Sensor catalogue
Edition 4/2016

SAUTER

Creating Sustainable Environments.

Changes in the sensor product range

The ranges on/off controllers and data capture of the SAUTER product portfolio have been revised and modernized. The current product information is available in this new and separate sensor catalogue.

On/off controllers – thermostats

Product	Old type	New type
TSO, TSH Page 8	TSO670F001	–
	TSO672F001	–
	TSH670F002	–
	TSH676F002	–
TSHK 621...643 Page 10	TSHK621F001	–
	TSHK642F001	–
	TSHK643F001	–
TSHK 670...672 Page 12	TSHK670F001	–
	TSHK672F001	–
TSHK 681, 682 Page 14	TSHK681F001	–
	TSHK682F001	–
TLC Page 16	TLC7B17F001	–
RAK Page 17	RAK13.5050S	TUC407F001
	RAK582.4/3726	TUC107F001
	RAK582.4/3728	TUC105F001
	RAK582.4/3729	TUC108F001
	RAK582.4/3753	EOL[1)]
	RAK582.4/3754	TUC106F001
	RAK582.4/3770	TUC101F003
	RAK582.4/3773	TUC102F001
	RAK584.4/3782	TUC303F001
	RAK584.4/3783	TUC307F001
	ATHS-20STW150	TUC207F003

On/off controllers – frost monitors

Product	Old type	New type
TFC Page 21	TFC7B12F001	TFL201F602
TFL 201 Page 21	TFL201F101	TFL201F102
	TFL201F001	TFL201F002
	TFL201F601	TFL201F602
	TFL201F021	TFL201F022
	TFL201F621	TFL201F622
TFL 611 Page 23	TFL611F201	–
	TFL611F601	–

Thermowells

Product	Old type	New type
Thermowells Page 19	0364439060	0391011050
	0364439120	0391011100
	0364439150	0391011150
	0364439225	0391011200
	0364439300	0391011300
	0364345450	0391011450
	0226811060	0391022050
	0226811120	0391022100
	0226811225	0391022200
	0226811300	0391022300
	0226811450	0391022450
	0226811600	0391022600
	–	0392022100
	–	0392022300
	0364346120	0393012100
	0364346225	0393012200
	0364258120	0393022100
	0364258225	0393022200
	0364258450	0393022450

1) EOL = End of Life

On/off controllers – pressure switches

Product	Old type	New type
DSA Page 25	DSA140F002	–
	DSA143F002	–
	DSA146F002	–
DSB, DSF Page 27	DSB138F001	
	DSB140F001	–
	DSB143F001	–
	DSB146F001	–
	DSB152F001	–
	DSB158F001	–
	DSB170F001	–
	DSF125F001	–
	DSF127F001	–
	DSF135F001	–
	DSF138F001	–
	DSF140F001	–
	DSF143F001	–
	DSF146F001	–
	DSF152F001	–
	DSF158F001	–
	DSF170F001	–
DSL, DSH Page 29	DSL140F001	–
	DSL143F001	–
	DSL152F001	–
	DSH127F001	–
	DSH143F001	–
	DSH146F001	–
	DSH152F001	–
	DSH158F001	–
	DSH170F001	–
DFC 17B, 27B Page 31	DFC17B54F001	–
	DFC17B58F001	–
	DFC17B59F001	–
	DFC17B76F001	–
	DFC17B78F001	–
	DFC17B79F001	–
	DFC17B96F001	–
	DFC17B97F001	–
	DFC17B98F001	–
	DFC27B26F002	–
	DFC27B43F002	–
	DFC27B46F002	–
	DFC27B52F002	–

Product	Old type	New type
DSD Page 33	DSD137F001	DSD137F002
	DSD140F001	DSD140F002
	DSD143F001	DSD143F002
	DSD152F001	EOL
	DSD134F101	DSD134F102

On/off controllers – humidistats

Product	Old type	New type
HSC 120 Page 35	HSC120F001	–
	HSC120F010	–
HBC Page 36	HBC111F001	–
	HBC112F001	–
HSC 101 Page 38	HSC101F001	–

Sensors and transducers – temperature

Product	Old type	New type
EGT 130 Page 40	EGT130F001	EGT130F031
EGT 330...335, 430 Page 40	EGT430F011	EGT430F012
	EGT330F101	EGT330F102
	EGT332F101	EGT332F102
	EGT333F101	EOL
	EGT335F101	EGT335F102
	EGT430F101	EGT430F102
EGT 336, 338, 436, 636, 638 Page 42	EGT336F101	EGT386F101
	EGT338F101	EGT388F101
	EGT338F102	EGT388F102
	EGT436F101	EGT486F101
	EGT636F101	EGT686F101
	EGT638F101	EGT688F102
EGT 301, 401 Page 43	EGT301F101	EGT301F102
	EGT301F101 + 0313346001	EGT301F031
	EGT401F101	EGT401F102

Sensors and transducers – temperature

Product	Old type	New type
EGT 354, 356, 456 Page 45	0313367001	EGT353F101
	0313367003	EGT353F103
	0313367010	EGT353F110
	0313367020	EGT353F120
	EGT354F101	EGT354F102
	–	EGT554F103
	EGT354F103	EGT354F104
	EGT354F110	EGT354F111
	EGT354F120	EGT354F121
	EGT356F101	EGT356F102
	EGT356F103	EGT356F104
	EGT356F110	EGT356F111
	EGT356F303	EGT356F304
	EGT456F011	EGT456F012
	EGT456F101	EGT456F102
EGT 355 Page 45	EGT355F101	EOL
	EGT355F900	EGT355F902
	EGT355F901	EGT355F903
EGT 346...348, 446, 447 Page 47	EGT346F021	EGT346F022
	EGT346F101	EGT346F102
	EGT346F101 + 0313346001	EGT346F031
	EGT347F021	EGT347F022
	EGT347F101	EGT347F102
	EGT347F101 + 031346001	EGT347F031
	EGT348F101	EGT348F102
	EGT348F101 + 031346001	EGT348F031
	EGT446F011	EGT446F012
	EGT446F101	EGT446F102
	EGT447F011	EGT447F012
	EGT447F101	EGT447F102
	EGT446F011	EGT446F012
	EGT447F011	EGT447F012
EGT 392, 393 Page 47	EGT392F101	EGT392F102
	EGT393F101	EOL
EGT 311, 411 Page 49	EGT311F021	EGT311F022
	EGT311F101 + 0313346001	EGT311F031
	EGT311F101	EGT311F102
	EGT411F101	EGT411F102

Sensors and transducers – humidity

Product	Old type	New type
EGH 102 Page 59	EGH102F001	–
	EGH102F101	–
EGH 120, 130 Page 62	EGH120F001	EGH120F041/ EGH130F031
	EGH130F001	EGH130F031
EGH 681 Page 63	EGH681SF233	EGH681F031
EGH 110...112 Page 61	EGH110F002	EGH110F041/ EGH112F031
	EGH111F001	EGH111F031
	EGH111F002	EGH111F031
	EGH112F001	EGH112F031
	EGH112F002	EGH112F031
EGE Page 60	EGE110F002	EGE112F031
	EGE112F002	EGE112F031

Sensors and transducers – air quality

Product	Old type	New type
EGQ 212 Page 54	EGQ212F002	EGQ212F031
EGQ 220, 222 Page 56	EGQ222F002	EGQ220F031
	EGQ222F002 + 0370421000	EGQ222F031
EGQ 281 Page 58	–	EGQ281F031
EGQ 110 Page 51	EGQ110F001	EGQ110F031
EGQ 120 Page 53	EGQ120F001	EGQ120F031

Sensors and transducers – air flow and pressure

Product	Old type	New type
EGP 100 Page 64	EGP100F101	–
	EGP100F102	–
	EGP100F111	–
	EGP100F112	–
	EGP100F201	–
	EGP100F202	–
	EGP100F211	–
	EGP100F301	–
	EGP100F311	–
	EGP100F312	–
	EGP100F401	–
	EGP100F402	–
	EGP100F411	–
	EGP110F412	–
XAFP 100 Page 66	XAFP100F001	–
SVU 100 Page 67	SVU100F005	–
DSU, DSI Page 68	DSU101F001	EOL
	DSU103F001	DSU203F002/ DSI203F002
	DSU106F001	DSU206F002/ DSI206F002
	DSU110F001	DSU210F002/ DSI210F002
	DSU116F001	DSU216F002/ DSI216F002
	DSU125F001	DSU225F002/ DSI225F002
	DSU206F001	DSU206F002/ DSI206F002
	DSU210F001	DSU210F002/ DSI210F002
	DSU216F001	DSU216F002/ DSI216F002
	DSU225F001	DSU225F002/ DSI225F002
DSDU, DSDI Page 70	DSDU100F020	EOL
	DSDU101F020	DSDU101F021/ DSDI101F021
	DSDU103F020	DSDU103F021/ DSDI103F021
	DSDU106F020	DSDU106F021/ DSDI106F021

Sensors and transducers – Other variables

Product	Old type	New type
SGU 100 Page 72	SGU100F010	–
	SGU100F011	–

On/off controllers

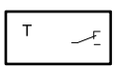
Thermostats

Frost monitor

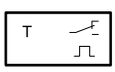
Pressure switches

Humidistats

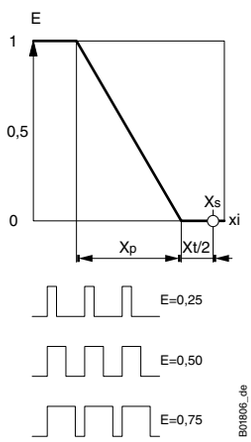
TSO67*F001



TSO67*F001



TSH67*F002



E= control factor

TSO, TSH: Room thermostat

Features

- Room temperature can be set as the setpoint using the printed temperature scale
- Variants of the standard devices are available, such as thermal feedback, night set-back mode, fan switches and switches for heating/cooling
- Setpoint adjuster with mechanical min. and max. limitation of the setting range

Technical data

Power supply		
	Load[1)]	230 V~ 10(2,5) A, 24 V= max. 1 A, 24 V~ min. 0.2 A
Parameters		
	Setting range	5...30 °C
	Night-time reduction (N/R)	Approx. 5 K
	Time constant in still air	17 min
	Time constant in moving air (0.2 m/s)	13 min
Thermal feedback	Proportional band	Approx. 3 K
	Shortest switching interval	Approx. 19 min (E = 0.5)
Ambient conditions		
	Admissible ambient temperature	0...50 °C
Construction		
	Weight	0.11 kg
	Dimensions	76 × 76 mm
	Housing	Pure white (RAL 9010)
	Housing material	Fire-retardant thermoplastic
	Fitting	Wall/recessed
	Cable inlet	At rear
	Baseplate	Black thermoplastic with membrane sensor and contact system
	Screw terminals	For wire of up to 1.5 mm²
Standards and directives		
	Type of protection	IP20 (EN 60529)
	Protection class	II (IEC 60730)
	Energy class	I = 1 % acc. EU 811/2013, 2010/30/EU, 2009/125/EG
CE conformity as per	EMC Directive 2004/108/EC	EN 60730-1, EN 60730-2-9
	Low-voltage directive 2006/95/EC	EN 60730-1

Overview of types

Power supply: 10% more voltage means P-band approx. 4 K, switching period = 15 min, actual-value reduction = approx. 0.5 K

H/C = heating or cooling, depending on connection; H//C = heating or cooling, selectable

Type	Operating mode switch	Output for	Power supply
TSO670F001	-	H/C	-
TSO672F001	Heating/OFF/Cooling	H//C	-
TSH670F002	-	H/C	230 V~, ±10%, 50...60 Hz
TSH676F002	-	H/C	230 V~, ±10%, 50...60 Hz

1) *For TSO672F001 for cooling 5(1.5) A*

- *TSO670F001, TSO672F001: switching difference 1.3 K without thermal feedback[2)]*
- *TSH670F002, TSH676F002: dynamic switching difference 0.5 K with thermal feedback[3)]*
- *TSH676F002: additional feature N/R (normal/reduced) for external clock*

Accessories

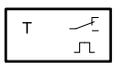
Type	Description
0362225001	Intermediate plate, pure white, for wall mounting on recessed junction box
0303124000	Recessed junction box

- *0303124000: only in combination with intermediate cover plate 0362225001*

[2)] *Devices without thermal feedback are pure on/off controllers. The static switching difference is given, i.e. for very slow changes in temperature. For faster changes in temperature, the time constant must be taken into account.*

[3)] *Devices with thermal feedback are pulsed by an in-built heating element. The control factor falls as the temperature increases, i.e. the controller has proportional behaviour. A small temperature variation of ±0.1…0.5 K occurs as a result of switching, depending on the time constant of the room.*

TSHK6**F00*



TSHK 621...643: Fan-coil room-temperature controller, electromechanical

Features

- Room temperature can be set as the setpoint using the printed temperature scale
- Switch from heating to cooling via switch or type of connection
- ON/OFF toggle switch for mains voltage, plus other slide switches for operating mode and fan, depending on the type
- More constant room temperature due to thermal feedback
- Suitable for wall mounting or fitting on recessed junction boxes
- Setpoint adjuster with mechanical min. and max. limitation of the setting range
- Two-point pulsed activation
- Individual unitary temperature control in residential and business rooms for activating e.g. electric heating systems, thermal actuators, or fans or cooling units in air-conditioning systems.

Technical data

Power supply		
	Power supply[1)]	230 V~, approx. ±10%, 50...60 Hz
	Load	6(3) A, 230 V~
	Fan load	6(3) A, 230 V~
Parameters		
	Setting range	5...30 °C
	Proportional band	3 K
	Hysteresis[2)]	Approx. ±0.1...0.5 K
	Shortest switching interval	Approx. 19 min (E = 0.5)
	Time constant in still air	20 min
	Dead time in still air	2 min
	Time constant in moving air (0.2 m/s)	15 min
	Dead time in moving air (0.2 m/s)	1 min
Ambient conditions		
	Admissible ambient temperature	0...55 °C
Construction		
	Weight	0.18 kg
	Housing	Pure white (RAL 9010)
	Housing material	Fire-retardant thermoplastic (fire classification UL94 HB)
	Baseplate	Black thermoplastic with bimetallic sensor and contact snap mechanism with permanent magnet
	Cable inlet	At rear
	Screw terminals	For electrical wires of up to 2.5 mm²
Standards and directives		
	Type of protection	IP30 (EN 60529)
	Protection class	II (IEC 60730)
	Energy class	I = 1 % acc. EU 811/2013, 2010/30/EU, 2009/125/EG

1) *10% more voltage results in: P-band = approx. 4 K, switching period = 15 min, actual-value reduction = approx. 0.5 K*

2) *Devices with thermal feedback are pulsed by an in-built heating element. The control factor reduces as the temperature increases (i.e. the controller has proportional behaviour). A small temperature variation of ±0.1…0.5 K occurs as a result of pulsing, depending on the time constant of the room*

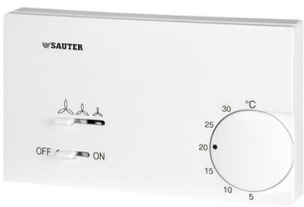
Overview of types

Type	Operating mode
TSHK621F001	Heating/cooling; 2-pipe
TSHK642F001	Heating only/cooling only; 2-pipe
TSHK643F001	Heating/cooling; 4-pipe

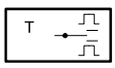
	TSHK 621	TSHK 642	TSHK 643
Mains switch ON/OFF	•	•	•
Operating mode switch	♨ ❄	–	♨ ❄
Fan speeds			

Accessories

Type	Description
0362239001	Pure white intermediate cover plate, suitable for various recessed junction boxes



TSHK67*F001



TSHK 670...672: Fan-coil room-temperature controller, heating/cooling sequence

Features

- Room temperature can be set as the setpoint using the printed temperature scale
- Gradual transition from heating to cooling through sequence characteristic
- Variants with master switch plus slide switch for the fan
- Suitable for wall mounting or fitting on recessed junction boxes
- Electronics unit and switching relay
- Setpoint adjuster with mechanical min. and max. limitation of the setting range
- Quasi-continuous temperature control
- Two-point pulsed activation
- Individual unitary temperature control in residential and business rooms for activating e.g. electric heating systems, thermal actuators, or fans or cooling units in air-conditioning systems.

