

With connection cable to the temperature sensor

## Application

The battery-operated digital thermometer models LILLY<sub>plus</sub> consist of an easy-to-read LC display and a platinum resistance thermometer built into a robust thermometer standard case made of stainless steel. They can be manufactured with the same construction types (according to DIN EN 13 190) as mechanical thermometers. They can be applied as an alternative to mechanical thermometers when these reach their limits due to difficult installation conditions, vibrations or accuracy requirements. Due to their high accuracy, the instruments of the LILLY<sub>plus</sub> series are also suitable as an alternative for mercury-in-glass thermometers.

## Standard Versions

### Measuring Element

Platinum measuring resistor Pt1000 according to DIN EN 60 751 in 4-wire connection

### Measuring Ranges

-50.0 / +250.0 °C  
-99.9 / +500.0 °C  
Resolution 0.1 K

### Unit

Switchable °C/°F

### Ambient Temperature Ranges

Operation and storage: -20 °C to +70 °C

### Accuracy

±0.1 % FS ±1 digit

### Measuring Rate

Adjustable from 1 s to 30 s

### Display

LC display  
Digit height 25 mm (0.98")

### Battery

AA, 2600 mAh (Li-SoCl<sub>2</sub>), 3.6 V  
included in the scope of delivery, replaceable by the customer  
battery life > 1 year, depending on application

### Error Monitoring

Battery voltage, sensor short circuit, sensor break

### Temperature Sensor (Stem)

Up to +250 °C version as cable sensor  
with stainless steel 316Ti (1.4571) sleeve  
From +250 °C upwards version as sheathed resistance thermometer  
Max. static  
operating pressure: 25 bar  
Stem models: E1 or E5  
Stem Ø dF: 6 mm (0.24")  
Connection cable: up to +180 °C made of silicone rubber  
up to +250 °C made of PFA

### Case

With bayonet ring polished, stainless steel 1.4301,  
with pressure equalising element

### Nominal Case Size

100 mm (4")



**Degree of Protection** (DIN EN 60 529)  
IP65

### Window

Aluminum with PE membrane keypad

### Case Configuration

Connection to temperature sensor:

- with connection cable

Cable position:

- vertical bottom position  
- lower back position (r)

Mounting device:

- for bottom cable position:  
- back flange for surface mounting (Rh)  
- mounting device for gauge holder bracket (Mgh)  
- for lower back cable position:  
- back flange for surface mounting (rRh)  
- front flange for panel mounting (rFr)

## Ordering Information

See page 4

## Special Versions and Further Options

- Other stem models, e.g. with connection for food/bio/ pharmaceutical industries
- Contact stem for temperature measurement at the outside of tanks and pipe barrels
- Other stem Ø, connection threads and materials upon request
- Case parts stainless steel 316L (1.4404) upon request
- Position of the connection radial at 3 o'clock, 9 o'clock, 12 o'clock, others upon request
- Shielded cable with spiral protection hose
- Pluggable cable with M 12x1 plug connector

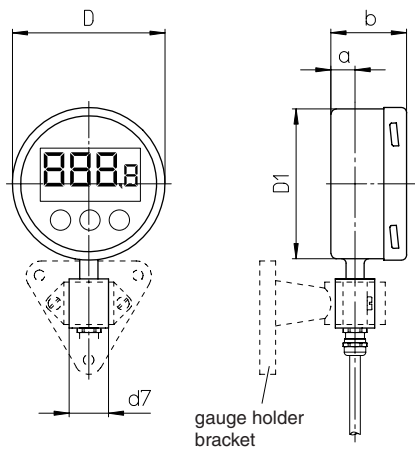
## Accessories

- Thermowells, see data sheet 8.8110 ff.
- Compression fittings
- Gauge holder bracket

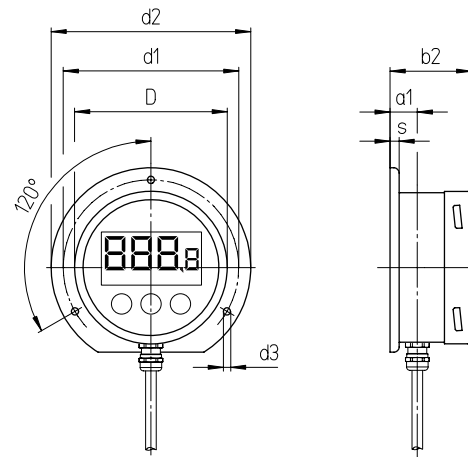
# Cable Position, Code Letters, Dimensional Data and Weight

