



INDUSTRIAL TEMPERATURE TRANSMITTERS

TT

FUNCTION

Temperature measuring and transmission in voltage, current values:

- 0...10 Vdc, 3 wires;
- 4...20 mA, 2 wires;

APPLICATIONS

Designed for industrial applications with air duct mounting or wall mounting.

TYPE	MEASURING RANGE °C	OUTPUT (TEMPERATURE)	ACCURACY (TEMPERATURE) °C	PROTECTION	APPLICATION	DIA-GRAM FIG.
TTC011	0...+50	0-10 Vdc	± 1	IP65	air duct	2
TTC012	-30...+50	0-10 Vdc	± 1,5	IP65	air duct	2
TTC013	0...+100	0-10 Vdc	± 2	IP65	air duct	2
TTC021	0...+50	4-20 mA	± 1	IP65	air duct	1
TTC022	-30...+50	4-20 mA	± 1,5	IP65	air duct	1
TTC023	0...+100	4-20 mA	± 2	IP65	air duct	1
TTE011	0...+50	0-10 Vdc	± 1	IP65	room/outdoor	2
TTE012	-30...+50	0-10 Vdc	± 1,5	IP65	room/outdoor	2
TTE013	0...+100	0-10 Vdc	± 2	IP65	room/outdoor	2
TTE021	0...+50	4-20 mA	± 1	IP65	room/outdoor	1
TTE022	-30...+50	4-20 mA	± 1,5	IP65	room/outdoor	1
TTE023	0...+100	4-20 mA	± 2	IP65	room/outdoor	1
TTI011	0...+50	0-10 Vdc	± 1	IP65	immersion	2
TTI012	-30...+50	0-10 Vdc	± 1,5	IP65	immersion	2
TTI013	0...+100	0-10 Vdc	± 2	IP65	immersion	2
TTI021	0...+50	4-20 mA	± 1	IP65	immersion	1
TTI022	-30...+50	4-20 mA	± 1,5	IP65	immersion	1
TTI023	0...+100	4-20 mA	± 2	IP65	immersion	1

TECNICAL FEATURES

Power supply: see electrical wiring
Outputs: see schedule
Power cons.: < 1 W
Elect. connections: screw terminals max. 0.75 mm²
Measuring range: see schedule
Working temp. (sensor): 0...+50 °C (TTE)
 -20...+100 °C (TTI)
 -20...+80 °C (TTC)
Room temp.: 0..50 °C
Working humidity: 10...95 % r.h.
Storage: -20...+70 °C
Precision: 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)
Housing: cover: blue transparent polycarbonate
 base: blue polycarbonate
Dimensions: 75 x 75 x 36 mm
Protection: IP65, class III (sensor excluded)
Weight: 180...300 g

TEMPERATURE DEPENDANCE OF ELECTRONICS:

output 4...20 mA (temperature): 0.015 °C/°C

Load limits:
 output 4...20 mA
 - power supply 11...17 Vdc: $R_L < 50 \text{ Ohm}$
 - power supply 21...30 Vdc: $R_L < 500 \text{ Ohm}$
 output 0...10 Vdc: $R_L > 1000 \text{ Ohm}$

