Symaro[™] – the range of sensors that persuades

Symaro™ simplifies and standardizes the use of sensors

Symaro™ – the new range of sensors from Siemens – simplifies and standardizes the use and installation of sensors in the most innovative way.

The new products offer you a number of benefits:

Implementation of the platform concept

The entire range of sensors is of modular design.

The result is an easy-to-understand, clearly structured product range that meets all requirements of building services plant.

Effective and accurate control

The clever design and the powerful, digital compensating algorithms of the Symaro™ range effectively suppress electrical interference, enabling the sensors to deliver unambiguous measuring signals in all situations.

For practical use

Symaro™ sensors are fully tested in our own HVAC laboratory and their reliability has been proven in extensive field tests.

Swiss production and full-scale final inspection

The sensors are made automatically in our production facility in Switzerland. Before leaving the factory, the characteristics of each sensor are checked and documented. Production date and serial number markings on the product ensure traceability.

An unmatched range of products

Decades of experience in the HVAC field and in building services plant enable Siemens to offer a unique range of products that operate reliably and safely in all situations.

Straightforward handling

Even staff with no special training can easily mount and commission the Symaro™ sensors.

		Tem	pera	ture		midi w po	•		ndoo qual		Pr	essu	re	Miscellaneous					
		Sensors	Switching sensors ¹⁾	Certified sensors	Sensors	Switching sensors	Certified sensors	Sensors	Switching sensors	Combi sensors	Sensors	Switching sensors	Certified sensors	Velocity sensor	Velocity sensor,	switching	Solar sensor	Flue gas sensor	
Air	Room	•	•		•	•	•	•	•										
	Air duct	•	•		•	•	•	•			•	•	•	•				•	
	Outside	•			•		•										•		
Water,	Immersion	•									•				•	•			
refrigerants	Strap-on	•				•													
	Cable	•																	
Accessories		•			•	•	•	•			•	•	•						

1) Refer to separate overview of thermostats

Symaro™ T: Temperature

Reliable and accurate temperature acquisition at any location





Model	Room sensors	Duct sensors	Immersion sensors	Strap-on sensors	Outside sensors	Outside sensors	Cable sensors
Type reference	QAA	QAM	QAE	QAD	QAC	QAC	QAP
Category: Standard	•	•	•	•	•		•
High-quality						•	
Certified							

The benefits of Siemens temperature sensors:

- Optimized for use in heating, ventilation, air conditioning and refrigeration plant. All standard measuring ranges are available.
- All types of output signals are available:
 Passive LG-Ni1000, PT100 and active
 DC 0..10 V and 4..20mA.
- Flexible duct averaging sensors in 3 different lengths, giving very reliable measuring data independent of the flow conditions.
- Very accurate immersion sensors with and without protection pocket and fast strap-on sensors.
- Very elegant room sensors in different designs with fast reaction time.
- A frost protection range for both proportional and on/off solution.

Symaro™ H: Humidity

Highly stable acquisition of humidity over long periods of time even under extreme conditions





Model	Room sensors	Room sensors	Duct sensors	Outside sensors	Condensation monitors
Type reference	QFA	QFA	QFM	QFA	QXA
Category: Standard	•		•		•
High-quality		•	•	•	
Certified		•	•		

The benefits of Siemens humidity sensors:

Capacitive humidity measuring element Outstanding properties with regard to hysteresis, long-term stability, temperature dependency and repeatability.

Certification

Factory certificate and recalibration service available for all QFA4...types.

Specially needed to fulfill recommendations of the pharma and chemical industry.

