

General Information

HAT-1000, 5000

Analog Type Level Transmitter
Level Alarm Type Transmitter



HITROL CO., LTD.



Features

HAT-1000 Electric Transmitter

- * Simple, trouble-free operation.
- * Voltage, current or resistance output can be selected to meet a particular application.
- * Level control available by providing additional level alarm positions.
- * Requires only 2-or 3-conductor cable (without level alarm positions).
- * Explosionproof model available for installation in hazardous area.
- * Limit level alarm contacts available.

HAT-5000 Alarm Transmitter

- * Simple, trouble-free operation.
- * Adjustable alarm contacts for whole measuring range.
- * Easy, low-cost mounting.
- * 6 limit level alarm contacts available.

System Example

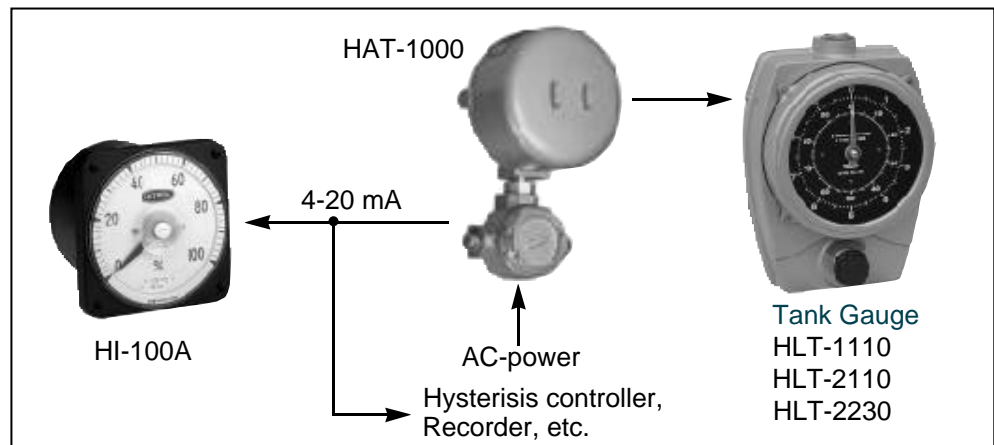


Fig. 1 System Example

Operating Principle

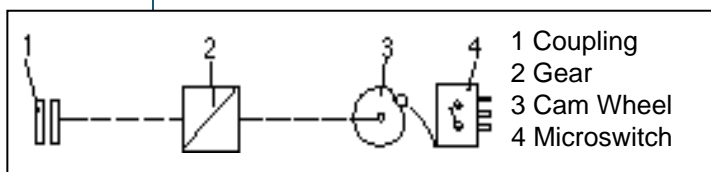


Fig. 2 Block Diagram (Alarm Transmitter)

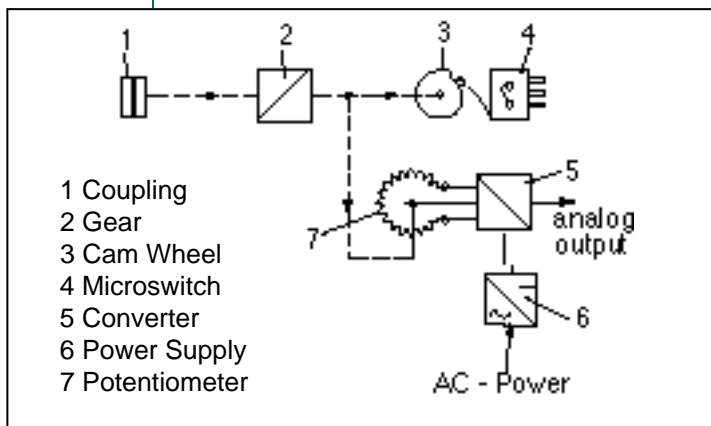


Fig. 3 Block Diagram

Fig. 2 shows the transmitter operating principle. The drive shaft connected to the tank level gauge via the coupling (1) adjusts one or more cam wheels (3) via a single wormgear (2). The cam wheels actuate microswitches (4) according to the limiting values set. The switching conditions thus generated are subsequently processed as high/low level information.

Fig. 3 shows the transmitter operating principle. The drive shaft connected to the tank level gauge via the coupling (1) adjusts one or more cam wheels (3) and a potentiometer (7) via a reduction gear (2). The cam wheels (3) actuate the microswitches according to the limiting values set.

