



HANYOUNGNUX HP3 Digital Scalemeter Instruction Manual

[Home](#) » [HANYOUNGNUX](#) » HANYOUNGNUX HP3 Digital Scalemeter Instruction Manual 

Contents

- 1 HANYOUNGNUX HP3 Digital Scalemeter
- 2 Safety information
- 3 Specification
- 4 Dimension and Panel cutout
 - 4.1 Wiring Examples
- 5 Parts Name
- 6 Parameter
- 7 Indication of Error and Function
- 8 Documents / Resources
 - 8.1 References
- 9 Related Posts

HANYOUNGNUX

HANYOUNGNUX HP3 Digital Scalemeter



Thank you for purchasing HANYOUNG product.

Please check whether the product is the exactly same as you ordered.

Before using the product, please read this instruction manual carefully.

Please keep this manual where you can view at any time

Safety information

Before using the product, please read the safety information thoroughly and use it properly.

Alerts declared in the manual are classified to Danger, Warning and Caution by their criticality

DANGER indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury

WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury

CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury

Warning

- If there is a possibility of an accident caused by errors or malfunctions of this product, install external protection circuit to prevent the accident.
- This product does not contain an electric switch or fuse, so the user needs to install a separate electric switch or fuse externally. (Fuse rating : 250 V 0.5 A)
- This product is built in 24 V output. Do not use loaded power more than 70 mA.
- To prevent defection or malfunction of this product, supply proper power voltage in accordance with the rating.
- When you change the using range (URV, LRV) Please change it before setting up than any other data. If you change URV or LRV, it could affect other data and cause problem.
- To prevent electric shock or devise malfunction of this product, do not supply the power until the wiring is completed.
- Since this product is not designed with explosion-protective structure, do not use it at any place with flammable or explosive gas.
- Do not decompose, modify, revise or repair this product. This may cause malfunction, electric shock or fire.
- Reassemble this product while the power is off. Otherwise, it may cause malfunction or electric shock.
- Due to the danger of electric shock, use this product installed onto a panel while an electric current is applied.

Caution

- The contents of this manual maybe changed without prior notification.
- If the user use the product with methods other than specified by the manufacturer, there may be bodily injuries or property damages.
- Check to make sure that there is no damage or abnormality of the product during delivery.
- The ambient temperature needs to be 0 ~ 50 °C (In case of installment in narrow space, 40 °C). The ambient humidity is 20 ~ 90 % R.H. (No icing).
- Do not use this product at any place with corrosive (especially noxious gas or ammonia) or flammable gas.
- Do not use this product at any place with direct vibration or impact.
- Do not use this product at any place with liquid, oil, medical substances, dust, salt or iron contents. (Use at Pollution level 1 or 2)
- Do not polish this product with substances such as alcohol or benzene.
- Do not use this product at any place with excessive induction trouble, static electricity or magnetic noise.
- Do not use this product at any place with possible thermal accumulation due to direct sunlight or heat radiation.
- Install this product at place under 2,000 m in altitude.
- When the product gets wet, the inspection is essential because there is danger of an electric leakage or fire.
- To avoid inductive noise to input wires, separate the power line from the load wire.
- Keep Input wire away from output wire.
- If there is excessive noise from the power supply, using insulating transformer and noise filter is recommended. The noise filter must be attached to a panel grounded, and the wire between the filter output side and power supply terminal must be as short as possible.
- It is effective to use a twisted cable for power supply against noise.
- Turn off the power before changing a sensor.
- This product confirms with IP65. But Waterproof between Panel and product is up to the packing between them. Please make good use of packing.
- Do not connect anything to the unused terminals.
- After checking polarity of terminal, connect wires at the correct position.
- Mark appropriate on the ON/OFF switch for the emergency.
- For the continuous and safe use of this product, the regular maintenance is recommended.
- Some parts of this product have limited life span, and others are changed by their usage.
- The warranty period for this product including parts is one year if this product is properly used.

Suffix code

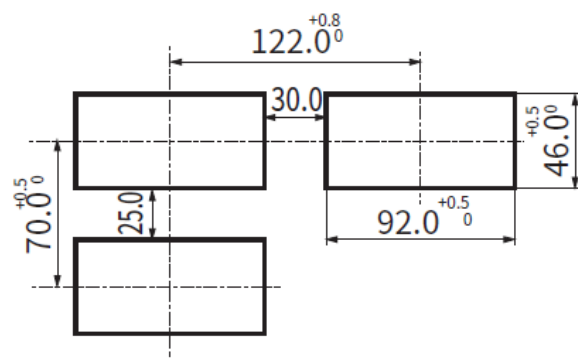
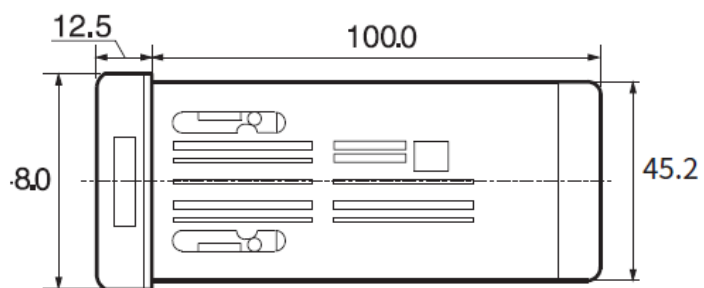
Model	Code	Information
HP3-		None
Optional		Digital scalemeter
	0	None
	1	RS232
	2	RS485