Accuracy and operating range

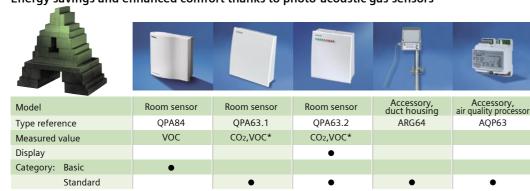
 $\begin{array}{ccc} & \text{High-quality} & \text{Standard} \\ \text{Accuracy} & \pm 2\% \text{ r.h.} & \pm 5\% \text{ r.h.} \\ \text{Operating range} & 0...100 \% \text{ r.h.} & 0...95\% \text{ r.h.} \end{array}$

Absolute humidity and enthalpy measuring With a combined humidity-temperature sensor and the absolute humidity processor (AQF61.1)

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Symaro™ A: Air quality

Energy savings and enhanced comfort thanks to photo-acoustic gas sensors



The benefits of Siemens air quality sensors:

- Energy-saving potential
 Demand-controlled ventilation offers potential
 energy savings of between 20 and 70%.
 The short pay-back period also makes
 these sensors very economical.
- No maintenance nor re-calibration.
- Combined measurement of CO₂ and Volatile Organic Compounds(VOC*) for optimum measurement of air quality.

Symaro™ P: Pressure

Reliable and stable acquisition of pressure thanks to patented ceramics lever system





Model		Differential pressure sensor	Differential pressure sensor	Differential pressure switch	Differential pressure sensor	Absolute pressure sensor	Absolute pressure sensor
Medium		Air	Air	Air	Liquids / gases	Liquids / gases	Refrigeration
Type refere	ence	QBM65/75	QBM66	QBM81	QBE63/64	QBE2002	QBE2001
Category:	Basic			•			
	Standard		•		•	•	•
	High-quality	•					
	Certified	•					

The benefits of Siemens pressure sensors:

- A full range of sensors for water, refrigerants and air pressure for all HVAC applications.
- Ideal mounting Sensors are available with the appropriate
- mounting options to suit every need.
- Factory certification available for QBM.../C versions
- A comprehensive range of pressure switches.

Symaro™ X: Xtra

You can also rely on Symaro™ quality for special applications





Model	Solar sensor	Flue gas temperature sensor	Air velocity sensor	Flow switch
Type reference	QLS60	FGT-PT1000	QVM62.1	QVE81.13
Medium		Air	Air	Water, refrigerants
Measured value	Intensity of radiation	Flue gas temperature	Velocity, Volumetric flow	Velocity, Volumetric flow

- Solar sensor For acquiring the intensity of solar radiation. Measuring range from 0...1000 W/m².
- Flue gas temperature sensor For acquiring the flue gas temperature in stacks.
- Operating range temperature from -20...+400°C.
- Air velocity duct sensor Three different measuring ranges are selectable.
- Flow switch To monitor systems that contain liquids.

