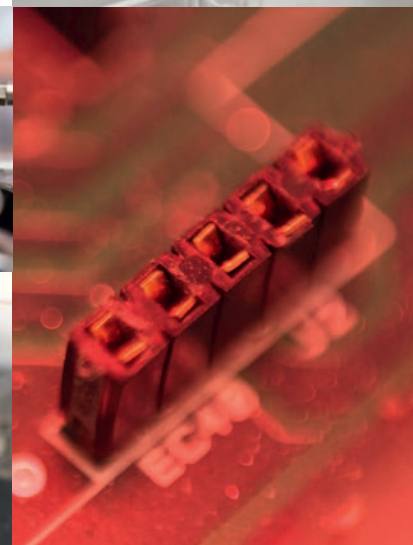
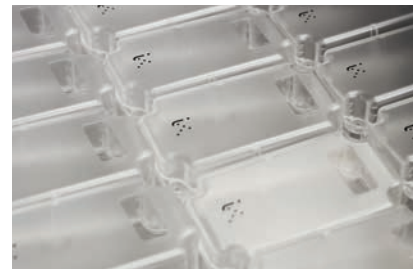


5 Sensors, transmitters and switches



Temperature transmitters and sensors

CLAMP-ON SENSOR WITH HOUSING

Clamp-on sensor for surface temperature measurement.



SC

Technical data	
Protection class	IP65
Time constant	3 s
Measuring range, temperature	-20...+120 °C
Cable gland	M16
Dimensions, external (WxHxD)	104 x 78 x 51 mm
Accessories, included	Two metal straps and heat-conductive paste (art.nr: PASTA-20).
Material	
Material, housing	Polycarbonate (PC)
Material, base	Polycarbonate (PC)

Article	Sensor element	Nominal resistance	Equivalent
SC-PT100-Y	PT100	100 Ω (0°C)	-
SC-PT1000-Y	PT1000	1000 Ω (0°C)	-
SC-NTC1.8-Y	NTC 1.8	1800 Ω (25°C)	TAC
SC-NTC2.2-Y	NTC 2.2	2252 Ω (25°C)	Johnson Controls
SC-NTC10-02-Y	NTC 10	10 kΩ (25°C)	Carel - Evco - Eliwell - AB Industrietechnik
SC-NTC10-03-Y	NTC 10	10 kΩ (25°C)	Andover - Delta Controls - Siebe - York
SC-NTC20-Y	NTC 20	20 kΩ (25°C)	Honeywell
SC-NI1000-01-Y	Ni1000	1000 Ω (0°C)	Siemens - Landis & Staefa
SC-NI1000-02-Y	Ni1000	1000 Ω (0°C)	Sauter

ACCESSORIES

Article	Description
PASTA-20	Heat-conductive paste in tube, 20 g

CLAMP-ON SENSOR WITH CABLE

For surface temperature measurement. Including clamp (Ø max 40 mm).

Technical data	
Material	Nickel-plated copper
Cable length	1.5 m
Protection class	IP65
Dimensions	36 x 10.5 x 7.5 / models with PVC sleeve: 23.5 x 6 x 9.5 mm

Article	Sensor element	Nominal resistance	Temperature range	Equivalent
SCC-PT100	PT100	100 Ω (0°C)	-30...+150 °C	-
SCC-PT1000	PT1000	1000 Ω (0°C)	-30...+150 °C	-
SCC-NTC1.8	NTC 1.8	1800 Ω (25°C)	-30...+120 °C	TAC
SCC-NTC2.2	NTC 2.2	2252 Ω (25°C)	-30...+150 °C	Johnson Controls
SCC-NTC10-01	NTC 10	10 kΩ (25°C)	-30...+150 °C	Aquatrol - Johnson Controls - Satchwell - Trend - Cylon - Honeywell - Distech
SCC-NTC10-02	NTC 10	10 kΩ (25°C)	-30...+110 °C	Carel - Evco - Eliwell - AB Industrietechnik
SCC-NTC10-02-BR-J	NTC 10	10 kΩ (25°C)	-50...+110 °C	Carel - Evco - Eliwell - AB Industrietechnik
SCC-NTC10-03	NTC 10	10 kΩ (25°C)	-30...+150 °C	Andover - Delta Controls - Siebe - York
SCC-NTC15-01	NTC 15	15 kΩ (0°C)		Regin - AB Industrietechnik
SCC-NTC20	NTC 20	20 kΩ (25°C)	-30...+150 °C	Honeywell
SCC-NI1000-01	Ni1000	1000 Ω (0°C)	-30...+150 °C	Siemens - Landis & Staefa
SCC-NI1000-02	Ni1000	1000 Ω (0°C)	-30...+150 °C	Sauter



SCC



SCC-NTC10-02-BR-J



SCC-NTC15-01

ACCESSORIES

Article	Description
PASTA-20	Heat-conductive paste in tube, 20 g

DUCT SENSOR WITH HOUSING

Duct sensor for air temperature measurement in ventilation ducts.



STC

Technical data

Protection class	IP65
Cable gland	M16
Diameter, probe	8 mm
Dimensions, external (WxHxD)	78 x 263 x 104 mm
Time constant	16 s
Measuring range, temperature	-30...+70 °C

Material

Material, housing	Polycarbonate (PC)
Material, base	Polycarbonate (PC)
Material, probe	Stainless steel, SUS304

MODELS

Article	Sensor element	Nominal resistance	Insertion length	Equivalent
STC-PT100-Y	PT100	100 Ω (0°C)	60...205 mm	-
STC-PT1000-Y	PT1000	1000 Ω (0°C)	60...205 mm	-
STC-PT1000/430-Y	PT1000	1000 Ω (0°C)	60...405 mm	-
STC-NTC1.8-Y	NTC 1.8	1800 Ω (25°C)	60...205 mm	TAC
STC-NTC2.2-Y	NTC 2.2	2252 Ω (25°C)	60...205 mm	Johnson Controls
STC-NTC10-01-Y	NTC 10	10 kΩ (25°C)	60...205 mm	Aquatrol - Johnson Controls - Satchwell - Trend - Cylon - Honeywell - Distech
STC-NTC10-02-Y	NTC 10	10 kΩ (25°C)	60...205 mm	Carel - Evco - Eliwell - AB Industrietechnik
STC-NTC10-03-Y	NTC 10	10 kΩ (25°C)	60...205 mm	Andover - Delta Controls - Siebe - York
STC-NTC20-Y	NTC 20	20 kΩ (25°C)	60...205 mm	Honeywell
STC-NI1000-01-Y	Ni1000	1000 Ω (0°C)	60...205 mm	Siemens - Landis & Staefa
STC-NI1000-02-Y	Ni1000	1000 Ω (0°C)	60...205 mm	Sauter

DUCT SENSOR WITH CABLE

Duct sensor for air temperature measurement in ventilation ducts. Adjustable insertion length.



STCC

Technical data	
Cable length	1.5 m
Insertion length	15...145 mm adjustable
Diameter	9 mm
Protection class	IP20

Article	Sensor element	Nominal resistance	Temperature range	Equivalent
STCC-PT100	PT100	100 Ω (0°C)	-30...+70 °C	-
STCC-PT1000	PT1000	1000 Ω (0°C)	-30...+70 °C	-
STCC-NTC1.8	NTC 1.8	1800 Ω (25°C)	-30...+70 °C	TAC
STCC-NTC2.2	NTC 2.2	2252 Ω (25°C)	-30...+70 °C	Johnson Controls
STCC-NTC10-01	NTC 10	10 kΩ (25°C)	-30...+70 °C	Aquatrol - Johnson Controls - Satchwell - Trend - Cylon - Honeywell - Distech
STCC-NTC10-02	NTC 10	10 kΩ (25°C)	-30...+70 °C	Carel - Evco - Eliwell - AB Industrietechnik
STCC-NTC10-03	NTC 10	10 kΩ (25°C)	-30...+70 °C	Andover - Delta Controls - Siebe - York
STCC-NTC15-01	NTC 15	15 kΩ (0°C)	0...30 °C	Regin - AB Industrietechnik
STCC-NTC15-02	NTC 15	15 kΩ (0°C)	0...60 °C	Regin - AB Industrietechnik
STCC-NTC15-03	NTC 15	15 kΩ (20°C)	20...50 °C	Regin - AB Industrietechnik
STCC-NTC15-04	NTC 15	15 kΩ (0°C)	0...40 °C	Regin - AB Industrietechnik
STCC-NTC20	NTC 20	20 kΩ (25°C)	-30...+70 °C	Honeywell
STCC-NI1000-01	Ni1000	1000 Ω (0°C)	-30...+70 °C	Siemens - Landis & Staefa
STCC-NI1000-02	Ni1000	1000 Ω (0°C)	-30...+70 °C	Sauter

5

DUCT SENSOR WITH HOUSING FOR AVERAGE TEMPERATURE MEASUREMENT

Sensor with a 4-point average temperature measurement for duct mounting.



STM

Technical data	
Protection class	IP65
Time constant	63 s at 2 m/s and 43 s at 5 m/s
Insertion length	75 mm
Measuring range, temperature	-20...+70 °C
Cable gland	M16
Diameter, probe	mm
Dimensions, external (WxHxD)	78 x 132 x 104 mm
Sensor cable length	3 m
Material	
Material, housing	Polycarbonate (PC)
Material, base	Polycarbonate (PC)
Material, probe	Stainless steel, SUS304

MODELS

Article	Sensor element	Nominal resistance	Equivalent
STM-PT1000-Y	PT1000 (DIN class B)	1000 Ω (0°C)	-

IMMERSION SENSOR WITH HOUSING, WITHOUT WELL, R1/4"

Immersion sensor for temperature measurement of heating or cooling batteries in ventilation units. Probe in stainless steel without a well.



SI

Technical data

Protection class	IP65
Time constant	4 s
Insertion length	90 mm
Measuring range, temperature	-20...+120 °C
Cable gland	M16
Connection, without well	R1/4"
Diameter, probe	5 mm
Pressure rating	PN16
Dimensions, external (WxHxD)	78 x 158 x 104 mm

Material

Material, housing	Polycarbonate (PC)
Material, base	Polycarbonate (PC)
Material, probe	Stainless steel, SUS304

Article	Sensor element	Nominal resistance	Equivalent
SI-PT100-Y	PT100	100 Ω (0°C)	-
SI-PT1000-Y	PT1000	1000 Ω (0°C)	-
SI-NTC1.8-Y	NTC 1.8	1800 Ω (25°C)	TAC
SI-NTC2.2-Y	NTC 2.2	2252 Ω (25°C)	Johnson Controls
SI-NTC10-01-Y	NTC 10	10 kΩ (25°C)	Aquatrol - Johnson Controls - Satchwell - Trend - Cylon - Honeywell - Distech
SI-NTC10-02-Y	NTC 10	10 kΩ (25°C)	Carel - Evco - Eliwell - AB Industrietechnik
SI-NTC10-03-Y	NTC 10	10 kΩ (25°C)	Andover - Delta Controls - Siebe - York
SI-NTC20-Y	NTC 20	20 kΩ (25°C)	Honeywell
SI-NI1000-01-Y	Ni1000	1000 Ω (0°C)	Siemens - Landis & Staefa
SI-NI1000-02-Y	Ni1000	1000 Ω (0°C)	Sauter

IMMERSION SENSOR WITH HOUSING AND WELL

Immersion sensor for temperature measurement in heating- or cooling applications. Supplied with a stainless steel well. Available in different lengths.



STI

Technical data

Protection class	IP65
Time constant	18 s
Measuring range, temperature	-20...+120 °C
Cable gland	M16
Connection, well	R1/2"
Diameter, well	7 mm
Pressure rating	PN25
Dimensions, external (WxHxD)	78 x 156 x 104 mm

Material

Material, housing	Polycarbonate (PC)
Material, base	Polycarbonate (PC)
Material, probe	Stainless steel, SUS304
Material, well	Nickel-plated copper

MODELS

Article	Sensor element	Nominal resistance	Insertion length	Equivalent
STI-PT100-Y	PT100	100 Ω (0°C)	90 mm	-
STI-PT1000-Y	PT1000	1000 Ω (0°C)	90 mm	-
STI-NTC1.8-Y	NTC 1.8	1800 Ω (25°C)	90 mm	TAC
STI-NTC2.2-Y	NTC 2.2	2252 Ω (25°C)	90 mm	Johnson Controls
STI-NTC10-01-Y	NTC 10	10 kΩ (25°C)	90 mm	Aquatrol - Johnson Controls - Satchwell - Trend - Cylon - Honeywell - Distech
STI-NTC10-02-Y	NTC 10	10 kΩ (25°C)	90 mm	Carel - Evco - Eliwell - AB Industrietechnik
STI-NTC10-03-Y	NTC 10	10 kΩ (25°C)	90 mm	Andover - Delta Controls - Siebe - York
STI-NTC20-Y	NTC 20	20 kΩ (25°C)	90 mm	Honeywell
STI-NI1000-01-Y	Ni1000	1000 Ω (0°C)	90 mm	Siemens - Landis & Staefa
STI-NI1000-02-Y	Ni1000	1000 Ω (0°C)	90 mm	Sauter

ACCESSORIES

Article	Insertion length	Material	Description
DBZ-90WN	90 mm	Nickel-plated copper	Well for probe STI



Insertion length 50/120/170/310 are available upon request, please contact Industrietechnik for more information.