ELECTRICAL WIRING

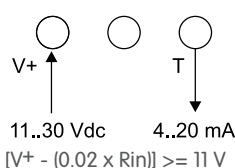


fig. 1

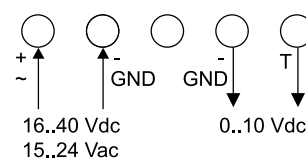
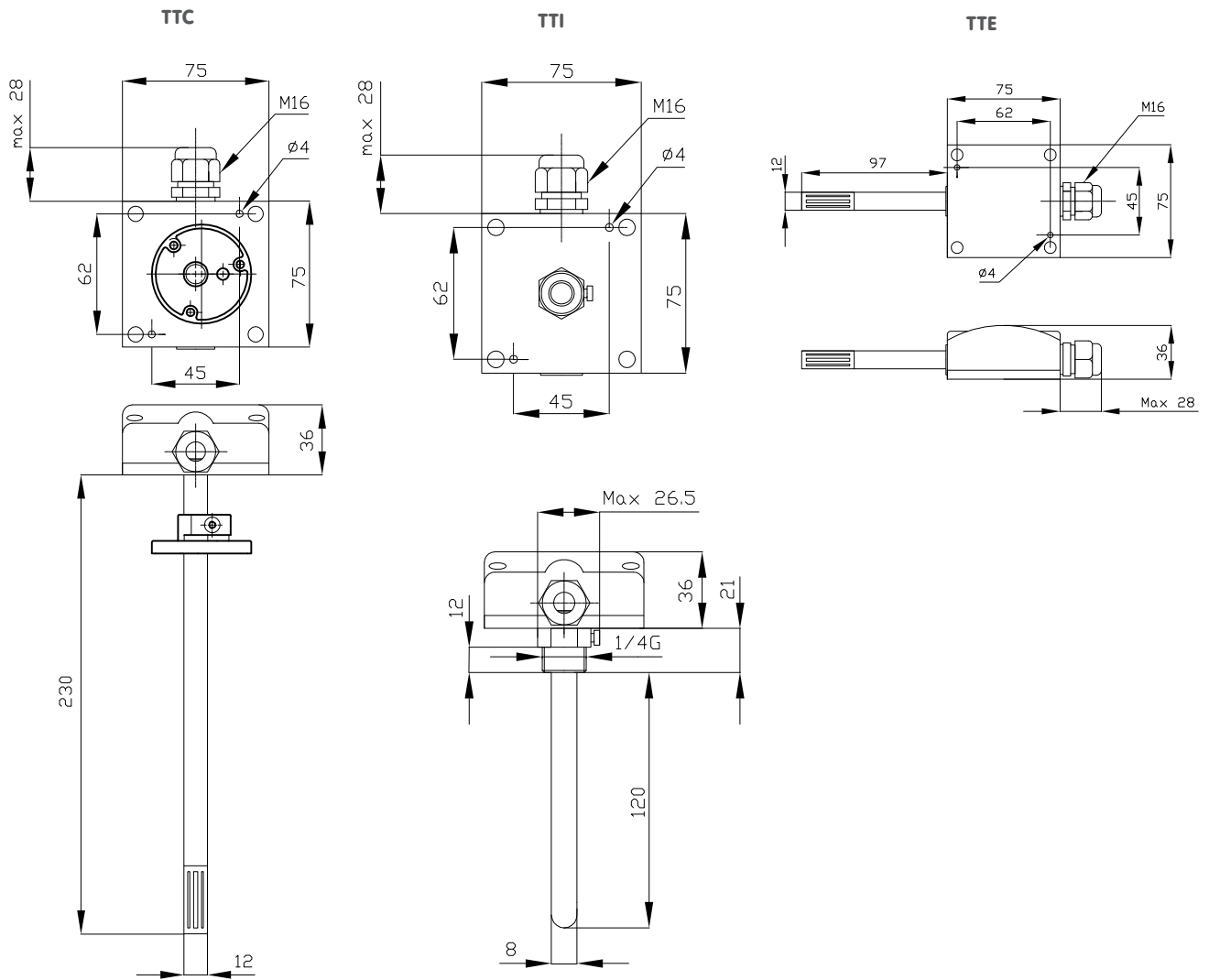


fig. 2

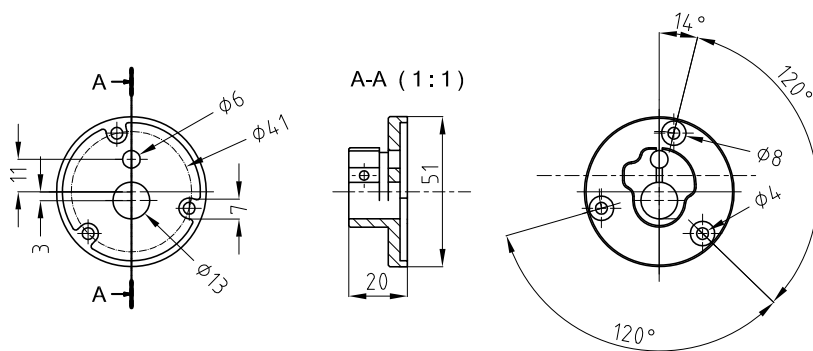
Wiring diagrams referred to the different models from the schedule.