/maro™ T• T	emperature
yiiiaio ···· i. i	emperature
Tumo rafaranca	

	Type reference				Out	tput				Range		Cate	gory			wer pply	Len	igth	Protection	Use / remarks
		LG-Ni 1000	PTC T1	PT100	PT1000	NTC 3K Ohm	NTC 575	DC 010 V	420 mA	Û	Basic	Standard	High-quality	Certified	AC 24 V	DC 13.535 V	Sensor	Cable		
	QAA2010			•						0+50		•							IP30	
	QAA2012				•					0+50 0+50		•							IP30	
_	QAA2040 QAA2061		•					•		0+50					•	•			IP30 IP30	
=	QAA2071								•	0+50		•				•			IP30	
moo	QAA24	•								0+50		•							IP30	
Z	QAA25 QAA26									0+50 0+50									IP30 IP30	With setpoint adjuster 535°C With setpoint adjuster 530°C
	QAA27	•								0+50		•							IP30	With setpoint adjuster +/- 3 K
	QAA32	_				•				0+50	•								IP30	
	QAA64	•								0+50									IP40	Vandal-proof
	QAM2110.040			•						-50+80		•					400		IP54	Incl. mounting flange
	QAM2112.040 QAM2120.040				•					-50+80 -50+80		•					400 400		IP42 IP42	Incl. mounting flange Incl. mounting flange
بب	QAM2120.200	•								-50+80		•					2000		IP42	Incl. mounting flange
uct	QAM2120.600	•								-50+80		•					6000		IP42	Incl. mounting flange
$\vec{\Box}$	QAM2140.020 QAM2161.040		•							-50+80 -50+50		•				•	200 400		IP42 IP54	Incl. mounting flange Incl. mounting flange
	QAM2171.040								•	-50+50		•				•	400		IP54	Incl. mounting flange
	FK-TP/200			•						-60+300		•					200		IP54	DIN head, incl. mounting flange
	QAE2110.010			•						-30+130		•					100		IP54	Incl. protection pocket G ¹ / ₂ "
	QAE2110.015			•						-30+130		•					150		IP54	Incl. protection pocket G ¹ / ₂ "
	QAE2111.015			•						-30+130 -30+130		•					150		IP42	Without protection pocket
	QAE2112.015 QAE2120.010	•			•					-30+130		•					150 100		IP42 IP42	Without protection pocket Incl. protection pocket G ¹ / ₂ "
	QAE2120.015	•								-30+130		•					150		IP42	Incl. protection pocket G ¹ / ₂ "
	QAE2121.010 QAE2122.013	•								-30+130 -30+130		•					100 130		IP42 IP42	Without protection pocket Threaded nipple G G ¹ / ₂ "
_	QAE2140.010		•							-30+130		•					100		IP42	Incl. protection pocket $G^1/2$
Immersion	QAE2164.010							•		-10+120		•			•	•	100		IP54	Incl. protection pocket G¹/₂"
. <u>S</u>	QAE2164.015 QAE2174.010							•	•	-10+120 -10+120		•			•	•	150 100		IP54 IP54	Incl. protection pocket G ¹ / ₂ " Incl. protection pocket G ¹ / ₂ "
<u>_</u>	QAE2174.015								•	-10+120		•				•	150		IP54	Incl. protection pocket G ¹ / ₂ "
Ĕ	QAE3010.010			•						-50+200			•				100		IP65	DIN head, direct immersion G ¹ / ₂ "
=	QAE3010.016 QAE3075.010			•					•	-50+200 0+200						● ¹⁾	160 100		IP65 IP65	DIN head, direct immersion G ¹ / ₂ " DC 7.530 V / direct immersion G ¹ / ₂ "