Stainless steel SUS304 available upon request, please contact Industrietechnik for more information.



DBZ-90WN

IMMERSION SENSOR WITH DIN HEAD

Immersion sensor for industrial applications.

Technical data	
Pressure rating	PN6
Material, well	Stainless steel AISI 304
Diameter, well	6 mm
Insertion length	200 mm
Dimensions	Max. Ø 82 x h 307 mm
Protection class	IP54
Precision	Class B

Article	Sensor element	Nominal resistance	Temperature range
DPTD-PT100	PT100	100 Ω (0°C)	-50...+600 °C
DPTD-PT1000	PT1000	1000 Ω (0°C)	-50...+600 °C



DPTD

IMMERSION SENSOR WITH FIXED CABLE

Immersion sensor for water temperature measurement with threaded connection R1/4".



STIC

Technical data	
Temperature range	-30...+70 °C
Cable length	1.5 m
Connection	R1/4"
Diameter	4 mm
Material, probe	Stainless steel, SUS304
Pressure rating	PN10
Protection class	IP65

Article	Sensor element	Nominal resistance	Insertion length	Equivalent
STIC-PT100/135	PT100	100 Ω (0°C)	135 mm	-
STIC-PT1000/135	PT1000	1000 Ω (0°C)	135 mm	-
STIC-NTC1.8/135	NTC 1.8	1800 Ω (25°C)	135 mm	TAC
STIC-NTC2.2/135	NTC 2.2	2252 Ω (25°C)	135 mm	Johnson Controls
STIC-NTC10-01/135	NTC 10	10 kΩ (25°C)	135 mm	Aquatrol - Johnson Controls - Satchwell - Trend - Cylon - Honeywell - Distech
STIC-NTC10-02/135	NTC 10	10 kΩ (25°C)	135 mm	Carel - Evco - Eliwell - AB Industrietechnik
STIC-NTC10-03/135	NTC 10	10 kΩ (25°C)	135 mm	Andover - Delta Controls - Siebe - York
STIC-NTC20/135	NTC 20	20 kΩ (25°C)	135 mm	Honeywell
STIC-NI1000-01/135	Ni1000	1000 Ω (0°C)	135 mm	Siemens - Landis & Staefa
STIC-NI1000-02/135	Ni1000	1000 Ω (0°C)	135 mm	Sauter

Article	Sensor element	Nominal resistance	Insertion length	Equivalent
STIC-PT100/220	PT100	100 Ω (0°C)	220 mm	-
STIC-PT1000/220	PT1000	1000 Ω (0°C)	220 mm	-
STIC-NTC1.8/220	NTC 1.8	1800 Ω (25°C)	220 mm	TAC
STIC-NTC2.2/220	NTC 2.2	2252 Ω (25°C)	220 mm	Johnson Controls
STIC-NTC10-01/220	NTC 10	10kΩ (25°C)	220 mm	Aquatrol - Johnson Controls - Satchwell - Trend - Cylon - Honeywell
STIC-NTC10-02/220	NTC 10	10kΩ (25°C)	220 mm	Carel - Evco - Eliwell - AB Industrietechnik
STIC-NTC10-03/220	NTC 10	10kΩ (25°C)	220 mm	Andover - Delta Controls - Siebe - York
STIC-NTC20/220	NTC 20	20kΩ (25°C)	220 mm	Honeywell
STIC-NI1000-01/220	Ni1000	1000 Ω (0°C)	220 mm	Siemens - Landis & Staefa
STIC-NI1000-02/220	Ni1000	1000 Ω (0°C)	220 mm	Sauter

Article	Sensor element	Nominal resistance	Insertion length	Equivalent
STIC-PT100/300	PT100	100 Ω (0°C)	300 mm	-
STIC-PT1000/300	PT1000	1000 Ω (0°C)	300 mm	-
STIC-NTC1.8/300	NTC 1.8	1800 Ω (25°C)	Max. 300 mm	TAC
STIC-NTC2.2/300	NTC 2.2	2252 Ω (25°C)	300 mm	Johnson Controls
STIC-NTC10-01/300	NTC 10	10 kΩ (25°C)	300 mm	Aquatrol - Johnson Controls - Satchwell - Trend - Cylon - Honeywell - Distech
STIC-NTC10-02/300	NTC 10	10 kΩ (25°C)	300 mm	Carel - Evco - Eliwell - AB Industrietechnik
STIC-NTC10-03/300	NTC 10	10 kΩ (25°C)	300 mm	Andover - Delta Controls - Siebe - York
STIC-NTC20/300	NTC 20	20 kΩ (25°C)	300 mm	Honeywell
STIC-NI1000-01/300	Ni1000	1000 Ω (0°C)	300 mm	Siemens - Landis & Staefa
STIC-NI1000-02/300	Ni1000	1000 Ω (0°C)	300 mm	Sauter

ACCESSORIES

Article	Description
DF	Mounting flange for 135 mm long sensors for mounting in ventilation ducts



DF

WELL

Well for immersion sensors.

Technical data	
Connection	R1/2"
Pressure rating	PN25
Material	Stainless steel AISI 316

Article	Insertion length	Description
DBZ-90R	90 mm	Well for probe SI...
DBZ-135R	135 mm	Well for probe STIC-.../135
DBZ-220R	220 mm	Well for probe STI-.../220
DBZ-300R	300 mm	Well for probe STI-.../300



DBZ-90WN



DBZ-135R

ACCESSORIES

Article	Description
DBZ-AD1	Adapter 1/4" to 1/2". For mounting immersion sensors in 1/2".



DBZ-AD1

ROOM SENSOR

For room temperature measurement.

Technical data	
Temperature range	0...50 °C
Dimensions	86 x 86 x 30 mm
Protection class	IP30



SA

Article	Sensor element	Nominal resistance	Temperature range	Equivalent
SA-PT100	PT100	100 Ω (0°C)	0...50 °C	-
SA-PT1000	PT1000	1000 Ω (0°C)	0...50 °C	-
SA-NTC1.8	NTC 1.8	1800 Ω (25°C)	0...50 °C	TAC
SA-NTC2.2	NTC 2.2	2252 Ω (25°C)	0...50 °C	Johnson Controls
SA-NTC10-01	NTC 10	10 kΩ (25°C)	0...50 °C	Aquatrol - Johnson Controls - Satchwell - Trend - Cylon - Honeywell - Distech
SA-NTC10-02	NTC 10	10 kΩ (25°C)	0...50 °C	Carel - Evco - Eliwell - AB Industrietechnik
SA-NTC10-03	NTC 10	10 kΩ (25°C)	0...50 °C	Andover - Delta Controls - Siebe - York
SA-NTC15-01	NTC 15	15 kΩ (0°C)	0...30 °C	Regin - AB Industrietechnik
SA-NTC15-03	NTC 15	15 kΩ (20°C)	20...50 °C	Regin - AB Industrietechnik
SA-NTC15-04	NTC 15	15 kΩ (0°C)	0...40 °C	Regin - AB Industrietechnik
SA-NTC20	NTC 20	20 kΩ (25°C)	0...50 °C	Honeywell
SA-NI1000-01	Ni1000	1000 Ω (0°C)	0...50 °C	Siemens - Landis & Staefa
SA-NI1000-02	Ni1000	1000 Ω (0°C)	0...50 °C	Sauter

ROOM SENSOR WITH SETPOINT ADJUSTMENT

For room temperature measurement. Can also be used solely for setpoint adjustment.



SAP

Technical data

Dimensions 86 x 86 x 30 mm

Protection class IP30

Article	Sensor element	Nominal resistance	Potentiometer range	Temperature range	Equivalent
SAP-PT100-2	PT100	100 Ω (0°C)	5...30 °C 0...10 kΩ	0...50 °C	-
SAP-PT1000-1	PT1000	1000 Ω (0°C)	5...31 °C 1020...1120 Ω	0...50 °C	-
SAP-PT1000-2	PT1000	1000 Ω (0°C)	5...30 °C 0...10 kΩ	0...50 °C	-
SAP-NTC1.8-2	NTC 1.8	1800 Ω (25°C)	5...30 °C 0...10 kΩ	0...50 °C	TAC
SAP-NTC2.2-2	NTC 2.2	2252 Ω (25°C)	5...30 °C 0...10 kΩ	0...50 °C	
SAP-NTC10-02-2	NTC 10	10 kΩ (25°C)	5...30 °C 0...10 kΩ	0...50 °C	Carel - Evco - Eliwell - AB Industrietechnik
SAP-NTC10-03-2	NTC 10	10 kΩ (25°C)	5...30 °C 0...10 kΩ	0...50 °C	Andover - Delta Controls - Siebe - York
SAP-NTC15-01-3	NTC 15	15 kΩ (0°C)	0...30 °C 0...5 kΩ	0...30 °C	Regin - AB Industrietechnik
SAP-NTC20-2	NTC 20	20 kΩ (25°C)	5...30 °C 0...10 kΩ	0...50 °C	Honeywell
SAP-NI1000-01-2	Ni1000	1000 Ω (0°C)	5...30 °C 0...10 kΩ	0...50 °C	Siemens - Landis & Staefa
SAP-NI1000-02-2	Ni1000	1000 Ω (0°C)	5...30 °C 0...10 kΩ	0...50 °C	Sauter

OUTDOOR TEMPERATURE SENSOR WITH HOUSING

Outdoor sensor for air temperature measurement.



SE

Technical data

Protection class IP65

Measuring range, temperature -50...+70 °C

Cable gland M16

Dimensions, external (WxHxD) 78 x 51 x 104 mm

Material

Material, housing Polycarbonate (PC)

Material, base Polycarbonate (PC)

MODELS

Article	Sensor element	Nominal resistance	Equivalent
SE-PT100-Y	PT100	100 Ω (0°C)	-
SE-PT1000-Y	PT1000	1000 Ω (0°C)	-
SE-NTC1.8-Y	NTC 1.8	1800 Ω (25°C)	TAC
SE-NTC2.2-Y	NTC 2.2	2252 Ω (25°C)	Johnson Controls
SE-NTC10-01-Y	NTC 10	10 kΩ (25°C)	Aquatrol - Johnson Controls - Satchwell - Trend - Cylon - Honeywell - Distech
SE-NTC10-02-Y	NTC 10	10 kΩ (25°C)	Carel - Evco - Eliwell - AB Industrietechnik
SE-NTC10-03-Y	NTC 10	10 kΩ (25°C)	Andover - Delta Controls - Siebe - York
SE-NTC20-Y	NTC 20	20 kΩ (25°C)	Honeywell
SE-NI1000-01-Y	Ni1000	1000 Ω (0°C)	Siemens - Landis & Staefa
SE-NI1000-02-Y	Ni1000	1000 Ω (0°C)	Siemens - Landis & Staefa

CABLE TEMPERATURE SENSOR, METAL BULB



NT04

Technical data	
Material, bulb	Stainless steel AISI 304
Material, cable	Thermoplastic rubber
Bulb length	40 mm
Cable length	2 m
Diameter	4 mm
Protection class	IP67

Article	Sensor element	Nominal resistance	Temperature range	Compatible with
NT0420-NTC1.8	NTC 1.8	1800 Ω (25°C)	-50...+110 °C	Tac
NT0420-NTC2.2	NTC 2.2	2252 Ω (25°C)	-50...+110 °C	Johnson Controls
NT0420-NTC10-01	NTC 10	10 kΩ (25°C)	-50...+110 °C	Aquatrol - Johnson Controls - Satchwell - Trend - Cylon - Honeywell
NT0420-NTC10-02	NTC 10	10 kΩ (25°C)	-50...+110 °C	Carel - Evco - Eliwell - AB Industrietechnik
NT0420-NTC10-03	NTC 10	10 kΩ (25°C)	-50...+110 °C	Andover - Delta Controls - Siebe - York
NT0420-NTC20	NTC 20	20 kΩ (25°C)	-50...+110 °C	Honeywell
NT0420-NI1000-01	Ni1000	1000 Ω (0°C)	-50...+110 °C	Siemens - Landis & Staefa
NT0420-NI1000-02	Ni1000	1000 Ω (0°C)	-50...+110 °C	Sauter

CABLE TEMPERATURE SENSOR, PVC BULB



NT02

Technical data	
Material, bulb	PP
Material, cable	PVC
Bulb length	23 mm
Cable length	2 m
Diameter	6 mm
Protection class	IP67