DIMENSIONS (mm)



MOUNTING BRACKET DBZ-22 SUPPLIED WITH TTC





TUTE



TUTC

INDUSTRIAL TEMPERATURE AND HUMIDITY TRANSMITTERS

TUT

FUNCTION

Temperature and humidity measuring and transmission in voltage, current or resistive (only temperature) values:

- 0...10 Vdc, 3 wires;
- 4...20 mA, 2 wires;
- resistive output;

APPLICATIONS

Designed for industrial applications with air duct mounting or wall mounting.

TYPE	MEASURING RANGE °C	MEASURING RANGE % r.h.	OUTPUT (TEMPERATURE)	OUTPUT (HUMIDITY)	ACCURACY (TEMPERATURE) °C	ACCURACY (HUMIDITY) % r.h.	PROTECTION	APPLICATION	DIAGRAM FIG:
TUTC0111	0...+50	0...100	0...10 Vdc	0...10 Vdc	± 1	± 3	IP65	air duct	2
TUTC0121	-30...+50	0...100	0...10 Vdc	0...10 Vdc	± 1,5	± 3	IP65	air duct	2
TUTC0131	0...+100	0...100	0...10 Vdc	0...10 Vdc	± 2	± 3	IP65	air duct	2
TUTC0212	0...+50	0...100	4...20 mA	4...20 mA	± 1	± 3	IP65	air duct	1
TUTC0222	-30...+50	0...100	4...20 mA	4...20 mA	± 1,5	± 3	IP65	air duct	1
TUTC0232	0...+100	0...100	4...20 mA	4...20 mA	± 2	± 3	IP65	air duct	1
TUTC1101	-5...+50	0...100	NTC 10K	0...10 Vdc	± 0,6	± 3	IP65	air duct	4
TUTC1102	-5...+50	0...100	NTC 10K	4...20 mA	± 0,6	± 3	IP65	air duct	3
TUTC1301	-5...+50	0...100	NTC 1K8	0...10 Vdc	± 0,6	± 3	IP65	air duct	4
TUTC1302	-5...+50	0...100	NTC 1K8	4...20 mA	± 0,6	± 3	IP65	air duct	3
TUTC1401	-5...+50	0...100	NTC 10K3A1	0...10 Vdc	± 0,2	± 3	IP65	air duct	4
TUTC1402	-5...+50	0...100	NTC 10K3A1	4...20 mA	± 0,2	± 3	IP65	air duct	3
TUTC1501	-5...+50	0...100	NTC 10K4A1	0...10 Vdc	± 0,2	± 3	IP65	air duct	4
TUTC1502	-5...+50	0...100	NTC 10K4A1	4...20 mA	± 0,2	± 3	IP65	air duct	3
TUTC1601	-5...+50	0...100	NTC 20K	0...10 Vdc	± 0,6	± 3	IP65	air duct	4
TUTC1602	-5...+50	0...100	NTC 20K	4...20 mA	± 0,6	± 3	IP65	air duct	3
TUTE0111	0...+50	0...100	0...10 Vdc	0...10 Vdc	± 1	± 3	IP65	room/outdoor	2
TUTE0121	-30...+50	0...100	0...10 Vdc	0...10 Vdc	± 1,5	± 3	IP65	room/outdoor	2
TUTE0131	0...+100	0...100	0...10 Vdc	0...10 Vdc	± 2	± 3	IP65	room/outdoor	2
TUTE0212	0...+50	0...100	4...20 mA	4...20 mA	± 1	± 3	IP65	room/outdoor	1
TUTE0222	-30...+50	0...100	4...20 mA	4...20 mA	± 1,5	± 3	IP65	room/outdoor	1
TUTE0232	0...+100	0...100	4...20 mA	4...20 mA	± 2	± 3	IP65	room/outdoor	1
TUTE1101	-5...+50	0...100	NTC 10K	0...10 Vdc	± 0,6	± 3	IP65	room/outdoor	4
TUTE1102	-5...+50	0...100	NTC 10K	4...20 mA	± 0,6	± 3	IP65	room/outdoor	3
TUTE1301	-5...+50	0...100	NTC 1K8	0...10 Vdc	± 0,6	± 3	IP65	room/outdoor	4
TUTE1302	-5...+50	0...100	NTC 1K8	4...20 mA	± 0,6	± 3	IP65	room/outdoor	3
TUTE1401	-5...+50	0...100	NTC 10K3A1	0...10 Vdc	± 0,2	± 3	IP65	room/outdoor	4
TUTE1402	-5...+50	0...100	NTC 10K3A1	4...20 mA	± 0,2	± 3	IP65	room/outdoor	3