Technical data

Power supply		
	Power supply	230 V~, approx. ±10%, 50...60 Hz
Parameters		
	Setting range	5...30 °C
	Proportional band	2 × 3 K
	Sequence dead zone	2 K ±0,7
	Hysteresis[1)]	Approx. ±0.1...0.5 K
	Shortest switching interval	Approx. 19 min (E = 0.5)
	Time constant in still air	20 min
	Dead time in still air	2 min
	Time constant in moving air (0.2 m/s)	15 min
	Dead time in moving air (0.2 m/s)	1 min
Ambient conditions		
	Admissible ambient temperature	0...55 °C
Outputs		
	Load	10(4) A, 230 V~
	Fan load	6(3) A, 230 V~
Function		
	Operating mode	Heating/cooling sequence; 4-pipe
Construction		
	Weight	0.18 kg
	Housing	Pure white (RAL 9010)
	Housing material	Fire-retardant thermoplastic (fire classification UL94 HB)
	Baseplate	Black thermoplastic with NTC sensor
	Cable inlet	At rear
	Screw terminals	For wires of up to 2.5 mm²
Standards and directives		
	Type of protection	IP30 (EN 60529)

1) *The device is pulsed electronically. When the temperature increases, the control factor is reduced to 0 on the "Heating" output and increased to E = 1 on the "Cooling" output. A small temperature variation of ±0.1...0.5 K occurs as a result of pulsing, depending on the time constant of the room*

Protection class	II (IEC 60730)
Energy class	I = 1 % acc. EU 811/2013, 2010/30/EU, 2009/125/EG

Overview of types

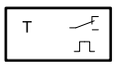
Type	Number of switches
TSHK670F001	0
TSHK672F001	2

	TSHK670	TSHK672
Mains switch ON/OFF	–	•
Fan speeds	–	
Indicators	–	1 LED

Accessories

Type	Description
0362239001	Pure white intermediate cover plate, suitable for various recessed junction boxes

TSHK68*F001



TSHK 681, 682: Fan-coil room-temperature controller, with digital display

Features

- LCD of the room temperature or setpoint, with two buttons (±) for adjusting the setpoint
- Output for heating or cooling depending on connection type, or change in direction of travel with external switch
- With main switch for mains power supply and slide switches for three fan speeds
- Suitable for wall mounting or fitting on recessed junction boxes
- Electronics unit and switching relay
- Quasi-continuous temperature control
- Two-point pulsed activation
- Individual unitary temperature control in residential and business rooms for activating e.g. electric heating systems, thermal actuators, or fans or cooling units in air-conditioning systems.

Technical data

Power supply		
	Power supply[1)]	230 V~, approx. ±10 V, 50...60 Hz
Parameters		
	Setting range	5...30 °C; resolution 0.5 °C
	Proportional band	3 K
	Display of actual value	0...40 °C; resolution 0.1 °C
	Hysteresis[2)]	Approx. ±0.1...0.5 K
	Shortest switching interval	Approx. 18 min (E = 0.5)
	Time constant in still air	20 min
	Dead time in still air	2 min
	Time constant in moving air (0.2 m/s)	15 min
	Dead time in moving air (0.2 m/s)	1 min
Ambient conditions		
	Admissible ambient temperature	0...55 °C
Outputs		
	Load	3(2) A, 230 V~
	Fan load	6(3) A, 230 V~
Construction		
	Weight	0.18 kg
	Housing	Pure white (RAL 9010)
	Housing material	Fire-retardant thermoplastic (fire classification UL94 HB)
	Baseplate	Black thermoplastic with NTC sensor
	Cable inlet	At rear
	Screw terminals	For wires of up to 2.5 mm²
Standards and directives		
	Type of protection	IP30 (EN 60529)
	Protection class	II (IEC 60730)
	Energy class	I = 1 % acc. EU 811/2013, 2010/30/EU, 2009/125/EG

1) 10% more voltage results in: P-band = approx. 4 K, switching period = 15 min, actual-value reduction = approx. 0.5 K

2) The device is pulsed electronically. When the temperature increases, the control factor falls to zero at the "Heating" output and rises to E = 1 at the "Cooling" output. A small temperature variation of ±0.1…0.5 K occurs as a result of pulsing, depending on the time constant of the room

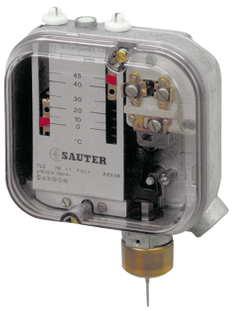
Overview of types

Type	Operating mode
TSHK681F001	Heating or cooling or heating/cooling; 2-pipe
TSHK682F001	Heating/cooling; 4-pipe

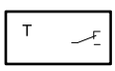
	TSHK681	TSHK682
Mains switch ON/OFF	•	(•)
Operating mode switch	–	OFF
Fan speeds		
Indicators	°C digital	°C digital

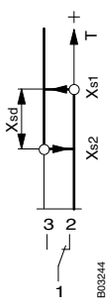
Accessories

Type	Description
0362238001	Cable-type sensor, 4 m long, made of PVC, for external temperature measurement (max. 50 m)
0362239001	Pure white intermediate cover plate, suitable for various recessed junction boxes



TLC7B17F001





TLC: Thermostat with room sensor, for industrial use

Features

- Control and monitoring of temperature
- Especially suitable for installations subject to vibrations, industrial spaces, halls, etc.
- 0...45 °C temperature setting range
- 1 mA / 6 V to 10 A / 400 V contact rating
- Gold-plated silver contacts
- Upper and lower switching points can be set independently of each other
- Sealable
- Splashproof

Technical data

Power supply		
Admissible contact rating for smaller loads	Maximum load with gold-plated contacts	200 mA, 50 V
	Minimum load with gold-plated contacts	1 mA, 6 V
Admissible contact rating for larger loads	Maximum load with silver-plated contacts	10 (2) A, 400 V~ 25 W, 250 V=
	Minimum load with silver-plated contacts	100 mA, 24 V
Time characteristic	Time constant at 0.15 m/s	12 min
	Time constant at 0.5 m/s	8 min
Parameters		
	Setting range	0...45 °C
	Lowest switching difference	1.0...2.2 K
Ambient conditions		
	Storage and transport temperature	-40...55 °C
	Admissible ambient temperature	-40...55 °C
Construction		
	Weight	0.65 kg
	Housing	Light-alloy housing with transparent cover
Standards and directives		
	Type of protection	IP44 (EN 60529)
	Protection class	I (IEC 60730)
CE conformity according to	EMC Directive 2004/108/EC	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4
	Low-voltage directive 2006/95/EC	EN 60730, EN 60730-2-9

Overview of types

Type	Description
TLC7B17F001	Thermostat with room sensor, for industrial use

Accessories

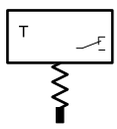
Type	Description
0259189000	Holder for raised wall mounting
0259299000	Cable screw fitting PG 13.5
0259409000	Fixing bracket (provides 3-point fixing with accessory 0259189)

TUC: Universal thermostat

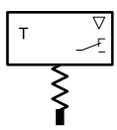
TUC*0*F00*

Features

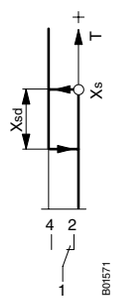
- Regulates and monitors the temperature of liquids in baths, containers, pipes and ducts
- Variants as temperature monitors (TW), safety temperature monitors (STW), temperature limiters (TB) or safety temperature limiters (STB)
- Thermostat with remote sensor
- Clamp-on thermostat
- Capillary tube thermostat with or without thermowell
- Double thermostat, e.g. as TW and STB
- As per PED 97/23/EC (2014/68/EU) classified as cat. IV (TUC207F003 and TUC407F001)
- The shift in the change-over point is minimised due to the temperature compensation.
- 100 mm thermowell supplied.



TW, STW



TB, STB



Technical data

Power supply		
Max. load	Terminal 1-2	230 V~, 10 (2.5) A (on the normally-closed contact)
	Terminal 1-4	230 V~ 2 (0.4) A
Parameters		
	Adjustment point	For t_a 22 °C
	Effect of temperature at instrument head	Approx. -0.1...-0.2 K/K
	Time constant with thermowell (LW 7)	< 45 s (water) < 60 s (oil)
	Time constant without thermowell	< 120 s (air)
Ambient conditions		
	Ambient temperature	0...70 °C
	Storage and transport temperature	-25...80 °C
Construction		
	Connection terminals	Plug-in connectors
	Cable cross-section	0.75...2.5 mm^2
	Sensor cartridge	Ø 6.5 mm
	Housing	Two sections, lower section black, upper section yellow, including inspection window
	Housing material	PA, ABS, PMMA
	Weight	0.2 kg
Standards and directives		
	Type of protection	IP54 (EN 60529)
	Protection class	I (EN 60730)
	Test marks	TÜV ID: 0000046121

Overview of types

Type	Setting range	Type	Switching difference	Capillary tube length	Thermowell	Max. sensor temp.
TUC101F003	-10...50 °C	TW	Approx. 4.2 K	1.6 m	100 mm, brass	140 °C
TUC102F001	5...30 °C	TW	Approx. 5.6 K	0.7 m	100 mm, brass	200 °C
TUC105F001	15...95 °C	TW	Approx. 5.6 K	0.7 m	100 mm, brass	200 °C
TUC106F001	40...120 °C	TW	Approx. 5.6 K	0.7 m	100 mm, brass	200 °C
TUC107F001	50...130 °C	TW	Approx. 5.6 K	0.7 m	100 mm, brass	200 °C
TUC108F001	80...160 °C	TW	Approx. 5.6 K	0.7 m	100 mm, stainless steel	200 °C

Type	Setting range	Type	Switching differ-ence	Capillary tube length	Thermowell	Max. sensor temp.
TUC207F003	70...130 °C	STW	Approx. 10 K	1.6 m	100 mm, brass	160 °C
TUC303F001	15...60 °C	TB	≤ 20 K	0.7 m	100 mm, brass	200 °C
TUC307F001	50...130 °C	TB	≤ 20 K	0.7 m	100 mm, brass	200 °C
TUC407F001	95...130 °C	STB	≤ 20 K	0.7 m	100 mm, brass	160 °C

*Only use the supplied thermowells or stainless-steel thermowells (part nos.: 0393022*** or 0392022***) with the TUC407F001 and TUC207F003.*

Accessories

Type	Description
0300360008	Retaining holder for cable temperature sensor or capillary tube with 0392022*** (LW 7 or 15) (10 pieces)
0300360009	Holder for sensor cartridge
0300360010	Retaining strap for fitting onto pipes
0300360011	Mounting plate for double thermostats
0300360012	Sensor support spiral for fitting in ventilation duct
0300360013	Duct/wall mounting bracket

Thermowells

Features

- To be fitted in pipes and containers for holding sensor cartridges, immersion stems, temperature sensors, temperature controllers or thermostats
- Made of brass (Ms) or stainless steel (V4A)
- Versions with cylindrical pipe thread (G½" male ISO 228/1, flat-sealing)[1] or cone-shaped (R½" ISO 7/1 sealing in thread)
- With pressure spring (LW 15)

Overview of types

Type	LW	Length	Material	Thread	Nominal pressure	Test pressure	T_{max}
0391022050	7	50 mm	Stainless steel	G½"	40 bar	60 bar	325 °C
0391022100	7	100 mm	Stainless steel	G½"	40 bar	60 bar	325 °C
0391022200	7	200 mm	Stainless steel	G½"	40 bar	60 bar	325 °C
0391022300	7	300 mm	Stainless steel	G½"	40 bar	60 bar	325 °C
0391022450	7	450 mm	Stainless steel	G½"	40 bar	60 bar	325 °C
0391022600	7	600 mm	Stainless steel	G½"	40 bar	60 bar	325 °C
0391011050	7	50 mm	Brass	R½"	10 bar	16 bar	160 °C
0391011100	7	100 mm	Brass	R½"	10 bar	16 bar	160 °C
0391011150	7	150 mm	Brass	R½"	10 bar	16 bar	160 °C
0391011200	7	200 mm	Brass	R½"	10 bar	16 bar	160 °C
0391011300	7	300 mm	Brass	R½"	10 bar	16 bar	160 °C
0391011450	7	450 mm	Brass	R½"	10 bar	16 bar	160 °C
0393022100	15	100 mm	Stainless steel	G½"	40 bar	60 bar	450 °C
0393022200	15	200 mm	Stainless steel	G½"	40 bar	60 bar	450 °C
0393022450	15	450 mm	Stainless steel	G½"	40 bar	60 bar	450 °C
0393012100	15	100 mm	Brass	G½"	16 bar	25 bar	160 °C
0393012200	15	200 mm	Brass	G½"	16 bar	25 bar	160 °C
0392022100	7	100 mm	Stainless steel	G½"	25 bar	40 bar	450 °C
0392022300	7	300 mm	Stainless steel	G½"	25 bar	40 bar	450 °C

0392022100 and 0392022300 for TUC thermostats only

*Only use the supplied thermowells or stainless-steel thermowells (part nos.: 0393022*** or 0392022***) with TUC407F001 and TUC207F003.*

Accessories

Type	Description
0300360008	Retaining holder for cable temperature sensor or capillary tube with 0392022*** (LW 7 or 15) (10 pieces)
0364263000	Welding sleeve of steel, with female thread G½", flat seal of copper
0300360017	Pressure spring for LW 15 (10 pieces)

[1] *G½" male ISO 228/1, flat-sealing: for welding bushings with flat seal (accessories)*

			
LW 7 50 mm	•	• L > 50 mm	–
LW 7 100 mm	•	•	–
LW 7 150 mm	•	•	–
LW 7 200 mm	•	•	–
LW 7 300 mm	•	• L > 300 mm	–
LW 7 450 mm	•	•	–
LW 7 600 mm	•	–	–
LW 15 100 mm	•	–	•
LW 15 200 mm	•	–	•
LW 15 450 mm	•	–	•
0392022100	–	–	•
0392022300	–	–	•

0392022100 and 0392022300 for TUC thermostats only

*Only use the supplied thermowells or stainless-steel thermowells (part nos.: 0393022*** or 0392022***) with TUC407F001 and TUC207F003.*

Only use the thermowells (LW 15) with at least 2 sensors or thermostats with a diameter of at least 6 mm.