Article	Sensor element	Nominal resistance	Temperature range	Equivalent
NT0220-NTC1.8	NTC 1.8	1800 Ω (25°C)	-40...+80 °C	Tac
NT0220-NTC2.2	NTC 2.2	2252 Ω (25°C)	-40...+80 °C	Johnson Controls
NT0220-NTC10-01	NTC 10	10 kΩ (25°C)	-40...+80 °C	Aquatrol - Johnson Controls - Satchwell - Trend - Cylon - Honeywell - Distech
NT0220-NTC10-02	NTC 10	10 kΩ (25°C)	-40...+80 °C	Carel - Evco - Eliwell - AB Industrietechnik
NT0220-NTC10-03	NTC 10	10 kΩ (25°C)	-40...+80 °C	Andover - Delta Controls - Siebe - York
NT0220-NTC20	NTC 20	20 kΩ (25°C)	-40...+80 °C	Honeywell
NT0220-NTC100	NTC 100	100 kΩ (25°C)	-40...+80 °C	Industrietechnik
NT0220-NI1000-01	Ni1000	1000 Ω (0°C)	-40...+80 °C	Siemens - Landis & Staefa
NT0220-NI1000-02	Ni1000	1000 Ω (0°C)	-40...+80 °C	Sauter

CABLE TEMPERATURE SENSOR, NTC, FOR USE WITH THE TTC SERIES



NT05

Technical data	
Sensor element	NTC, 15...10 kΩ
Material, tube	Nickel plated brass
Material, cable	Silicone
Bulb length	50 mm
Cable length	1.5 m
Diameter	6 mm
Protection class	IP65

Article	Sensor element	Nominal resistance	Temperature range	Compatible with
NT0515-NTC15	NTC 15	15 kΩ (0°C)	0...30 °C	Regin

ACCESSORIES

Article	Description
PASTA-20	Heat-conductive paste in tube, 20 g



This sensor cannot be used together with the CTR series.

CABLE TEMPERATURE SENSOR, METAL BULB, PT100/PT1000

Universal sensor.



PT04

Technical data	
Material, bulb	Stainless steel AISI 304
Material, cable	Thermoplastic rubber
Bulb length	40 mm
Cable length	1.5 m
Diameter	4 mm
Protection class	IP67
Accuracy	class B

Article	Sensor element	Nominal resistance	Temperature range	Compatible with
PT0415-PT100	PT100	100 Ω (0°C)	-30...+110 °C	Universal
PT0415-PT1000	PT1000	1000 Ω (0°C)	-30...+110 °C	Universal

CABLE TEMPERATURE SENSOR -50...+200 °C, METAL BULB



PT10

Technical data	
Material, bulb	Stainless steel AISI 304
Material, cable	Silicone
Bulb length	100 mm
Cable length	2 m (3 wires)
Diameter	6 mm
Protection class	IP67
Precision	Class B

Article	Sensor element	Nominal resistance	Temperature range	Compatible with
PT1020-PT100	PT100	100 Ω (0°C)	-50...+200 °C	Universal
PT1020-PT1000	PT1000	1000 Ω (0°C)	-50...+200 °C	Universal

CABLE TEMPERATURE SENSOR -50...350 °C, METAL BULB

Special cable sensor for high temperature.



PT10xxC

Technical data	
Material, bulb	Stainless steel AISI 304 with ceramic insert
Material, cable	Fiberglass
Bulb length	100 mm
Cable length	2 m (3 wires)
Diameter	6 mm
Protection class	IP44
Precision	Class B

Article	Sensor element	Nominal resistance	Temperature range	Compatible with
PT1020C-PT100	PT100	100 Ω (0°C)	-50...+350 °C	Universal
PT1020C-PT1000	PT1000	1000 Ω (0°C)	-50...+350 °C	Universal

SETPOINT DEVICE FOR PT1000

Setpoint device which gives resistance corresponding to the standard PT1000 table.



SET-PT1000

Technical data	
Temperature range	5...30 °C
Mounting	Panel mounting
Dimensions	60 x 60 x 38 mm
Protection class	IP20

Article	Description
SET-PT1000	Setpoint device
SET-30	Setpoint device for electric heating controllers CTR

HEAT-CONDUCTIVE PASTE

Article	Description
PASTA-20	Heat-conductive paste in tube, 20 g



PASTA-20

SENSOR CHARACTERISTICS

Equivalent	PT100	PT1000	NTC 1,8K	NTC 2,2K	NTC 10K-01	NTC 10K-02	NTC 10K-03	NTC 15K-01	NTC 15K-02	NTC 15K-03	NTC 15K-04	NTC 20K	NI 1000-01	NI 1000-02
Temp. °C	Ω	Ω	Ω	Ω	Ω	Ω	Ω	Ω	Ω	Ω	Ω	Ω	Ω	Ω
			Tac	Johnson Controls	Aquatrol - Johnson Controls - Satchwell - Trend - Cylon - Honeywell	Carel - Evco - Eliwell - AB Industrietechnik	Andover - Delta Controls - Siebe - York	Regin - AB Industrietechnik	Regin - AB Industrietechnik	Regin - AB Industrietechnik	Regin - AB Industrietechnik	Honeywell	Siemens - Landis & Staefa	Sauter
150	157,3	1573			186									
140	153,6	1536			235								1737	1909
130	149,8	1498			301								1675	1833
120	146,1	1461			390								1615	1760
110	142,3	1423	138	115	511	758	624					818	1557	1688
100	138,5	1385	177	153	679	973	817					1114	1500	1618
90	134,7	1347	230	206	916	1266	1084					1541	1444	1549
80	130,9	1309	303	283	1255	1668	1457					2166	1390	1483
70	127,1	1271	404	395	1752	2228	1990					3098	1337	1417
65	125,2	1252	469	469	2083	2588	2338					3732	1311	1385
60	123,2	1232	547	560	2488	3020	2760		10000			4518	1285	1353
55	121,3	1213	640	672	2986	3536	3270					5494	1260	1322
50	119,4	1194	753	811	3602	4160	3893		10830	10000		6718	1235	1291
45	117,5	1175	888	984	4368	4911	4655			10830		8260	1210	1260
40	115,5	1155	1052	1199	5324	5827	5594		11670	11670	10000	10212	1186	1230
35	113,6	1136	1252	1471	6532	6940	6754			12500	10625	12698	1162	1200
30	111,7	1117	1498	1814	8055	8313	8196	10000	12500	13330	11250	15886	1138	1171
29	111,3	1113	1553	1893	8406	8622	8525	10170				16627	1132	1165
28	111,0	1110	1611	1977	8779	8944	8869	10330				17407	1128	1159
27	110,5	1105	1671	2064	9165	9281	9229	10500				18227	1123	1153
26	110,1	1101	1734	2156	9574	9632	9606	10670				19090	1119	1147
25	109,7	1097	1800	2252	10000	10000	10000	10830		14170	11875	20000	1114	1141
24	109,3	1093	1868	2353	10448	10380	10413	11000				20958	1109	1136
23	109,0	1090	1940	2460	10924	10780	10845	11170				21968	1105	1130
22	108,6	1086	2015	2572	11421	11200	11298	11330				23033	1100	1124
21	108,2	1082	2092	2689	11940	11630	11773	11500				24156	1095	1118
20	107,8	1078	2174	2813	12491	12090	12270	11670	13330	15000	12500	25340	1091	1112
19	107,4	1074	2258	2944	13073	12560	12791	11830				26491	1086	1107
18	107,0	1070	2347	3081	13681	13060	13337	12000				27912	1081	1101
17	106,6	1066	2440	3226	14325	13580	13910	12170				29307	1077	1095
16	106,2	1062	2537	3378	15000	14120	14510	12330				30782	1072	1089
15	105,9	1059	2638	3538	15710	14690	15140	12500			13125	32340	1068	1084
14	105,5	1055	2744	3707	16461	15280	15801	12370				33982	1063	1078
13	105,1	1051	2854	3886	17256	15900	16494	12830				35716	1058	1072
12	104,7	1047	2972	4074	18091	16560	17222	13000				37550	1054	1067
11	104,3	1043	3093	4272	18970	17240	17987	13170				39489	1049	1061
10	103,9	1039	3222	4482	19902	17960	18790	13330	14170		13750	41540	1045	1056
9	103,5	1035	3354	4703	20884	18700	19633	13500				43715	1040	1050
8	103,1	1031	3493	4936	21918	19480	20519	13670				46018	1036	1044
7	102,7	1027	3639	5183	23015	20300	21451	13830				48457	1031	1039
6	102,3	1023	3791	5443	24170	21150	22430	14000				51041	1027	1033
5	101,9	1019	3951	5718	25391	22050	23460	14170			14375	53780	1022	1028
4	101,6	1016	4120	6009	26683	23000	24545	14330				56678	1018	1022
3	101,2	1012	4296	6317	28051	23990	25687	14500				59751	1013	1016
2	100,8	1008	4481	6643	29498	25030	26890	14670				63011	1009	1011
1	100,4	1004	4677	6988	31030	26130	28156	14830				66469	1004	1005
0	100,0	1000	4882	7353	32650	27280	29490	15000	15000		15000	70140	1000	1000
-5	98,0	980	6059	9532	42327	33900	37310					92220	978	973
-10	96,1	961	7580	12460	55329	42470	47540					122260	956	946
-15	94,1	941	9519	16430	72957	53410	61020					163480	935	919
-20	92,2	922	12061	21863	97083	67770	78910					220600	914	893
-25	90,2	902	15359	29371	130422	86430	102900					300400	893	867
-30	88,2	882	19747	39855	176976	111300	135200					413400	872	842
-35	86,3	863											851	816
-40	84,3	843											831	791

TEMPERATURE TRANSMITTER FOR ROOM MOUNTING, 0...10 V AND MODBUS

Technical data	
Supply voltage	24 V AC $\pm 10\%$ / 15...35 V DC
Power consumption	< 1 W
Temperature range	0...50 °C
Ambient temperature	0...50 °C
Ambient humidity	10...90 % UR (senza condensa)
Voltage range	0...11.5 V DC
Transformer power	≥ 2 VA
Mounting	Room
Display	4 digit
Dimensions	100 x 85 x 30.5 mm
Protection class	IP30
Isolation class	III

Article	Output signal	Accuracy	Display
TTA	0...10 V DC	$\pm 0.4^\circ\text{C}$	-
TTA-D	0...10 V DC	$\pm 0.4^\circ\text{C}$	X
TTA-M	Modbus	$\pm 0.4^\circ\text{C}$	-
TTA-D-M	Modbus	$\pm 0.4^\circ\text{C}$	X



TTA



TTA-D

TEMPERATURE TRANSMITTER FOR ROOM MOUNTING, 4...20 mA

Technical data	
Supply voltage	Max. 28 V DC, Min. $11+(0.02 \times \text{RL})$ V DC
DC power	Min. 1 W
Temperature range	0...50 °C
Ambient temperature	0...50 °C
Ambient humidity	10...95 % RH
Power consumption	0.6 W
Accuracy, temperature	$\pm 0.5^\circ\text{C}$ at 20°C
Mounting	Room
Dimensions (WxHxD mm)	100 x 85 x 30.5
Protection class	IP30
Isolation class	III

Article	Output signal	Display
TTA-CD	4...20 mA (2 wires)	X (4 digits)
TTA-C	4...20mA (2 wires)	-



TTA-C



TTA-CD

TEMPERATURE TRANSMITTER FOR WALL MOUNTING, IP65



TTE

Technical data	
Power consumption	< 1 W
Ambient temperature	-20...+50 °C
Ambient humidity	10...95 % RH
Storage temperature	-20...+70 °C
Material, casing cover	White polycarbonate
Material, casing base	Grey polycarbonate
Weight	170 g
Dimensions	75 x 75 x 36 mm (housing)
Protection class	IP65 class III (sensor excluded)
Isolation class	III

Article	Temperature range	Output signal	Accuracy	Supply voltage
TTE011	0...50 °C	0...10 V DC	± 1°C	18...35 V DC / 18...24 V AC
TTE012	-30...+50 °C	0...10 V DC	± 1,5°C	18...35 V DC / 18...24 V AC
TTE013	0...100 °C	0...10 V DC	± 2°C	18...35 V DC / 18...24 V AC
TTE021	0...50 °C	4...20 mA (2 wires)	± 1°C	Max 30 V DC, Min 11+(0,02xRL) V DC
TTE022	-30...+50 °C	4...20 mA (2 wires)	± 1,5°C	Max 30 V DC, Min 11+(0,02xRL) V DC
TTE023	0...100 °C	4...20 mA (2 wires)	± 2°C	Max 30 V DC, Min 11+(0,02xRL) V DC