Specification

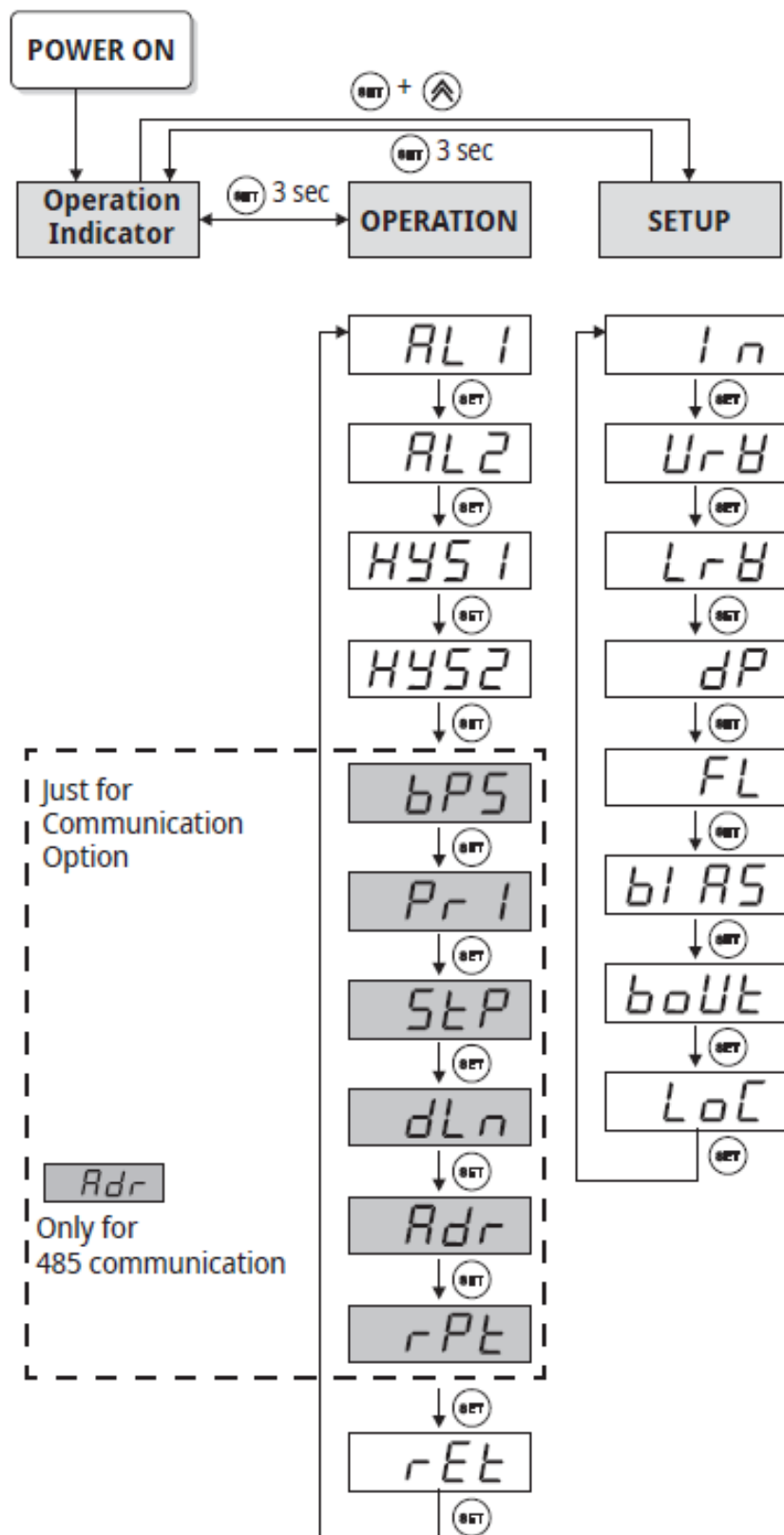
Power supply voltage	100 - 240 V a.c, 50 - 60 Hz (allowable voltage fluctuation : $\pm 10\%$)
Input	Input contact : 1 Channel Input specification : 4 - 20 mA, 1 - 5 V (Different input contact) Accuracy : $\pm 0.03\%$ of F.S Sampling cycle : 500 ms Input Compensation : -100 ~ 100 % of F.S, Input Filter : 0 ~ 100 s
Alarm output	Output contact : 1C \times 2 contacts (AL1, AL2) Capacity of Contact : 5 A 240 V a.c, (5 A 30 V d.c) Resolving power : 125 ms Hysteresis : 0 ~ 10 % of F.S
Retransmission output	Output contact : 1 contacts Output range : 4 - 20 mA d.c Load resistance : 600 Ω max Accuracy : $\pm 0.1\ \mu\text{A}$ Resolving power : 2,600
Insulation resistance	100 M Ω (500 V .d.c)
Dielectric strength	2300 V a.c, 50 Hz / 60 Hz for 1 min
Operating ambient	Temperature : -5 ~ 50 °C Humidity : 20 ~ 90 % R.H. (With no condensation)
Storage ambient	Temperature : -25 ~ 70 °C Humidity : 5 ~ 95 % R.H. (With no condensation)

