WARRANTY

_____ manufacturing date

_____ article number

Product: **Single-channel programmable thermometer**

Model: **H5700**

Input type: ☐ programmable ☐ Pt1000 ☐ "J" ☐ "K" ☐ "S"

Power supply: ☐ none ☐ batteries
☐ long-life batteries ☐ rechargeable batteries

Serial No ..... Quality Control Passed: .....
(stamp)

Factory settings: OFSt ☐
toFF ☐

SPECIFICATIONS

Measurement error	0.1% from span (0.3% for T/C)
Keyboard	foil-type, 3 membrane keys
Display	4-digit LCD - 13 mm
Power supply	two 1.5 V batteries type AA
Operating consumption	max. 3 mA
Auto power-off	programmable: 0 to 30 min
Operating temperature / humidity	-10÷65°C / 0÷85% RH
Protection: case / socket	IP44 / IP20

Warranty: COMECO provides a 24-month warranty for this device.

. . . . . .
(date)

Retailer: . . . . . .

Buyer: . . . . . .

QD-8.2.4-WC

v1-2-01.14

COMECO
CONTROL & MEASUREMENT

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SINGLE-CHANNEL PROGRAMMABLE THERMOMETER

H5700

OPERATION MANUAL

H5700 is a handheld microprocessor-based device for temperature measurement. It is available with one or two channels for Pt1000 sensors, thermocouples type "J", "K", and "S", as well as with universal input (the sensor type is selectable through the device menu). H5700 has a 4-digit display, which provides a resolution of 0.1° in the -99.9° ÷ 999.9° range. The device software allows realization of various operating modes, selection of temperature dimension and decimal point position, battery control, programmable auto power-off, etc.

Please read this Operation Manual before operating the device!
This Operation Manual applies only to the single-channel variant of the device!

OPERATING

Input sensors and ranges

The device operating ranges depending on the type of the connected temperature sensor are shown in Table 1.

Table 1

SENSOR TYPE	OPERATING RANGE
Thermoresistance Pt 1000	-100÷660°C (-148÷1220°F)
Thermocouple Fe-CuNi (type "J")	-100÷1200°C (-148÷2192°F)
Thermocouple NiCr-Ni (type "K")	-100÷1300°C (-148÷2372°F)
Thermocouple PtRh-Pt (type "S")	0÷1700°C (32÷3092°F)

Control keys

The device is controlled via three keys. The right key ( ) serves for turning H5700 on and off while it is in measurement mode, as well as for confirming selected value during thermometer adjustment. The middle key ( ) in measurement mode serves for alternation of the "accuracy" (resolution) between without decimal part and with one digit after the decimal point. In adjustment mode, the same key serves for selection and change of the adjusted parameter. The left key ( ) is used for alternation of the temperature dimention and during adjustment.

Turning on and off

Press the key once. The test string 88:88 appears on the display and the device enters measurement mode. One measurement cycle lasts approximately half a second and the display readings refresh after its end. While the device is in measurement mode, you can turn it off by pressing the key. The thermometer indicates OFF and turns itself off.

"Accuracy" (resolution) selection

While the device is in measurement mode, use to alternate the resolution with which H5700 indicates the measured temperature. The readings can be displayed either as whole numbers or as numbers with one digit after the decimal point. After pressing the key, read for half a second respectively 0 or 0.0.

Notes:

1. Because the device display is 4-digit, temperatures below -99.9° and above 999.9° are always displayed as whole numbers.
2. If the resolution is "whole number", H5700 will round off the readings with decimal part greater than or equal to 0.5° (e.g., if the measured temperature is 342.7°, the device will indicate 343).
3. After recovery from power supply failure (for example, due to battery replacement), the thermometer may display the readings with resolution "whole number" until the other resolution is selected.
4. When the input is from thermocouple type "S", the readings are always whole numbers!

Temperature dimension selection

H5700 measures the temperature in Celsius or Fahrenheit degrees. To alter the dimension, use . After pressing the key, read for half a second respectively °C or °F.

Note: After supply voltage recovery, the readings may be in Celsius degrees until the other dimension is selected.

ADJUSTING

Use the adjustment mode to set the parameters auto-power-off time, offset, and sensor type (only for H5700 with programmable input). To enter this mode, press and simultaneously. Read on the display the parameter to be adjusted: OFSt (offset), toFF (auto-power-off time), or StYP (sensor type). Use or to select a parameter. Confirm with .

Auto-power-off adjustment

The toFF parameter defines the time between the moment a key has been pressed for the last time and the moment the device turns itself off automatically. The auto-power-off time is user-selectable in the range from 0 to 30 min. at intervals of 5 min. While H5700 is in adjustment mode, select the "auto-power-off time" parameter with or and confirm it with . Read the last parameter value on the display. Use to increase and to decrease the value at intervals of 5 min. Confirm the changes by pressing . To exit without setting (confirming) the new value, press and simultaneously.

Note: If no key has been pressed for more than 5 sec., the device automatically returns to measurement mode without saving the changed parameter values.

Offset adjustment

Use the OFSt parameter to offset linearly the device scale. While H5700 is in adjustment mode, select the "offset" parameter with or and confirm it with . Read the last parameter value on the display. The digit to be adjusted flashes. Use to select the desired digit and to change its value. The last digit is the sign digit. Confirm the changes by pressing . To exit without saving the changes, press and simultaneously.

Note: If no key has been pressed for more than 5 sec., the device automatically returns to measurement mode without saving the changed parameter values.

Sensor selection

H5700 with programmable input can operate with any of the following sensors: Pt1000, thermocouples type "J", "K", and "S". To set the sensor type, while the device is in adjustment mode, use or to select the "sensor type" parameter (StYP). Confirm it with . Select sensor type: tYPt (Pt1000), tY J (T/C "J"), tY K (T/C "K"), or tY S (T/C "S"). Confirm the selection with or exit without confirming by pressing and simultaneously.

Note: If no key has been pressed for more than 5 sec., the device automatically returns to measurement mode without saving the changed parameter values.

LOW BATTERY INDICATION

H5700 monitors the battery voltage, and when it drops bellow the critical (approx. 2.2 V), each 10 s the device displays bAtt for about half a second. Replace the battery.

SENSOR FAILURE INDICATION

When the measured value is outside the input nominal range, which happens usually as a result of sensor failure or destroyed connection (sensor break, short circuit), the SEn message appears on the display. Check the condition of the sensor and its connections.