



TECHNICAL GUIDANCE

Compact indicator and totalizer
CE marking and complying with RoHS

IR1700

MINI UNIVERSAL TOTALIZER

OUTLINE

IR1700 is an indicating totalizer. Connecting with flowmeters having pulse output, it indicates alternatively instantaneous or totalizing flow rate with alarm output. Scaling, preset value and other parameters can be set through a key operation on front panel. Supplying built-in power of 12 V DC for sensor, it receives 3-wire pulse signals. **IR1700** compact housing of DIN48 × 24 is just the right size for your space saving control panel.



STANDARD SPECIFICATION

● INPUT

- ◇ Pulse input (receives pulse output signal)
 - Full scale input frequency setting : 1 to 1000Hz
- NPN Open collector or dry contact pulse (no-voltage contact)
 - Voltage at open terminals: 10.0 V, Current at short circuit: 6.0 mA
- Voltage pulse L: 2 V DC or less, H: 3.8 to 30 V DC
- ◇ External input
 - To receive NPN open collector output signal and contact output signal.
 - Select following functions.
 - Reset input : Totalizing count or alarm is reset by ON input.
 - Inhibit input : Sensor input is inhibited by ON input (Input becomes zero compulsorily)
 - Hold input : Current indication is kept hold by ON input.

● INDICATION

- (Flow rate or totalized flow is selected by key operation)
- ◇ Indicator
 - Red 5 digit LED, height 7 mm (Zero blanking method)
- ◇ Flow rate indication
 - Indication Max. 4 digits LED (decimal point changeable)
 - Measurement accuracy $\pm 0.05\%$ rdg. ± 1 digit (* 1)
 - Scaling 0.001 to 9999
 - Low cut-off 1 to 29% variable (Stop functioning depending on setting)
 - Indication sampling period Averaging in 0.1 to 99.9 sec.
- ◇ Totalizing count indication
 - Indication Max. 5digits LED (decimal point changeable)
 - Accuracy ± 0 (at scaling 1) (* 1)
 - Scale factor 1 to 180000 count/h
 - Low cut-off Same setting applied as the one of flow rate
 - Totalizing count reset by key operation or reset input
 - Over scale Selectable either of following
 - Stop totalizing with flickering indicating digit
 - Continue totalizing from zero endlessly
 - Continue totalizing with shifting (indicated as $\times 10$)
- Flow rate and totalized flow indication when abnormal signal is received.
 - The last digit flickers if input signal exceeds 150% F.S.
- ◇ 3 LED status lamps on the front panel
 - 1 (Red) : ON at alarm output OUT1 is ON
 - 2 (Red) : ON at alarm output OUT2 is ON
 - T (Green) : ON at totalizing count indication

(* 1) At the conditions of 23°C measurement and less than 100ppm/°C temperature drift

(* 2) Between OUT1 and OUT2 output terminals

● ALARM OUTPUT

- Output Flow rate / Totalized flow
 - Duplicated use is not allowed.
- No. of outputs 2 points (Alarm lamp ON)
- Output signals NPN open collector
 - Maximum rating : 30 V DC, Max. 50 mA
- Operation mode Comparison/Hold/1shot selectable
- Reset by key operation or external reset input
- ◇ 1c contact relay output as option (cannot be combined)
- Output terminal Terminal 3-4 : Normal open
 - Terminal 5-4 : Normal close (Terminal 4 : COM)
- Output method 1c contact relay output
- Rated control capacity / Maximum allowable power 220 V AC 0.12 A / 30 V DC 1 A
- Output indication OUT1 LED light up (OUT2 LED is always OFF)

● OUTPUT FUNCTION

- ◇ Pulse output (Synchronized pulse with totalizing pulse)
 - One pulse is transmitted each time the counter counts up.
 - OUT1 output terminal used (common use with alarm is not allowed)
 - Pulse width 0.01 to 1.99s (default 50 ms)
- ◇ Current output as option
 - (4 to 20 mA DC, resistance load 500Ω or less)
 - Transmits flow rate in rescaled current signal.
 - Accuracy $\pm 0.3\%$ F.S. of the indication (* 1)
 - Renewal period approx. 20ms
 - Resolution Max. 1.6μA

● GENERAL SPECIFICATION

- Power supply 24 V DC $\pm 10\%$
- Consumption 3W or less
- Sensor power supply 12 V DC, Max. 50 mA
- Ambient cond. 0 to 50°C, 30 to 80%RH (No condensation)
- Case material, color Polycarbonate, Black
- Flame retardant grade UL94 V-0
- Enclosure Case: IP20 eq. (indoor use)
 - Front: IP66 eq. (dust and water proof)
- Cable termination Plug-in type screw terminal
- Wire size AWG26 to 16 (0.14 to 1.25mm²)
- Mass Approx. 50g