Dimension and Panel cutout

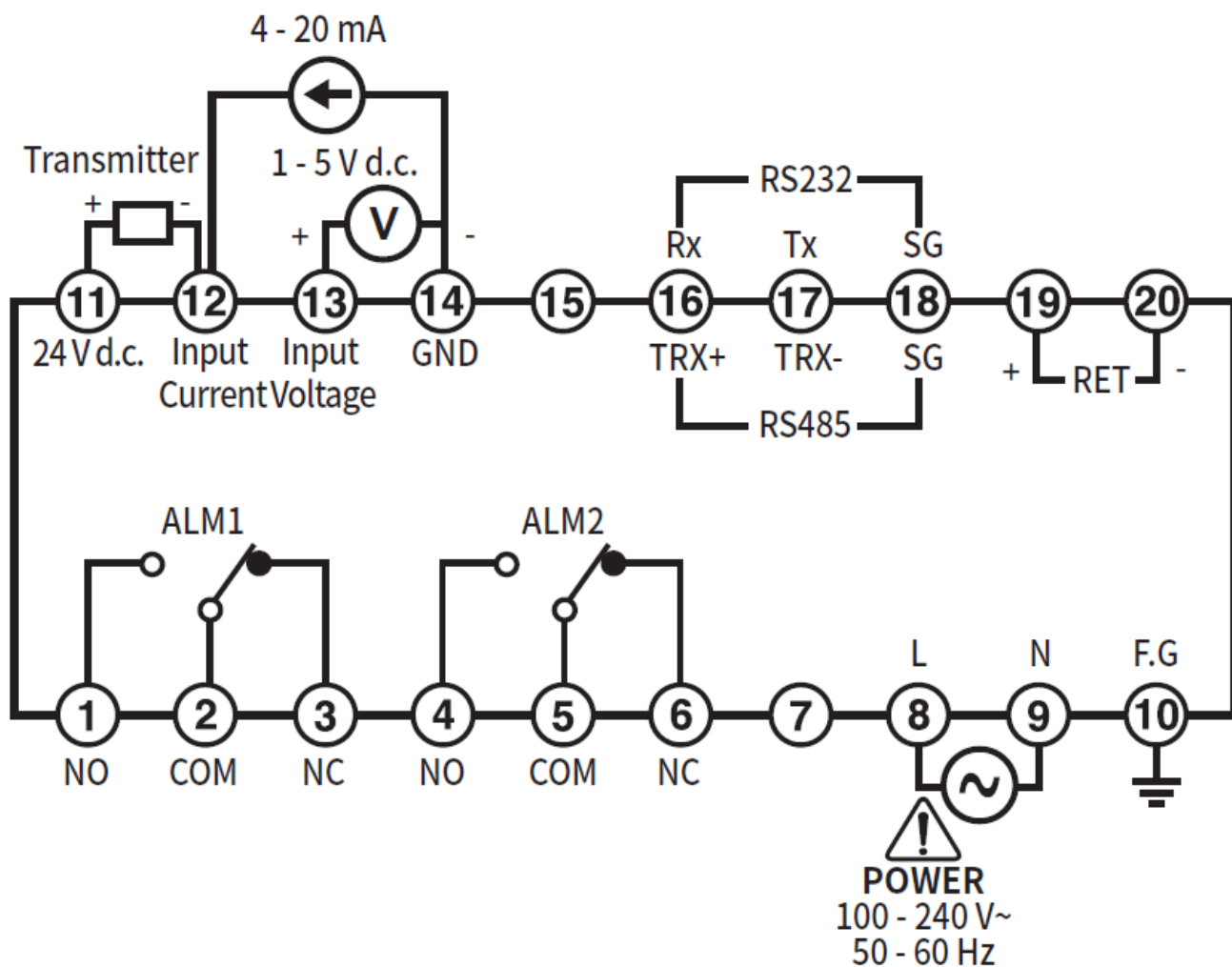
[Unit : mm]



Parameter structure



Connection diagram

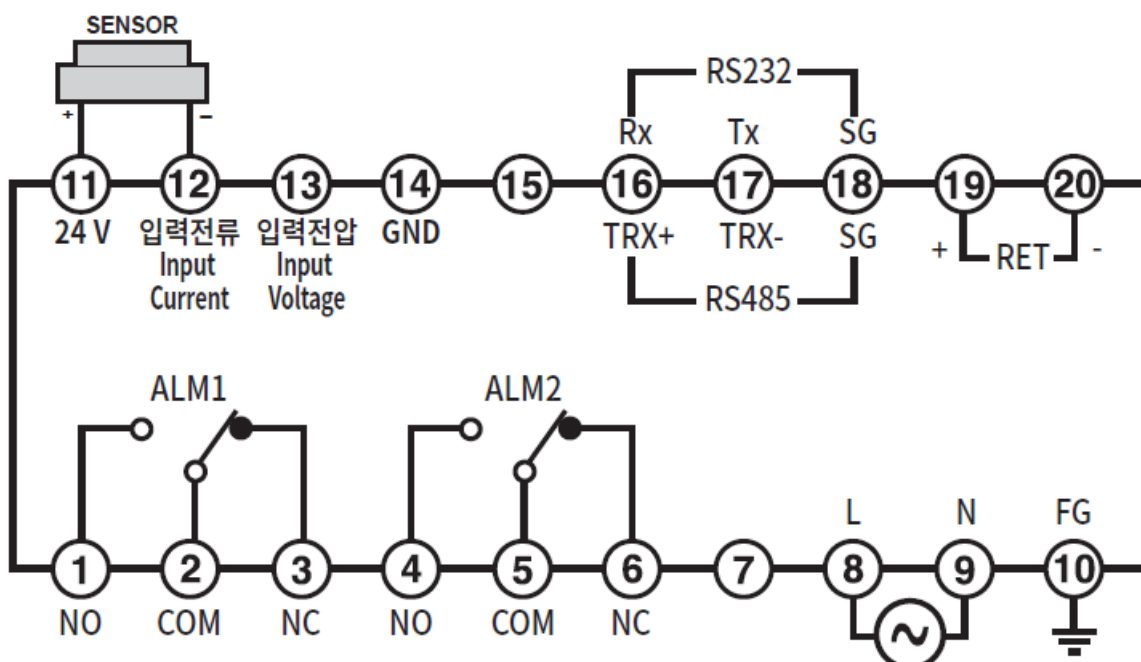


Contact — is only applied to 2 wire current retransmission transducer.