<u>_</u>	QAE3075.016								•	0+200			•			• 1)	160		IP65	DC 7.530 V / direct immersion G ¹ / ₂ "
	QAE26.9	•								-40+180 -50+180		•					260	1200 2000	IP64 IP64	Threaded nipple R ¹ / ₄ "
	QAE26.90 QAE26.91	•								-50+180							65 125	2000	IP64	Threaded nipple R ¹ / ₄ " Threaded nipple R ¹ / ₄ "
	QAE26.93	•								-50+180		•					240	2000	IP64	Threaded nipple R ¹ / ₄ "
	QAE26.95 FT-T1Q	•								-50+180 -30+130		•					465 70	2000	IP64 IP54	Threaded nipple R ¹ / ₄ " DIN head, direct immersion G ¹ / ₂ "
	FT-T1Q2		•							-30+130			•				150		IP54	DIN head, direct immersion G ¹ / ₂ "
	FT-TP/100 FT-TP/400			•						-100+450 -100+450			•				100		IP54	DIN head, direct immersion G ¹ / ₂ "
_	F1-1P/400			•						-100+430							400		IP54	DIN head, direct immersion G ¹ / ₂ "
Strap-or	QAD22	•								-30+130		•						2000	IP42	
ल	QAD26.220 FA-T1G	•	•							-35+90 -30+130								2000	IP65 IP42	
Stl	17(110									301130									11 72	
a	QAC2010 QAC2012			•						-50+70 -50+70		•							IP54	
8	QAC3161				•			•		-50+70			•		•	•			IP54 IP65	
· <u>S</u>	QAC3171								•	-50+50			•			•			IP65	
utside	QAC22 QAC32	•								-50+70 -50+70		•							IP54 IP54	
0	FW-T1G		•							-50+70		•							IP54	
	QAP2010.150									-30+130								1500	IP65	Ciliaana aabla
	QAP2012.150				•					-30+130		•						1500	IP65	Silicone cable Silicone cable
	QAP2040.250		•							-30+130		•						2500	IP65	Silicone cable
	QAP21.2 QAP21.3	•								-30+180 -30+130		•						1500 1500	IP67 IP65	1-2 h / day at 220°C, silicone cable Silicone cable
<u>e</u>	QAP21.3/8000	•								-30+130		•						8000	IP65	Silicone cable
9	QAP22	•								-25+95		•						2000	IP65	PVC cable
()	QAZ21.682/101 QAZ21.685/101	•								-50+80 -50+80		•						2000 5000	IP67	Silicone cable Silicone cable
	QAH11					•				-20+70		•						2500	11 07	Connectors, -5°C, if cable is flex, mounted
	QAH11.1					•				-20+70		•						2500		Ferrules, -5°C, if cable is flex, mounted
	QAT22									-10+50								1500		Window panel temp. sensor
	AQE2102											•								Compression fitting
es	ALT-SB											•	•							Protection pocket, nickel-plated brass, for QAE and QAP (PN10)
· <u>=</u>	ALT-SS											•	•							Protection pocket, stainless steel V4A,
0	ALT CCF																			for QAE and QAP (PN16)
ccessorie	ALT-SSF											•	•							Protection pocket, stainless steel V4A, for QAE and QAP (PN40)
a)	AQM63.0											•								Mounting flange for QAM
	AQM63.6 ARG22.1																			Mounting clamp (set w. 6 pcs)
\triangleleft	ARG22.1 ARG22.2											•								Changeover kit for QAP Aluminium bar for QAP
43	ARG86.3											•								Changeover kit for QAH11
 Refer 	to "Use/remarks"																			