TYPE	MEA-SURING RANGE °C	MEA-SURING RANGE % r.h.	OUTPUT (TEMPERATURE)	OUTPUT (HUMIDITY)	ACCU-RACY (TEMPERATURE) °C	ACCU-RACY (HUMIDITY) % r.h.	PROTEC-TION	APPLICATION	DIAGRAM FIG:
TUTE1501	-5...+50	0...100	NTC 10K4A1	0...10 Vdc	± 0,2	± 3	IP65	room/outdoor	4
TUTE1502	-5...+50	0...100	NTC 10K4A1	4...20 mA	± 0,2	± 3	IP65	room/outdoor	3
TUTE1601	-5...+50	0...100	NTC 20K	0...10 Vdc	± 0,6	± 3	IP65	room/outdoor	4
TUTE1602	-5...+50	0...100	NTC 20K	4...20 mA	± 0,6	± 3	IP65	room/outdoor	3

All humidity transmitters (P/N including letter U) have a max working temperature -5...+50 °C.

TECHNICAL FEATURES

- Power supply:** see electrical wirings
- Sensors:** temperature: resistive
humidity: capacitive
- Outputs:** see schedule
- Power cons.:** < 1 W
- Elect. connections:** screw terminals max. 0.75 mm²
- Measuring range:** see schedule
- Working temp. :** -5...+50 °C
- Working humidity:** 10...95 % r.h.
- Storage:** -20...+70 °C
- Precision:** humidity: ±3 % r.h. at 20 °C
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)
- Housing:** cover: blue transparent polycarbonate
base: blue polycarbonate
- Dimensions:** 75 x 75 x 36 mm
- Protection:** IP65, class I (sensors excluded)
- Weight:** 180...300 g

Temperature dependance of electronics:
output 4...20 mA (temperature): 0.015 °C/°C
output 4...20 mA (humidity): 0.015 % r.h./°C

Load limits:
output 4...20 mA
- power supply 11...17 Vdc: $R_L < 50 \text{ Ohm}$
- power supply 21...30 Vdc: $R_L < 500 \text{ Ohm}$
output 0...10 Vdc: $R_L > 1000 \text{ Ohm}$

