

# ORDERING INFORMATION

# MODEL : 27HU-B

## PLEASE FILL IN THIS SECTION



Model
Company
Name
P/O No.

## M-SYSTEM USE ONLY



Job No.	Inspected by:
Ser No. —	
Sales	Inspected by:

## PRODUCT'S DESTINATION COUNTRY

(Mark  with . This information is required only for the Safety Approval code 4. One of the selections must be specified.)

The ATEX Directive 94/9/EC by the European Union, in its Annex II 1.0.6 (b), requires that the product be accompanied by a translation of the instructions in the language or languages of the country in which the product is to be used and by the instructions in the original language, when the product is to be used in an EU member state, Iceland or Norway.

### 1. Is the product going to be used in one of the countries covered by the ATEX Directive (listed in Part 2 and 3)?

- YES**, the product is to be used in an EU member state, Iceland or Norway. ➡➡ Choose a country among listed in Part 2 and 3.
- NO**, the product is to be used outside the EU, Iceland or Norway. ➡➡ Local language instructions are not obligatory.

### 2. Choose one of the languages (countries) in which the product is to be used. Go to Part 3 if not listed in Part 2.

- English (Ireland, The United Kingdom)

### 3. Choose one of the countries in which the product is to be used, and then go to Part 4. If multiple languages are used in the country, specify one.

- |  |  |                                   |
|--|--|-----------------------------------|
| <input type="checkbox"/> Austria         | <input type="checkbox"/> Belgium ( <input type="checkbox"/> Dutch <input type="checkbox"/> French <input type="checkbox"/> German) | <input type="checkbox"/> Bulgaria |
| <input type="checkbox"/> Cyprus          | <input type="checkbox"/> Czech Republic  | <input type="checkbox"/> Denmark  |
| <input type="checkbox"/> Finland         | <input type="checkbox"/> France  | <input type="checkbox"/> Germany  |
| <input type="checkbox"/> Hungary         | <input type="checkbox"/> Iceland   | <input type="checkbox"/> Italy    |
| <input type="checkbox"/> Lithuania       | <input type="checkbox"/> Luxembourg ( <input type="checkbox"/> French <input type="checkbox"/> German)                             | <input type="checkbox"/> Latvia   |
| <input type="checkbox"/> The Netherlands | <input type="checkbox"/> Norway  | <input type="checkbox"/> Malta    |
| <input type="checkbox"/> Romania         | <input type="checkbox"/> Slovakia  | <input type="checkbox"/> Poland   |
| <input type="checkbox"/> Sweden          |  | <input type="checkbox"/> Slovenia |
|  |  | <input type="checkbox"/> Portugal |
|  |  | <input type="checkbox"/> Spain    |

### 4. The translation must be made by either the manufacturer or his authorized representative established in the Community or the person introducing the product into the language area in question. The instructions' original language is English.

Will you or your authorized representative established in the Community, or the person introducing the product into the language area in question, translate the original instructions?

- YES**, we will translate the original instructions.
- NO**, M-System will translate the original instructions.

The translation of the original instructions must be available to the user before the product is commissioned. Please consult M-System for the delivery time of the product and the translation.

Do you wish the translation be sent to you separately from the product?

- YES**, we agree that the translation will be sent separately.
- NO**, the product must be accompanied with the translation.

Please confirm the product's destination country again and sign below:

---

**TRANSMITTER SETTING** Configurable with a HART hand-held communicator.  
Fill in blank sections or mark  with  if necessary.

ITEM	SET VALUE	STANDARD	COMMENTS
INPUT TYPE		K thermocouple	Choose from Table 1.
NUMBER OF WIRES	<input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 2	No standard	Applied only for RTD or resistance input. Choose among 2-wire, 3-wire or 4-wire.
NUMBER OF INPUTS	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> Difference <input type="checkbox"/> Average <input type="checkbox"/> Backup	1	2 inputs selectable only for thermocouple or DC millivolt input. For 2-input type, specify also if the inputs should be handled as Difference, Average or Backup.
INPUT UNIT	Temperature sensor <input type="checkbox"/> °C <input type="checkbox"/> °F <input type="checkbox"/> K <input type="checkbox"/> °R Other than temperature <input type="checkbox"/> Ω <input type="checkbox"/> mV	°C	Choose a temperature unit for the temperature input types.
INPUT RANGE		0 – 100	Choose from Table 1.
UPPER OUTPUT LIMIT		21.5mA	Specify the upper output limit proportional to the input, within 20 – 21.5mA
LOWER OUTPUT LIMIT		3.8mA	Specify the lower output limit proportional to the input, within 3.8 – 4mA.
BURNOUT	<input type="checkbox"/> Upscale (23mA) <input type="checkbox"/> Downscale (3.75mA) <input type="checkbox"/> No burnout	Upscale	The burnout includes not only wire breakdowns but also an overrange input exceeding the maximum electrical range applicable to the input circuit.
DAMPING		sec. 0	Choose between 0 and 30 seconds.
HART ADDRESS		0	Choose between 0 and 15. Multi-drop mode when an address other than 0 is selected.