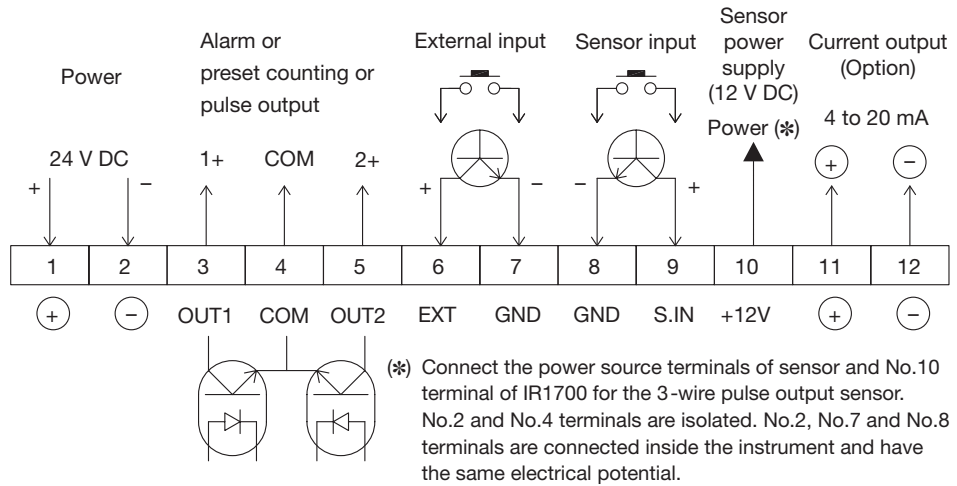
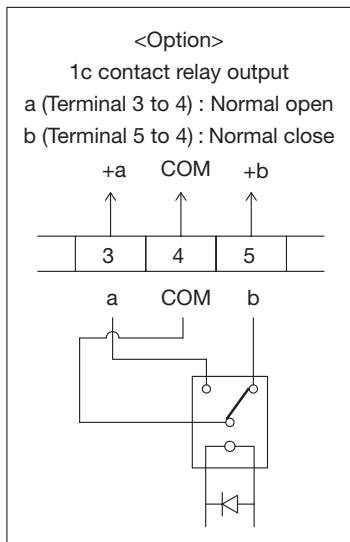
● OTHER SPECIFICATIONS

- Withstand voltage 1000 V AC, 1min. (* 2)
- Insulation resistance 500 V DC, 50 MW or more (* 2)
- Data back-up The setting values and totalized values are memorized in FRAM, in less than 100000 times for about 10 years.

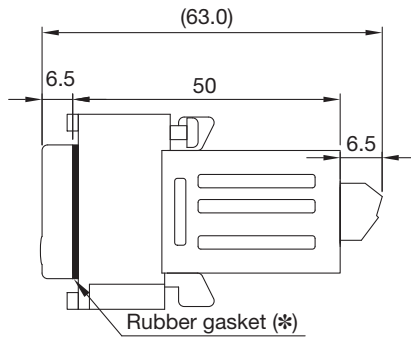
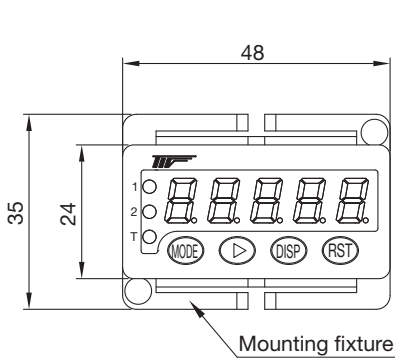
MODEL CODE

Model code			Description
IR	1	7	
Output signal	0		Without (Standard)
	1		Activate (Current output: 4 to 20mA)
	2		Activate (1c contact relay output)
	3		Activate (Current output, 1c contact relay output)
Input signal	0		Open collector pulse
	1		Voltage pulse

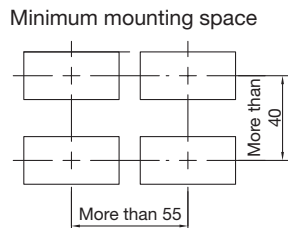
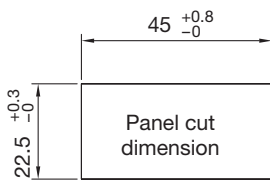
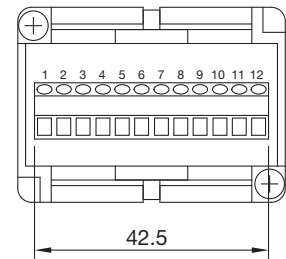
TERMINAL



DIMENSIONS



(*) Insert the attached rubber gasket to protect water ingress if needed.



Top-side terminal label

POWER	+	-	OUT1	COM	OUT2	EXT	GND	GND	S.IN	+	-	12 V DC A.OUT(OP)
+24V	0V											
1	2	3	4	5	6	7	8	9	10	11	12	

* Specification is subject to change without notice.

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