TFL 201: Frost protection monitor/limiter with capillary-tube sensor

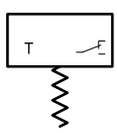
TFL201F**2

Features

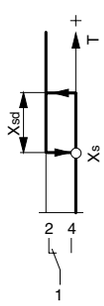
- Temperature monitoring in heating coils and air ducts
- Variants as monitors or limiters
- Copper capillary tube
- Switching point can be set internally
- Small switching difference
- With capillary-tube holders made of plastic

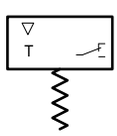
Technical data

Power supply		
Max. load	Terminal 1-2	230 V~, 10 (2.5) A (on the normally-closed contact)
	Terminal 1-4	230 V~ 2 (0.4) A
Parameters		
	Setting range	–10...15 °C
	Factory setting	5 °C
	Switching difference	1.5 K
	Tolerance of switching difference	Max. ±1 K
	Max. sensor temperature	120 °C
Time characteristic	Time constant in moving air (0.3 m/s)[1]	Capillary tube length 1.5 m: 25 s Capillary tube length 3 m: 31 s Capillary tube length 6 m: 51 s
Ambient conditions		
	Ambient temperature	-5...70 °C
	Temperature of instrument head[2]	-5...70 °C
	Storage and transport temperature	-30...80 °C
Construction		
	Connection terminals	Plug-in connectors
	Cable cross-section	Ø 0.75...2.5 mm²
	Housing	Two sections, lower section black, upper section yellow, including inspection window
	Housing material	ABS, PMMA
	Weight	0.2 kg
Standards and directives		
	Type of protection	IP65 (EN 60529)
	Protection class	I (IEC 60730)
	EMC Directive 2006/95/EC	EN 60730-1 / EN 60730-2-9
	Low-voltage directive 2006/95/EC	EN 60730-1 / EN 60730-2-9



TFL201F*02





TFL201F*22

Overview of types

Type	Function	Switching difference	Capillary tube	Capillary tube holder
TFL201F002	Monitor	1.5 K (±1 K)	3 m	3
TFL201F022	Limiter	1.5 K (±1 K)	3 m	3
TFL201F102	Monitor	1.5 K (±1 K)	1.5 m	3
TFL201F602	Monitor	1.5 K (±1 K)	6 m	6
TFL201F622	Limiter	1.5 K (±1 K)	6 m	6

[1] *The frost monitor always reacts to the coldest point (minimum length 7.5 cm (1.5 m), 15 cm (3 m) and 30 cm (6m))*

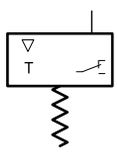
[2] *The head of the instrument must be fitted in a warmer location than the sensor*

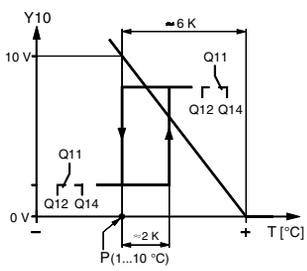
Accessories

Type	Description
0300360014	Six holders for fitting the capillary tube

TFL 611: Continuous frost monitor with capillary sensor

TFL611F*01





Features

- Detects the lowest temperature that occurs for a length of at least 250 mm at any position along the capillary tube
- Used on air side in ventilation and air conditioning units where protective measures must be taken against freezing
- Active capillary sensor for measuring the lowest temperatures in the range 0...15 °C
- Vapour-filled capillary tube and diaphragm system with inductive system of measurement
- Setting range 1...10 °C
- Start-up function
- LED and 7-segment display
- Self-monitoring of sensor line

Technical data

Power supply		
	Power supply[1]	24 V~, 10/-20%
	Power consumption	< 6.6 VA
	Frequency	50...60 Hz
Parameters		
	Measuring range	0...15 °C
	Setting range	1...10 °C
	Adjustment point	5 °C
	Accuracy for adjustment point	± 1 K
	Switching difference	Approx. 2 K
	Temperature for capillary tube	< 110 °C
	Time constant in still air	Approx. 90 s
	Time constant in moving air	< 40 s
	Response length for capillary tube	Min 250 mm
Inputs/Outputs		
	Admissible cable length	300 m with 1.5 mm²
Analogue input	Valve control for terminal Y	0...10 V
	Current	< 0.1 mA
Analogue outputs	Sensor temperature for terminal B	0...10 V ≙ 0...15 °C
	Valve control for terminal Y10	0...10 V
	Current	±1 mA
Potential-free relay outputs (Q terminals)	Min. switching capacity	12 V~/=, 100 mA
	Max. switching capacity	250 V~, 6(2) A; 24 V=, 6 A
Ambient conditions		
Operation	Humidity (non-condensing)	< 85% rh
	Temperature	-15...55 °C
Storage and transport	Humidity (non-condensing)	< 95% rh
	Temperature	-25...65 °C
Construction		
	Terminals with spring technology	Max. 2 × 1.5 mm² Or 1 × 2.5 mm² Min. 0.25 mm²
	Cable inlet	Cable gland M16 for cable diameter 5...10 mm
	Protection class[2]	I
	Housing	PA, silver grey (RAL 7001)

[1] *SELV/PELV: Safety Extra Low Voltage/Protected Extra Low Voltage*

[2] *No earth conductor necessary*

Housing cover	PC, transparent
Cap	ABS, light grey (RAL 7035)
Capillary tube	Copper

Standards and directives

Vibration resistance	EN 60721-3-3 (class 3M2)
Type of protection	IP42 (EN 60529)
Operation as per IEC 721-3-3	Class 3K5
Storage and transport as per IEC 721-3-2	Class 2K3
RoHS Directive 2011/65/EU	EN 50581
EMC Directive 2004/108/EC	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3
Low-voltage directive 2006/95/EC	EN 60730-1, EN60730-2-9

Overview of types

Type	Description	Weight
TFL611F201	Continuous frost monitor; 0...15 °C; capillary tube length= 2m	0.34 kg
TFL611F601	Continuous frost monitor; 0...15 °C; capillary tube length= 6m	0.41 kg

Accessories

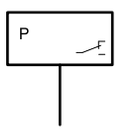
Type	Description
0292146001	Set for duct fitting consisting of: 5 capillary-tube holders, 1 depth-adjustable flange
0303167000	Five holders for fitting the capillary tube
0374534001	Depth-adjustable flange

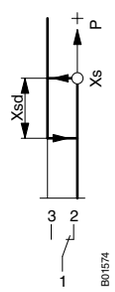
DSA: Pressure switch

DSA14*F002

Features

- For regulating and monitoring pressure in liquids, gases and vapours
- Especially suitable for applications in compact installations
- Upper switching point can be set
- Fixed switching difference, no hysteresis setting is necessary
- Sealable
- Pressure sensor made of brass for non-aggressive media





Technical data

Power supply		
	Maximum load with gold-plated contacts[1]	400 mA, 24 V, 10 VA
	Minimum load with gold-plated contacts	4 mA, 5 V
	Maximum load with silver-plated contacts	10(4) A, 250 V~, 50 W, 250 V=
	Minimum load with silver-plated contacts	100 mA, 24 V
Parameters		
	Pressure connection	G½" male
Ambient conditions		
	Admissible sensor temperature	70 °C
	Admissible ambient temperature	–20...70 °C
Construction		
	Fitting	Pipe and wall mounting
	Housing	Transparent cover
	Housing material	Impact-proof thermoplastic
	Device plug	Standard plug with female cable connector for cable of Ø 6...10 mm
Standards and directives		
	Type of protection[2]	IP65 (EN 60529)
	Protection class	I (IEC 60730)
CE conformity according to[3]	Low-voltage directive 2006/95/EC	EN 60730-1, EN 60730-2-6
	EMC Directive 2004/108/EC	EN 61000-6-1, EN 61000-6-2 EN 61000-6-3, EN 61000-6-4
	Machine directive 2006/42/EC (according to appendix IIB)	EN ISO 12100

Overview of types

Type	Setting range	Switching difference	Maximum pressure	Admissible vacuum loading	Weight
DSA140F002	0.5...2.5 bar	0.25 bar	12 bar	-0.7 bar	0.5 kg
DSA143F002	0.5...6 bar	0.3 bar	16 bar	-0.7 bar	0.5 kg
DSA146F002	1...10 bar	0.4 bar	20 bar	-1.0 bar	0.4 kg

DSA: Pressure sensor made of brass for non-aggressive media; X_s = upper switching point

[1] *If the contacts are subjected to a load greater than specified, the gold plating will be destroyed. They are then classed merely as silver contacts and lose the properties of gold-plated contacts*

[2] *Depending on the fitting position, see the fitting instructions. The devices are not suitable for outdoor applications.*

[3] *Excluded from the directive on pressure equipment 97/23/EC (as per Art. 1.3.6)*

Accessories

Type	Description
0035465000	Throttle screw for absorbing pressure surges, brass
0192222000	Cap nut with solder connector
0192700000	1 m capillary tube for absorbing pressure surges, copper
0214120000	Throttle screw for absorbing pressure surges, stainless steel
0259239000	Reduction piece G½" on 7/16" 20-UNF-2A for copper tubes of Ø 6 mm, brass
0292001000	Setpoint adjuster according to customer's wishes (setting accuracy: ±3% of the setting range, but a minimum of ±0.2 bar)
0292004000	Setpoint adjuster sealed (with accessory 0292001 only)
0292018001	Damping screw for absorbing pressure surges in low viscosity media
0292150001	Fixing bracket for wall mounting
0296936000	Fixing brackets for rail: top-hat rail EN 60715, 35 × 7.5 mm and 35 × 15 mm
0311572000	Screw fitting for copper tubes of Ø 6 mm, brass
0381141001	Profile sealing ring, copper, for G½"

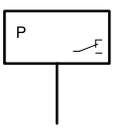
0296936000: with accessory 0292150001 only

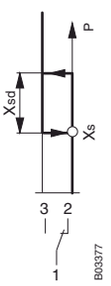
DSB, DSF: Pressure monitors and pressure switches

DSB1**F001
DSF1**F001

Features

- For regulating and monitoring pressure in liquids, gases and vapours
- Adjustable lower switching point
- Adjustable switching difference
- Sealable
- Pressure sensor made of brass for non-aggressive media (DSB)
- Pressure sensor made of stainless steel for aggressive media (DSF)
- SIL 2 certified as per EN 61508
- Approved for marine applications (GL and LR certified)





Technical data

Power supply		
	Maximum load with gold-plated contacts[1]	400 mA, 24 V, 10 VA
	Minimum load with gold-plated contacts	4 mA, 5 V
	Maximum load with silver-plated contacts	10(4) A, 250 V~, 50 W, 250 V=
	Minimum load with silver-plated contacts	100 mA, 24 V
Parameters		
	Pressure connection	G½" male
Ambient conditions		
	Admissible ambient temperature	-20...70 °C
Construction		
	Housing	Transparent cover
	Housing material	Impact-proof thermoplastic
	Device plug	Standard plug with female cable connector for cable Ø 6...10 mm
Standards and directives		
	Type of protection[2]	IP65 (EN 60529)
	Protection class	I (IEC 60730)
	Test marks[3]	TÜV DWFS (SDBFS) ID: 0000006024
	PED 97/23/EC (2014/68/EU)	VdTÜV pressure information sheet 100 cat. IV (as SDBFS) EN 12952-11, EN 12963-9
	Ship-approved	Germanischer Lloyd (GL) Lloyds Register
CE conformity according to	EMC Directive 2004/108/EC	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4
	Low-voltage directive 2006/95/EC	EN 60730-1, EN 60730-2-6
	Machine directive 2006/42/EC (according to appendix IIB)	EN ISO 12100
SIL-conformity as per SIL 2	Standards	IEC 61508 parts 1-2 and 4-7 IEC 61511 parts 1-3

[1] *If the contacts are subjected to a load greater than specified, the gold plating will be destroyed. They are then classed merely as silver contacts and lose the properties of gold-plated contacts*

[2] *Depending on the fitting position, see the fitting instructions. The devices are not suitable for outdoor applications.*

[3] *DWFS (SDBFS): As a safety pressure limiter when an external electrical locking facility is fitted downstream in the circuit. Certificates can be downloaded from www.certipedia.com*

Overview of types

Type	Setting range	Switching difference	Maximum pressure	Max. sensor temp.	Admissible vacuum loading	Weight
DSB138F001	0...1.6 bar	0.25...0.65 bar	12 bar	70 °C	-0.7 bar	0.5 kg
DSB140F001	0...2.5 bar	0.25...0.75 bar	12 bar	70 °C	-0.7 bar	0.5 kg
DSB143F001	0...6 bar	0.3...1.6 bar	16 bar	70 °C	-0.7 bar	0.5 kg
DSB146F001	0...10 bar	0.8...3.7 bar	30 bar	70 °C	-1 bar	0.4 kg
DSB152F001	6...16 bar	1...4 bar	30 bar	70 °C	-1 bar	0.4 kg
DSB158F001	0...25 bar	1...7.5 bar	60 bar	70 °C	-1 bar	0.4 kg
DSB170F001	5...40 bar	1.4...7.5 bar	60 bar	70 °C	-1 bar	0.4 kg
DSF125F001	-1...1.5 bar	0.25...0.75 bar	12 bar	110 °C	-1 bar	0.5 kg
DSF127F001	-1...5 bar	0.3...1.5 bar	16 bar	110 °C	-1 bar	0.5 kg
DSF135F001	0...0.6 bar	0.12...0.60 bar	12 bar	110 °C	-1 bar	0.5 kg
DSF138F001	0...1.6 bar	0.25...0.7 bar	12 bar	110 °C	-1 bar	0.5 kg
DSF140F001	0...2.5 bar	0.25...0.75 bar	12 bar	110 °C	-1 bar	0.5 kg
DSF143F001	0...6 bar	0.3...1.5 bar	16 bar	110 °C	-1 bar	0.5 kg
DSF146F001	0...10 bar	0.8...3.0 bar	18 bar	110 °C	-1 bar	0.5 kg
DSF152F001	0...16 bar	1.2...3.8 bar	60 bar	110 °C	-1 bar	0.3 kg
DSF158F001	0...25 bar	1.5...8.0 bar	60 bar	110 °C	-1 bar	0.3 kg
DSF170F001	15...40 bar	1.7...8.2 bar	60 bar	110 °C	-1 bar	0.3 kg

DSB: Pressure sensor made of brass for non-aggressive media; X_S = lower switching point

DSF: Pressure sensor made of stainless steel for aggressive media; X_S = lower switching point

The switching difference must be within the setting range of the switching point. The minimum values of the switching difference are only possible in the lower setting range.