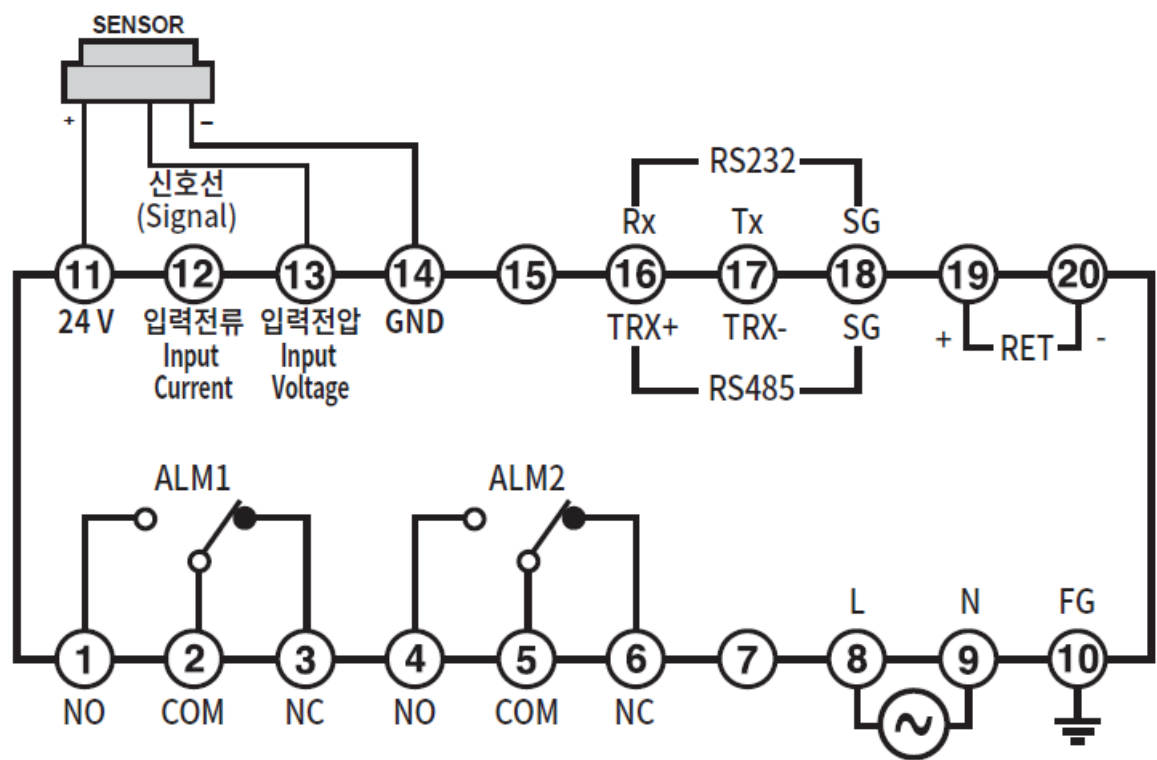
Wiring Examples

Internal power

24 V d.c 2 wire 4 – 20 mA transmitter (24 V d.c 2 wire 4 – 20 mA transmitter)

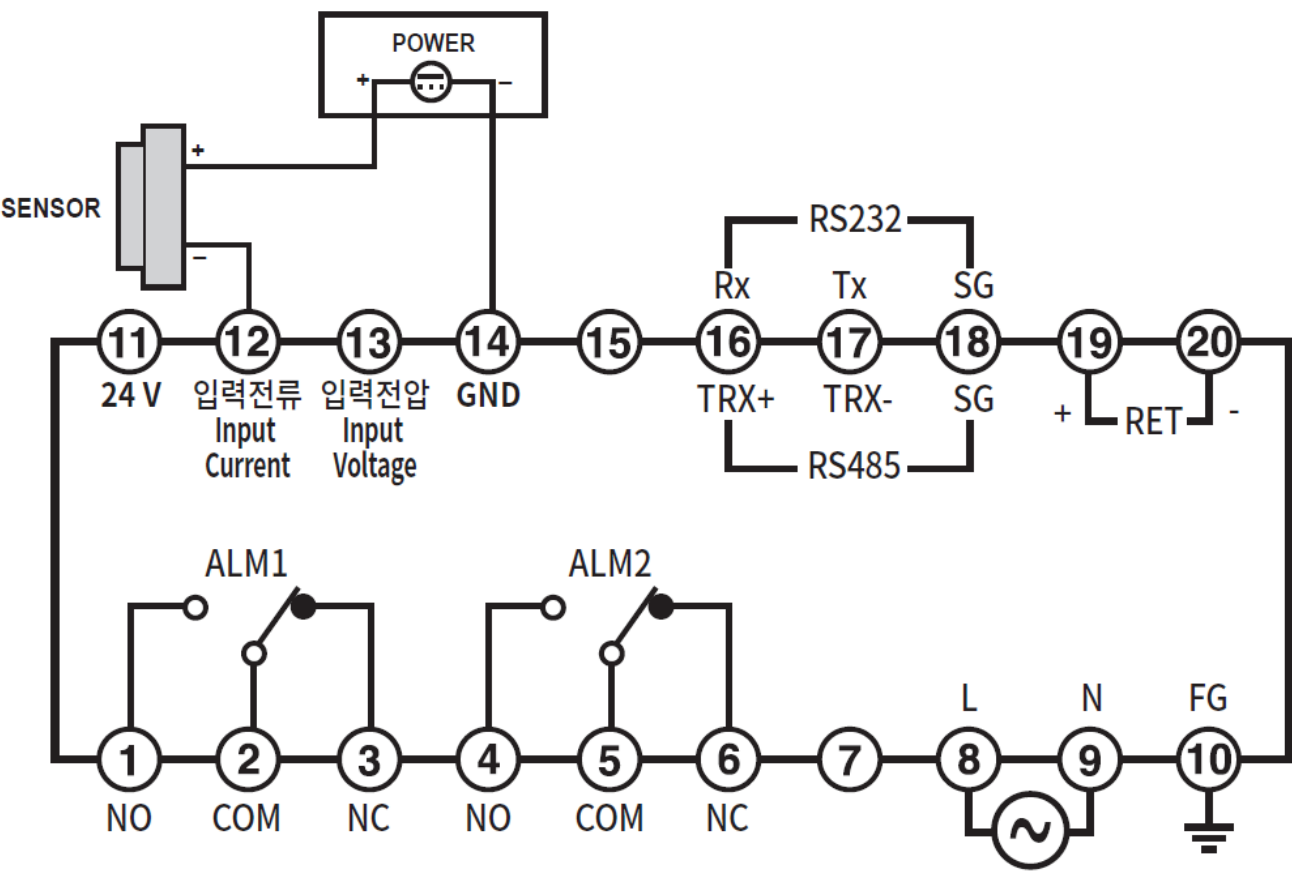