ELECTRICAL WIRING

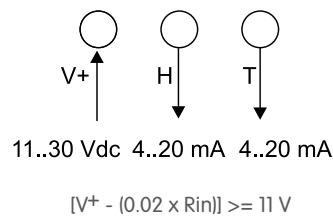


Fig. 1

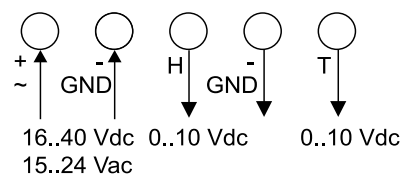


Fig. 2

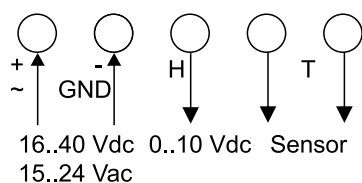


Fig. 4

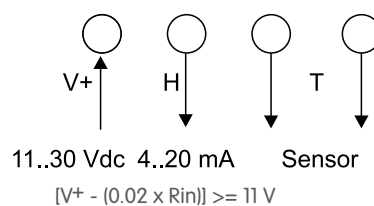
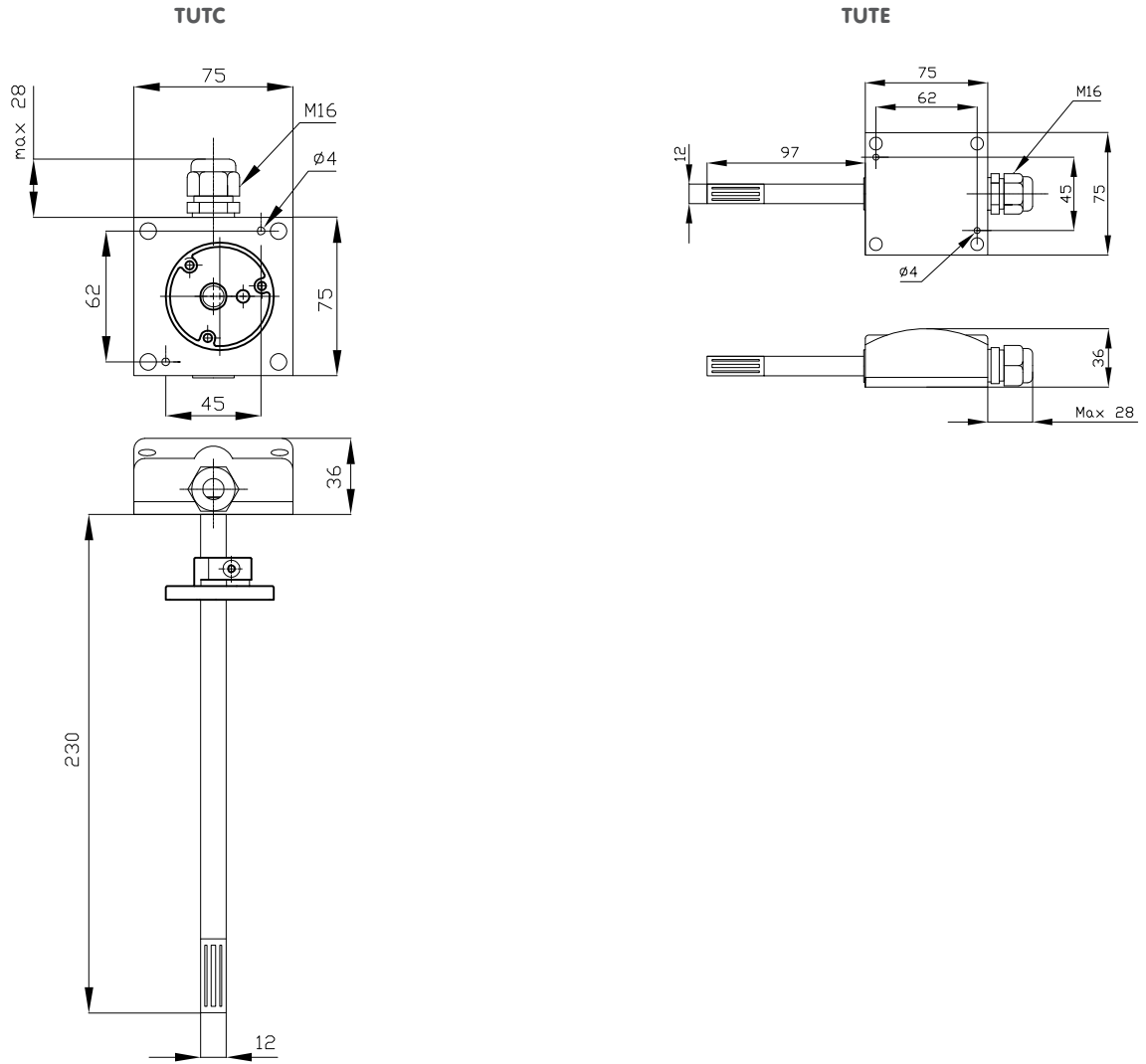


