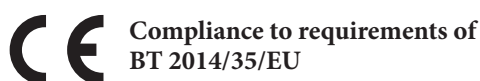


## thermometers with electric contacts

### all stainless steel construction

### DS 4" (100 mm)



They are used to control the electrical activity of compressors, pumps, presses, hydraulic and pneumatic equipment, chemical and petrochemical plant. The contacts open or close the circuit depending on the position of the indicating pointer and they are adjustable over the whole range. The filling drastically reduces the effects of vibrations and pulsations as well as those caused by a corrosive atmosphere, giving longer life and better performances of the pressure gauge and the electric contacts. They are also available with intrinsically safe inductive contacts.

#### 6.TCE - Standard Model

**Designation:** EN 13190.

**Indication ranges:** -320...+1200 °F (-200...+600 °C).

**Measuring ranges:** -280...+1100 °F (-170...+500 °C).

**Mechanical contact:** sliding contact, magnetic snap-action, electronic, inductive.

**Accuracy class:** 1 as per EN 13190, measuring range.

**Overtemperature:** not suitable.

**Ambient temperature:** -13...+149 °F (-25...+65 °C).

**Max working pressure:** 360 psi - 25 bar (without thermowell).

**Protection degree:** IP 55 as per EN 60529/IEC 529.

**Process connection:** AISI 316 st.st.

**Bulb:** AISI 316 st.st.  $\varnothing$  0.31-0.37-0.45" (8-9,5-11,5 mm), with rigid extension  $\varnothing$  0.31" (8 mm)

**Immersion length of the bulb with rigid extension "S":** **S22** -  $\varnothing$  0.31" (8 mm) = 5.63"...36.37" (143...1000 mm);

**S21** -  $\varnothing$  0.38" (9,6 mm) = 4.41"...36.37" (112...1000 mm);

**S20** -  $\varnothing$  0.45" (11,5 mm) = 3.35"...36.37" (85...1000 mm).

**Measuring element:** inert gas filled expansion system.

**Case:** stainless steel.

**Ring:** stainless steel bayonet lock.

**Window:** plexiglas.

**Movement:** stainless steel.

**Internal compensation device:** by a bimetallic linkage.

**Dial:** aluminium, white with black markings.

**Pointer:** adjustable, aluminium, black.

#### 6.TCE...R13 - Filled Model

**Indication ranges:** -40...+500 °F (-40...+250 °C).

**Measuring ranges:** -20...+425 °F (-30...+220 °C).

**Mechanical contact:** magnetic snap-action, electronic, inductive.

**Accuracy class:** 2 as per EN 13190, measuring range.

**Filling liquids:** silicon oil.

**Protection:** IP 65 as per EN 60529/IEC 529.

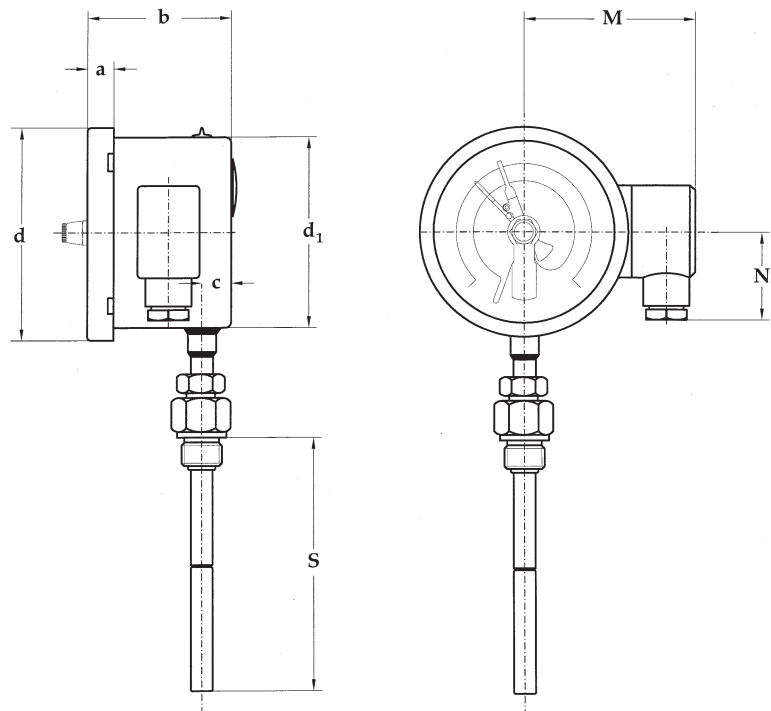
**Other features:** as Standard Model.

(1) The addition of mechanical electric contacts affects the accuracy of the instruments: 1% accuracy turns to be 1,5%, 1,6% turns to be 2,4% etc. (add 50% of the instrument accuracy; in case of magnetically assisted type contact, this value can't be added within  $\pm 5\%$  of setting point).

thermometres with electric contacts

all stainless steel construction, DS 4" (100mm)

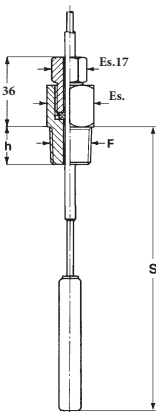
TCE



1 - Lower connection

DS	a	b (1)	d	d <sub>1</sub>	M	N
4" (100)	0.51" (13)	2.81/2.85" (71,5/82,5)	4.41" (112)	3.98" (101)	3.54" (90)	1.81" (46)

dimensions : inches (mm)



9 - Sliding male swivel nut

F	Es	h
41M G 1/2 A	0.87" (22)	0.55" (14)
43M 1/2-14 NPT	0.87" (22)	0.67" (17)
51M G 3/4 A	1.06" (27)	0.63" (16)
53M 3/4-14 NPT	1.06" (27)	0.67" (17)

CONTACT TYPE (1)

MODEL	Standard			Filled		
Contact type	Sliding contact, electronic			Magnetic snap-action contact, electronic		
Contact number	1	2	2 independent	1	2	2 independent
Junction box	3 poles + GND	3 poles + GND	6 poles + GND	6 poles + GND	6 poles + GND	6 poles + GND
ø exit cables: inches (mm)	0,23...0,35 (6...9)	0,23...0,35 (6...9)	0,27...0,51 (7...13)	0,27...0,51 (7...13)	0,27...0,51 (7...13)	0,27...0,51 (7...13)
Minimum range	140°F (60°C)	140°F (60°C)	140°F (60°C)	140°F (60°C)	140°F (60°C)	140°F (60°C)

(1) Functional characteristics, electric diagrams and contact types are available on data-sheets : "ELECTRIC CONTACTS", "ELECTRONIC CONTACTS"

OPTIONS

R13 - Filling liquid: silicon oil, for temperature range ≤ +500 °F (250 °C)
ATEX version, with intrinsic safety inductive contact (1)

(1) See ATEX data-sheet for technical details

"HOW TO ORDER" SEQUENCE

Section / Model / Mounting / Connection type / Diameter / Range / Process connection / Bulb / Options

6 TCE 1 9 E 41M, 43M 520...22 R13 51M, 53M