Accessories

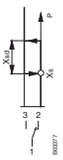
Type	Description
0192222000	Cap nut with solder connector
0259239000	Reduction piece G½" on 7/16" 20-UNF-2A for copper tubes of Ø 6 mm, brass
0292001000	Setpoint adjuster according to customer's wishes (setting accuracy: ±3% of the setting range, but a minimum of ±0.2 bar)
0292002000	Switching difference according to customers' wishes (setting accuracy: ±5% of the setting range, but a minimum of ±0.05 bar, with accessory 0292001 only)
0292004000	Setpoint adjuster sealed (with accessory 0292001 only)
0292150001	Fixing bracket for wall mounting
0296936000	Fixing brackets for rail: top-hat rail EN 60715, 35 × 7.5 mm and 35 × 15 mm
0311572000	Screw fitting for copper tubes of Ø 6 mm, brass
0381141001	Profile sealing ring, copper, for G½"

0296936000: with accessory 0292150001 only

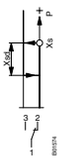
DSL, DSH: Specially designed pressure limiter

Features

- Switching point can be set
- Sealable
- Pressure sensor made of brass for non-aggressive media (DSL)
- Pressure sensor made of stainless steel for aggressive media (DSH)
- Locking type: with falling pressure (DSL) or with rising pressure (DSH)
- SIL 2 certified as per EN 61508
- Approved for marine applications (GL and LR certified)



DSL1**F001



DSH1**F001

Technical data

Power supply		
	Maximum load with gold-plated contacts[1]	400 mA, 24 V, 10 VA
	Minimum load with gold-plated contacts	4 mA, 5 V
	Maximum load with silver-plated contacts	10(4) A, 250 V~, 50 W, 250 V=
	Minimum load with silver-plated contacts	100 mA, 24 V
Parameters		
	Pressure connection	G½" male
Ambient conditions		
	Admissible ambient temperature	-20...70 °C
Construction		
	Housing	Transparent cover
	Housing material	Impact-proof thermoplastic
	Device plug	Standard plug with female cable connector for cable of Ø 6...10 mm
Standards and directives		
	Type of protection[2]	IP65 (EN 60529)
	Protection class	I (IEC 60730)
	Test marks[3]	TÜV DSL: SDBF ID: 0000006022 DSH: SDB ID: 0000006023 PED: 97/23/EC, cat. IV
	Ship-approved	Germanischer Lloyd (GL) Lloyds Register
CE conformity according to	EMC Directive 2004/108/EC	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4
	Low-voltage directive 2006/95/EC	EN 60730-1, EN 60730-2-6
	PED 97/23/EC (2014/68/EU)	VdTÜV pressure information sheet 100, cat. IV EN 12952-11 EN 12953-9
	Machine directive 2006/42/EC (according to appendix IIB)	EN ISO 12100
SIL-conformity as per SIL 2	Standards	IEC 61508 parts 1-2 and 4-7 IEC 61511 parts 1-3

[1] *If the contacts are subjected to a load greater than specified, the gold plating will be destroyed. They are then classed merely as silver contacts and lose the properties of gold-plated contacts*

[2] *Depending on the fitting position, see the fitting instructions. The devices are not suitable for outdoor applications.*

[3] *Certificates can be downloaded from www.certipedia.com*

Overview of types

Min. change for reset: average values

Type	Setting range	Min. change for reset	Maximum pressure	Admissible sensor temperature	Admissible vacuum loading	Weight
DSL140F001	0...2.5 bar	0.4 bar	12 bar	70 °C	-0.7 bar	0.5 kg
DSL143F001	0...6 bar	0.5 bar	16 bar	70 °C	-0.7 bar	0.5 kg
DSL152F001	6...16 bar	1.2 bar	30 bar	70 °C	-1.0 bar	0.4 kg
DSH127F001	-1...5 bar	-0.4 bar	16 bar	110 °C	-1.0 bar	0.5 kg
DSH143F001	0.5...6 bar	-0.45 bar	16 bar	110 °C	-0.7 bar	0.5 kg
DSH146F001	1...10 bar	-0.8 bar	18 bar	110 °C	-1.0 bar	0.5 kg
DSH152F001	2...16 bar	-1.5 bar	60 bar	110 °C	-1.0 bar	0.3 kg
DSH158F001	5...25 bar	-1.8 bar	60 bar	110 °C	-1.0 bar	0.3 kg
DSH170F001	15...40 bar	-2.0 bar	60 bar	110 °C	-1.0 bar	0.3 kg

DSL: locks when the pressure falls (SDBF); pressure sensor made of brass for non-aggressive media

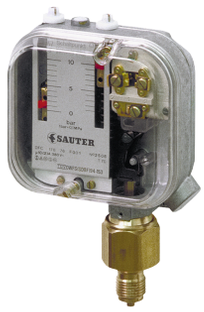
DSH: locks when the pressure rises (SDB); pressure sensor made of stainless steel

Accessories

Type	Description
0192222000	Cap nut with solder connector
0259239000	Reduction piece G½" on 7/16" 20-UNF-2A for copper tubes of Ø 6 mm, brass
0292001000	Setpoint adjuster according to customer's wishes (setting accuracy: ±3% of the setting range, but a minimum of ±0.2 bar)
0292004000	Setpoint adjuster sealed (with accessory 0292001 only)
0292150001	Fixing bracket for wall mounting
0296936000	Fixing brackets for rail: top-hat rail EN 60715, 35 × 7.5 mm and 35 × 15 mm
0311572000	Screw fitting for copper tubes of Ø 6 mm, brass
0381141001	Profile sealing ring, copper, for G½"

0296936000: with accessory 0292150001 only

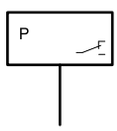
DFC 17B, 27B: Heavy-duty pressure switch



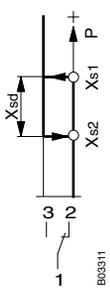
DFC17B76F001

Features

- For regulating and monitoring pressure in liquids, gases and vapours
- Especially suitable for installations subject to vibrations
- Contact rating 1 mA/6 V to 10 A/400 V
- Gold-plated silver contacts, vibration-proof snap-action switch with single-pole change-over switch
- Upper and lower switching points can be set independently of each other
- Sealable
- Splashproof
- DFC17B**F001: Pressure sensor made of brass for non-aggressive media
- DFC27B**F002: Pressure sensor made of stainless steel for aggressive media



Technical data



Power supply		
	Maximum load with gold-plated contacts[1]	200 mA, 50 V
	Minimum load with gold-plated contacts	1 mA, 6 V
	Maximum load with silver-plated contacts[2]	10(2) A, 400 V~ (25 W), 250 V=
	Minimum load with silver-plated contacts	100 mA, 24 V
Ambient conditions		
	Temperature of medium	≤ 110 °C
	Admissible ambient temperature	–40...70 °C
Construction		
	Housing	Transparent cover
	Housing material	Light metal
	Cable inlet	PG 13.5
	Screw terminals	For wire of up to 2.5 mm²
	Pressure connection	G½" male
Standards and directives		
	Type of protection[3]	IP44 (EN 60529)
	Protection class	I (IEC 60730)
	Test marks[4]	TÜV DWFS (SDBF) ID: 0000006018 DWFS (SDB) ID: 0000006019 DB (SDBF) ID: 0000006017
	Mode of operation	Type 2 B (EN 60730)
	Ship-approved	Germanischer Lloyd (GL) ID: 99589-84HH, 99588-84HH, 99587-84HH

[1] If the contacts are subjected to a load greater than 200 mA, 50 V, the gold plating will be destroyed. They are then classed merely as silver contacts and lose the properties of gold-plated contacts

[2] Take the RC circuitry into account for inductive loads
230/400 V networks
From 70 °C media temperature, the current must be reduced to 6 A

[3] IP 54 with accessory 0259299000

[4] Certificates can be downloaded from www.tuv.com

CE conformity as per	Low-voltage directive 2006/95/EC	EN 60730-1, 60730-2-6
	EMC Directive 2004/108/EC	EN 6100-6-1, EN61000-6-2 EN 61000-6-3, EN 61000-6-4
	PED 97/23/EC, cat. IV	VdTÜV pressure information sheet 100, sheet 1, cat. IV, DIN 3398 T4 EN 12952-11, EN 12953-9

Overview of types

Type	Setting range (bar)	Switching difference (bar)	Maximum pressure (bar)	Max. temp., sensor (°C)	Admissible vacuum loading (bar)	Weight (kg)
DFC17B54F001	0...2.5	0.14	16	70	-0.7	1.2
DFC17B58F001	0...6.0	0.18	16	70	-1.0	1.2
DFC17B59F001	-1...5.0	0.2	16	70	-1.0	1.2
DFC17B76F001	0...10	0.5	40	70	-1.0	1.1
DFC17B78F001	0...16	0.5	40	70	-1.0	1.1
DFC17B79F001	16...32	0.8	42	70	-1.0	1.1
DFC17B96F001	0...25	1.7	100	70	-1.0	1
DFC17B97F001	25...50	2	100	70	-1.0	1
DFC17B98F001	0...40	1.8	100	70	-1.0	1
DFC27B26F002	-1...2.5	0.3	21	110	-1.0	0.9
DFC27B43F002	0.5...6.0	0.3	21	110	-1.0	0.9
DFC27B46F002	1...10	0.3	21	110	-1.0	0.9
DFC27B52F002	2...16	0.3	21	110	-1.0	0.9

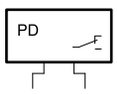
The switching difference must be within the setting range of the switching point. The minimum values of the switching difference are only possible in the lower setting range.

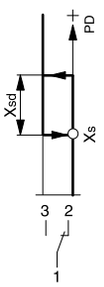
Accessories

Type	Description
0192222000	Cap nut with solder connector
0259239000	Reduction piece G½" on 7/16" 20-UNF-2A for copper tubes of Ø 6 mm, brass
0311572000	Screw fitting for copper tubes of Ø 6 mm, brass
0035465000	Throttle screw for absorbing pressure surges, brass
0214120000	Throttle screw for absorbing pressure surges, stainless steel
0192700000	1 m capillary tube for absorbing pressure surges, copper
0292018001	Damping screw for absorbing pressure surges in low viscosity media
0259189000	Holder for raised wall mounting
0259409000	Fixing bracket (provides 3-point fixing with accessory 0259189)
0259299000	Cable screw fitting PG 13.5
0292019001	Setpoint adjustment for each switching point according to customer's wishes (setting accuracy: ±3% of the setting range)
0292019002	Sealing of the adjustment screw for each switching point (only with accessory 0292019001)
0381141001	Profile sealing ring, copper, for G½"

DSD: Differential pressure switch

DSD1**F002





Features

- For monitoring the differential pressure in liquids, gases and vapours
- For use in, for example, filter technology and plant and machine engineering
- Differential pressure setting ranges from 0.06 to 6 bar
- Up to 80 °C media temperature
- High repeat precision
- High overload protection
- Can be used in all neutral media, such as heating water, neutral gases, oils etc.
- Long serviceable life
- With fitting bracket

Technical data

Parameters		
	Min. load	0.1 A, 250 V~, 25 VA 0.1 A, 30 V=
	Max. load	3(1) A, 250 V~, 250 VA 0.4 A, 30 V=, 10 W
	Temperature dependence	1.5%/10 K
	Accuracy	3% of the setting range
	Hysteresis	5% of the setting range
	Mechanical serviceable life	10^6 switchings
	Max. static operating pressure (positive and negative pressure)	16 bar
Ambient conditions		
	Admissible ambient temperature	-10...70 °C
	Admissible temperature of medium	0...80 °C (non-freezing media)
	Admissible ambient humidity	45...75% rh
Construction		
	Connection cable[1)]	3 x 0.5 mm^2
	Diaphragms	Chromium-nickel steel 1.4310
	Connecting thread	G ⅛" (female thread)
	Weight	0.2 kg
Standards and directives		
	Type of protection	IP65 (EN 60529)
	Protection class	II (EN 60730)
CE conformity according to	Low-voltage directive 2006/95/EC	EN 60730-1 / EN 60730-2-6
	EMC Directive 2004/108/EC	EN 55014 Click rate N < 0.2 Art. 4.2
	PED 97/23/EC	Art. 3.3
	PED 2014/68/EU	Art. 13, fluid group 2

Overview of types

Type	Setting range (bar)
DSD134F102	0.06...0.6
DSD137F002	0.10...1.0
DSD140F002	0.25...2.5
DSD143F002	0.6...6.0

1) *1 m long, fixed wiring*

Accessories

Type	Description
0300360005	Cutting ring fitting G⅛" to 6 mm pipe (2 pcs)
0300360006	Pneumatic fitting G⅛" to 6 mm hose (2 pcs)
0300360016	Throttle screws G⅛", G⅛" (2 pcs)

HSC 120: Room humidistat

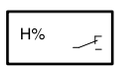
HSC120F0**

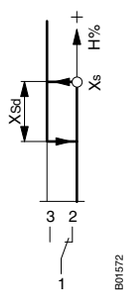
Features

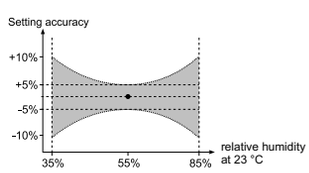
- Monitoring and regulation of relative air humidity in rooms by controlling fans, drying units and air humidifiers
- Variable relative humidity as setpoint based on printed scale in % rh
- Measurement taken via a measuring element of stabilised synthetic textile tape.
- Micro-switch with fixed switching difference X_{Sd}

Technical data

Power supply		
	Max. load	5(3) A, 250 V~
	Min. load	100 mA, 24 V
Parameters		
	Setting range	30...90% rh
	Setting accuracy[1)]	±5% rh
	Humidity calibration at	55% rh, 23 °C
	Switching difference	Typ. 6% rh
	Long-term stability	Approx. -1.5% rh/a
	Time constant in moving air (0.2 m/s)	Approx. 5 min
	Temperature influence	0.5% rh/K
Ambient conditions		
Operation	Humidity (non-condensing)	30...90% rh
	Temperature	0...50 °C
Storage and transport	Humidity (non-condensing)	10...95% rh
	Temperature	-20...70 °C
Construction		
	Weight	0.09 kg
	Housing	Pure white (RAL 9010)
	Housing material	Fire-retardant thermoplastic
	Screw terminals	For wire of up to 1.5 mm²
Standards and directives		
	Type of protection	IP20 (EN 60529)
	Protection class	II (IEC 60730)
CE conformity as per	EMC Directive 2004/108/EC	EN 61000-6-1, EN 61000-6-2 EN 61000-6-3, EN 61000-6-4
	Low-voltage directive 2006/95/EC	EN 60730-1, EN 60730-2-13







Overview of types

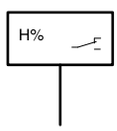
Type	Features
HSC120F001	External setpoint adjuster
HSC120F010	Internal setpoint adjuster

Accessories

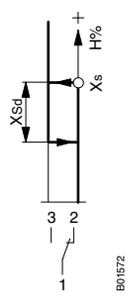
Type	Description
0362225001	Intermediate plate, pure white, for wall mounting on recessed junction box

[1)] *The setting accuracy of the humidistat is valid for the calibration point ±5% rh at 55% rh and 23 °C following initial calibration at the factory. See diagram "Setting accuracy". In general, humidity sensors (humidistats) are subject to increased ageing if they are used and/or stored in very contaminated air or aggressive gases. The humidistat may start to drift and its linearity may change under these conditions. If the humidistats are used in very contaminated air, the warranty does not cover a premature re-calibration or the replacement of the complete humidistat*

HBC11*F001



HBC111F001



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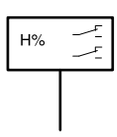

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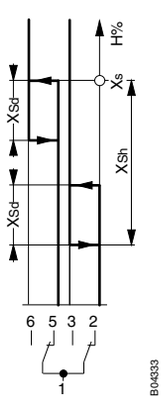