TEMPERATURE TRANSMITTER FOR AIR DUCT MOUNTING, IP65



TTC



DBZ-22

Technical data	
Power consumption	< 1 W
Temperature range sensor	-20...+80 °C
Insertion length	60...230 mm
Ambient temperature	0...50 °C
Ambient humidity	10...95 % RH (non-condensing)
Storage temperature	-20...+70 °C
Material, casing cover	White polycarbonate
Material, casing base	Grey polycarbonate
Weight	260 g
Dimensions	75 x 75 x 36 mm (housing)
Protection class	IP65 (sensor excluded)
Isolation class	III

Article	Temperature range	Output signal	Accuracy	Supply voltage
TTC011	0...50 °C	0...10 V DC	± 1°C	18...35 V DC / 18...24 V AC
TTC012	-30...+50 °C	0...10 V DC	± 1,5°C	18...35 V DC / 18...24 V AC
TTC013	0...100 °C	0...10 V DC	± 2°C	18...35 V DC / 18...24 V AC
TTC021	0...50 °C	4...20 mA (2 wires)	± 1°C	Max 30 V DC, Min (11+(0,02xRL)) V DC
TTC022	-30...+50 °C	4...20 mA (2 wires)	± 1,5°C	Max 30 V DC, Min (11+(0,02xRL)) V DC
TTC023	0...100 °C	4...20 mA (2 wires)	± 2°C	Max 30 V DC, Min (11+(0,02xRL)) V DC

Article	Description
DBZ-22	Mounting bracket for air duct transmitters



The transmitter is supplied with mounting bracketed model DBZ-22

TEMPERATURE TRANSMITTER FOR IMMERSION MOUNTING, IP65



TTI

Technical data	
Power consumption	< 1 W
Temperature range sensor	-20...+100 °C
Insertion length	120 mm
Ambient temperature	0...50 °C
Ambient humidity	10...95 % RH (non-condensing)
Storage temperature	-20...+70 °C
Material, casing cover	White polycarbonate
Material, casing base	Grey polycarbonate
Weight	310
Dimensions	75 x 75 x 36 mm (housing)
Protection class	IP65 (sensor excluded)
Isolation class	III

Article	Temperature range	Output signal	Accuracy	Supply voltage
TTI011	0...50 °C	0...10 V DC	± 1°C	18...35 V DC / 18...24 V AC
TTI012	-30...+50 °C	0...10 V DC	± 1,5°C	18...35 V DC / 18...24 V AC
TTI013	0...100 °C	0...10 V DC	± 2°C	18...35 V DC / 18...24 V AC
TTI021	0...50 °C	4...20 mA (2 wires)	± 1°C	Max 30 V DC, Min (11+(0,02xRL)) V DC
TTI022	-30...+50 °C	4...20 mA (2 wires)	± 1,5°C	Max 30 V DC, Min (11+(0,02xRL)) V DC
TTI023	0...100 °C	4...20 mA (2 wires)	± 2°C	Max 30 V DC, Min (11+(0,02xRL)) V DC

CO₂, CO, VOC transmitters

CO₂ TRANSMITTER, ROOM MOUNTING

This series with automatic calibration sets new standards in CO₂ measurement for HVAC applications. It combines the measurement of the carbon dioxide level, temperature and relative humidity. Models with or without display are available.



TCO2A



Technical data	
Supply voltage	24 V AC ±10 %, 50...60 Hz / 15...35 V DC
Working range, CO ₂	0...2000 ppm
Working range, temperature	0...50 °C
Working range, humidity	10...90 % RH (non-condensing)
Power consumption	< 2.5 W
Energy consumption	< 0.5 Wh
Transformer power	≥ 5 VA
Accuracy, CO ₂	< ± (50 ppm + 2 % of the measured value) (25 °C)
Accuracy, humidity	±3 % RH (20°C)
Relay output	Max. 1 A at 50 V AC, min. 1 mA at 5 V DC
Mounting	Room
Dimensions	100 x 85 x 30.5 mm
Protection class	IP30

Outputs	
CO ₂	0...10 V DC referring to 0...2000 ppm
Temperature	0...10 V DC referring to 0...50 °C or resistive outputs
Humidity	0...10 V DC referring to 0...100 % RH

Article	Description	Display	Output signal	Accuracy, temperature
TCO2A	CO ₂ + °C	-	0...10 V + 0...10 V	± 0.4 °C
TCO2A-D	CO ₂ + °C	X	0...10 V + 0...10 V	± 0.4 °C
TCO2A-PT100	CO ₂ + PT100, 100 Ohm (0°C)	-	0...10 V + ohm	± 0.3 °C
TCO2A-PT1000	CO ₂ + PT1000, 1000 Ohm (0°C)	-	0...10 V + ohm	± 0.3 °C
TCO2A-NTC1.8	CO ₂ + NTC 1.8, 1800 Ohm (25°C)	-	0...10 V + ohm	± 0.5 °C
TCO2A-NTC2.2	CO ₂ + NTC 2.2, 2252 Ohm (25°C)	-	0...10 V + ohm	± 0.2 °C
TCO2A-NTC10-01	CO ₂ + NTC 10, 10 kOhm (25°C)	-	0...10 V + ohm	± 0.2 °C
TCO2A-NTC10-02	CO ₂ + NTC 10, 10 kOhm (25°C)	-	0...10 V + ohm	± 0.3 °C
TCO2A-NTC10-03	CO ₂ + NTC 10, 10 kOhm (25°C)	-	0...10 V + ohm	± 0.25 °C
TCO2A-NTC20	CO ₂ + NTC 20, 20 kOhm (25°C)	-	0...10 V + ohm	± 0.2 °C
TCO2A-NI1000-01	CO ₂ + Ni1000, 1000 Ohm (0°C)	-	0...10 V + ohm	± 0.5 °C
TCO2A-NI1000-02	CO ₂ + Ni1000, 1000 Ohm (0°C)	-	0...10 V + ohm	± 0.5 °C
TCO2A-D-PT100	CO ₂ + PT100, 100 Ohm (0°C)	X	0...10 V + ohm	± 0.3 °C
TCO2A-D-PT1000	CO ₂ + PT1000, 1000 Ohm (0°C)	X	0...10 V + ohm	± 0.3 °C
TCO2A-D-NTC1.8	CO ₂ + NTC 1.8, 1800 Ohm (25°C)	X	0...10 V + ohm	± 0.5 °C
TCO2A-D-NTC2.2	CO ₂ + NTC 2.2, 2252 Ohm (25°C)	X	0...10 V + ohm	± 0.2 °C
TCO2A-D-NTC10-01	CO ₂ + NTC 10, 10 kOhm (25°C)	X	0...10 V + ohm	± 0.2 °C
TCO2A-D-NTC10-02	CO ₂ + NTC 10, 10 kOhm (25°C)	X	0...10 V + ohm	± 0.3 °C
TCO2A-D-NTC10-03	CO ₂ + NTC 10, 10 kOhm (25°C)	X	0...10 V + ohm	± 0.25 °C
TCO2A-D-NTC20	CO ₂ + NTC 20, 20 kOhm (25°C)	X	0...10 V + ohm	± 0.2 °C
TCO2A-D-NI1000-01	CO ₂ + Ni1000, 1000 Ohm (0°C)	X	0...10 V + ohm	± 0.5 °C
TCO2A-D-NI1000-02	CO ₂ + Ni1000, 1000 Ohm (0°C)	X	0...10 V + ohm	± 0.5 °C
TCO2A-M	CO ₂ + °C	-	Modbus	± 0.4 °C
TCO2A-D-M	CO ₂ + °C	X	Modbus	± 0.4 °C
TCO2AU	CO ₂ + °C + RH	-	0...10 V + 0...10 V + 0...10 V	± 0.4 °C
TCO2AU-PT100	CO ₂ + RH + PT100, 100 Ohm (0°C)	-	0...10 V + 0...10 V + ohm	± 0.3 °C
TCO2AU-PT1000	CO ₂ + RH + PT1000, 1000 Ohm (0°C)	-	0...10 V + 0...10 V + ohm	± 0.3 °C

Article	Description	Display	Output signal	Accuracy, temperature
TCO2AU-NTC1.8	CO ₂ + RH + NTC 1.8, 1800 Ohm (25°C)	-	0...10 V + 0...10 V + ohm	± 0.5 °C
TCO2AU-NTC2.2	CO ₂ + RH + NTC 2.2, 2252 Ohm (25°C)	-	0...10 V + 0...10 V + ohm	± 0.2 °C
TCO2AU-NTC10-01	CO ₂ + RH + NTC 10, 10 kOhm (25°C)	-	0...10 V + 0...10 V + ohm	± 0.2 °C
TCO2AU-NTC10-02	CO ₂ + RH + NTC 10, 10 kOhm (25°C)	-	0...10 V + 0...10 V + ohm	± 0.3 °C
TCO2AU-NTC10-03	CO ₂ + RH + NTC 10, 10 kOhm (25°C)	-	0...10 V + 0...10 V + ohm	± 0.25 °C
TCO2AU-NTC20	CO ₂ + RH + NTC 20, 20 kOhm (25°C)	-	0...10 V + 0...10 V + ohm	± 0.2 °C
TCO2AU-NI1000-01	CO ₂ + RH + Ni1000, 1000 Ohm (0°C)	-	0...10 V + 0...10 V + ohm	± 0.5 °C
TCO2AU-NI1000-02	CO ₂ + RH + Ni1000, 1000 Ohm (0°C)	-	0...10 V + 0...10 V + ohm	± 0.5 °C
TCO2AU-D	CO ₂ + °C + RH	X	0...10 V + 0...10 V + 0...10 V	± 0.4 °C
TCO2AU-D-PT100	CO ₂ + RH + PT100, 100 Ohm (0°C)	X	0...10 V + 0...10 V + ohm	± 0.3 °C
TCO2AU-D-PT1000	CO ₂ + °C + RH	X	0...10 V + 0...10 V + ohm	± 0.3 °C
TCO2AU-D-NTC1.8	CO ₂ + RH + NTC 1.8, 1800 Ohm (25°C)	X	0...10 V + 0...10 V + ohm	± 0.5 °C
TCO2AU-D-NTC2.2	CO ₂ + RH + NTC 2.2, 2252 Ohm (25°C)	X	0...10 V + 0...10 V + ohm	± 0.2 °C
TCO2AU-D-NTC10-01	CO ₂ + RH + NTC 10, 10 kOhm (25°C)	X	0...10 V + 0...10 V + ohm	± 0.2 °C
TCO2AU-D-NTC10-02	CO ₂ + RH + NTC 10, 10 kOhm (25°C)	X	0...10 V + 0...10 V + ohm	± 0.3 °C
TCO2AU-D-NTC10-03	CO ₂ + RH + NTC 10, 10 kOhm (25°C)	X	0...10 V + 0...10 V + ohm	± 0.25 °C
TCO2AU-D-NTC20	CO ₂ + RH + NTC 20, 20 kOhm (25°C)	X	0...10 V + 0...10 V + ohm	± 0.2 °C
TCO2AU-D-NI1000-01	CO ₂ + RH + Ni1000, 1000 Ohm (0°C)	X	0...10 V + 0...10 V + ohm	± 0.5 °C
TCO2AU-D-NI1000-02	CO ₂ + RH + Ni1000, 1000 Ohm (0°C)	X	0...10 V + 0...10 V + ohm	± 0.5 °C
TCO2AU-M	CO ₂ + RH + °C	-	Modbus	± 0.4°C
TCO2AU-D-M	CO ₂ + RH + °C	X	Modbus	± 0.4°C

DUCT AIR QUALITY TRANSMITTERS, VOC

Analysis of the air quality based on a mixed gas VOC (Volatile Organic Compounds) sensor.

Detectable gases:

- carbon monoxide CO
- hydrogen sulfide H₂S
- solvent vapours
- cigarette smoke
- car exhaust
- air produced by human breathing
- combustion smoke from wood, paper and plastics.



DB-KLQ

Technical data

Supply voltage	15...36 V DC or 24 V AC/DC ± 10%, 50-60 Hz
Outputs	0...10 V DC, 0...20 mA or 4...20 mA, selectable by dip-switch
Sensor	VOC
Ambient temperature	0...50 °C
Ambient humidity	10...90 % RH (non-condensing)
Storage temperature	-20...+50 °C
Storage humidity	< 95 % RH
Casing	Plastic material similar to RAL 9010
Weight	80 g
Dimensions	65 x 59 x 36 mm (tube L = 206 mm, diameter = 16 mm)
Protection class	IP30 (case)
Isolation class	III
Certification	EN 60335-1: safety / EN 60529: IP degree of protection / EN 60730: domestic controls

Article	Output	Application
DB-KLQ	0...10 V DC, 0...20 mA, 4...20 mA	Duct
DB-KLQ5	0...5 V DC, 0...20 mA, 4...20 mA	Duct

CO₂ TRANSMITTER, AIR DUCT MOUNTING

Measures the concentration of carbon dioxide in ducts. Exempt from periodic calibration. Some models are equipped with a passive temperature sensor.