## Vertical Bottom Cable Position

mounting device for gauge holder bracket  
code letters: **Mgh**

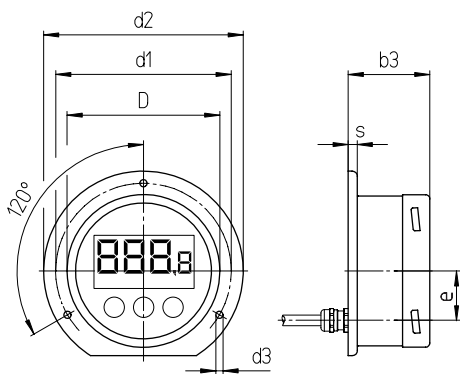


back flange for surface mounting  
code letters: **Rh**

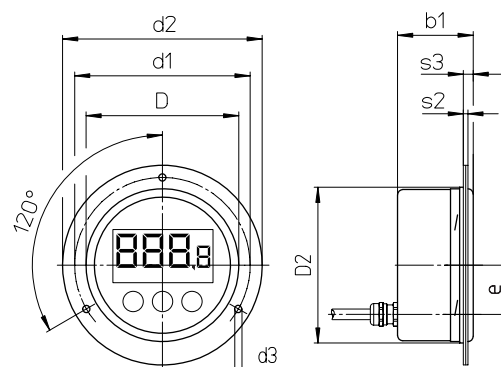


## Lower Back Cable Position

front flange for panel mounting  
code letters: **rFr**



back flange for surface mounting  
code letters: **rRh**



## Dimensional Data (mm/inch) and Weight (kg/lb)

NCS	a	a1	b	b1	b2	b3	D	D1	D2	d1	d2	d3	d5	d7	s	s1	s2	s3	s5	weight
100	15	18.5	50	50	53.5	53.5	101	99	103	116	132	4.8	M4	26	6	1	2	5.5	7	0.6
4"	0.59	0.73	1.97	1.97	2.11	2.11	3.98	3.9	4.06	4.57	5.2	0.19		1.02	0.24	0.04	0.08	0.22	0.28	1.32

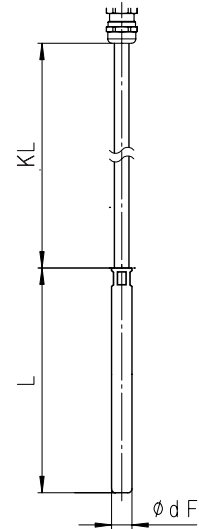
# Process Connections

## Process Connection

without screw fitting, plain stem

**Stem model:** E1  
**Stem material:** 1.4571  
**Stem Ø dF:** 6 mm  
**Order length:** L, KL

**Suitable thermowell models:** SK1 (8.8140)  
 (data sheet) SK2 (8.8141)



## male thread/compression fitting

**Stem model:** E5  
 (E1 with compression fitting)  
**Stem material:** 1.4571  
**Stem Ø dF:** 6 mm  
**Order length:** L, KL

**Suitable thermowell models:** SF4 (8.8110), SF4F (8.8112)  
 (data sheet) SF5 (8.8120), SF6, SF7 (8.8121)

**Thread**  
 (dimensional data in mm/inch):

G	SW1	SW2	i	Lk
G 1/2 B	27	22	14	42
1/2" BSP	1.06	0.87	0.55	1.65
G 3/4 B	32	22	16	42
3/4" BSP	1.26	0.87	0.63	1.65
1/2" NPT	27	22	19	42
1/2" NPT	1.06	0.87	0.75	1.65
3/4" NPT	27	22	19	42
3/4" NPT	1.06	0.87	0.75	1.65
M20x1.5	27	22	14	42
M20x1.5	1.06	0.87	0.55	1.65