**DISPLAY SETTING** Used for the display option.  
Fill in blank sections or mark  with  if necessary.

ITEM	SET VALUE	STANDARD	COMMENTS
LINEARIZATION	<input type="checkbox"/> No linearization <input type="checkbox"/> SQRT ( $X^{1/2}$ ) <input type="checkbox"/> RT ( $X^{3/2}$ ) <input type="checkbox"/> RT ( $X^{5/2}$ )	No linearization	
CALIBRATION RANGE	<input type="checkbox"/> 4 – 20mA <input type="checkbox"/> User's range	4 – 20mA	Specify the user's range under USER's RANGE.
USER'S RANGE	0% :                      mA		Specify 0% input value within 3.75 – 23mA.
	100% :                      mA		Specify 100% input value within 3.75 – 23mA.
DISPLAY SCALE*	0% :	0.000	Specify 0% input value within -1999 – 9999. Include decimal figures.
	100% :	100.0	Specify 100% input value within -1999 – 9999. Include decimal figures.
OFFSET		0.000	Specify a display value added to the scaled range within -1999 – 9999.
DECIMAL POINT POSITION	Factory chooses according to the display scale specified above.	8.888	The decimal point position may shift according to the required number of digits for the integer section, even when more than one decimal figures have been specified.
SECURITY CODE		0000 (No lock)	The module does not go into programmable mode without entering the security code.

\*Refer to 'Display Scale' in the next page for detailed information.

■ TABLE 1. INPUT TYPE & RANGE

INPUT TYPE	MINIMUM SPAN		MAXIMUM RANGE	
DC mV	4mV		-100 to +800mV	
Resistance	25Ω		0 to 4kΩ	
Thermocouple	°C		°F	
	MINIMUM SPAN	MAXIMUM RANGE	MINIMUM SPAN	MAXIMUM RANGE
K (CA)	50	-180 to +1372	90	-292 to +2501
E (CRC)	50	-100 to +1000	90	-148 to +1832
J (IC)	50	-100 to +1200	90	-148 to +2192
T (CC)	50	-200 to +400	90	-328 to +752
B (RH)	100	400 to 1820	180	752 to 3308
R	100	-50 to +1760	180	-58 to +3200
S	100	-50 to +1760	180	-58 to +3200
C (WRe 5-26)	100	0 to 2300	180	32 to 4172
D (WRe 3-25)	100	0 to 2300	180	32 to 4172
N	50	-180 to +1300	90	-180 to +2372
U	50	-200 to +600	90	-328 to +1112
L	50	-100 to +900	90	-148 to +1652
RTD	°C		°F	
	MINIMUM SPAN	MAXIMUM RANGE	MINIMUM SPAN	MAXIMUM RANGE
Pt 100 (JIS'97, IEC)	10	-200 to +850	18	-328 to +1562
Pt 200	10	-200 to +850	18	-328 to +1562
Pt 500	10	-200 to +850	18	-328 to +1562
Pt 1000	10	-200 to +850	18	-328 to +1562
JPt 100 (JIS '89)	10	-200 to +510	18	-328 to +950
Ni 100 (DIN43760 '87)	10	-60 to +250	18	-76 to +482

■ DISPLAY SCALE

- The maximum number of display digits equals four. The decimal point position automatically shifts within this maximum limit according to the required number of integer digits.
- There are four ways to specify the display scale depending upon how many decimal figures you want to show. Refer to the examples below.

[Example 1] Display range 0 to 100

DECIMAL FIGURES	SCALE SETTING		ACTUAL DISPLAY STYLES		
	0%	100%	INPUT 0%	INPUT 50%	INPUT 100%
None	0	100	0	50	100
1	0.0	100.0	0.0	50.0	100.0
2	0.00	100.0	0.00	50.00	100.0
3	0.000	100.0	0.000	50.00	100.0

[Example 2] Display range 0 to 5

DECIMAL FIGURES	SCALE SETTING		ACTUAL DISPLAY STYLES		
	0%	100%	INPUT 0%	INPUT 50%	INPUT 100%
None	0	5	0	3	5
1	0.0	5.0	0.0	2.5	5.0
2	0.00	5.00	0.00	2.50	5.00
3	0.000	5.000	0.000	2.500	5.000