TCO2C

Technical data	
Supply voltage	15...35 V DC / 24 V AC ± 10% 50-60 Hz
CO ₂ sensor	NDIR (Non-Dispersive Infrared Technology)
Output	0...10 V DC or 0...5 V DC, RL>10 kOhm
Working range, CO ₂	0...2000 ppm
Working range, temperature	0...+50 °C
Working range, humidity	10...90 % RH (non-condensing)
Storage temperature	-20...+70 °C
Storage humidity	< 95 % RH
Accuracy, CO ₂	±(50 ppm +2% of the measured value)
Power consumption	< 2.5 W
Energy consumption	< 0.5 Wh
Transformer power	>=5 VA
Max. air velocity	10 m/s
Mounting	Duct
Material, casing cover	White polycarbonate
Material, casing base	Grey polycarbonate
Insertion length	60...230 mm
Weight	160 g
Dimensions	75 x 77 x 36 mm (housing)
Protection class	IP65 case (sensor excluded)
Isolation class	III
Outputs	
CO ₂	0...10 V DC referring to 0...2000 ppm
Temperature	passive sensor °C

Article	Description	Output signal	Accuracy, temperature
TCO2C	CO ₂	0...10 V	-
TCO2C-05	CO ₂	0...5 V	-
TCO2C-PT100	CO ₂ + PT100, 100 Ohm (0°C)	0...10 V + Ohm	± 0.3
TCO2C-PT1000	CO ₂ + PT1000, 1000 Ohm (0°C)	0...10 V + Ohm	± 0.3
TCO2C-NTC1.8	CO ₂ + NTC 1.8, 1800 Ohm (25°C)	0...10 V / Ohm	± 0.5
TCO2C-NTC2.2	CO ₂ + NTC 2.2, 2252 Ohm (25°C)	0...10 V + Ohm	± 0.2
TCO2C-NTC10-01	CO ₂ + NTC 10, 10 kOhm (25°C)	0...10 V + Ohm	± 0.2
TCO2C-NTC10-02	CO ₂ + NTC 10, 10 kOhm (25°C)	0...10 V + Ohm	± 0.3
TCO2C-NTC10-03	CO ₂ + NTC 10, 10 kOhm (25°C)	0...10 V + Ohm	± 0.25
TCO2C-NTC20	CO ₂ + NTC 20, 20 kOhm (25°C)	0...10 V + Ohm	± 0.2
TCO2C-NI1000-01	CO ₂ + Ni1000, 1000 Ohm (0°C)	0...10 V + Ohm	± 0.5
TCO2C-NI1000-02	CO ₂ + Ni1000, 1000 Ohm (0°C)	0...10 V + Ohm	± 0.5

ACCESSORIES

Article	Description
DBZ-22	Mounting bracket for air duct transmitters



DBZ-22



Note: The transmitter is supplied with mounting bracketed model DBZ-22

CARBON MONOXIDE TRANSMITTER

This device measures the carbon monoxide concentration using an electrochemical method of measurement characterised by high selectivity even in low concentrations. It is installed for both safety and energy-saving reasons. The output signals are linear representations of the gas concentration.

The transmitter is TÜV-approved in accordance with VDI 2053.



TC01

Technical data	
Supply voltage	12...28 V DC
Measuring range	0...300 ppm
Outputs	4...20 mA, two-wire / 0...10 V DC, three-wire
Calibration	Automatic zero adjustment
Dimensions	80 x 82 x 86 mm
Protection class	IP56

Article	Description
TC01	CO transmitter

ROOM AIR QUALITY TRANSMITTERS, VOC

Analysis of the air quality based on a mixed gas VOC (Volatile Organic Compounds) sensor.

Detectable gases:

- carbon monoxide CO
- hydrogen sulfide H₂S
- solvent vapours
- cigarette smoke
- car exhaust
- air produced by human breathing
- combustion smoke from wood, paper and plastics.



DB-RLQ

5

Technical data	
Supply voltage	15...36 V DC or 24 V AC/DC ± 10%, 50-60 Hz
Outputs	0...10 V DC, 0...20 mA or 4...20 mA, selectable by jumpers
Sensor	VOC
Ambient temperature	0...50 °C
Ambient humidity	10...90 % RH (non-condensing)
Storage temperature	-20...+50 °C
Storage humidity	< 95 % RH
Casing	Plastic material similar to RAL 9010
Weight	80 g
Dimensions	75 x 75 x 25 mm
Protection class	IP30 (case)
Isolation class	III
Certification	EN 60335-1: safety / EN 60529: IP degree of protection / EN 60730: domestic controls

Article	Output	Application
DB-RLQ	0...10 V DC, 0...20 mA, 4...20 mA	Room
DB-RLQ5	0...5 V DC, 0...20 mA, 4...20 mA	Room

Humidity transmitters and humidistats

ROOM HUMIDISTAT

Electromechanical humidistat for room mounting with synthetic element.



DBZH-101

Technical data	
Sensor element	Synthetic element
Contact	Dust-tight microswitches with SPDT contacts
Switch capacity	Humidify: 2 (1) A, 230 V AC Dehumidify: 5 (1) A, 230 V AC
Output	
Humidity range	30...100 % RH
Setpoint	30...100 % RH
Hysteresis	4 % at 50 % RH
Air velocity range	0.2...8 m/s
Time constant	t_{50} at 2 m/s: 72 s at an air velocity of 2 m / s
Temperature coefficient	± 0.2 %/K at 23 °C
Ambient temperature	0...60 °C
Ambient humidity	< 95 % RH (non-condensing)
Storage temperature	-20...+60 °C
Storage humidity	< 95 % RH (In the case of voltage below 48 V, the humidistat can be used up to 100% RH)
Casing	ABS
Weight	130 g
Dimensions	115 x 70 x 35 mm
Protection class	IP20
Isolation class	II

Article	Hidden setpoint
DBZH-101	-
DBZH-101U	X

ROOM HUMIDISTAT

Electromechanical humidistat with a synthetic element. The setpoint knob can be locked.



DBZH-102

Technical data	
Sensor element	Synthetic element
Output	One, 230 V AC, 5 A, change-over
Setpoint	35...95 % RH
Hysteresis	7 % RH
Mounting	Room
Dimensions	86 x 86 x 30 mm
Protection class	IP30

Article	Description
DBZH-102	Room humidistat, 1-step

DUCT HUMIDISTAT

Humidistat to be mounted in the duct.



DBKH-10

Technical data	
Sensor element	Synthetic element
Contact	Microswitches with SPDT contacts
Switch capacity	15 (2) A, 230 V AC/0.25 A, 230 V DC
Humidity range	30...100 % RH
Hysteresis	4 % at 50% RH
Max. air velocity	8 m/s
Ambient temperature	0...60 °C
Ambient humidity	< 95 % RH (non-condensing)
Storage temperature	-30...+60 °C
Storage humidity	< 95 % RH (In the case of voltage below 48 V, the humidistat can be used up to 100% RH)
Tube length	220 mm
Material, tube	Nickel-plated brass, perforated
Casing	ABS
Weight	480 g
Dimensions	108 x 70 x 72 mm

Article	Hidden setpoint	Protection class
DBKH-10	-	IP54
DBKH-10U	X	IP65

DUCT/WALL HUMIDISTAT

Electromechanical humidistat with change-over contact.



DBKH-10H

Technical data	
Sensor element	Human hair
Output	10 A, 250 V AC, change-over
Setpoint	10...100 % RH
Hysteresis	3 % RH
Mounting	Duct or wall
Dimensions	80 x 85 x 88 mm
Protection class	IP54
Isolation class	I

Article	Description	Output	Step differential
DBKH-10H	Duct/wall humidistat	1-step	-
DBKH-20H	Duct/wall humidistat	2-step	0...25 % RH

HUMIDITY TRANSMITTER FOR ROOM MOUNTING, OUTPUT 0...10 V, IP30

Transmitters for relative humidity and temperature measurement. They have good long-term stability and are resistant to contamination.



TUA



TUA-D

Technical data	
Supply voltage	24 V AC \pm 10% / 15...35 V DC
Power consumption	< 1 W
Transformer power	\geq 2 VA
Output signal	0...10 V DC or Modbus
Ambient temperature	0...50 °C
Ambient humidity	0...95%
Working range, temperature	0...50 °C
Working range, humidity	0...100 % RH
Accuracy, humidity	\pm 3 % RH at 20 °C
Mounting	Room
Dimensions	100 x 85 x 30.5 mm
Protection class	IP30
Isolation class	III

Article	Output signal	Display
TUA-M	Modbus	-
TUA-D-M	Modbus	X
TUA	0...10 V DC	-
TUA-D	0...10 V DC	X

HUMIDITY TRANSMITTER FOR ROOM MOUNTING, OUTPUT 4...20 MA, IP30

Technical data	
Supply voltage	Max 28 V DC, Min (11+(0,02xRL)) V DC
Output signal	4...20 mA (2 wire)
Power consumption	0,6 W
Ambient temperature	0...50 °C
Ambient humidity	0...95% RH (non condensing)
Transformer power	>=1 W
Working range, humidity	0...100 % RH (non condensing)
Accuracy, humidity	±3 % RH at 20 °C
Mounting	Room
Dimensions	100 x 85 x 30.5 mm
Protection class	IP30
Isolation class	III

Article	Display
TUA-C	-
TUA-CD	X



TUA-C



TUA-CD

HUMIDITY AND TEMPERATURE TRANSMITTER FOR ROOM MOUNTING, 4...20 MA

Technical data	
Supply voltage	Max. 28 V DC, Min. 11+(0.02xRL) V DC
Output signal	4...20 mA (2 wire)
Power consumption	1.2 W
Temperature range	0...50 °C
Ambient temperature	0...50 °C
Ambient humidity	0...95 % RH (non-condensing)
Humidity range	0...100 % RH
Transformer power	Min. 2 W
Accuracy, humidity	±3% RH at 20 °C
Accuracy, temperature	±0.5°C at 20°C
Mounting	Room
Dimensions (WxHxD mm)	100 x 85 x 30.5
Protection class	IP30
Isolation class	III

Article	Display
TTUA-C	-
TTUA-CD	X



TTUA-C



TTUA-CD

HUMIDITY AND TEMPERATURE TRANSMITTER FOR ROOM MOUNTING, IP30

Transmitter for relative humidity and temperature measurement. It has good long-term stability and is resistant to contamination.



TTUA



TTUA-D

Technical data

Supply voltage	24 V AC $\pm 10\%$ / 15...35 V DC
Power consumption	< 1 W
Transformer power	≥ 2 VA
Working range, temperature	0...50 °C
Working range, humidity	0...100 % RH
Accuracy, humidity	$\pm 3\%$ RH at 20°C
Mounting	Room
Dimensions	100 x 85 x 30.5 mm
Protection class	IP30

Article	Description	Display	Output signal	Accuracy, temperature
TTUA	RH + °C	-	0...10 V + 0...10 V	± 0.4 °C
TTUA-PT100	RH + PT100, 100 Ohm (0°C)	-	0...10 V + ohm	± 0.3 °C
TTUA-PT1000	RH + PT1000, 1000 Ohm (0°C)	-	0...10 V + ohm	± 0.3 °C
TTUA-NTC1.8	RH + NTC 1.8, 1800 Ohm/25°C	-	0...10 V + ohm	± 0.5 °C
TTUA-NTC2.2	RH + NTC 2.2, 2252 Ohm/25°C	-	0...10 V + ohm	± 0.2 °C
TTUA-NTC10-01	RH + NTC 10, 10 kOhm/25°C	-	0...10 V + ohm	± 0.2 °C
TTUA-NTC10-02	RH + NTC 10, 10 kOhm/25°C	-	0...10 V + ohm	± 0.3 °C
TTUA-NTC10-03	RH + NTC 10, 10 kOhm/25°C	-	0...10 V + ohm	± 0.25 °C
TTUA-NTC20	RH + NTC 20, 20 kOhm/25°C	-	0...10 V + ohm	± 0.2 °C
TTUA-NI1000-01	RH + Ni1000, 1000 Ohm/0°C	-	0...10 V + ohm	± 0.5 °C
TTUA-NI1000-02	RH + Ni1000, 1000 Ohm/0°C	-	0...10 V + ohm	± 0.5 °C
TTUA-D	RH + °C	X	0...10 V + 0...10 V	± 0.4 °C
TTUA-D-PT100	RH + PT100, 100 Ohm/0°C	X	0...10 V + ohm	± 0.3 °C
TTUA-D-PT1000	RH + PT1000, 1000 Ohm (0°C)	X	0...10 V + ohm	± 0.3 °C
TTUA-D-NTC1.8	RH + NTC 1.8, 1800 Ohm/25°C	X	0...10 V + ohm	± 0.5 °C
TTUA-D-NTC2.2	RH + NTC 2.2, 2252 Ohm/25°C	X	0...10 V + ohm	± 0.2 °C
TTUA-D-NTC10-01	RH + NTC 10, 10 kOhm/25°C	X	0...10 V + ohm	± 0.2 °C
TTUA-D-NTC10-02	RH + NTC 10, 10 kOhm/25°C	X	0...10 V + ohm	± 0.3 °C
TTUA-D-NTC10-03	RH + NTC 10, 10 kOhm/25°C	X	0...10 V + ohm	± 0.25 °C
TTUA-D-NTC20	RH + NTC 20, 20 kOhm/25°C	X	0...10 V + ohm	± 0.2 °C
TTUA-D-NI1000-01	RH + Ni1000, 1000 Ohm/0°C	X	0...10 V + ohm	± 0.5 °C
TTUA-D-NI1000-02	RH + Ni1000, 1000 Ohm/0°C	X	0...10 V + ohm	± 0.5 °C
TTUA-M	RH + C°	-	Modbus	± 0.4 °C
TTUA-D-M	RH + °C	X	Modbus	± 0.4 °C

