

General Specifications

Model SM60
Industrial electrodes for temperature measurement

GS 12B06J01-61EN-P

■ Overview

For accurate pH measurement temperature compensation is required. A Pt 1000 temperature electrode can be selected.

pH measurements are temperature dependent from two different effects:

- Variations with temperature on the contact potentials in the glass and the reference system
- Temperature variations of the liquid being measured

Therefore, it is necessary to include a temperature sensor in the system, whose purpose is to provide automatic compensation for the effects of temperature variations on the measuring system.

The temperature compensator consists of a platinum resistance element (e.g. PT1000) mounted in a glass tube. The tube is filled with white silicon grease, the thermal conducting properties of which ensure fast temperature response. It is possible to manually compensate for temperature variations as an alternative to automatic temperature compensation.

■ Features

- High resistance glass for chemical resistance
- Dimensions and design meet the requirements of DIN 19263
- Maximum pressure: 1000 kPa (10 bar)
- Metal foil screening
- Large useable temperature range



■ 1. General Specification SM60

Temperature adjustment is necessary for precise pH measurement. A Pt1000 temperature electrode can be selected.

1.1. Measuring elements

Sensor type : Pt1000 temperature electrode

1.2 Wetted parts construction material

Sensor body : Glass
O-rings : N/A

Operating range

- Pressure Range : 1.5 kPa ... 1000 kPa
- Temperature Range : -20 ... 150 °C

1.5 Shipping Details

Package size (LxWxH) : 260 x 45 x 45 mm
: (10.2 x 1 x1 inch)

1.2 Environmental conditions

Storage temp. : -10 to 50 °C
: (14 to 122 °F)

1.7 Regulatory standards

CE
- RoHS Directive 2011/65/EU
Commission Delegated Directive (EU) 2015/863 amending Annex II as regards the list of restricted substances, and by applying following standards:
EN-IEC 63000: 2018 Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances.

UKCA
- RoHS The restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012

The resistance of the electrodes at different temperatures is shown in the table 1.

Table 1: Pt1000 table

°C	R
-25	901.5
-20	921.3
-15	941
-10	960.7
-5	980.4
0	1000
5	1019.5
10	1039
15	1058.5
20	1078
25	1097.4
30	1116.8
35	1136.1
40	1155.4
45	1174.7
50	1194
55	1213.2
60	1232.4
65	1252.6
70	1270.8
75	1290
80	1309.1
85	1328.1
90	1347
95	1366
100	1385
105	1404
110	1422.9
115	1441.8
120	1460.7
125	1479.5
130	1498.3
135	1517.1
140	1535.9
145	1554.6
150	1573.3
155	1592
160	1610.6
165	1629.2
170	1647.8
175	1666.3
180	1684.8
185	1703.3
190	1721.8
195	1740.2
200	1758.6

■ 2. Dimensions (Units in mm)

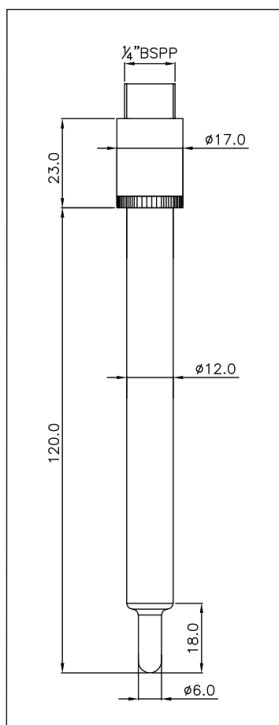


Figure 1: SM60-T1 dimensions

■ 3. Model Codes & Parts

Table 2: Model & Suffix codes SM60

Model	Suffix Code	Option Code	Description
SM60			Measuring sensor temperature
	-T1		Meas. Temp, pt1000

Table 3: Spare parts SM60

Part Number	Description
K1520JL	Adapter Y-CAP - PG13.5 SS
K1523JA	Adapter PG13.5 in F*40 PPO
K1523JB	Adapter PG13.5 to 1/4"NPT PPO
K1523JC	Adapter PG13.5-sensors in F*40 SS
K1523JD	Adapter PG13.5 to 1/4" NPT SS
K1524AA	O-Ring Sil. 10.77x2.62&Slide Ring (1 pc.)
K1598AC	Flow fitting (3.1), for SC4A
K1500DW	Set of 12 cable nuts for WU20

■ 4. Cables

Table 4: Model & Suffix codes WU20

Model	Suffix Code	Option Code	Description
WU20			Industrial pH/ORP cable
	-PC		Coax
		01	1 meter cable
		02	2 meter cable
		05	5½ meter cable
		10	10 meter cable
		15	15 meter cable
		20	20 meter cable
		25	25 meter cable

Addendum 1: Typical Installation

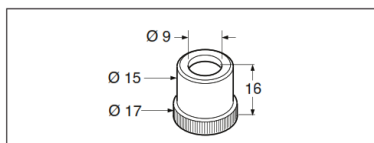


Figure 2: K1500DW (set of 12 cable nuts)

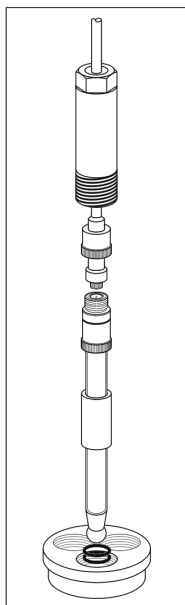


Figure 3: With mounting set FP20-R12, FP20-S12

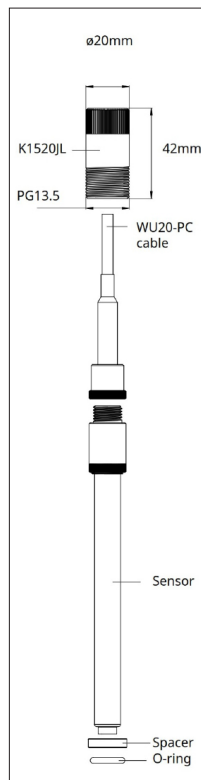


Figure 4: Mounting PG13.5 for Y-CAP sensors

Addendum 2: Available Models

Table 5: SM60 Available models

SM60	SM60-T1
	SM60-T2

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