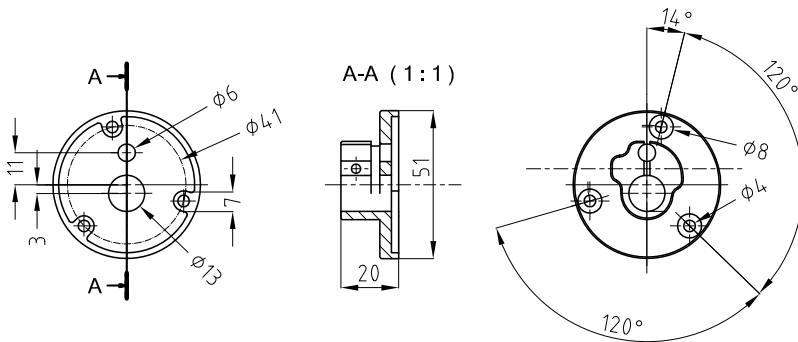
Fig. 3



DIMENSIONS (mm)



MOUNTING BRACKET DBZ-22 SUPPLIED WITH TUTC





TUE



TUC

INDUSTRIAL HUMIDITY TRANSMITTERS

TU

FUNCTION

Humidity measuring and transmission in voltage, current values:

- 0...10 Vdc, 3 wires;
- 4...20 mA, 2 wires;

APPLICATIONS

Designed for industrial applications with air duct mounting or wall mounting.

TYPE	MEASURING RANGE % r.h.	OUTPUT (HUMIDITY)	ACCURACY (HUMIDITY) % r.h.	PROTECTION	APPLICATION	DIAGRAM FIG.
TUC1	0...100	0...10 Vdc	± 3	IP65	air duct	2
TUC2	0...100	4...20 mA	± 3	IP65	air duct	1
TUE1	0...100	0...10 Vdc	± 3	IP65	room/outdoor	2
TUE2	0...100	4...20 mA	± 3	IP65	room/outdoor	1

All humidity transmitters (P/N including letter U) have a max working temperature -5...+50 °C.

TECHNICAL FEATURES

Power supply:	see electrical wiring
Humidity sensor:	capacitive
Output:	see schedule
Power cons.:	< 1 W
Elect. connections:	screw terminals max. 0.75 mm ²
Measuring range:	see schedule
Working temp. :	-5...+50 °C
Working humidity:	10...95 % r.h.
Storage:	-20...+70 °C
Precision:	+/-3 % r.h. at 20 °C
Housing:	cover: blue transparent polycarbonate base: blue polycarbonate
Protection:	IP65, class III (sensor excluded)
Dimensions:	75 x 75 x 36 mm
Weight:	180...300 g

Temperature dependance of electronics:

output 4...20 mA: 0.015 %r.h./°C

Load limits:

output 4...20 mA	
- power supply 11...17 Vdc:	R _L < 50 Ohm
- power supply 21...30 Vdc:	R _L < 500 Ohm
output 0...10 Vdc:	R _L > 1000 Ohm