WALL HUMIDITY TRANSMITTER, IP65



TUE

Technical data	
Supply voltage, 0...10 V DC	18...24 V AC / 18...35 V DC
Supply voltage, 4...20 mA	Max 30 V DC, Min (11+(0,02xRL)) V DC
Power consumption	< 1 W
Transformer power	≥ 2 VA
Ambient humidity	10...95 % RH (non-condensing)
Ambient temperature	-20...+50 °C
Storage temperature	-20...+70 °C
Accuracy	±3 % RH at 20 °C
Temperature dependence of electronics	Output 4...20 mA: 0.015 °C/°C
Material, casing cover	White polycarbonate
Material, casing base	Grey polycarbonate
Weight	170 g
Dimensions	75 x 172 x 36 mm
Protection class	IP65 (sensor excluded)
Isolation class	III

Article	Supply voltage	Load limits	Output signal
TUE1	18...24 V AC / 18...35 V DC	RL < 1000 Ohm	0...10 V DC
TUE2	11...30 V DC	V+ - (0.02 x RL) ≥ 11 V]	4...20 mA
TUE3	18...24 V AC / 18...35 V DC	RL < 1000 Ohm	0...5 V DC

WALL HUMIDITY/TEMPERATURE TRANSMITTER, IP65



TUTE

Technical data

Power consumption	
Ambient humidity	10...95 % RH (non-condensing)
Storage temperature	-20...+70 °C
Ambient temperature	-20...+50 °C
Accuracy, humidity	± 3% RH at 20 °C
Material, casing cover	White polycarbonate
Material, casing base	Grey polycarbonate
Weight	170 g
Dimensions	75 x 172 x 36 mm
Protection class	IP65 (sensor excluded)
Isolation class	III

Article	Supply voltage	Temperature range	Output, temperature	Output, humidity	Accuracy, temperature
TUTE0111	18...24 V AC / 18...35 V DC	0...+50 °C	0...10 V DC	0...10 V DC	± 1°C
TUTE0121	18...24 V AC / 18...35 V DC	-30...+50 °C	0...10 V DC	0...10 V DC	± 1.5°C
TUTE0131	18...24 V AC / 18...35 V DC	0...+100 °C	0...10 V DC	0...10 V DC	± 2°C
TUTE0212	Max 30 V DC, Min 11+(0,02xRL) V DC	0...+50 °C	4...20 mA	4...20 mA	± 1°C
TUTE0222	Max 30 V DC, Min 11+(0,02xRL) V DC	-30...+50 °C	4...20 mA	4...20 mA	± 1.5°C
TUTE0232	Max 30 V DC, Min 11+(0,02xRL) V DC	0...+100 °C	4...20 mA	4...20 mA	± 2°C
TUTE1101	18...24 V AC / 18...35 V DC	-5...+50 °C	NTC 10K-02	0...10 V DC	± 0.6°C
TUTE1102	Max 30 V DC, Min 11+(0,02xRL) V DC	-5...+50 °C	NTC 10K-02	4...20 mA	± 0.6°C
TUTE1103	18...24 V AC / 18...35 V DC	-5...+50 °C	NTC 10K-02	0...5 V DC	± 0.6°C
TUTE1301	18...24 V AC / 18...35 V DC	-5...+50 °C	NTC 1K8	0...10 V DC	± 0.6°C
TUTE1302	Max 30 V DC, Min 11+(0,02xRL) V DC	-5...+50 °C	NTC 1K8	4...20 mA	± 0.6°C
TUTE1401	18...24 V AC / 18...35 V DC	-5...+50 °C	NTC 10K-01	0...10 V DC	± 0.2°C
TUTE1402	Max 30 V DC, Min 11+(0,02xRL) V DC	-5...+50 °C	NTC 10K-01	4...20 mA	± 0.2°C
TUTE1501	18...24 V AC / 18...35 V DC	-5...+50 °C	NTC 10K-03	0...10 V DC	± 0.2°C
TUTE1502	Max 30 V DC, Min 11+(0,02xRL) V DC	-5...+50 °C	NTC 10K-03	4...20 mA	± 0.2°C
TUTE1601	18...24 V AC / 18...35 V DC	-5...+50 °C	NTC 20K	0...10 V DC	± 0.6°C
TUTE1602	Max 30 V DC, Min 11+(0,02xRL) V DC	-5...+50 °C	NTC 20K	4...20 mA	± 0.6°C
TUTE1701	18...24 V AC / 18...35 V DC	-5...+50 °C	PT1000	0...10 V DC	± 0.6°C
TUTE2101	18...24 V AC / 18...35 V DC	-5...+50 °C	PT100	0...10 V DC	± 0.3°C
TUTE2102	Max 30 V DC, Min 11+(0,02xRL) V DC	-5...+50 °C	PT100	4...20 mA	± 0.3°C

DUCT HUMIDITY TRANSMITTER

Technical data	
Supply voltage, 0...10 V DC	18...24 V AC / 18...35 V DC
Supply voltage, 4...20 mA	Max 30 V DC, Min (11+(0,02xRL)) V DC
Power consumption	< 1 W
Sensor	Capacitive
Ambient temperature	-20...+50 °C
Ambient humidity	10...95 % RH (non-condensing)
Storage temperature	-20...+70 °C
Accuracy	±3 % RH at 20 °C
Casing	Cover: white polycarbonate Base: grey polycarbonate
Weight	260 g
Dimensions	75 x 103 x 266 mm
Protection class	IP65
Isolation class	III



TUC

Article	Humidity range	Output signal
TUC1	0...100 % RH	0...10 V DC
TUC2	0...100 % RH	4...20 mA
TUC3	0...100 % RH	0...5 V DC

ACCESSORY

Article	Description
DBZ-22	Mounting bracket for air duct transmitters



DBZ-22



These transmitters are supplied with mounting bracket model DBZ-22.

DUCT HUMIDITY/TEMPERATURE TRANSMITTER



TUTC

Technical data	
Power consumption	< 1 W
Sensor	Temperature: resistive ; humidity: capacitive
Ambient humidity	10...95 % RH (non-condensing)
Ambient temperature	-20...+50 °C
Humidity range	0...100 % RH (non condensing)
Storage temperature	-20...+70 °C
Accuracy	Humidity: ± 3% RH at 20 °C Temperature: Max error 1 °C (range 0...50 °C) Max error 1.5 °C (range -30...+50 °C) Max error 2 °C (range 0...100 °C)
Casing	Cover: white polycarbonate Base: grey polycarbonate
Weight	260
Dimensions	75 x 103 x 266 mm
Protection class	IP65 (sensor excluded)
Isolation class	III

Article	Supply voltage	Temperature range	Output, temperature	Output, humidity
TUTC0111	18...24 V AC / 18...35 V DC	0...+50 °C	0...10 V DC	0...10 V DC
TUTC0121	18...24 V AC / 18...35 V DC	-30...+50 °C	0...10 V DC	0...10 V DC
TUTC0131	18...24 V AC / 18...35 V DC	0...+100 °C	0...10 V DC	0...10 V DC
TUTC0212	Max 30 V DC, Min 11+(0,02xRL) V DC	0...+50 °C	4...20 mA	4...20 mA
TUTC0222	Max 30 V DC, Min 11+(0,02xRL) V DC	-30...+50 °C	4...20 mA	4...20 mA
TUTC0232	Max 30 V DC, Min 11+(0,02xRL) V DC	0...+100 °C	4...20 mA	4...20 mA
TUTC1101	18...24 V AC / 18...35 V DC	-5...+50 °C	NTC 10K-02	0...10 V DC
TUTC1102	Max 30 V DC, Min 11+(0,02xRL) V DC	-5...+50 °C	NTC 10K-02	4...20 mA
TUTC1103	18...24 V AC / 18...35 V DC	-5...+50 °C	NTC 10K-02	0...5 V DC
TUTC1301	18...24 V AC / 18...35 V DC	-5...+50 °C	NTC 1K8	0...10 V DC
TUTC1302	Max 30 V DC, Min 11+(0,02xRL) V DC	-5...+50 °C	NTC 1K8	4...20 mA
TUTC1401	18...24 V AC / 18...35 V DC	-5...+50 °C	NTC 10K-01	0...10 V DC
TUTC1402	Max 30 V DC, Min 11+(0,02xRL) V DC	-5...+50 °C	NTC 10K-01	4...20 mA
TUTC1501	18...24 V AC / 18...35 V DC	-5...+50 °C	NTC 10K-03	0...10 V DC
TUTC1502	Max 30 V DC, Min 11+(0,02xRL) V DC	-5...+50 °C	NTC 10K-03	4...20 mA
TUTC1601	18...24 V AC / 18...35 V DC	-5...+50 °C	NTC 20K	0...10 V DC
TUTC1602	Max 30 V DC, Min 11+(0,02xRL) V DC	-5...+50 °C	NTC 20K	4...20 mA
TUTC1701	18...24 V AC / 18...35 V DC	-5...+50 °C	PT1000	0...10 V DC
TUTC2101	18...24 V AC / 18...35 V DC	-5...+50 °C	PT100	0...10 V DC
TUTC2102	Max 30 V DC, Min 11+(0,02xRL) V DC	-5...+50 °C	PT100	4...20 mA

ACCESSORY

Article	Description
DBZ-22	Mounting bracket for air duct transmitters



These transmitters are supplied with mounting bracket model DBZ-22.

Flow, air and liquid switches and transmitters

LIQUID FLOW SWITCHES

Switches for liquid flow control.

Well-suited for:

- heating and air conditioning systems
- refrigeration systems.



DB25MI

Technical data	
Media	Water, Water max. 50% glycol
Contacts	Microswitch with SPDT contacts
Switch capacity	5 A, 250 V AC
Media temperature	-20...+110 °C
Storage temperature	-20...+70 °C
Storage humidity	< 95 % RH
Max. pressure	2500 kPa = 25 bar
Pressure loss at Q_{max}	1 kPa = 0.01 bar
Tolerance	± 15 % end of scale
Hysteresis	Min. 0.7 l/min
Plug	Internally threaded connector DIN 43650-A
Casing	ABS V0
Body	Brass
Paddles	Stainless steel
Packing	NBR
Weight	300...990 g
Dimensions	102 x 30 x 83...104 mm
Protection class	IP65
Isolation class	II

Article	Connection	Setting range	Max. recommended flow (l/min)
DB10MI	3/8"	5 - 6 l/min (H ₂ O)	10 l/min (H ₂ O)
DB15MI	1/2"	6 - 7 l/min	20 l/min
DB20MI	3/4"	7.5 - 11 l/min	40 l/min
DB20MI/1	3/4"	13 - 16 l/min	40 l/min
DB25MI	1"	19 - 24 l/min	60 l/min
DB32MI	1 1/4"	30 - 50 l/min	80 l/min
DB40MI	1 1/2"	50 - 60 l/min	100 l/min
DB50MI	2"	70 - 90 l/min	150 l/min



The indicated values have been measured with the flow switch mounted horizontally.

LIQUID FLOW SWITCH

Electromechanical flow switches, suited for pipes of industrial plants: heating and air conditioning, refrigeration systems and heat pumps. Available in brass (suitable for normal media), and stainless steel AISI 316L (compatible with certain aggressive media).