The switching conditions thus generated are subsequently processed as high/low level information. Any change in resistance can be picked up by the potentiometer slider as analogue information which is accessible either directly or via an R/I converter. The R/I converter converts the change in resistance into a proportional current

Specifications

Model	Series : HAT-1000	Series : HAT-5000
Analog Output	DC 4 to 20 mA,	
Accuracy	± 0.5 % at 4 to 20 mA Linearity ±0.5 % and resistance tolerance	± 0.5 %
	AC 110/220 V ± 10 % 50/60 Hz or DC 24 V (not necessary for 0 to 500 output)	
Power Supply	DC 24 V	
Alarm Contact	Potential-free SPDT contacts (microswitch with snap-action contact) connected to common supply, contacts wired as normally closed contact, but can be converted to normally open contact by customer.	
Contact Capacity	AC 250 V, 15 A max.	
Permissible Ambient Temperature	-20 to + 60 (accuracy guaranteed for 0 to + 40)	-20 to + 60
Installation	Mounted onto counter flange fo tank level gauge	

Installation

- Before mounting remove transmitter cover. Turn drive shaft (6. Fig. 4) until both worm wheel screws are accessible.
- Flange the transmitter to the tank level gauge using the accessories shown in Fig. 4. In doing so, flange the transmitter such that the housing section containing the alarm contacts and the terminal box form a vertical or horizontal line.
- Ensure the driving pin engages properly. Do not use force in joining the coupling together again. Tighten hexagonal nuts (5).

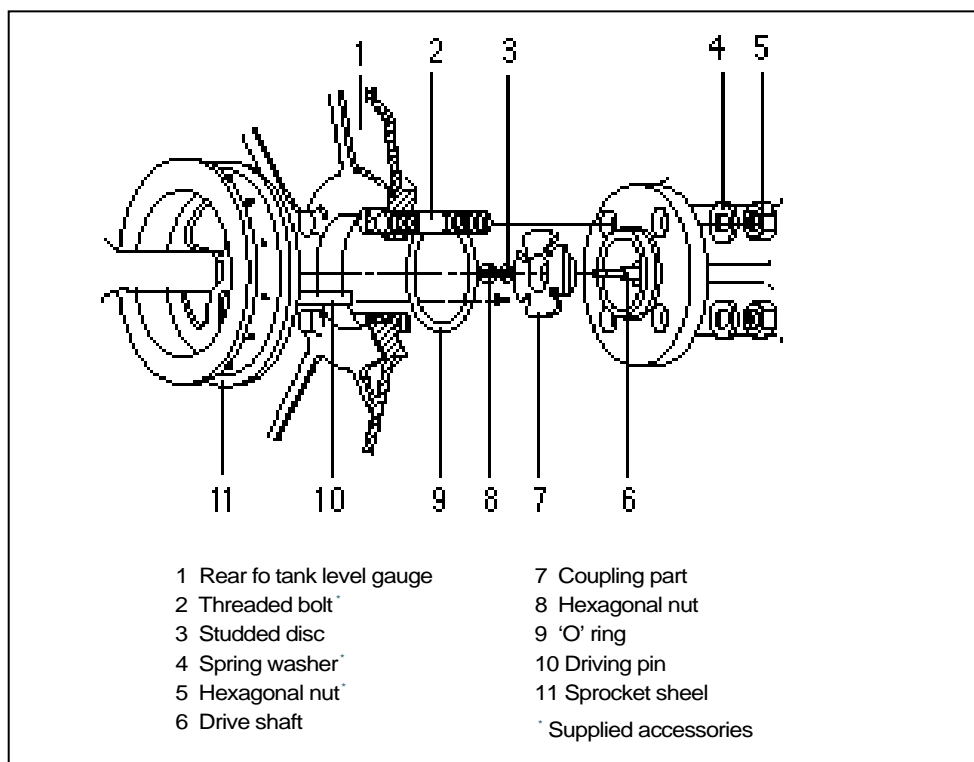


Fig. 4 Flange-mounting the transmitter

ORDER CODES

* Enclosure
A : Weather proof
B : Explosion proof (Flame proof d2G4)
S : Special version

* Output Signal
1 : DC 4-20 mA

* Power Supply
A : DC 24 V

* Alarm Contact
1 : None
2 : 2 point
3 : 4 point
4 : 6 point

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* Alarm Contact
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