24 V d.c 3 wire 1 – 5 V transmitter (24 V d.c 3 wire 1 – 5 V transmitter)

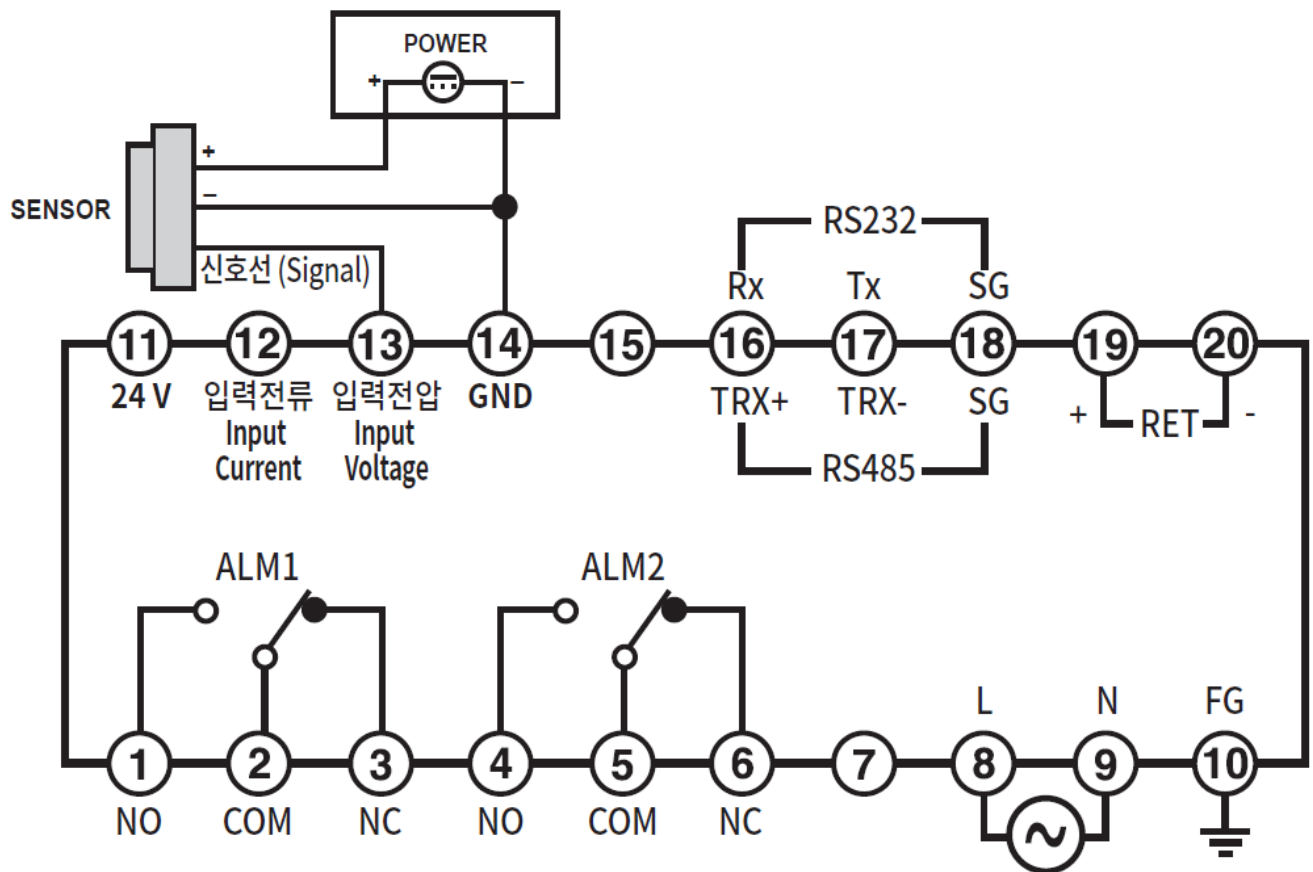


External power

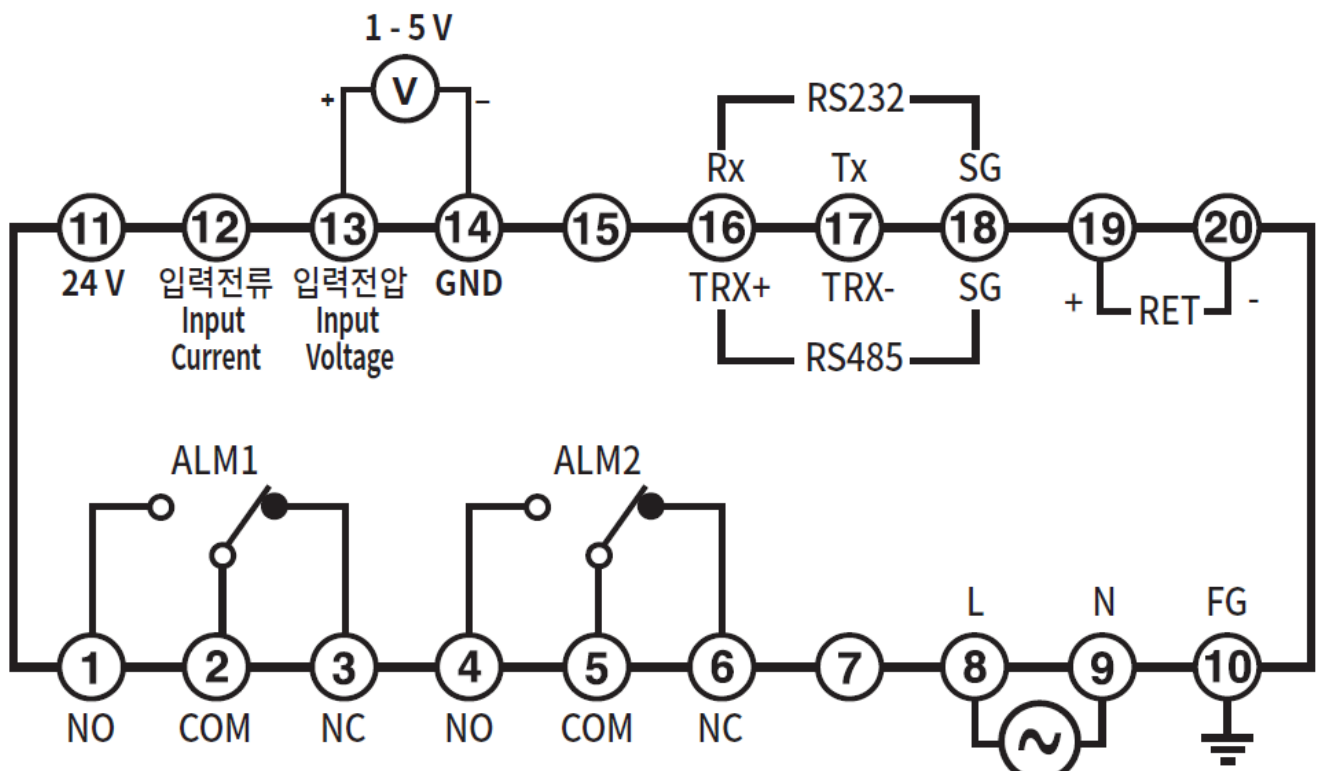