HBC112F001

HBC: Duct-mounted humidistat

Features

- Monitoring and regulation of relative air humidity by controlling fans, drying units and air humidifiers
- Temperature-compensated humidity sensor
- Variable relative humidity as setpoint based on printed scale in % rh
- Includes fixing bracket with seal for duct or wall mounting
- To be fitted in a ventilation duct or on a wall
- With single-pole change-over contacts and fixed switching difference X_{Sd}
- Immersion depth 130...156 mm; includes fixing bracket

Technical data

Power supply		
	Max. load	5(3) A, 250 V~
	Min. load	100 mA, 24 V
Parameters		
	Setting range	15...95% rh
	Setting accuracy	±5% rh
	Humidity calibration at	55% rh, 23 °C
	Temperature influence	Compensated
	Long-term stability	–1.5% rh/a
	Time constant in moving air (0.2 m/s)	Approx. 3 min
	Switching difference X_{sd}	4% rh (after humidity calibration)
	Max. air speed	10 m/s
Ambient conditions		
Operation	Humidity (non-condensing)	30...90% rh
	Temperature	0...70 °C
Storage and transport	Humidity (non-condensing)	10...95% rh
	Temperature	-20...70 °C
Construction		
	Housing material	Glass-fibre-reinforced thermoplastic
	Housing cover	Thermoplastic, sealable
	Sensor tube	Glass-fibre-reinforced thermoplastic, Ø 30 mm
	Cable inlet	PG 11
	Screw terminals	For wire of up to 1.5 mm²
Standards and directives		
	Type of protection	IP30 (EN 60529)
	Protection class	II (IEC 60730)
	EMC Directive 2004/108/EC	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4
	Low-voltage directive 2006/95/EC	EN 60730-1, EN 60730-2-13

Overview of types

Type	Switching range X_{sh}	Number of switches	Weight
HBC111F001	–	1	0.33 kg
HBC112F001	6...25% rh	2	0.35 kg

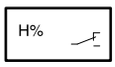
HBC 112: For 3-point control or min./max. monitoring and internally adjustable switching range X_{Sd}

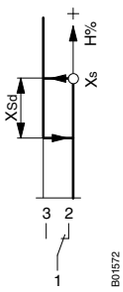
Accessories

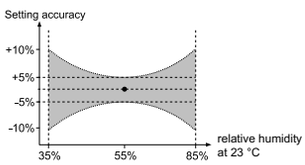
Type	Description
0303538001	Set for increasing protection rating to IP 55 (housing lid with transparent cap for setpoint knob, seal, 1 cable screw fitting - PG 11, 1 plug - PG 11)
0370560011	Cable screw fitting PG 11, plastic, for cable of Ø 9...11 mm

HSC 101: Panel-mounted humidistat (packing unit: 50 pieces)

HSC101F001







Features

- Monitoring and regulation of relative air humidity by controlling fans, drying units and air humidifiers
- Adjustment of change-over point via setpoint adjustment axis
- Suitable for fitted applications with protection class II
- Measurement via a measuring element of stabilised synthetic textile tape
- Secured with bolting hole and fixing hole (blind hole)
- Micro-switch with single-pole change-over contacts and fixed switching difference
- Suitable for panel-mounted units only

Technical data

Power supply		
	Max. load	5(3) A, 250 V~
	Min. load	100 mA, 24 V
Parameters		
	Setting range	25...95% rh
	Setting accuracy[1)]	±5% rh
	Humidity calibration at	55% rh, 23 °C
	Switching difference[2)]	6% rh
	Long-term stability	–1.5% rh/a
	Time constant in moving air (0.2 m/s)	Approx. 3 min
	Temperature influence	0.5% rh/K
Ambient conditions		
Operation	Humidity (non-condensing)	25...95% rh
	Temperature	0...70 °C
Storage and transport	Humidity (non-condensing)	10...95% rh
	Temperature	-20...70 °C
Construction		
	Weight	0.03 kg
	Baseplate	Thermoplastic
	Electrical connection	AMP terminals 2.8 mm
Standards and directives[3)]		
	Type of protection	IP00 (EN 60529)
	Protection class	0 (IEC 60730)
CE conformity as per	EMC Directive 2004/108/EC	EN 55014 Art. 4.2
	Low-voltage directive 2006/95/EC	EN 60730-1, EN 60730-2-13

Overview of types

Type	Properties
HSC101F001	Panel-mounted humidistat

1) The setting accuracy of the humidistat is valid for the calibration point ±5% rh at 55% rh and 23 °C following initial calibration at the factory. See diagram "Setting accuracy". In general, humidity sensors (humidistats) are subject to increased ageing if they are used and/or stored in very contaminated air or aggressive gases. The humidistat may start to drift and its linearity may change under these conditions. If the humidistats are used in very contaminated air, the warranty does not cover a premature re-calibration or the replacement of the complete humidistat

2) Can be substantially improved by recalibration during usage

3) The fitting method must adhere to the relevant safety standards

Data capture

Temperature

Indoor air quality

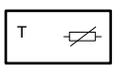
Humidity

Flow and pressure

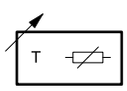
Other variables

EGT 130, 330, 332, 335, 430: Room-temperature sensor, surface-mounted

EGT*30F***



EGT332F102



Features

- Passive measuring element
- Temperature measurement in dry rooms
- Variants with setpoint adjuster, presence button and status LED

Technical data

Power supply		
	Power supply	See type list
Parameters		
Time characteristic	Time constant in still air	12 minutes
Ambient conditions		
	Storage and transport temperature	-35...70 °C
	Admissible ambient temperature	-35...70 °C
Construction		
	Housing	Pure white, similar to RAL9010
	Housing material	ASA
	Cable inlet	From rear or side top/bottom
	Connection terminals	Screw terminal, max. 1.5 mm^2
	Weight	50 g
Standards, directives		
	Type of protection	IP30 (EN 60529)
CE conformity according to	EMC Directive 2014/30/EU	EGT130F031: EN 60730-1 (mode of operation 1, residential premises)
	RoHS Directive 2011/65/EU	EN 50581

Resistance values

The tolerance listed below applies only to the corresponding measuring element. The accuracy of the sensor depends on the cable length and the measuring element used.

Measuring element	Standards	Nominal value	Tolerance at 0 °C
Ni500	DIN 43760	500 Ω at 0 °C	±0.4 K
Ni1000	DIN 43760	1000 Ω at 0 °C	±0.4 K
Pt100	DIN EN 60751	100 Ω at 0 °C	±0.3 K
Pt1000	DIN EN 60751	1000 Ω at 0 °C	±0.3 K

Overview of passive types

Type	Measuring range	Output signal	Adjuster
EGT330F052	-35...70 °C	Passive, Ni500	-
EGT330F102	-35...70 °C	Passive, Ni1000	-
EGT332F102	-35...70 °C	Passive, Ni1000	Resistor signal 2.5 kΩ
EGT335F102	-35...70 °C	Passive, Ni1000	Resistor signal 2.5 kΩ
EGT430F012	-35...70 °C	Passive, Pt100	-
EGT430F102	-35...70 °C	Passive, Pt1000	-

EGT 335 with presence button and 3 LEDs

Active

Type	Measuring range	Measuring accuracy at 21 °C	Output signal	Power supply	Power consumption	Adjuster
EGT130F031	3 temperature ranges, adjustable on device (see connection diagram)	Typ. ±1% of measuring range[1)2)]	Active, 0...10 V, min. load 5 kΩ	15...24 V= (±10%)/ 24 V~ (±10%)	Max. 12 mA/24 V=	-

[1)] *With offset adjustment ±3 K*

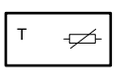
[2)] *The transducers must be operated at a constant operating voltage (±0.2 V). Current/voltage peaks when switching the supply voltage on/off must be avoided by the customer.*

EGT 386, 388, 486, 686, 688: Room temperature sensor, recessed

EGT386F101

EGT486F101

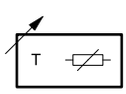
EGT686F101



EGT388F101

EGT388F102

EGT688F101



How energy efficiency is improved

Precise measuring of room temperature for energy-efficient room climate control

Features

- Passive room temperature measurement
- For temperature measurement in dry rooms (e.g. in residential properties, offices and business premises)
- Including frame

Technical data

Parameters		
	Measuring range	-35...70 °C
Time characteristic	Time constant in still air	30 minutes
Ambient conditions		
	Storage and transport temperature	-35...70 °C
	Admissible ambient temperature	-35...70 °C
Construction		
	Housing	Pure white
	Housing material	Thermoplastic
	Frame design	Gira E2
Standards and directives		
	Type of protection	IP20 (EN 60529)
CE conformity according to	RoHS Directive 2011/65/EU	EN 50581

Resistance values / characteristics

i *The tolerance listed below applies only to the corresponding measuring element. The accuracy of the sensor depends on the cable length and the measuring element used.*

Measuring element	Standard	Nominal value at 0 °C	Tolerance at 0 °C
Ni1000	DIN 43760	1000 Ω	±0.4 K
Pt1000	DIN EN 60751	1000 Ω	±0.3 K
NTC 10k	-	10 kΩ at 25 °C	±0.3 K

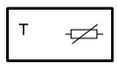
Overview of types

Type	Measuring element	Adjuster	Weight
EGT386F101	Ni1000	–	53 g
EGT388F101	Ni1000	10 kΩ	83 g
EGT388F102	Ni1000	100 Ω	83 g
EGT486F101	Pt1000	–	83 g
EGT686F101	NTC 10k	–	53 g
EGT688F101	NTC 10k	10 kΩ	83 g

EGT 301, 401: Outdoor temperature sensor

EGT*01F102

EGT301F031



Features

- Passive or active measuring element
- Extra protection against dust and humidity (IP65)
- Cable inlet on back or via cable gland
- For weather-dependent heating and ventilation systems

Technical data

Parameters		
	Recommended measurement current	< 1 mA
Time characteristic	Time constant in still air	EGT*01F102:12 min EGT301F031:7 min
Ambient conditions		
	Ambient temperature	EGT*01F102:–35...90 °C, EGT301F031:-35...70°C
Storage and transport	Storage and transport temperature	-35...70 °C
	Humidity (non-condensing)	85% rh
Construction		
	Sensor sleeve	EGT301F031: stainless steel 1.4571 Ø 6×25 mm
	Housing	Yellow/black
	Housing material	Polyamide
	Connection terminals	Screw terminals 0.35 - 2.5 mm^2, for number of poles see connection diagram
	Cable inlet	EGT*01F102:M16 for cable min. Ø 5 mm, max. Ø 8 mm EGT301F031:M20 for cable min. Ø 5 mm, max. Ø 8 mm
Standards and directives		
	Type of protection	IP65 (EN 60529)
CE conformity according to	RoHS Directive 2011/65/EU	EN 50581
	EMC Directive 2004/108/EC	EGT301F031: EN 60730-1 (mode of operation 1, residential premises)

Resistance values / characteristics

i *The tolerance listed below applies only to the corresponding measuring element. The accuracy of the sensor depends on the cable length and the measuring element used.*

Measuring element	Standards	Nominal value at 0 °C	Tolerance at 0 °C
Ni1000	DIN 43760	1000 Ω	±0.4 K
Pt1000	DIN EN 60751	1000 Ω	±0.3 K

Overview of types

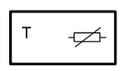
Type	Measuring range	Measuring accuracy at 21 °C	Output signal	Power supply	Power consumption	Weight
EGT301F102	-35...90 °C	-	Passive, Ni1000	-	-	80 g
EGT401F102	-35...90 °C	-	Passive, Pt1000	-	-	80 g
EGT301F031	5 temperature ranges (-50...160 °C), adjustable on device (see connection diagram)	Typ. ±1% of measuring range[1)2)]	Active, 0...10 V, min. load impedance 1 kΩ	15...24 V= (±10%)/ 24 V~ (±10%)	Max. 0.42 W / 0.84 VA	120 g

[1)] *With offset adjustment ±3 K*

[2)] *The transducers must be operated at a constant operating voltage (±0.2 V). Current/voltage peaks when switching the supply voltage on/off must be avoided by the customer.*

EGT 353...356, 456, 554: Cable temperature sensor

EGT*5*F***



Features

- Passive measuring element
- Particularly suitable for direct connection in installations with short distances between the controllers and the sensors
- Sensor with a wide range of applications and high type of protection (IP67) and fast time characteristic
- Used in air, used in liquid media using protective tubes, or as a clamp-on temperature sensor using an accessory
- Large temperature measuring range

Technical data

Parameters		
	Recommended measurement current	Typ. < 1 mA
Time characteristic in water	Time constant with thermowell (LW 7) in still water	9 s (t_{63})
Time characteristic in air	Time constant in still air	155 s (t_{63})
	Time constant in moving air (3 m/s)	35 s (t_{63})

Construction		
	Sensor sleeve	Ø 6 × L (mm) - see table
	Material	Sensor sleeve: stainless steel 1.4571 Cable: see table
	Connection cable	Ø 5 mm with wire ferrules
	Cable cross-section	2 x 0.25 mm^2

Standards and directives		
	Type of protection	IP67 (EN 60529)
CE conformity according to	RoHS Directive 2011/65/EU	EN 50581

Resistance values / characteristics

i *The tolerance listed below applies only to the corresponding measuring element. The accuracy of the sensor depends on the cable length and the measuring element used.*

Measuring element	Standards	Nominal value	Tolerance at 0 °C
Ni1000	DIN 43760	1000 Ω at 0 °C	±0.4 K
Pt100	DIN EN 60751	100 Ω at 0 °C	±0.3 K
Pt1000	DIN EN 60751	1000 Ω at 0 °C	±0.3 K
NTC 10k	-	10 kΩ at 25 °C	±0.3 K

Overview of types

Type	Measuring element	Measuring range	Sleeve length L1	Cable length L (m)	Material	Weight
EGT353F101	NTC10k	-35...100 °C	50 mm	1.5	PVC	40 g
EGT353F103	NTC 10k	-35...100 °C	50 mm	3	PVC	85 g
EGT353F110	NTC 10k	-35...100 °C	50 mm	10	PVC	280 g
EGT353F120	NTC 10k	-35...100 °C	50 mm	20	PVC	550 g
EGT554F103	NTC 22k	-35...100 °C	50 mm	3	PVC	85 g
EGT354F102	Ni1000	-35...100 °C	50 mm	1	PVC	30 g
EGT354F104	Ni1000	-35...100 °C	50 mm	3	PVC	85 g
EGT354F111	Ni1000	-35...100 °C	50 mm	10	PVC	280 g
EGT354F121	Ni1000	-35...100 °C	50 mm	20	PVC	550 g
EGT355F902	Ni1000	-50...180 °C	100 mm	2	Silicone	60 g
EGT355F903	Ni1000	-50...180 °C	150 mm	2	Silicone	60 g
EGT356F102	Ni1000	-50...180 °C	50 mm	1	Silicone	30 g

Type	Measuring element	Measuring range	Sleeve length L1	Cable length L (m)	Material	Weight
EGT356F104	Ni1000	-50...180 °C	50 mm	3	Silicone	90 g
EGT356F111	Ni1000	-50...180 °C	50 mm	10	Silicone	300 g
EGT356F304	Ni200	-50...180 °C	50 mm	3	Silicone	90 g
EGT456F012	Pt100	-50...180 °C	50 mm	1	Silicone	30 g
EGT456F102	Pt1000	-50...180 °C	50 mm	1	Silicone	30 g

