WARRANTY

_____ production date

_____ warranty card number

Product: **Double-channel programmable thermometer**

Model: **H5700**

Input Ch1: ☐ programmable ☐ Pt1000 ☐ "J" ☐ "K" ☐ "S"

Input Ch2: ☐ programmable ☐ Pt1000 ☐ "J" ☐ "K" ☐ "S"

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

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

SPECIFICATIONS

Measurement error	0.1% from span (0.3% for T/C)
Keyboard	foil-type, 3 membrane keys
Display	4-digit LCD - 13mm
Power supply	Two 1.5V 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

..... *(date)*

Retailer: . . . . . .

Buyer: . . . . . .

QD-8.2.4-WC

v0d-08.03

COMECO CONTROL & MEASUREMENT

BS EN ISO 9001 Reg.No FM 40344

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DOUBLE-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 input channels (in measurenet mode) and for changing parameter values during adjustment.

Turning on and off

Press the key once. The test string 8888 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 will 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!

Input channel selection

H5700 can measure the temperature of the 1st channel (T1) or the temperature of the 2nd channel as well as the difference (T1-T2). For channel selection mode use . Press once to view the active channel or hold to change channel mode. If first channel has been selected, the device will indicate CH 1; if the second channel has been selected, the device indicates CH 2; in case of differential mode H5700 will indicate diFF.

Note: After power on H5700 will enter in CH 1 measurement mode by default.

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.

ADJUSTING

Use the adjustment mode to set the parameters auto-power-off time, offset, measuring units 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), Unit (measuring units), 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.

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: The offset programming can be done for the selected input channel, but not for the temperature difference mode! In such case an error message will be displayed!

Measurement units

H5700 can display temperature in degreed Celsius or Fahrenheit. While H5700 is in adjustment mode, select the "units" parameter (Unit) with or and confirm with . Using or select °C (°C) or °F (°F) and confirm your selection by . To exit without saving the changes, press and simultaneously.

Note: After power on H5700 will measure temperature in °C by default.

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: 1. The sensor programming can be done for the selected input channel, but not for the temperature difference mode! In such case an error message will be displayed!
2. 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. 2.2V), each 10 sec. the device displays bAtt for about half a second. Replace the battery.