24 V d.c 2 wire 4 – 20 mA transmitter (24 V d.c 2 wire 4 – 20 mA transmitter)



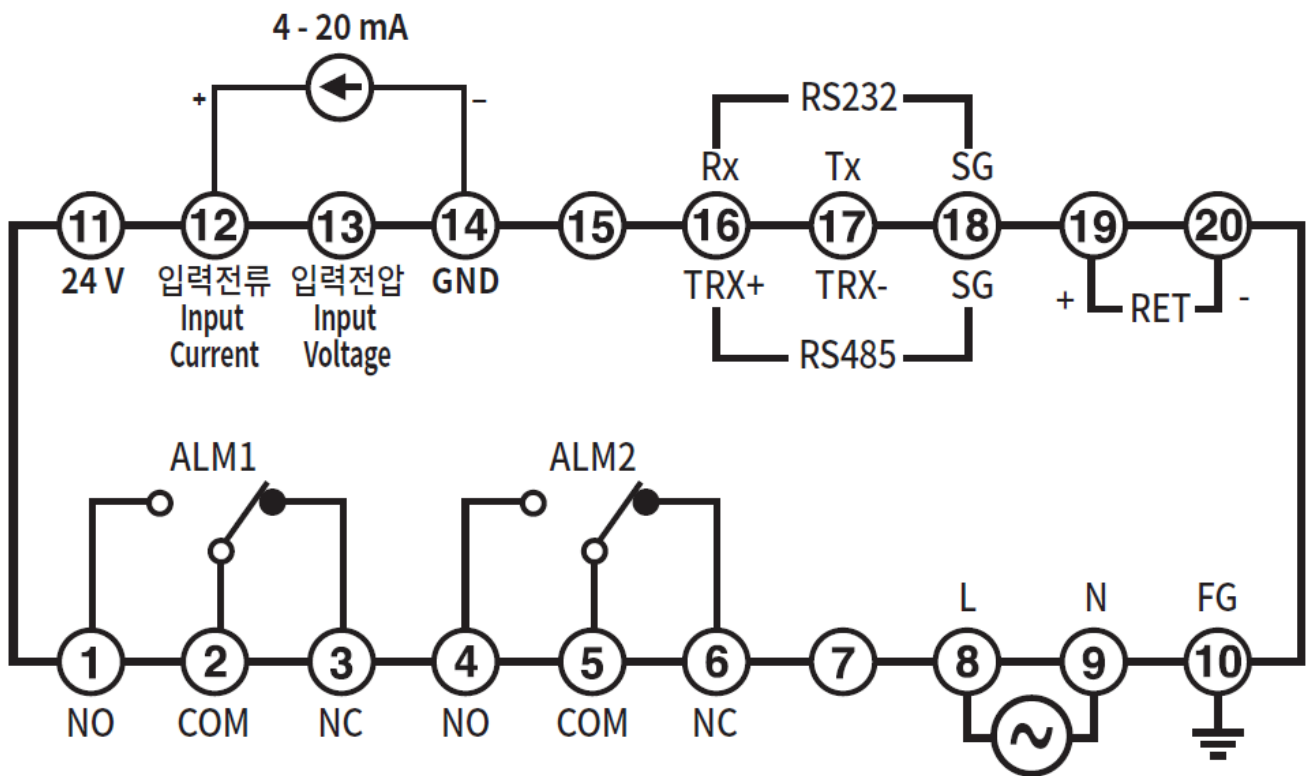
24 V d.c 3 wire 1 – 5 V transmitter (24 V d.c 3 wire 1 – 5 V transmitter)