Accessories

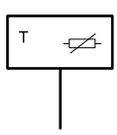
Type	Description
0300360000	Immersion screw fitting R¼"; stainless steel
0300360003	Mounting flange; plastic (max. 140 °C)
0300360004	Heat-conducting paste incl. gun with 2 g content
0300360008	Retaining holder for cable temperature sensor or capillary tube with 0392022*** (LW 7 or 15) (10 pieces)
0300360012	Sensor support spiral for fitting in ventilation duct
0313214001	Fixing kit for all applications (holder, heat-conducting paste, retaining strap)

*039*******: Thermowell (LW 7 and 15) made of brass or stainless steel (see product data sheet)*

EGT 346...348, 392, 446, 447: Duct temperature sensor

EGT*4*

EGT392F102



Features

- Passive or active measuring element
- Used in pipes and containers using optional thermowells (LW 7) For use in standard HVAC applications up to 160 °C and aggressive ambient conditions up to 260 °C (EGT392F102)

Technical data

Parameters		
	Recommended measurement current	Typ.< 1 mA
Time characteristic	Time constant in moving air (3 m/s)	35 s (t_{63})
	Time constant in still air	155 s (t_{63})
	Time constant in still water	9 s (t_{63})
	Time constant in still water, with thermowell made of brass	17 s (t_{63})
	Time constant in still water, with thermowell made of stainless steel	20 s (t_{63})
Ambient conditions		
	Ambient temperature	EGT*4* passive:-35...90 °C EGT*4* active:-35...70 °C EGT392F102:-25...90 °C
Storage and transport	Storage and transport temperature	-35...70 °C
	Humidity (non-condensing)	85% rh
Construction		
	Housing	EGT*4*:Black/yellow
	Housing material	EGT*4*: Polyamide EGT392F102: Form J made of die-cast aluminium
	Connection terminals	EGT*4*:45° screw terminals 0.35...1.5 mm^2 For number of poles see connection diagram
	Cable inlet	M16 for cable min. Ø 5 mm, max. Ø 8 mm
	Immersion stem	Ø 6×L (mm) made of stainless steel 1.4571, see table
Standards and directives		
	Type of protection	IP65 (EN 60529)
CE conformity according to	RoHS Directive 2011/65/EU	EN 50581
	EMC Directive 2004/108/EC	EGT34*F031: EN 60730-1 (mode of operation 1, residential premises)

Resistance values / characteristics

i *The tolerance listed below applies only to the corresponding measuring element. The accuracy of the sensor depends on the cable length and the measuring element used.*

Measuring element	Standard	Nominal value at 0 °C	Tolerance at 0 °C
Ni1000	DIN 43760	1000 Ω	±0.4 K
Ni200	DIN 43760	200 Ω	±0.4 K
Pt1000	DIN EN 60751	1000 Ω	±0.3 K
Pt100	DIN EN 60751	100 Ω	±0.3 K

Overview of passive types

Type	Measuring element	Immersion length L (mm)	Measuring range	Weight
EGT346F022	Ni200	100 mm	-50...160 °C	85 g
EGT346F102	Ni1000	100 mm	-50...160 °C	85 g
EGT347F022	Ni200	200 mm	-50...160 °C	95 g
EGT347F102	Ni1000	200 mm	-50...160 °C	95 g
EGT348F102	Ni1000	450 mm	-50...160 °C	120 g
EGT392F102	Ni1000	100 mm	-50...260 °C	105 g
EGT446F012	Pt100	100 mm	-50...160 °C	85 g
EGT446F102	Pt1000	100 mm	-50...160 °C	85 g
EGT447F012	Pt100	200 mm	-50...160 °C	95 g
EGT447F102	Pt1000	200 mm	-50...160 °C	95 g

Overview of active types

Type	Measuring range	Measuring accuracy at 21 °C[1)2)]	Output signal	Power supply	Power consumption	Immersion length L (mm)	Weight
EGT346F031	5 temperature ranges (-50...160 °C), adjustable on device (see connection diagram)	Typ. ±1% of measuring range	0...10 V, min. load 5 kΩ	15...24 V= (±10%) or 24 V~ (±10%)	Typ. 0.35 W / 0.82 VA	100 mm	90 g
EGT347F031	5 temperature ranges (-50...160 °C), adjustable on device (see connection diagram)	Typ. ±1% of measuring range	0...10 V, min. load 5 kΩ	15...24 V= (±10%) or 24 V~ (±10%)	Typ. 0.35 W / 0.82 VA	200 mm	100 g
EGT348F031	5 temperature ranges (-50...160 °C), adjustable on device (see connection diagram)	Typ. ±1% of measuring range	0...10 V, min. load 5 kΩ	15...24 V= (±10%) or 24 V~ (±10%)	Typ. 0.35 W / 0.82 VA	450 mm	120 g

Accessories

Type	Description
0300360000	Immersion screw fitting R¼"; stainless steel
0300360003	Mounting flange; plastic (max. 140 °C)
0300360004	Heat-conducting paste incl. gun with 2 g content

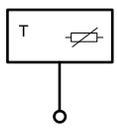
*039*******: Thermowells (LW 7 and 15) made of brass or stainless steel (see product data sheet)*

1) *With offset adjustment ±3 K*

2) *The transducers must be operated at a constant operating voltage (±0.2 V). Current/voltage peaks when switching the supply voltage on/off must be avoided by the customer.*

EGT 311, 411: Clamp-on temperature sensor

EGT*11F***



Features

- Passive or active measuring element
- Extra protection against dust and humidity (IP65)
- Temperature measurement on pipes
- Including retaining strap for pipes of Ø 10...50 mm
- Heat-conducting paste (silicone-free) is included in the scope of delivery

Technical data

Parameters		
	Recommended measurement current	Typ.< 1 mA
Time characteristic with heat-conducting paste	Time constant	16 s
Ambient conditions		
	Storage and transport temperature	-35...70 °C
	Humidity (non-condensing)	85% rh
Construction		
	Housing	Yellow/black
	Housing material	Polyamide
	Connection terminals	Screw terminals 0.35 - 1.5 mm^2, for number of poles see connection diagram
	Cable inlet	M16 for cable min. Ø 5 mm, max. Ø 8 mm
Standards and directives		
	Type of protection	IP65 (EN 60529)
CE conformity according to	RoHS Directive 2011/65/EU	EN 50581
	EMC Directive 2004/108/EC	EGT311F031: EN 60730-1 (mode of operation 1, residential premises)

Resistance values / characteristics

i *The tolerance listed below applies only to the corresponding measuring element. The accuracy of the sensor depends on the cable length and the measuring element used.*

Measuring element	Standards	Nominal value	Tolerance at 0 °C
Ni1000	DIN 43760	1000 Ω at 0 °C	±0.4 K
Ni200	DIN 43760	200 Ω at 0 °C	±0.4 K
Pt100	DIN EN 60751	100 Ω at 0 °C	±0.3 K

Overview of types

Type	Measuring range	Measuring accuracy at 21 °C	Output signal	Power supply	Power consumption	Weight
EGT311F022	-35...90 °C	-	Passive, Ni200	-	-	80 g
EGT311F102	-35...90 °C	-	Passive, Ni1000	-	-	80 g

Type	Measuring range	Measuring accuracy at 21 °C	Output signal	Power supply	Power consumption	Weight
EGT411F102	-35...90 °C	-	Passive, Pt1000	-	-	80 g
EGT311F031	5 temperature ranges (-50...160 °C), adjustable on device (see connection diagram)	Typ. ±1% of measuring range[1)2)]	Active, 0...10 V, min. load impedance 5 kΩ	15...24 V= (±10%) 24 V~ (±10%)	Max. 0.42 W / 0.84 VA	120 g

Accessories

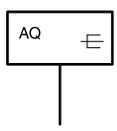
Type	Description
0300360002	Retaining strap 900 mm and heat-conducting paste
0300360004	Heat-conducting paste incl. gun with 2 g content

1) *With offset adjustment ±3 K*

2) *The transducers must be operated at a constant operating voltage (±0.2 V). Current/voltage peaks when switching the supply voltage on/off must be avoided by the customer.*

EGQ 110: Duct transducer, air quality (VOC)

EGQ110F031



Features

- Measures the relative mixed gas concentration (organic components in the room air), such as tobacco smoke, kitchen vapours or human body odours
- Demand-based ventilation control in buildings such as restaurants and offices
- For measuring air quality in air ducts
- Automatic self-calibration through software algorithm
- Calibrated ex works and ready to use immediately
- The sensors have been developed according to the DIN EN 13779, DIN EN 15251, VDI 6038 and 6040 directives
- Mounting flange supplied

Technical data

Power supply		
	Power supply	15...24 V= (±10%) or 24 V~ (±10%)
	Power consumption	Max. 1.5 W (24 V=) | 2.9 VA (24 V~)
	Peak inrush current	10 A < 2 ms
Outputs		
	Output signal	0...10 V Min. load: 10 kΩ
Parameters		
	Flow speed	Min. 3 m/s Max. 10 m/s
	Readiness for operation	< 2 minutes (operational), 15 minutes (max. precision)
Time characteristic	In moving air (3 m/s)	5 minutes
	Measuring range	0...100%
	Serviceable life	Typically 10 years
	Sensor	VOC sensor, heated tin dioxide semi-conductor
Ambient conditions		
	Ambient temperature	0...50 °C
	Ambient humidity	Max. 85% rh non-condensing
Construction		
	Connection terminals	Clamp connector 1.5 mm^2
	Cable inlet	M20 for cable Ø min. 5 mm, max. 8 mm
	Housing	Yellow/black
	Housing material	Polyamide 6
	Filter unit material	Stainless steel, wire mesh
	Sensor tube diameter	19.5 mm
	Sensor tube length	180 mm
	Weight	350 g
Standards and directives		
	Type of protection	Instrument head: IP65 (EN 60529)
CE conformity according to	EMC Directive 2014/30/EU	EN 60730-1 (mode of operation 1, residential premises)
	RoHS Directive 2011/65/EU	EN 50581

Overview of types

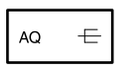
Type	Properties
EGQ110F031	Duct transducer; VOC; 0-10 V

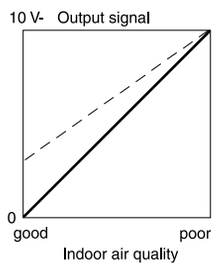
EGQ 120: Room transducer, air quality, surface-mounted

EGQ120F031

Features

- Measures the relative mixed gas concentration (organic components in the room air), such as tobacco smoke, kitchen vapours or human body odours
- Demand-based ventilation control in buildings such as restaurants and offices
- Active VOC semi-conductor sensor (volatile organic compound) for measuring the mixed gas concentration
- Adjustment of the output signal using a trim potentiometer
- Suitable for fitting directly to walls





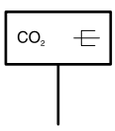
Technical data

Power supply		
	Power supply	15...24 V= / 24 V~ ±10%
	Power consumption	1.2 W / 2.2 VA
	Warming-up time	Approx. 30 min
Parameters		
	Time constant in moving air (0.5 m/s)	Approx. 100 seconds
Ambient conditions		
	Admissible ambient temperature	-20...50 °C
	Admissible ambient humidity	Max. 85% rh, no condensation
Inputs/outputs		
	Output signal	0...10 V, min. load 10 kΩ
Construction		
	Housing	Pure white
	Housing material	ABS, ASA
	Connection terminals	Screw terminal, max. 1.5 mm^2
	Weight	65 g
Standards, directives		
	Type of protection	IP30 (EN 60529)
CE conformity according to	EMC Directive 2004/108/EC	EN 60730-1 (mode of operation 1, residential premises)

Overview of types

Type	Description
EGQ120F031	Room transducer, air quality, surface-mounted

EGQ212F031



EGQ 212: Duct transducer, CO_2 and temperature

Features

- Selective measurement of the CO_2 concentration and temperature for demand-controlled ventilation of rooms (e.g. meeting rooms, conference rooms, offices, classrooms, etc.)
- CO_2 measurement with NDIR[1] Dual-beam technology, therefore stable in the long term and largely resistant to external influences
- Suitable for 24-hour operation
- Calibrated ex works and ready to use immediately
- The sensors have been developed according to the DIN EN 13779, DIN EN 15251, VDI 6038 and 6040 directives
- Mounting flange supplied

Technical data

Power supply		
	Power supply	15...24 V= (±10%) or 24 V~ (±10%)
	Power consumption	Max. 1.5 W (24 V=) | 2.9 VA (24 V~)
	Peak inrush current	10 A, 2 ms
Outputs		
	Output signal	2 × 0...10 V, load > 10 kΩ
Parameters		
	Readiness for operation	< 2 minutes (operational), 15 minutes (max. precision)
	Flow speed	Min. 3 m/s Max. 10 m/s
Time charateristic	In moving air (3 m/s)	5 minutes
CO_2	Measuring range	0...2000 ppm
	Measuring accuracy	±75 ppm, >750 ppm:±10% (typ. at 21 °C)
	Pressure dependence	Typ.0.135% of the measured value per mm Hg
	Temperature dependence	Typ.2 ppm per °C (0...50 °C)
	Gradual drift	< 5% FS or < 10% per year
Temperature	Measuring range	0...50 °C
	Measuring accuracy	±1 °C for the measuring range (typ. 21 °C and 24 V=)
Ambient conditions		
	Ambient temperature	0...50 °C
	Ambient humidity	Max. 85% rh non-condensing
Construction		
	Connection terminals	Plug-in connector, max. 1.5 mm^2
	Cable inlet	M20 for cable Ø min. 5 mm, max. 8 mm
	Housing	Yellow/black
	Housing material	PA6
	Filter unit material	Stainless steel, wire mesh
	Sensor tube diameter	19.5 mm
	Sensor tube length	180 mm
	Weight	180 g
Standards and directives		
	Type of protection	Instrument head: IP65 (EN 60529)

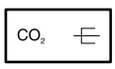
[1] *NDIR: Non-dispersive infrared sensor*

CE conformity according to	EMC Directive 2014/30/EU	EN 60730-1 (mode of operation 1, residential premises)
	RoHS Directive 2011/65/EU	EN 50581

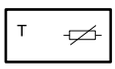
Overview of types

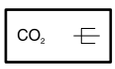
Type	Description
EGQ212F031	Duct transducer, CO_2 and temperature; 2 x 0-10 V

EGQ220F031



EGQ222F031





EGQ 220, 222: Room transducer, CO_2, surface-mounted

Features

- Selective measurement of the CO_2 concentration for demand-controlled ventilation of rooms (e.g. meeting rooms, conference rooms, offices, classrooms, etc.)
- Available in 2 versions: with and without temperature measurement
- CO_2 measurement with NDIR[1] Dual-beam technology, therefore stable in the long term and largely resistant to external influences
- Suitable for 24-hour operation
- Calibrated ex works and ready to use immediately
- Very fast response to changes in the CO_2 concentration in rooms
- Temperature-compensated calibration for the standard air pressure of 1013 mbar
- The sensors have been developed according to the DIN EN 13779, DIN EN 15251, VDI 6038 and 6040 directives