ELECTRICAL WIRING

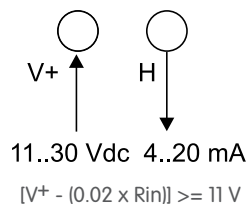


Fig. 1

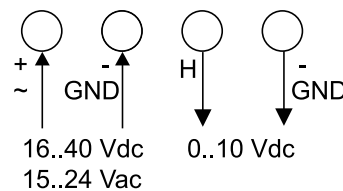
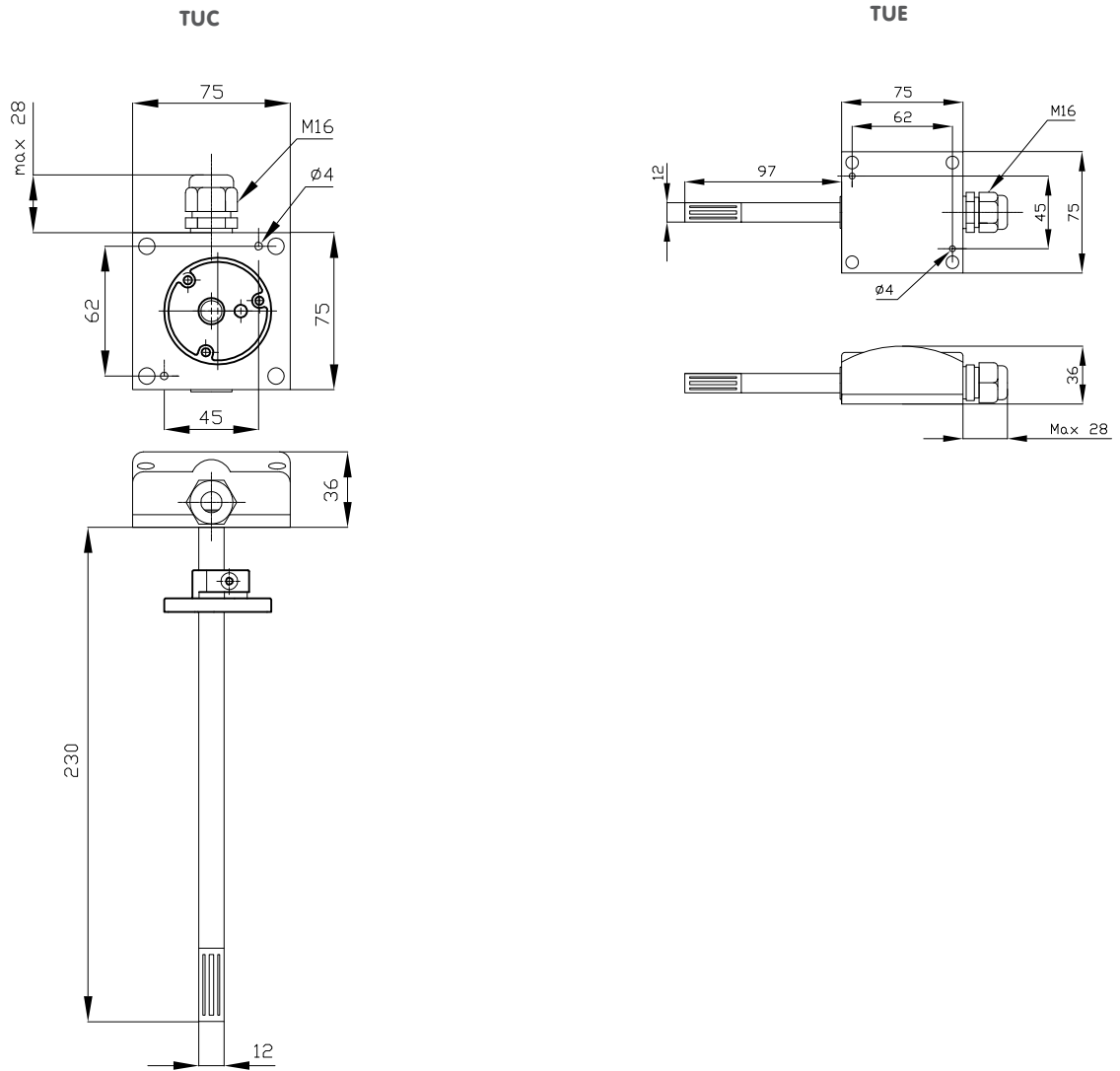


Fig. 2

Wiring diagrams referred to the different models from the schedule.



DIMENSIONS (mm)



MOUNTING BRACKET DBZ-22 SUPPLIED WITH TUC