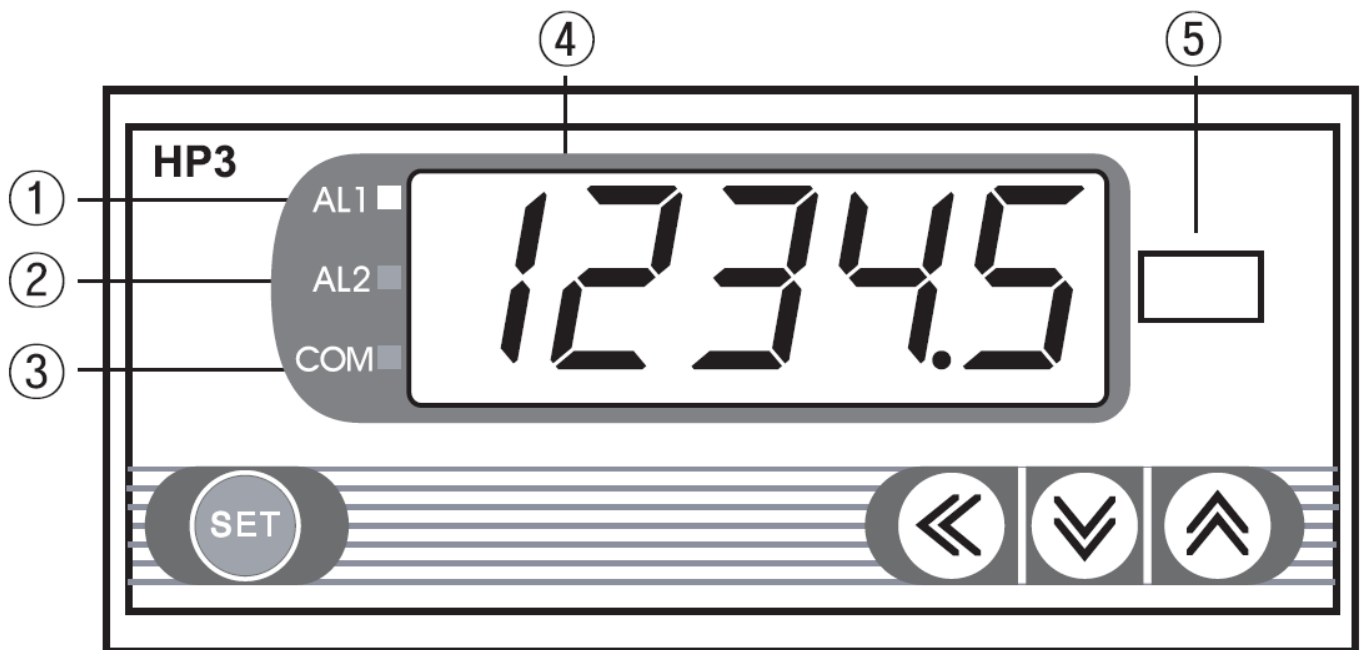
1 – 5 V input (1 – 5 V Input)



4 – 20 mA input (4 – 20 mA Input)



Parts Name



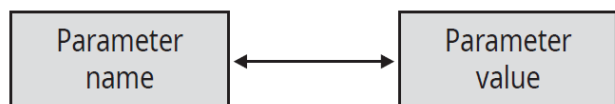
- ① Alarm 1 indicating lamp
- ② Alarm 2 indicating lamp
- ③ Communication lamp
- ④ PV Indicator
- ⑤ Measurement indication

- ⑥ SET : SET mode
- ⏪ : Setting Value shift key
- ⏴ : Set value up
- ⏵ : Set value down

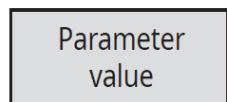
- 1. Alarm 1 indicating lamp
- 2. Alarm 2 indicating lamp

3. Communication lamp
4. PV Indicator
5. Measurement indication
6. SET : SET mode

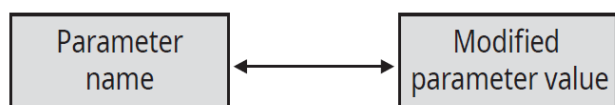
Modify parameter value



In indicator screen, when “parameter name” and “parameter value” come up alternately, press “◀” or “⬆”, “⬇”



Then, only “parameter value” come up. Press ◀ , ⬆ , ⬇ button to change the value and press “SET” button.