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Type reference	Ver	sion			Out	put			Range		Cate	gory			wer oply	Protection	Use / remarks
	Humidity only	Combi sensor	DC 010V	420 mA	1	LG-Ni 1000	Relay contact	Digital	% r.h.	Basic	Standard	High-quality	Certified	AC 24 V	DC 13.535 V		
QFA2000	•		•						095		•			•	•	IP30	
QFA2020		•	•			•			095		•			•	•	IP30	
QFA2040		•	•		•				095		•			•	•	IP30	
QFA2060 QFA3100 QFA3101 QFA3160 QFA3171		•	•						095		•			•	•	IP30	
QFA3100	•		•						0100			•		•	•	IP65	
QFA3101	•			•					0100			•			•	IP65	
QFA3160		•	•						0100			•		•	•	IP65	
		•		•					0100			•	_		•	IP65	
QFA4160		•	•						0100				•	•	•	IP65	
QFA4171		•		•					0100				•		•	IP65	
OFM2100									0.05							IDE 4	land are continued by
QFM2100	•		•						095 095		•			•	•	IP54 IP54	Incl. mounting flange
QFM2101	_		•	•		•			095					•		IP54 IP54	Incl. mounting flange
QFM2120 QFM2140		•				•			095						•	IP54	Incl. mounting flange
QFM2160									095							IP54	Incl. mounting flange Incl. mounting flange
QFM2171				•					095		•					IP54	Incl. mounting flange
QFM3100			•						0100			•		•		IP65	Incl. mounting flange
QFM3101				•					0100						•	IP65	Incl. mounting flange
QFM3160		•	•						0100			•		•	•	IP65	Incl. mounting flange
QFM3171		•		•					0100			•			•	IP65	Incl. mounting flange
QFM4160		•	•						0100				•	•	•	IP65	Incl. mounting flange
QFM4171		•	_	•					0100				•	_	•	IP65	Incl. mounting flange
QTWTT7T									0100						_	11 05	mei. mounting nunge
QFA3100 + AQF3100	•		•						0100			•		•	•	IP65	
QFA3101 + AQF3100	•			•					0100			•			•	IP65	
QFA3160 + AQF3100		•	•						0100			•		•	•	IP65	
QFA3171 + AQF3100		•		•					0100			•			•	IP65	
QXA2000	•								0100		•				•	IP40	Accessory AQX2000
							•										
QFA1001	•								3090	•						IP20	Room: Setpoint adjustment
QFA1000	•						•		3090	•						IP20	Room: Setpoint adjustment
							•										under the cover
QFM81.2	•						•		1595	•						IP30	Duct: Setpoint adjustment
QXA2000 QFA1001 QFA1000 QFM81.2 QFM81.21	•								1595	•						IP55	Duct: Setpoint adjustment under transparent cover
											•					IP20	AC 230 V extension module QXA2000
AQF3100												•					Radiation protection forQFA
AQF3101												•					Replacement filter caps
AQX2000 AQF3100 AQF3101 AQF4150 AQF61.1		•						•	0100				•				Probe for QFA41 and QFM41
AQF61.1																IP20	Processor for absolute humic
																	and enthalpy