Technical data	
Media	Water, Water max. 50% glycol
Contacts	Microswitch with switching contacts SPDT
Switch capacity	15 (8) A, 24...250 V AC
Ambient temperature	-40...+85 °C
Ambient humidity	10...90 % RH (non-condensing)
Media temperature	-40...+120 °C
Storage temperature	-40...+85 °C
Storage humidity	< 95 % RH
Connection	Standard R1" (DIN 2999) for series SF1 and SF2
Material, casing cover	Transparent Polycarbonate (PC)
Material, casing base	ABS
Paddles	Stainless steel AISI 316L
Weight	950 g
Dimensions	140 x 62 x 65 mm
Protection class	IP65
Isolation class	I

Article	For pipes (diameter)	Flow	Media	"T" pipe fitting	Max. pressure
SF1K	1...8"	0.6...90.8 m ³ /h	Normal (body in brass)	-	1100 kPa (11 bar)
SF1E	1...8"	0.6...90.8 m ³ /h	Normal (body in brass)	-	1100 kPa (11 bar)
SF1RE	1...8"	0.2...55.3 m ³ /h	Normal (body in brass)	-	1100 kPa (11 bar)
SF2EI	1...8"	0.6...90.8 m ³ /h	Corrosive (AISI 316L compatibility)	-	3000 kPa (30 bar)
SF2REI	1...8"	0.2...55.3 m ³ /h	Corrosive (AISI 316L compatibility)	-	3000 kPa (30 bar)
SF3E	1/2"	0.174...0.846 m ³ /h	Normal (body in brass)	X	1100 kPa (11 bar)
SF4E	3/4"	0.138...0.768 m ³ /h	Normal (body in brass)	X	1100 kPa (11 bar)
SF6E	1"	0.2...1.0 m ³ /h	Normal (body in brass)	X	1100 kPa (11 bar)



SF2EI



SF3E



FLZ-09

ACCESSORIES

Article	Description
DBZ-09	Paddles for liquid flow switch in stainless steel AISI 316L. (Only for FLS304... and FLS350... Not for FLS306X, FLS307X or FLS308X.)



Models SF1E and SF2EI with TÜV approval.

Notes: the flow switches are supplied with paddles model DBZ-09.

On request available: 1" NPT connection version (product code "SFxx/NPT") for SF1 and SF2 series.

SF1K/SF1E/SF2EI Flow chart H₂O

Pipe connector Ø	Qmax m ³ /h recommended	Min. adjustment m ³ /h cut-off cut-in	Max. adjustment m ³ /h cut-off cut-in
1"	3,6	0,6 (1,0)	2,0 (2,1)
1 1/4"	6,0	0,8 (1,3)	2,8 (3,0)
1 1/2"	9,0	1,1 (1,7)	3,7 (4,0)
2"	15,0	2,2 (3,1)	5,7 (6,1)
2 1/2"	24,0	2,7 (4,0)	6,5 (7,0)
3"	36,0	4,3 (6,2)	10,7 (11,4)
4"	60,0	11,4 (14,7)	27,7 (29,0)
4" Z	60,0	6,1 (8,0)	17,3 (18,4)
5"	94,0	22,9 (28,4)	53,3 (55,6)
5" Z	94,0	9,3 (12,9)	25,2 (26,8)
6"	120,0	35,9 (43,1)	81,7 (85,1)
6" Z	120,0	12,3 (16,8)	30,6 (32,7)
8"	240,0	72,6 (85,1)	165,7 (172,5)
8" Z	240,0	38,6 (46,5)	90,8 (94,2)

For models with suffix "Z" the longest paddle must be used to obtain the values indicated on the table.
Pressure drop at the maximum flow (Qmax): 0,08 bar

Nota: the values indicated on schedule have been measured with the flow switch mounted on horizontal position.

SF1RE/SF2REI Flow chart H₂O

Pipe connector Ø	Min. adjustment m ³ /h cut-off cut-in	Max. adjustment m ³ /h cut-off cut-in
1"	0,2 (0,6)	1,0 (1,1)
1 1/4"	0,25 (0,9)	1,4 (1,6)
1 1/2"	0,5 (1,2)	1,6 (2,2)
2"	0,9 (2,3)	3,6 (4,1)
2 1/2"	1,2 (3,1)	4,9 (5,5)
3"	2,1 (4,9)	7,4 (8,2)
4"	4,9 (11,3)	17,1 (19,1)
4" Z	3,3 (7,7)	11,6 (13,0)
5"	9,7 (22,4)	34,0 (37,9)
5" Z	5,0 (11,5)	17,5 (19,6)
6"	13,6 (31,5)	47,6 (53,2)
6" Z	6,1 (14,1)	21,4 (23,9)
8"	25,7 (59,6)	90,1 (100,7)
8" Z	21,7 (36,5)	55,3 (61,8)

Nota: the values indicated on schedule have been measured with the flow switch mounted on horizontal position.

Palette (models without "T" pipe fitting)

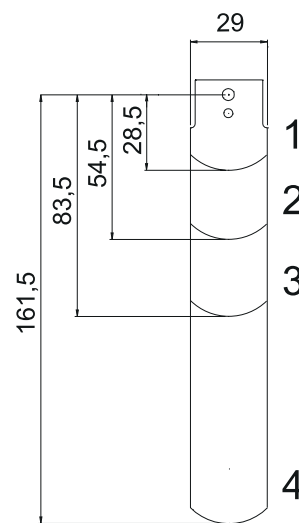
SF3E/4E/6E

Flow chart with „T“ fittings

SF-	Pipe connector with "T" pipe fitting Ø	Min. adjustment m ³ /h cut-off cut-in	Max. adjustment m ³ /h cut-off cut-in
3E	1/2"	0,174 (0,48)	0,846 (0,948)
4E	3/4"	0,138 (0,408)	0,768 (0,858)
6E	1"	0,2 (0,6)	1,0 (1,1)

The "T" connectors have cylindrical GAS thread.

Nota: the values indicated on schedule have been measured with the flow switch mounted on horizontal position.



PIPE	PADDLES
1"	1
1 1/4"	1
1 1/2"	1
2"	1+2
2 1/2"	1+2
3"	1+2+3
4"	1+2+3
4" Z	1+2+3+4
5"	1+2+3
5" Z	1+2+3+4
6"	1+2+3
6" Z	1+2+3+4
8"	1+2+3
8" Z	1+2+3+4



AIR FLOW SWITCH

Air or non-aggressive gas flow control. Alarm signal for flow shortage. Well-suited for air ducts, air conditioning and air handling systems.



SL1E

Technical data	
Contacts	Dust-tight microswitch with SPDT contacts (NC/NO)
Switch capacity	15 (8) A, 24...250 V AC
Ambient temperature	-40...+85 °C
Ambient humidity	10...90 % RH (non-condensing)
Media temperature	-10...+85 °C
Storage temperature	-40...+85 °C
Storage humidity	< 95 % RH
Material, casing cover	Transparent PC
Material, casing base	ABS
Body	Brass
Paddles	Stainless steel AISI 301
Weight	630 g
Dimensions	265.5 x 140 x 102 mm
Protection class	IP65

Article	Cut out	Cut in	Max. air temperature
SL1E	min. 1.0 m/s - max. 8.0 m/s	min. 2.5 m/s - max. 9.2 m/s	85 °C

ACCESSORIES

Article	Description
DBZ-08	Stainless steel AISI 301 paddle for air flow switch



DBZ-08



Supplied with paddel model DBZ-08.

The values indicated on schedule have been measured with the flow switch mounted on horizontal position.

Pressure switches and transmitters

AIR DIFFERENTIAL PRESSURE SWITCHES

Differential pressure for air or non-aggressive and non-inflammable gas control.



DBL

Technical data	
Contacts	Microswitch with SPDT contacts, according to EN 1854 (EN 60730)
Switch capacity	1.5 (0.4) A, 250 V AC
Ambient temperature	-20...+85 °C
Ambient humidity	10...90 % RH (non-condensing)
Storage temperature	-40...+85 °C
Max. pressure	100 mbar
Diaphragm	Silicone (LSR)
Casing	Polystyrene
Weight	180...210 g
Dimensions	Ø 118 x h 57.5 mm
Protection class	IP54
Isolation class	II

Article	Range	Hysteresis
DBL-205A	0.3...4.0 mbar (30...400 Pa)	0.15 mbar ± 15%
DBL-205B	0.5...5.0 mbar (50...500 Pa)	0.2 mbar ± 15%
DBL-205C	0.2...3.0 mbar (20...300 Pa)	0.1 mbar ± 15%
DBL-205D	2...10 mbar (200...1000Pa)	1.0 mbar ± 15%
DBL-205E	5...25 mbar (500...2500 Pa)	1.5 mbar ± 15%

ACCESSORIES

Article	Description
DBZ-06	Connection set with 2 PVC duct connectors, 2 m flexible PVC pipe and 4 screw
DBZ-14A	Set with mounting bracket and screws (S-shaped)
DBZ-14B	Set with mounting bracket and screws (L-shaped)



Articles available in multipack /M: DBL-205.../M (45 pcs.)



DBZ-06



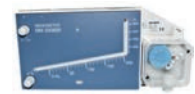
DBZ-14A



DBZ-14B

MANOMETERS AND AIR DIFFERENTIAL PRESSURE SWITCHES

Differential pressure visualization of air or non-aggressive and non-inflammable gases with alarm at a pre-set value.



DB-M6P6

The compact unit consists of:

- a differential manometer with an inclined liquid pipe, complete of tank to allow temporary overpressure;
- a bottle containing indication liquid and 2 stickers (red/green);
- a differential pressure switch connected to the manometer with PVC hose, complete of pressure adjustment knob, terminals for electrical connections and cable gland PG 9 (protection class according to EN 60529: IP54);
- PVC hose $\varnothing 4 \times 7$ - 2.2 m length, pipes and fixing screws.

Technical data

Contacts	Dust-tight microswitch with SPDT contacts
Switch capacity	3 (2) A, 250 V AC
Ambient temperature	-40...+60 °C
Ambient humidity	10...90 % RH (non-condensing)
Storage temperature	DB-M...: -45...+70 °C DB-M...P...: -25...+70 °C
Accuracy	5 Pa
Fluid	ISO-paraffin with density at 15 °C DB-M6P6: red colour DB-M10P13: blue colour
Electrical connection	With terminals and cable gland PG9
Material	ABS, PMMA, PC
Packing	NBR
Weight	400...820 g
Dimensions	290 x 140 x 64 mm
Protection class	IP54 class II
Isolation class	II

Article	Manometer range	Pressure switch range	Hysteresis	Max. pressure
DB-M6	0...600 Pa	-	-	200 kPa
DB-M6P6	0...600 Pa	40...600 Pa	30 Pa	50 kPa
DB-M10	0...1500 Pa	-	-	200 kPa
DB-M10P13	0...1500 Pa	100...1300 Pa	80 Pa	50 kPa

DIFFERENTIAL PRESSURE TRANSMITTERS 0...1 BAR

Differential pressure transmitter for monitoring differential gaseous pressure, non-aggressive media. Can be mounted in any position.

Possible areas of applications are:

- air-conditioning and clean rooms;
- building automation;
- valve and flap control;
- fluid and level monitoring;
- control of air flows.



984M.3X3104



984M.343714

Technical data	
Supply voltage	24 V AC / DC with output 0...10 V DC and 4...20 mA 24 V DC with output 4...20 mA (2 wires)
Outputs	0...10 V DC (max 10 mA) 4...20 mA (20...500 Ohm)
Sensor	Piezoresistive
Ambient temperature	0...50 °C
Ambient humidity	10...95 % RH (non-condensing)
Storage temperature	-10...+70 °C
Accuracy	< ± 0.2 % of end of scale
Typical long term stability	< ± 0.5 % to ± 2.5 % of end of scale/year
Response time	100 ms or 1 sec., selectable
Installation	Can be mounted in any position
Casing	Housing with process connection P2 made of ABS, mounting part with process connection P1 made of POM
Weight	170 g
Dimensions	Max. Ø 118 x h 57.5 mm
Protection class	IP54
Certification	EN60770, EN61326

984M.3

X 3 X X 4

Pressure range (Pa):

Range 1	Range 2	overload max	
0...100 Pa (1.0 mbar)	0...250 Pa (2.5 mbar)	60 kPa	2
0...250 Pa (2.5 mbar)	0...500 Pa (5.0 mbar)	60 kPa	3
0...500 Pa (5.0 mbar)	0...1.000 Pa (10 mbar)	75 kPa	4
0...1 kPa (10 mbar)	0...2.5 kPa (25 mbar)	85 kPa	5
0...5 kPa (50 mbar)	0...10 kPa (100 mbar)	85 kPa	7
0...25 kPa (250 mbar)	0...50 kPa (500 mbar)	200 kPa	9
0...50 kPa (500 mbar)	0...100 kPa (1000 mbar)	200 kPa	A
-50...+50 Pa (-0,5...+0,5 mbar)		60 kPa	X
-100...+100 Pa (-1,0...+1,0 mbar)		60 kPa	W

Pressure unit Pascal

Output and power supply

0...10 Vdc	24 Vac/dc, with open collector NPN output, 3-wire cable	1
4...20 mA	24 Vdc, without open collector NPN output, 2-wire cable	2
4...20 mA	24 Vac/dc, with open collector NPN output, 3-wire cable	3
0...10 Vdc	24 Vac/dc, without open collector NPN output, 3-wire cable	7
4...20 mA	24 Vac/dc, without open collector NPN output, 3-wire cable	D

Display

None	0
With LED-display, 3.5 digits (not for output 4...20 mA, 2-wire)	1

Electrical connections

Screw terminal block

ACCESSORIES

Article	Description
DBZ-06	Connection set with 2 PVC duct connectors, 2 m flexible PVC pipe and 4 screw
DBZ-14A	Set with mounting bracket and screws (S-shaped)
DBZ-14B	Set with mounting bracket and screws (L-shaped)
104552	Test certificate



DBZ-06



DBZ-14A



DBZ-14B

DIFFERENTIAL PRESSURE TRANSMITTER WITH DISPLAY

Differential pressure transmitter for use in air and non-corrosive gases. For control of dampers, frequency converters, VAV systems etc.