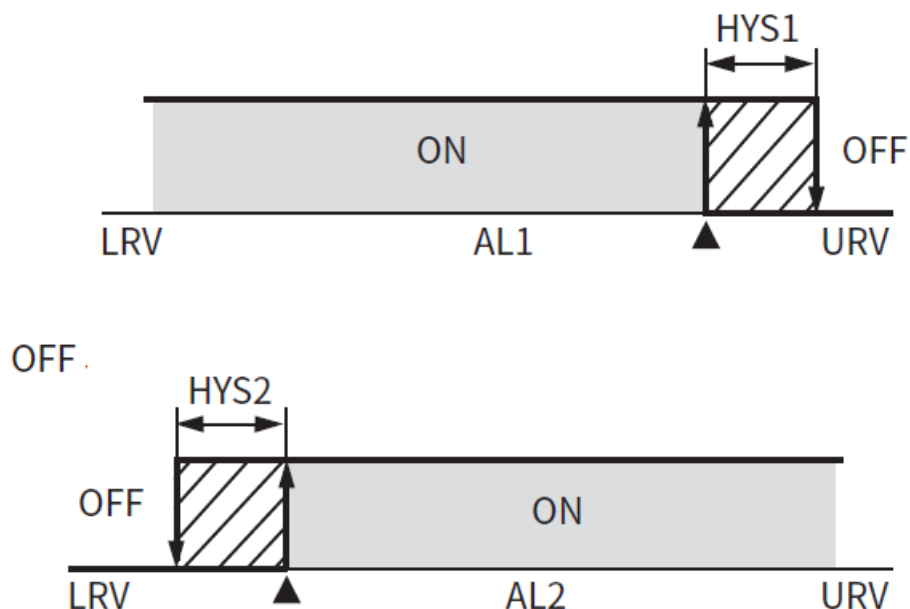
Changed parameter value has been set up. “Parameter name” and “changed parameter value” come up alternately.

Parameter

Process value display unit	Parameter	Setting description	Initial value	Measurement
<i>AL1</i>	Alarm 1 set value	EU 0 ~ 100 %	EU (0 %)	EU
<i>AL2</i>	Alarm 2 set value	EU 0 ~ 100 %	EU (100 %)	EU
<i>HYS1</i>	Alarm 1 hysteresis	EUS 0 ~ 10 %	EUS (2 %)	EUS
<i>HYS2</i>	Alarm 2 hysteresis	EUS 0 ~ 10 %	EUS (2 %)	EUS
<i>bPS</i>	Communication velocity	1200, 2400, 4800, 9600	9600	ABS
<i>Pr1</i>	Communication Parity	NONE, EVEN, ODD	NONE	ABS
<i>STP</i>	Communication Stop Bit	1,2	1	ABS
<i>dLn</i>	Communication Data Length	7,8	8	ABS
<i>Adr</i>	Communication Address	1 ~ 99	1	ABS
<i>rPt</i>	Communication responding time	0 ~ 10(* 10 ms)	0	ABS
<i>rEt</i>	Transmission time	DIR, REV, SQRT, 0to20	DIR	ABS
<i>ln</i>	Input type	1 : 4 - 20 mA, 2 : 1 - 5 V d.c	1	ABS
<i>URH</i>	Set value of High Alarm	-19999 ~ 19999	19.999	ABS
<i>LRH</i>	Set value of Low alarm	-19999 ~ 19999	-19.999	ABS
<i>dP</i>	Decimal point	0 ~ 4	3	ABS
<i>FL</i>	Filter	OFF(0), 1 ~ 100	OFF (0)	ABS
<i>bIAS</i>	Compensation Value	EUS -100 ~ 100 %	EUS (0 %)	EUS
<i>boUt</i>	Sensor Break	UP(0), DOWN(1),OFF(2)	UP	ABS
<i>LoC</i>	Lock	OFF(0), ON(1)	OFF (0)	ABS

- When you change the using range (URV, LRV) Please change it before setting up than any other data. If you change URV or LRV, it could affect other data and cause problem.
- 1 : EUS -100 ~ 100% within the range of -19999 ~ 19999

Alarm relay and AL1, AL2 lamp function



Indication of Error and Function


Process value display unit	Description	Relay function	LED function
<i>SYSE</i>	SYSTEM error	All relay "OFF"	All LED "OFF"
<i>AdC</i>	AD Change error	AL1 "ON"	AL1 "ON"
<i>FAIL</i>	Sensor error	Mode UP → AL2 "ON" Mode Down → AL1 "ON"	Mode UP → AL2 "ON" Mode Down → AL1 "ON"
<i>obr</i>	Over Input (Input of more than 20 mA)	AL1 "OFF", AL2 "ON"	AL1 "OFF", AL2 "ON"
<i>noobr</i>	Over Input (Input of less than 4 mA)	AL1 "ON", AL2 "ON"	AL1 "OFF", AL2 "OFF"
<i>EEP</i>	EEPROM error	Normal Function	Normal Function

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Documents / Resources

	<p>HANYOUNGNUX HP3 Digital Scalemeter [pdf] Instruction Manual HP3-HP3 Digital Scalemeter, HP3, Digital Scalemeter, Scalemeter</p>
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References

- [!\[\]\(849840539e55921a3851a4ff96d7400d_img.jpg\) !\[\]\(c176e0b06f6c5dd85a4598b214d1ebba_img.jpg\) !\[\]\(66a18e26647fc145bd9198dd182dd107_img.jpg\) ; !\[\]\(572bcf30fdd4de64673b94584b7c6eca_img.jpg\) !\[\]\(ba6dc7fecffbf82e7fd414c1c97a1ece_img.jpg\) !\[\]\(7b0c59a8d567ae8f4c94e1b0dfc0504e_img.jpg\) !\[\]\(6e7b00b003bc1efbd5a833fe586c1576_img.jpg\)](#)
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