Technical data

Power supply		
	Power supply	15...24 V= (±10%) or 24 V~ (±10%)
	Power consumption	Max. 3 W (24 V=) | 6 VA (24 V~)
	Peak inrush current	10 A, 2 ms
Parameters		
Time characteristic	In room (0.1 m/s)	2 minutes
CO2	Measuring range	0...2000 ppm
	Measuring accuracy	±75 ppm, >750 ppm:±10% (typ. at 21 °C)
	Pressure dependence	Typ.0.135% of the measured value per mm Hg
	Temperature dependence	Typ.2 ppm per °C (0...50 °C)
	Gradual drift[2]	< 5% FS or < 10% per year
Temperature (EGQ 222)	Measuring range	0...50 °C
	Measuring accuracy	±1% of measuring range (typ. at 21 °C)
Ambient conditions		
	Ambient temperature	0...50 °C
	Admissible ambient humidity	Max. 85% rh non-condensing
Construction		
	Connection terminals	Screw terminal, max. 1.5 mm^2
	Cable inlet	From behind, top bottom
	Housing	Pure white
	Housing material	ASA
	Weight	90 g
Standards and directives		
	Type of protection	IP30 according to EN 60529
CE conformity according to	EMC Directive 2004/108/EC	EN 60730-1 (mode of operation 1, residential premises)
	RoHS Directive 2011/65/EU	EN 50581

[1] *NDIR: Non-dispersive infrared sensor*

[2] *Luftdurchströmungsgeschwindigkeit 0,15 m/s, Luftdurchströmungsrichtung, Laminar von unten nach oben.*

Overview of types

Type	Description	Readiness for operation	Output signal
EGQ220F031	Room transducer, surface-mounted, CO_2; 0-10 V	< 2 minutes (operational), < 15 minutes (response time)	1 x 0...10 V, load ≥ 10 kΩ
EGQ222F031	Room transducer, surface-mounted, CO_2 + temp; 2 x 0-10 V	< 2 minutes (operational), 15 minutes (response time)	2 x 0...10 V, load ≥ 10 kΩ

EGQ281F031

EGQ 281: Room transducer, CO_2, recessed

How energy efficiency is improved

Measuring the CO_2 concentration for energy-efficient control of the room climate

Features

- CO_2 sensor for continuous measurement of the CO_2 concentration for the demand-controlled ventilation of rooms (e.g. meeting rooms, conference rooms, offices, classrooms, etc.)
- CO_2 measurement with NDIR dual-beam technology[1], therefore stable in the long term and resistant to external influences
- Any ageing or contaminating effects are continuously compensated in real time
- Very fast response to changes in the CO_2 concentration in rooms
- Temperature-compensated calibration for the standard air pressure of 1013 mbar
- Calibrated ex works and ready to use immediately
- Low energy requirement of the ventilation system during the warming up time of the sensor
- Including frame

Technical data

Power supply		
	Power supply (SELV)	15...24 V= (±10%) / 24 V~ (±10%)
	Power consumption	< 1.6 W (typ. 0.3 W) < 3.9 VA (typ. 0.7 VA)
Output signal		
	Analogue output	0...10 V
	Load current	Max. 10 mA
Parameters		
	Measuring range	0...2000 ppm
	Measuring accuracy	< ±50 ppm 2% of the measured value (25 °C and 1013 mbar)
	Time constant	< 195 s (t_{90})
	Measuring cycle	15 s
	Long-term stability	Typ.20 ppm/year
Ambient conditions		
	Ambient temperature	-20...70 °C
Construction		
	Housing	Pure white
	Housing material	Lower section: PA6 Front plate: PC
	Frame design	Gira E2
	Weight	90 g
Standards and directives		
	Type of protection	IP30 (EN 60529)
CE conformity according to	EMC Directive 2014/30/EU	EN 60730-1 (mode of operation 1, residential premises)
	RoHS Directive 2011/65/EU	EN 50581

Overview of types

Type	Description
EGQ281F031	Room transducer, CO_2; 0...10 V, recessed

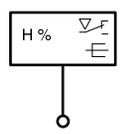
[1] *NDIR: Non-dispersive infrared sensor*

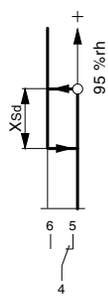
EGH 102: Dew point monitor and transducer

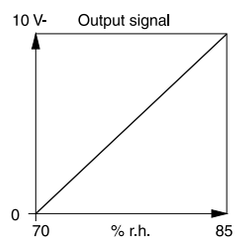
EGH102F*01

Features

- Protects against dew formation on chilled ceilings
- Controls a regulating unit via a holding relay that interrupts the cooling water flow or increases the cooling water temperature
- Best solution for monitoring chilled-ceiling systems
- Measurement taken by a spring-mounted dew point monitor
- Active data capture
- Variant with external sensor (EGH102F101)
- Protects against dew formation on chilled ceilings
- Holding relay with change-over contacts
- Includes retaining strap for pipes of Ø 10...100 mm and heat-conducting paste







Technical data

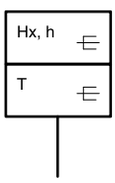
Power supply		
	Power supply	24 V~/=, ±20%
	Power consumption	Max. 1 VA
Parameters		
	Measuring range	70...85% rh
	Change-over contact[1)]	1 A, 24 V~/=
	Response time in still air	80 to 99% rh, 99 to 80% rh, max. 3 min
	Exposure to dew	Max. 30 min
	Switching difference	Fixed, approx. 5% rh
	Switching point	95 ±4% rh
Ambient conditions		
	Admissible ambient temperature	5...60 °C
Inputs/Outputs		
	Output signal	Approx. 70...85% rh, 0...10 V, load > 10 kΩ
Construction		
	Screw terminals	For wire of up to 1.5 mm²
	Housing	Pure white (RAL 9010)
	Housing material	Fire-retardant thermoplastic
	Weight	0.1 kg
	Cable inlet	For Pg 11
Standards and directives		
	Type of protection	IP40 (EN 60529)
	Mode of operation	Type 1 C (EN 60730)

Overview of types

Type	Clamp-on sensor
EGH102F001	Integrated in housing
EGH102F101	Cable 1 m long, sensor integrated in the cable end

[1)] *When activating relays, contactors etc. with cos ϕ < 0.3, it is recommended to use an RC circuit in parallel to the coil. This reduces contact pitting and prevents high-frequency interference*

EGE112F031



EGE 112: Duct transducer, enthalpy

Features

- Measurement of absolute humidity and enthalpy in air ducts
- Measurement by means of fast capacitive measuring element
- Active measuring element
- Unaffected by flow speeds and normal contamination
- Linear output signal 0...10 V
- Mounting flange supplied

Technical data

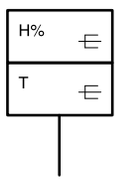
Power supply		
	Power supply	15...24 V= (±10%) or 24 V~ (±10%)
	Power consumption	Max. 0.4 W (24 V=) | 0.8 VA (24 V~)
Outputs		
	Output signal	0...10 V (min. load 10 kΩ)
Parameters		
	Flow speed	Min. 3 m/s Max. 10 m/s
Time characteristic	Time constant in moving air (3 m/s)	3 minutes
Enthalpy	Measuring range	0...100 kJ/kg
	Measuring accuracy	3.5 kJ/kg (typ. at 21 °C)
Temperature	Measuring range	-20...80 °C
	Measuring accuracy	±0.5 °C (typ. at 25 °C)
Ambient conditions		
	Ambient temperature	-20...70 °C
Construction		
	Connection terminals	Screw terminal, max. 1.5 mm^2
	Cable inlet	M20 for cable Ø min. 5.8 mm, max. 6 mm
	Housing	Yellow/black
	Housing material	PA6
	Filter unit material	Stainless steel, wire mesh
	Sensor tube diameter	19.5 mm
	Sensor tube length	140 mm
	Weight	120 g
Standards, directives		
	Type of protection	Instrument head: IP65 (EN 60529)
CE conformity according to	EMC Directive 2014/30/EU	EN 60730-1 (mode of operation 1, residential premises)
	RoHS Directive 2011/65/EU	EN 50581

Overview of types

Type	Description
EGE112F031	Duct transducer, enthalpy, 0-10 V

EGH 110...112: Duct transducer, relative humidity and temperature

EGH11*F0*1



Features

- Measures the relative humidity and temperature in air ducts
- Measurement by means of fast capacitive measuring element
- Active and passive measuring element
- Immersion depth 140 mm
- Mounting flange supplied

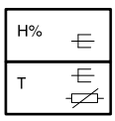
Technical data

Power supply		
	Power supply	15...24 V= (±10%) or 24 V~ (±10%)
	Peak inrush current	1.5 A, 4 ms
Parameters		
	Readiness for operation	10 seconds (operational), 5 minutes (max. precision)
	Flow speed	Min: 0 m/s Max: 10 m/s
Time characteristic	In moving air (3 m/s)	2 minutes (t63)
Ambient conditions		
	Ambient temperature	-20...70 °C
Construction		
	Connection terminals	Screw terminals, max. 1.5 mm^2
	Cable inlet	M20 for cable with min. Ø 5 mm, max. Ø 8 mm
	Housing	Yellow/black
	Housing material	PA6
	Filter unit material	Stainless steel, wire mesh
	Sensor tube diameter	19.5 mm
	Sensor tube length	140 mm
	Weight	120 g
Standards and directives		
	Type of protection	Instrument head: IP65 (EN 60529)
CE conformity according to	EMC Directive 2014/30/EU	EN 60730-1 (mode of operation 1, residential premises)
	RoHS Directive 2011/65/EU	EN 50581

Overview of types

Type	Power consumption	Output signal	Measuring range, temperature	Measuring accuracy, humidity
EGH110F041	Max. 1 W (24 V=)	2 × 4...20 mA (max. load 500 Ω)	-20...80 °C	0...100% rh, no condensation
EGH111F031	Max. 0.4 W (24 V=) | 0.8 VA (24 V~)	2 × 0...10 V (min. load 10 kΩ) + Ni1000	-20...80 °C	0...100% rh, no condensation
EGH112F031	Max. 0.4 W (24 V=) | 0.8 VA (24 V~)	2 × 0...10 V (min. load 10 kΩ)	-20...80 °C	0...100% rh, no condensation

EGH1*0F0*1



EGH 120, 130: Room transducer, relative humidity and temperature

How energy efficiency is improved

Precise measuring of humidity for energy-efficient control of HVAC installations

Features

- Measurement by means of fast capacitive sensor
- Active measuring element
- Suitable for fitting directly to walls
- Converts the measured values into a continuous analogue signal (0...10 V or 4...20 mA)

Technical data

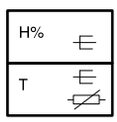
Power supply		
	Power supply	15...24 V= (±10%) or 24 V~ (±10%)
Parameters		
Relative humidity	Measuring range	0...100% rh, no condensation
	Measuring accuracy	±2% between 10...90% rh (typ. at 21 °C)
Temperature	Measuring range	0...50 °C
	Measuring accuracy	±0.5 °C (typ. at 25 °C)
Ambient conditions		
	Admissible ambient temperature	-20...70 °C
Construction		
	Housing material	ASA
	Housing	Pure white
	Connection terminals	Screw terminals, max. 1.5 mm^2
	Weight	80 g
Standards and directives		
	Type of protection	IP30 (EN 60529)
CE conformity according to	EMC Directive 2014/30/EU	EN 60730-1 (mode of operation 1, residential premises)
	RoHS Directive 2011/65/EU	EN 50581

Overview of types

Type	Output signal	Power consumption
EGH120F041	2 x 4...20 mA	Max. 1 W (24 V=)
EGH130F031	2 x 0...10 V	Max. 0.3 W (24 V=) | 0.5 VA (24 V~)

EGH 681: Room transducer, relative humidity and temperature, recessed

EGH681F031



How energy efficiency is improved

Precise measuring of relative humidity and temperature for energy-efficient room climate control

Features

- Measures the relative humidity and temperature in rooms
- Regulation of the room climate in combination with room automation systems
- Fast response time and high precision
- Including frame

Technical data

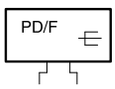
Power supply		
	Power supply	15...24 V= (±10%) or 24 V~ (±10%)
	Power consumption	Typ.0.3 W / 0.5 VA
Output signal		
	Output signal	0...10 V, load resistance at least 10 kΩ
Parameters		
	Measuring range, temperature	0...50° C
	Measuring range, humidity	0...100% rh
Ambient conditions		
	Ambient temperature	-20...70 °C
Construction		
	Housing	Pure white
	Housing material	Lower section: ABS Front plate: PC
	Frame design	Gira E2
	Weight	80 g
Standards and directives		
	Type of protection	IP30 (EN 60529)
CE conformity according to	RoHS Directive 2011/65/EU	EN 50581
	EMC Directive 2014/30/EU	EN 60730-1 (mode of operation 1, residential premises)

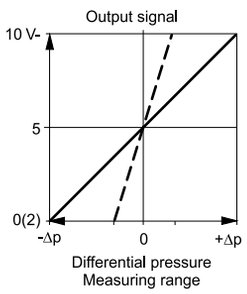
Overview of types

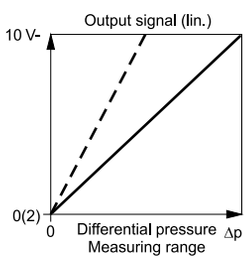
Type	Description
EGH681F031	Room transducer, relative humidity and temperature, recessed

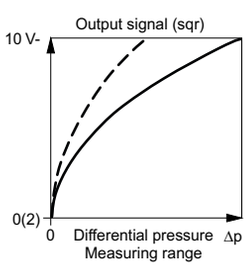
EGP 100: Differential pressure transducer

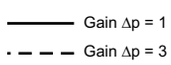
EGP100F*12











Features

- Exact measurement of positive, negative and differential pressures in gases
- Optimised for applications such as filter monitoring, room or duct pressure monitoring, level monitoring in fluids, actuating frequency converters for fan control and recording volume flow, especially for room air balancing in laboratories.
- Can be ideally combined with XAFP100 flow probe for precise measurement of volume flow
- Static dual-membrane-pressure sensor on capacitive basis
- Can be fitted in any position
- Can be used for dusty air or air polluted with chemicals (not ATEX approved)
- Manufacturer's test certificate ex works
- The measuring range can be adapted to the needs of the application
- Variable zero point and filter time constant to suppress pressure surges in the system
- Display shows the actual value and the signal progression (depending on type)
- Status LED for immediate indication of operating status (depending on type)
- Measuring range can be reduced to one third (depending on type)
- Fitted to either wall or top-hat rail (EN 60715)
- Cover that does not require special tools to open

Technical data

Power supply		
	Power supply	24 V~/=, ±20%
Power consumption F**2	24 V~	3.0 VA
	24 V=	1.3 W
Power consumption F**1	24 V~	1.4 VA
	24 V=	0.4 W
Parameters		
	Admissible positive pressure	±10 kPa
	Influence of position[1]	±1% full span (FS) at 150 Pa, ±75 Pa, ±0,75% FS at 300 Pa, ±150 Pa
	Non-linearity	1% FS pressure-linear
	Zero point stability	< 0.3% FS
	Reproducibility	0.2% FS
	Pneumatic connection[2]	6.2 mm
	Parts in contact with media	PC/ABS blend, MQ, CuSn6, FR4
Ambient conditions		
	Temperature of medium	0...70 °C
	Admissible operating pressure p_{stat}[3]	±3 kPa
	Admissible ambient temperature	0...60 °C
	Admissible ambient humidity	5...95% rh, no condensation
Inputs/outputs		
	Output signal[4]	F*01: 0...10 V, load > 10 kΩ F*11: 0...10 V, load > 5 kΩ F*02/F*12: 0(2)...10 V, load < 500 Ω

