar				■	IP65	■
Refrigerants	QBE2001-P10U	■		■						−1...+9 bar			■	■	IP67	
	QBE2001-P25U	■		■						−1...+24 bar			■	■	IP67	
	QBE2001-P30U	■		■						−1...+29 bar			■	■	IP67	
	QBE2001-P60U	■		■						−1...+59 bar			■	■	IP67	
	QBE2101-P10U	■			■					−1...+9 bar				■	IP67	
	QBE2101-P25U	■			■					−1...+24 bar				■	IP67	
	QBE2101-P30U	■			■					−1...+29 bar				■	IP67	
	QBE2101-P60U	■			■					−1...+59 bar				■	IP67	

[1] including mounting accessories

Symaro flow – flexible and efficient measurement of flow

Innovative sensors for all requirements

Be it the flow of liquids or the flow of air, Symaro offers everything needed to ensure accurate flow measurements – from flow sensors to flow switches and velocity sensors. Since all types of flow sensors are available with DC 0...10 V or 4...20 mA outputs, the products are very versatile.

Ruggedness, stability and longevity

The vortex flow sensors for liquid media are available in glass fiber reinforced plastic or rugged red brass. The sensors contain no moving parts, which makes them dirt-resistant and ensures an excellent media resistance. As a result, they ensure longevity and excellent long-term stability.

The flow switches are made of glass-fiber reinforced plastic featuring a Reed contact, which is actuated by a magnetic field, absolutely contact-free and without a return spring. This leads to stable switching points. Depending on the model, the switches offer pressure ranges up to 25 bar without using bellows, resulting in pressure-independent switching points. This means that the switching point is solely dependent on the volumetric flow. The Symaro range of flow switches covers nominal sizes from DN 10 to DN 200.

The air velocity sensor offers three measuring ranges: 0...5, 0...10 and 0...15 m/s. Thanks to its special thin-film sensing element, the sensor operates independently of the direction of flow and is dirt-resistant.

Highlights

- Suited for all types of flow applications – for versatile use in liquids and air
- More flexibility thanks to DC 0...10 V, 4...20 mA or switching contact outputs
- Excellent resistance to media
- Longevity and long-term stability
- Dirt-resistant
- Stable, pressure-independent switching point

						
Model	Flow switch	Flow switch	Flow switch	Flow sensor	Flow sensor	Velocity sensor
Medium	Liquids	Liquids	Liquids	Liquids	Liquids	Air
Type	QVE1900	QVE1901	QVE1902	QVE2x00	QVE3x00	QVM62.1

	Type	Version			Output			Range	Supply		Protection
		Nominal size	Thread	Pipe housing	DC 0...10 V	DC 4...20 mA	Relay contact		AC/DC 24 V	DC 18...33 V	
Liquids	QVE1900	DN 32...200					■				IP65
	QVE1901	DN 20...200					■				IP65
	QVE1902.010	DN 10		Brass			■				IP65
	QVE1902.015	DN 15		Brass			■				IP65
	QVE1902.020	DN 20		Brass			■				IP65
	QVE1902.025	DN 25		Brass			■				IP65
	QVE2000.010	DN 10	G ½"	Plastic	■			1.8...32 l/min		■	IP65
	QVE2000.015	DN 15	G ¾"	Plastic	■			3.5...50 l/min		■	IP65
	QVE2000.020	DN 20	G1"	Plastic	■			5.0...85 l/min		■	IP65
	QVE2000.025	DN 25	G1 ¼"	Plastic	■			9.0...150 l/min		■	IP65
	QVE2100.010	DN 10	G ½"	Plastic		■		1.8...32 l/min		■	IP65
	QVE2100.015	DN 15	G ¾"	Plastic		■		3.5...50 l/min		■	IP65
	QVE2100.020	DN 20	G1"	Plastic		■		5.0...85 l/min		■	IP65
	QVE2100.025	DN 25	G1 ¼"	Plastic		■		9.0...150 l/min		■	IP65
	QVE3000.010	DN 10	G ¾"	Red brass	■			1.8...32 l/min		■	IP65
	QVE3000.015	DN 15	G ¾"	Red brass	■			3.5...50 l/min		■	IP65
	QVE3000.020	DN 20	G1"	Red brass	■			5.0...85 l/min		■	IP65
	QVE3000.025	DN 25	G1 ¼"	Red brass	■			9.0...150 l/min		■	IP65
	QVE3100.010	DN 10	G ¾"	Red brass		■		1.8...32 l/min		■	IP65
	QVE3100.015	DN 15	G ¾"	Red brass		■		3.5...50 l/min		■	IP65
	QVE3100.020	DN 20	G1"	Red brass		■		5.0...85 l/min		■	IP65
	QVE3100.025	DN 25	G1 ¼"	Red brass		■		9.0...150 l/min		■	IP65
Air	QVM62.1				■	■		0...5 m/s 0...10 m/s 0...15 m/s	■		IP42

Solar		Output			Range	Supply		Protection
		DC 0...10 V	DC 4...20 mA	Relay contact		AC 24 V	DC 18...30 V	
Model	Solar sensor							
Type	QLS60	■	■		0...1000 W/m²	■	■	IP65

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