TPDA

Technical data

Supply voltage	24 V AC/DC (21...27 V AC/DC)
Output signal, pressure	0...10 V DC / 4...20 mA
Measuring range, pressure	0...100 / 0...300 / 0...500 / 0...999 Pa
Accuracy, pressure	±1 % full scale at 20 °C
Electronic damping	0...20 s
Display	Yes
Dimensions, external (WxHxD)	89 x 129 x 58 mm
Protection class	IP54

MODELS WITH CONNECTION KIT (MTU) AND 2M PLASTIC TUBE

Article	Description
TPDA	Differential pressure transmitter

DIFFERENTIAL PRESSURE TRANSMITTER WITH BUILT-IN CONTROLLER AND DISPLAY

Differential pressure transmitter for use in air and non-corrosive gases. For control of dampers, frequency converters, VAV systems etc.



TPDA-C

Technical data

Supply voltage	24 V AC/DC (21...27 V AC/DC 50-60 Hz)
Output signal, pressure	0...10 V DC / 4...20 mA
Output signal, controller	0...10 V DC
Measuring range, pressure	0...100 / 0...300 / 0...500 / 0...999 Pa
Accuracy, pressure	±1 % full scale at 20 °C
P-band	0...300 %
I-time	0...999 s
D-factor	0...999
Electronic damping	0...20 s
Display type	LED, three digits
Mounting	Wall
Dimensions, external (WxHxD)	89 x 129 x 58 mm
Protection class	IP54

MODELS WITH CONNECTION KIT (MTU) AND 2M PLASTIC TUBE

Article	Description
TPDA-C	Differential pressure transmitter

DIFFERENTIAL PRESSURE TRANSMITTERS WITH COMMUNICATION



TPDA-12CX

Technical data	
Supply voltage	24 V AC/DC (21...27 V AC/DC)
Protection class	IP54
Power consumption	< 1 VA
Ambient temperature	-25...+50 °C
Mounting	Wall
Accuracy, pressure	≤ 1 % full scale
Accessories, included	Two pressure outlets (straight) and 2 m plastic tube. Art. no.: ANS-20
Pressure data	
Media	Air, non-combustible and non-aggressive gases
Response time	40 ms, depending on filtertime
Sensor element, pressure	Piezoresistive
Temperature dependency, pressure	Thermal effects: 1 (-25...+85 °C), Offset: ±0.5 % FSS, Span: ±1.0 % FSS
Accuracy, pressure	≤ 1 % full scale
Resolution	0,005 % of full scale
Warmup time	< 5 min
Annual deviation	±2 Pa (1250 Pa) ±4 Pa (2500 Pa) ±20 Pa (7500 Pa)
K-factor	5 (5...700)
Zero-point adjustment	By pressing a button, the output signal and the display adjusts to zero.
Universal inputs (UI1, UI2)	
Accuracy	± 1 % (0...10 V) ± 0.5 K (PT1000/Ni1000-01)
Digital inputs (DI)	Potential-free contacts on/off (closed=on)
Universal output (UO1, UO2)	
Analogue outputs (AO)	0...10 V
Accuracy	± 1 %
Digital outputs (DO)	Potential-free contacts on / off (on = closed)
Power output	Max. 2A (total UO1 + UO2)
Communication data	
Supported protocols	
Material, housing	Polycarbonate (PC)
Material, base	Polycarbonate (PC)

MODELS WITH CONNECTION KIT (ANS-20)

Article	Number of sensors	Max. overload pressure	Measuring range, pressure
TPDA-12CX	1	25 kPa	0...1250 Pa
TPDA-25CX	1	50 kPa	0...2500 Pa
TPDA-75CX	1	120 kPa	0...7500 Pa
TPDA-12CX2	2	25 / 25 kPa	0...1250 Pa (sensor 1) / 0...1250 Pa (sensor 2)
TPDA-25CX2C	2	50 / 50 kPa	0...2500 Pa (sensor 1) / 0...2500 Pa (sensor 2)
TPDA-12CXS25C	2	25 / 50 kPa	0...1250 Pa (sensor 1) / 0...2500 Pa (sensor 2)
TPDA-12CXS75C	2	25 / 120 kPa	0...1250 Pa (sensor 1) / 0...7500 Pa (sensor 2)

ACCESSORIES

Article	Description
ANS-3	2 m plastic tube and two pressure outlets (metal, 90° angle)
ANS-20	2 m plastic tube and two pressure outlets (straight)

DIFFERENTIAL PRESSURE TRANSMITTERS WITH ANALOGUE OUTPUTS



TPDAxxxxAx

Technical data

Supply voltage	24 V AC/DC ±15 %
Overall accuracy pressure	≤ 1 % full scale
Power consumption	0...10 V mode : 2 VA (rms), min. trafo size 7,5 VA 4...20 mA mode : 2.7 VA (rms), min. trafo size 9 VA
Operating temperature	-25...+50 °C
Protection class	IP54
Accessories, included	Two pressure outlets (straight) and 2 m plastic tube. Art. no.: ANS-20

Article	Working range	Number of sensors
TPDA12A	0...1250 Pa	1
TPDA25A	0...2500 Pa	1
TPDA75A	0...7500 Pa	1
TPDA1225A2	PS1: 0...1250 Pa / PS2: 0...2500 Pa	2
TPDA1275A2	PS1: 0...1250 Pa / PS2: 0...7500 Pa	2

PRESSURE TRANSMITTER FOR LIQUIDS AND GASES

Pressure transmitter for measurement of liquids and gases.



Technical data

Output signal	0...10 V DC (three-wire) or 4...20 mA (two-wire)
Pressure connection	G 1/4" (outside thread)
Dynamic response time	< 2 ms, 1 ms typically
Tolerable overload	≤ 4 bar 3.0 x full scale, > 4 bar 2.5 x full scale
Media temperature	-15...+125 °C
Ambient temperature	-30...+85 °C
Storage temperature	-50...+100 °C
Accuracy, characteristic line	±0.3 % full scale *
Accuracy, resolution	0.1 % full scale *
Accuracy, thermal characteristic	Max. ±0.2 % full scale / 10 K *
Accuracy, long-term stability according to IEC EN 60770-1	Max. ±0.25 % full scale *
Sealing	FPM
Weight	90 g
Cable length	1.5 m
Protection class	IP67

MODELS

Article	Working range	Output signal	Supply voltage	Power consumption
TPGL1	0...100 kPa (1 bar)	0...10 V DC	12...33 V DC / 24 V AC ±15 %	< 7 mA
TPGL1-420	0...100 kPa (1 bar)	4...20 mA	7...33 V DC	< 23 mA
TPGL2.5	0...250 kPa (2.5 bar)	0...10 V DC	12...33 V DC / 24 V AC ±15 %	< 7 mA
TPGL2.5-420	0...250 kPa (2.5 bar)	4...20 mA	7...33 V DC	< 23 mA
TPGL6	0...600 kPa (6 bar)	0...10 V DC	12...33 V DC / 24 V AC ±15 %	< 7 mA
TPGL6-420	0...600 kPa (6 bar)	4...20 mA	7...33 V DC	< 23 mA
TPGL10	0...1000 kPa (10 bar)	0...10 V DC	12...33 V DC / 24 V AC ±15 %	< 7 mA
TPGL10-420	0...1000 kPa (10 bar)	4...20 mA	7...33 V DC	< 23 mA
TPGL16	0...1600 kPa (16 bar)	0...10 V DC	12...33 V DC / 24 V AC ±15 %	< 7 mA
TPGL16-420	0...1600 kPa (16 bar)	4...20 mA	7...33 V DC	< 23 mA
TPGL25	0...2500 kPa (25 bar)	0...10 V DC	12...33 V DC / 24 V AC ±15 %	< 7 mA
TPGL25-420	0...2500 kPa (25 bar)	4...20 mA	7...33 V DC	< 23 mA
TPGL40	0...4000 kPa (40 bar)	0...10 V DC	12...33 V DC / 24 V AC ±15 %	< 7 mA
TPGL40-420	0...4000 kPa (40 bar)	4...20 mA	7...33 V DC	< 23 mA

ACCESSORIES

Article	Description
TPL105074	Mounting spacer which lowers the temperature at higher media temperatures than the sensor can handle.
DBZ-AD1	Adapter 1/4" to 1/2". For mounting immersion sensors in 1/2".



For other models please contact Industrietechnik.



TPL105074



DBZ-AD1

DIFFERENTIAL PRESSURE TRANSMITTER FOR LIQUIDS AND GASES

Differential pressure transmitter for measurement of liquids (also glycol-mixed) and gases (not ammonia).

Supply voltage	24 V CA / 18...33 V DC \pm 15% (output signal 0...10 V), 0.1 VA 11...33 V DC \pm 15%, two-wire (output signal 4...20 mA), 0.5 VA
Output signal	0...10 V DC or 4...20 mA (two-wire)
Ambient temperature	-15...+85 °C
Accuracy	TPDL10...TPDL250: \pm 1.3 % es TPDL400: \pm 0.8 % es TPDL600...TPDL2500: \pm 0.5 % es
Connection	Screw fitting for \varnothing 6 mm pipe included
Electrical connection	DIN EN 175301 803-A
Dimensions	68 x 40 x 113 mm
Protection class	IP65



TPDL

Article	Output signal	Working range
TPDL10	0...10 V DC	0...10 kPa (0...0.1 bar)
TPDL10-420	4...20 mA	0...10 kPa (0...0.1 bar)
TPDL20	0...10 V DC	0...20 kPa (0...0.2 bar)
TPDL20-420	4...20 mA	0...20 kPa (0...0.2 bar)
TPDL40	0...10 V DC	0...40 kPa (0...0.4 bar)
TPDL40-420	4...20 mA	0...40 kPa (0...0.4 bar)
TPDL100	0...10 V DC	0...100 kPa (0...1 bar)
TPDL100-420	4...20 mA	0...100 kPa (0...1 bar)
TPDL250	0...10 V DC	0...250 kPa (0...2.5 bar)
TPDL250-420	4...20 mA	0...250 kPa (0...2.5 bar)
TPDL400	0...10 V DC	0...400 kPa (0...4 bar)
TPDL400-420	4...20 mA	0...400 kPa (0...4 bar)
TPDL600	0...10 V DC	0...600 kPa (0...6 bar)
TPDL600-420	4...20 mA	0...600 kPa (0...6 bar)
TPDL1000	0...10 V DC	0...1000 kPa (0...10 bar)
TPDL1000-420	4...20 mA	0...1000 kPa (0...10 bar)
TPDL1600	0...10 V DC	0...1600 kPa (0...16 bar)
TPDL1600-420	4...20 mA	0...1600 kPa (0...16 bar)
TPDL2500	0...10 V DC	0...2500 kPa (0...25 bar)
TPDL2500-420	4...20 mA	0...2500 kPa (0...25 bar)

Article	Description
TPDL-NIPPEL	Nipple (R=1/8" 27 NPT) for connection of \varnothing 6 mm copper pipe
TPDL-R	Copper pipe, \varnothing 6 mm, length 30 cm



TPDL-NIPPEL



TPDL-R



For other models please contact Industrietechnik.

Level switches

LEVEL SWITCH

Level control of normal liquids contained in tanks and barrels.

Alarm signal of minimum or maximum level.



SQ01

Technical data

Contacts	Microswitch with SPDT contacts
Switch capacity	15 (8) A, 24...250 V AC
Ambient temperature	-40...+85 °C
Ambient humidity	10...90 % RH (non-condensing)
Media temperature	max. +85 °C
Storage temperature	-40...+85 °C
Storage humidity	< 95 % RH
Level length	200 mm
Protection class	IP65
Isolation class	I

Material

Material, casing cover	Transparent polycarbonate
Material, casing base	ABS
Body	Brass
Float	Acrylic
Weight	960 g
Dimensions	140 x 62 x 65 mm

Article	Hysteresis	Max. temperature	Max. pressure
SQ01	10/14 mm	+85 °C	11 bar