	Symaro™ A: Air quality																
	Type reference	E:	xecuti	on		(Outpu	t		Range	Cate	gory	Pov	ver sup	oply	Protection	Use / remarks
		CO2	VOC	Temperature	DC 010V	Switching	LG-Ni 1000	PT 1000	Display	mdd	Basic	Standard	AC 24 V	DC 13.535 V	AC 230 V		
_	QPA63.1	•	•		•					02000		•	•			IP30	VOC requires AQP63.1
Room	QPA63.2	•	•		•				•	02000		•	•			IP30	VOC requires AQP63.1
ō	QPA84		•			•					•				•	IP30	
0																	
\simeq																	
	QPA63.1/AUS+ARG64	•	•		•					02000		•	•			IP54	VOC requires AQP63.1
	QPA63.2+ARG64	•	•		•					02000		•	•			IP54	VOC requires AQP63.1
uct																	
\preceq																	
Se	AQP63.1											•				IP40	Processor for ventilation demand
. <u></u>	ARG64											•				IP54	Housing for duct mounting
Accessories																	
S																	
9																	
9																	

	Type reference	Ver	sion		(Output	t		Range		Cate	gory			w er oply	Protection	Use / remarks
		Absolut	Differenzial	DC 010 V	420 mA	Root function	Relay contact	Display		Basic	Standard	High-quality	Certified	AC 24 V	DC 2030 V		
	QBM65-1		•	•					0100 Pa			•		•	•	IP54	Incl. connecting tube
	QBM65-3		•	•					0300 Pa			•		•	•	IP54	Incl. connecting tube
	QBM65-5		•	•					0500 Pa			•		•	•	IP54	Incl. connecting tube
	QBM65-10		•	•					01000 Pa			•		•	•	IP54	Incl. connecting tube
	QBM65-25		•	•					02500 Pa			•		•	•	IP54	Incl. connecting tube
	QBM65-1U		•	•					-50+50 Pa			•		•	•	IP54	Incl. connecting tube
	QBM65.1-1		•	•				•	0100 Pa			•		•	•	IP54	Incl. connecting tube
	QBM65.1-3		•	•				•	0300 Pa			•		•		IP54 IP54	Incl. connecting tube
	QBM65.1-5 QBM65.1-10								0500 Pa 01000 Pa			•				IP54 IP54	Incl. connecting tube Incl. connecting tube
	QBM65.1-25							•	02500 Pa			•			•	IP54	Incl. connecting tube
	QBM65.2-1					•			0100 Pa			•				IP54	Incl. connecting tube
	QBM65.2-3		•			•			0300 Pa			•		•	•	IP54	Incl. connecting tube
_	QBM65.2-5		•			•			0500 Pa			•		•	•	IP54	Incl. connecting tube
·≡	QBM65.2-10		•			•			01000 Pa			•		•	•	IP54	Incl. connecting tube
<	QBM65.2-25		•			•			02500 Pa			•		•	•	IP54	Incl. connecting tube
	QBM65-1/C		•	•					0100 Pa				•	•	•	IP54	Incl. screwed connection
	QBM65-3/C		•	•					0300 Pa				•	•	•	IP54	Incl. screwed connection
	QBM65-10/C		•	•					01000 Pa				•	•	•	IP54	Incl. screwed connection
	QBM65-25/C		•	•					02500 Pa				•	•	•	IP54	Incl. screwed connection
	QBM66.201		•	•					0100 Pa		•			•	•	IP42	0200 Pa, 2nd measuring range
	QBM66.202		•	•					0250 Pa		•			•	•	IP42	0500 Pa, 2nd measuring range
	QBM66.203		•	•					01500 Pa		•			•	•	IP42	03000 Pa, 2nd measuring range
	QBM75-1U/C		•		•				-50+50 Pa				•	•	•	IP42	Incl. screwed connection
	QBM75.1-1/C		•		•			•	0100 Pa				•	•	•	IP42	Incl. screwed connection
	QBM81-3 QBM81-5		•				•		20300 Pa 50500 Pa	•						IP54 IP54	Incl. air duct connection kit Incl. air duct connection kit
	QBM81-10								1001000 Pa	•						IP54	Incl. air duct connection kit
	QBINIOT-10						_		100100014							11 34	inci. all duct connection kit
	QBE2002-P1	•		•					01 bar		•			•	•	IP65	
	QBE2002-P2	•		•					02 bar		•			•	•	IP65	
	QBE2002-P4	•		•					04 bar		•			•	•	IP65	
	QBE2002-P5	•		•					05 bar		•			•	•	IP65	
S	QBE2002-P10	•		•					010 bar		•			•	•	IP65	
Se	QBE2002-P16	•		•					016 bar		•			•	•	IP65	
ä	QBE2002-P20	•		•					020 bar		•			•	•	IP65	
0	QBE2002-P25	•		•					025 bar		•			•	•	IP65	
_	QBE2002-P40	•		•					040 bar		•			•	•	IP65	
S	QBE61.2-DP0.5		•	•					00,5 bar		•			•		IP42	
iquids	QBE61.3-DP2		•	•					02 bar		•			•	•	IP54 IP54	
=	QBE61.3-DP5 QBE61.3-DP10								05 bar 010 bar		•					IP54 IP54	
\Rightarrow	QBE63-DP01			•					0100 mbar		•				•	IP65	
.≌	QBE63-DP02			•					0200 mbar		•			•		IP65	
	QBE63-DP05		•	•					0500 mbar		•			•	•	IP65	
	QBE63-DP1		•	•					01 bar		•			•	•	IP65	
	QBE64-DP4		•	•					04 bar		•			•	•	IP65	
Ē	QBE621-P10U	•		•					-1+9 bar		•			•	•	IP65	
.≌	QBE621-P25U	•		•					-1+24 bar		•			•	•	IP65	
<u></u>	QBE621-P60U	•		•					-1+59 bar		•			•	•	IP65	
Je																	
Refrigeration																	
ef																	
8	EV D71										•						Air duct connection
	FK-PZ1 FK-PZ2										_	•					Air duct connection Air duct connection
S	FK-PZ3									•							Air duct connection
<u>تة</u> .	AQB2000										•						Mounting bracket for QBM65/QBM66
2	AQB21.2										•						DIN rail adapter
35	AQB22.1										•						Mounting bracket for QBE2002
0,	AQB51.1										•						SERTO connection kit for QBE2002
ָש											•						U-tube for QBE2002
CCe	428616520																U-tube for QBE2002
Accessories	428616520 FT-PZ1										•						Fitting for QBE2001

Symaro™ X: Xtra										
Type reference	Application		Out	put		Range		wer	Protection	Sensing element / remarks
		PT1000	DC 010 V	420 mA	Relay contact		AC 24 V	DC 2030 V		
QLS 60	Solar radiation		•	•		01000 W/m ²	•		IP65	Solar cell
FGT-PT1000	Flue gas temperature	•				-20+400°C				PT1000
QVM62.1	Air velocity, volumetric flow		•			05 m/s, 010 m/s, 015/ms	•		IP42	Hot film anemometer
QVE81.13	Velocity, volumetric flow				•				IP65	Paddle, for water and refrigerants