1) *The sensor is calibrated at the factory for vertical fitting. The influence of position must be taken into account if the unit is not fitted in the vertical position.*

2) *Max. length of measuring wire (di = 6.2 mm): Lmax = 15 m for time constant < 0.5 s, Lmax = 60 m for time constant > 0.5 s*

3) *The zero point should be rebalanced if the admissible operating pressure is exceeded*

4) *With a load of < 500 Ω, a change-over to 0…20 mA or 4…20 mA occurs automatically. Output protected against short circuits and excess voltage up to 24 V~*

Filter time constant	F*01: 0.05...2 s F*02, F*11, F*12: 0.15...5.2 s

Structural design

Pressure connection	Internal Ø 6 mm
Housing	PC/ABS
Cable gland	M16
Screw terminals	For electric wires of up to 1.5 mm²

Standards and directives

Type of protection	IP65 (EN 60529)
Protection class	III (EN 60730-1)
EMC Directive 2004/108/EC	EN 61000-6-1, EN 61000-6-2 EN 61000-6-3, EN 61000-6-4

Overview of types

i *Output signal: analogue output limited to 10.6 V. Measured value can thus be transferred with an overflow of 6% of the measuring range*

i *Variable characteristic/LED: Manual adjustment of measuring range with gain potentiometer. Signal curve: linear/root-extracted. Output signal: 0...10 V/2...10 V via DIP switches or with CASE Sensors software*

Type	Measuring range	Display	Variable characteristic/LED	Weight (kg)
EGP100F101	±75 Pa, ±0,75 mbar	–	–	0.17
EGP100F102	±75 Pa, ±0,75 mbar	–	•	0.18
EGP100F111	±75 Pa, ±0,75 mbar	•	–	0.18
EGP100F112	±75 Pa, ±0,75 mbar	•	•	0.19
EGP100F201	±150, 1,5 mbar	–	–	0.17
EGP100F202	±150, 1,5 mbar	–	•	0.18
EGP100F211	±150, 1,5 mbar	•	–	0.19
EGP100F212	±150, 1,5 mbar	•	•	0.19
EGP100F301	0...150 Pa, 0...1.5 mbar	–	–	0.17
EGP100F302	0...150 Pa, 0...1.5 mbar	–	•	0.18
EGP100F311	0...150 Pa, 0...1.5 mbar	•	–	0.18
EGP100F312	0...150 Pa, 0...1.5 mbar	•	•	0.19
EGP100F401	0...300 Pa, 0...3.0 mbar	–	–	0.17
EGP100F402	0...300 Pa, 0...3.0 mbar	–	•	0.18
EGP100F411	0...300 Pa, 0...3.0 mbar	•	–	0.18
EGP100F412	0...300 Pa, 0...3.0 mbar	•	•	0.19

Accessories

Type	Description
0010240300	Connection set, 6 mm, complete
XAFP100F001	Flow sensor to measure the air volume in ventilation ducts
CERTIFICAT001	Manufacturer's test certificate type M
CERTIFICAT999	Test for further device (from 2 pcs.)
0300360001	USB connection set

XAFP100F001

XAFP 100: Flow probe for ventilation ducts

Features

- Flow probe for precise and inexpensive recording of effective pressure signals in ventilation and air conditioning systems
- Efficient regulation of applications for demand-controlled ventilation in offices, laboratories, fume cupboards and clean rooms, by combining an air damper and an electronic/pneumatic volume flow controller
- In combination with a square root differential pressure sensor, air volume flows can be reliably recorded and monitored
- Optimised flow profile for accurate measurement of operating pressure signals
- Can be used in atmospheres containing aggressive substances
- Length (396 mm) can be shortened on site if necessary

Technical data

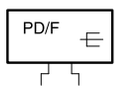
Parameters		
	Measurement tolerance	< 3%
	Range (mm)	DN 80...DN 400
Admissible ambient conditions		
	Operating temperature	0...50 °C
	Admissible ambient humidity	< 85% rh, no condensation
Operation		
	Function	Flow sensor
Construction		
	Dimensions	65 × 40 × 396 mm (W × H × L)
	Bore	Ø 30...32 mm
Material	Flow probe	PA 6
	Seal	PE, physiologically safe
	Connecting tube	PU
Standards and directives		
Flow probe	Electrical	UL 7468
	Flammability	UL 94, IEC 60695-2-12, IEC 60695-2-13

Overview of types

Type	Properties
XAFP100F001	Flow probe for ventilation ducts

SVU 100: Air-flow transducer

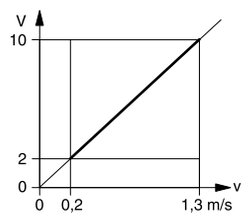
SVU100F005



Features

- Precise and long-term stable recording of air inflow speeds in fume cupboards with a time constant of <100 ms
- Particularly suitable for fume cupboards with horizontal and vertical front sashes
- Air volume control according to needs for fume cupboards with horizontal and vertical front sashes
- Precise and long-term stable recording of air inflow speeds in fume cupboards
- Reliable detection of reversal of flow direction
- Integrated filter unit that protects against contamination of the sensor
- Dynamic pressure sensor based on thin-film technology
- Fitted to the fume cupboard simply and quickly

Technical data



Power supply		
	Power supply	24 V~, -15%/+20%, 50...60 Hz
	Power consumption	1 VA
Parameters		
	Measuring range	0...1 Pa
	Measuring span[1)]	0...1.3 m/s
	Differential pressure	Approx. 0...1 Pa
	Time constant	< 0.1 s
	Air throughput rate	3 cm^3/min (at 1 m/s)
Ambient conditions		
	Admissible ambient temperature	5...55 °C
	Admissible ambient humidity	< 90% rh
Inputs/Outputs		
	Output signal[2)]	0...10 V
	Linearity	2% (based on the output signal)
Standards and directives		
	Type of protection	IP40 (EN 60529) with terminal cover
CE conformity as per	EMC Directive 2004/108/EC	EN 61000-6-1, EN 61000-6-3

Overview of types

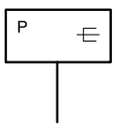
Type	Feature
SVU100F005	Linear to v [m/s]

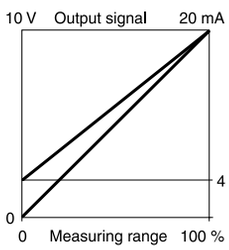
Specified flow speed is based on ρ = 1.2 kg/m^3

[1)] *Recommended measuring span 0.2...1.3 m/s (output 2...10 V)*

[2)] *Output signal: Output protected against short circuits and excess voltage up to 24 V~*

DS*2**F002





DSU, DSI: Pressure transmitter

Features

- For measuring pressure in liquids, gases and vapours
- Sturdy device with ceramic diaphragm
- High precision
- High positive pressure protection
- High vibration resistance
- Low hysteresis
- Standard signal 2...10 V or 4...20 mA
- Pressure sensor made of stainless steel for corrosive media
- With standard plug as per DIN EN 175301-803-A

Technical data

Power supply		
	Power supply	See type list
	Electrical connection	DSI:two-wire DSU:three-wire
	Power consumption	Two-wire:24 V=, 0.7 W Three-wire:24 V=/~, 0.5 W(VA)
Parameters		
	Temperature dependence	Zero point 0.07% FS/K Measuring range 0.05% FS/K
Ambient conditions		
	Admissible ambient temperature	0...60 °C
	Admissible temperature of medium	0...85 °C
	Admissible ambient humidity	45...75% rh
Inputs/outputs		
	Hysteresis	< 0.5% FS
	Linearity	< 1% FS
Construction		
	Housing material	Chromium-nickel steel 1.4305
	Device plug	Plug connection 4-pin, standard plug DIN EN 175 01-803-A, cable gland M12
	Cable cross-section	Max. 1.5 mm^2
	Pressure connection	G ½"
	Weight	0.2 kg
Standards and directives		
	Type of protection	IP65 (EN 60529)
	Protection class	III (EN 61140)
CE conformity according to	EMC Directive 2004/108/EC	EN 61000-6-1 / EN 61000-6-2 EN 61000-6-3 / EN 61000-6-4 EN 60730
	PED	Subject to Art. 3.3 of PED without safety function

Overview of types

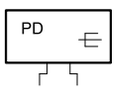
Type	Measuring range (bar)	Output signal	Power supply	Maximum pressure
DSU203F002	0...2.5 bar	0...10 V	24 V=/~	8 bar
DSU206F002	0...6 bar	0...10 V	24 V=/~	20 bar
DSU210F002	0...10 bar	0...10 V	24 V=/~	32 bar

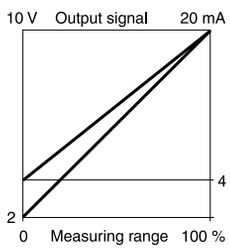
Type	Measuring range (bar)	Output signal	Power supply	Maximum pressure
DSU216F002	0...16 bar	0...10 V	24 V=/~	50 bar
DSU225F002	0...25 bar	0...10 V	24 V=/~	80 bar
DSI203F002	0...2.5 bar	4...20 mA	24 V=	8 bar
DSI206F002	0...6 bar	4...20 mA	24 V=	30 bar
DSI210F002	0...10 bar	4...20 mA	24 V=	32 bar
DSI216F002	0...16 bar	4...20 mA	24 V=	50 bar
DSI225F002	0...25 bar	4...20 mA	24 V=	80 bar

Accessories

Type	Description
0300360007	Capillary throttle, stainless steel, length 1 m, G½"-G½"
0300360015	Pressure spring for LW 15

DSD*10*F021





DSDU, DSDI: Differential pressure transmitter

Features

- For measuring pressure differences in liquids, gases and vapours
- Sturdy device with ceramic diaphragm
- For use in filter technology, heating systems etc.
- Differential pressure measuring range from 0...6 bar
- Analogue signal 0...10 V or 4...20 mA
- 24 V~/= supply voltage
- With fitting bracket
- Standard plug as per DIN EN 175301-803-A

Technical data

Power supply		
	Power supply	24 V=/~, ±20%, (50...60 Hz)
	Electrical connection	Three-wire
	Power consumption	< 1.5 W (VA)
Parameters		
	Output signal	0...10 V Load: > 2 kΩ 4...20 mA Load: ≤ 700 Ω (V=), ≤ 400 Ω (V~)
	Accuracy[1)]	≤ 1%
Ambient conditions		
	Admissible ambient temperature	-20...80 °C
	Admissible temperature of medium	0...80 °C (non-freezing media)
	Admissible ambient humidity	45...75% rh
	Burst pressure	64 bar (both sides)
Construction		
	Housing material	Brass
	Diaphragms	Ceramic
	Connecting thread	G ⅛" (female thread)
	Device plug	Plug connection 4-pin, standard plug DIN EN 175 01-803-A, cable gland M12
	Weight	0.62 kg
Standards and directives		
	Type of protection	IP65 (EN 60529)
CE conformity according to	EMC Directive 2004/108/EC	EN 61326-1, EN 61326-2-3

Overview of types

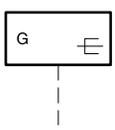
Type	Measuring range Δp	Output signal	Max. pressure (connection +)	Max. pressure (connection -)
DSDI101F021	0...2 bar	4...20 mA	10 bar	5 bar
DSDI103F021	0...4 bar	4...20 mA	21 bar	15 bar
DSDI106F021	0...6 bar	4...20 mA	21 bar	15 bar
DSDU101F021	0...2 bar	0...10 V	10 bar	5 bar
DSDU103F021	0...4 bar	0...10 V	21 bar	5 bar
DSDU106F021	0...6 bar	0...10 V	21 bar	5 bar

1) *Including non-linearity and hysteresis in compensated temperature range 10...70 °C*

Accessories

Type	Description
0300360005	Cutting ring fitting G⅛" to 6 mm pipe (2 pcs)
0300360006	Pneumatic fitting G⅛" to 6 mm hose (2 pcs)
0300360016	Throttle screws G⅛", G⅛" (2 pcs)

SGU100F01*



SGU 100: Sash sensor

Features

- Infinitely-variable measurement of the position of the vertical front sash on laboratory fume cupboards
- Accurate detection of sash position, with no wear and tear
- Fast control of the air volume; no oscillation
- Easy fitting, preferably on the counterweight of the front sash
- Teach-in function for adjusting the travel of the front sash
- Easy to program using the SAUTER CASE Sensors software
- Integrated excess-travel alarm
- Power cable 2.5 m long, 7 × 0.32 mm^2, fixed to housing
- Fitted with halogen-free cable as standard
- Remote access and remote maintenance: commissioning and service via bus or external push-button
- 3-colour LED status indicator
- Acoustic status and alarm elements (can be deactivated)

Technical data

Power supply		
	Power supply 24 V~	±20%, 50...60 Hz
	Power supply 24 V=	±20%
	Power consumption 24 V~[1]	Typically: 2 VA, 0.75 W, inactive buzzer, max.: 4 VA, 1.5 W, active buzzer
	Power consumption 24 V=[2]	Typically: 0.6 W, inactive buzzer, max.: 1.1 W, active buzzer
Parameters		
	Linearity error	Max. 1.5% based on working range, e.g.: 2...10 V = 8 V
	Hardware response time[3]	< 100 ms
	Filter time constant	0...5, 22 s, variable using SAUTER CASE Sensors
Ambient conditions		
	Operating temperature	0...55 °C
	Storage and transport temperature	–20...70 °C
	Humidity	85% rh, no condensation
Inputs/Outputs		
	Digital input	I_{out_source} max.: 1 mA, V_{out} max.: 18 V at R_{Load} = ∞
	Alarm output	I_{sink} max.: 2 mA, open collector output, 100 mV at I_{sink} 2 mA, V_{in} max.: 24 V=, 20% at I_{sink} = 0 mA
	Voltage output[4]	0/2...10 V, 1 mA max., V_{out} max.: 11.5 V, can be parametrised, Default 2...10 V
	Typical overall error	2.5% (unlinearity, hysteresis, offset, amplified; based on working range)
	Temperature influence	< 0.04 %/K

1) *Default is buzzer active*
2) *Inactive/active buzzer: Default is buzzer active*
3) *The set filter time constant must be added*
4) *Protected against short circuits and excess voltage to 24~*

Construction

Weight	0.68 kg
Length of cable without bus termination[5]	Up to 200 m, Ø 0.5 mm

Standards and directives

Type of protection	IP10 (EN 60529, IP20 (EN 60529)
Protection class	III (EN 60730)
Software	A (EN 60730)
EMC Directive 2004/108/EC	EN 61000-6-1, EN 61000-6-2 EN 61000-6-3, EN 61000-6-4

Overview of types

Type	Working range	Resolution of working stroke
SGU100F010	200...800 mm for bench-mounted fume cupboards (max. spring travel 1000 mm)	< 1 mm
SGU100F011	400...1600 mm for walk-in fume cupboards (max. spring travel 2000 mm)	< 2 mm

Accessories

Type	Description
0300360001	USB connection set

[5] *Cable length of bus termination on both sides 120 Ω: 200...500 m, Ø 0.5 mm*

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Components

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