

Totalizer - Ratemeter

Totalizer and Ratemeter - LCD, 36 x 72

3233 / 3253
3293

- Display : LCD 10 mm
- Input : contact, voltage or solid-state (PNP/NPN)
- Front panel or electrical reset to zero
- Lithium battery - 8 years life
- Scale factor : 0.001 to 9999 (3253 and 3293)
- Decimal point selectable (3253 and 3293)
- Rate (3253 and 3293)



Types	3233	3253	3293
Totalizer	●	—	—
Ratemeter	—	●	—
Totalizer and Ratemeter	—	—	●

Part numbers	87 614 040	87 614 340	87 614 440
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Characteristics		87 614 040	87 614 340	87 614 440
Display	Totalizer mode	8 digit LCD, height 10 mm	—	8 digit LCD, height 10 mm
	Tachometer mode	—	6 digit LCD, height 10 mm	6 digit LCD, height 10 mm

Inputs		87 614 040	87 614 340	87 614 440
1 slow counting input for contact closure or NPN open-collector transistor input		terminals 1 and 2	terminals 1 and 2	terminals 1 and 2
	Max. frequency	40 Hz	20 Hz	20 Hz
	Min. contact-closed time	12 ms	10 ms	10 ms
1 input for high-speed counting signal from voltage level	Min. contact-open time	12 ms	20 ms	20 ms
		terminals 1 and 3	terminals 1 and 3	terminals 1 and 3
	Max. frequency	5 kHz	5 kHz (5/coef. if coef>1)	5 kHz (5/coef. if coef>1)
	High level	3 • 30 V $\overline{\text{---}}$	3 • 30 V $\overline{\text{---}}$	3 • 30 V $\overline{\text{---}}$
	Low level	0 • 0.7 V $\overline{\text{---}}$	0 • 0.7 V $\overline{\text{---}}$	0 • 0.7 V $\overline{\text{---}}$
	Minimum pulse time	70 μ s	—	—

Reset		87 614 040	87 614 340	87 614 440
External : terminals 1 and 4	Volt-free contact	●	—	●
	NPN open-collector transistor	●	—	(Only for totalizer mode)
	Minimum pulse time	300 ms	—	300 ms
Front panel		by push-button if terminals 1 and 5 connected together	—	if enabled at time of programming
Input impedance		50 k Ω /+3 V $\overline{\text{---}}$	50 k Ω /+3 V $\overline{\text{---}}$	50 k Ω /+3 V $\overline{\text{---}}$
		(High-speed counting) 100 k Ω /+3 V $\overline{\text{---}}$ (Slow counting)	(High-speed counting) 100 k Ω /+3 V $\overline{\text{---}}$ (Slow counting)	(High-speed counting) 100 k Ω /+3 V $\overline{\text{---}}$ (Slow counting)
Tachometer mode	Type	—	Reciprocal 1/Tau	Reciprocal 1/Tau
	Accuracy	—	\pm 0.2 %	\pm 0.2 %
	Sampling time	—	0.7 s	0.7 s
	Time limit for measuring	—	10 s	10 s
Scale factor	Tachometer mode	—	0.001 • 9999 (0 not permitted)	0.001 • 9999 (0 not permitted)
	Totalizer mode	—	—	0.0001 • 99.9999
Decimal point	Tachometer mode	—	4 programmable positions	4 programmable positions
	Totalizer mode	—	—	5 programmable positions
Rate		—	x1 or x10 programmable	x1 or x10 only for ratemeter
		—	—	—
Time base		—	Crystal controlled	Crystal controlled
Lithium battery		3 V $\overline{\text{---}}$	3 V $\overline{\text{---}}$	3 V $\overline{\text{---}}$
Life		8 Years	8 Years	8 Years

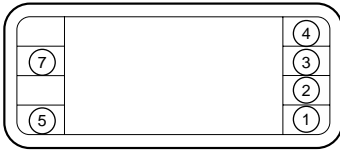
A power supply must be provided for a sensor (12 V $\overline{\text{---}}$)

Physical details and protection		87 614 040	87 614 340	87 614 440
Material : Self-extinguishing (UL94VO)		●	●	●
Front panel protection		IP56	IP56	IP56
Mounting (panel-mounting - slide-action clips)		●	●	●
Connections at rear of case		Screw terminals	Screw terminals	Screw terminals
Waterproof gasket for panel sealing		●	●	●
Temperature limits	Use	0 °C + 55 °C	0 °C + 55 °C	0 °C + 55 °C
	Stored	0 °C + 70 °C	0 °C + 70 °C	0 °C + 70 °C
Weight		60 g	60 g	60 g

To order, specify :

Standard products	1 Part number
Example : Totalizer/counter - 87 614 040	

Terminal markings



Type 3233

- 1 - Common 0 V
- 2 - Slow counting input
- 3 - High-speed counting input
- 4 - Remote reset
- 5 - Enable/disable front reset button

Type 3253

- 1 - Common 0 V
- 2 - Slow counting input
- 3 - High-speed counting input
- 5 - Programming

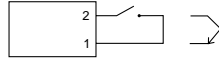
Type 3293

- 1 - Common 0 V
- 2 - Slow counting input
- 3 - High-speed counting input
- 4 - Remote reset
- 5 - Programming

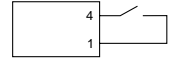
Connections

Totalizer 3233

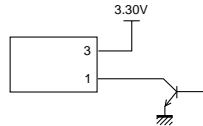
Slow counting.
Volt-free contact or NPN transistor.



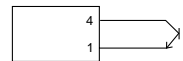
Remote reset.
By contact.



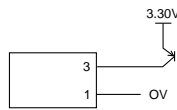
High-speed counting.
NPN transistor.



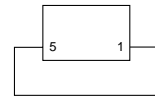
Remote reset.
By NPN transistor.



High-speed counting.
PNP transistor.

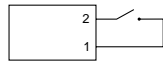


Front reset enable.

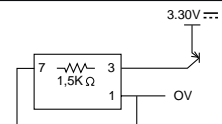


Ratometer 3253

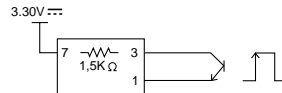
Slow counting.
Volt-free contact.



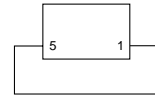
High speed counting.
PNP transistor



High-speed counting.
NPN transistor or voltage level.

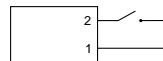


Programming enable.

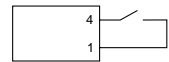


Totalizer and Ratometer 3293

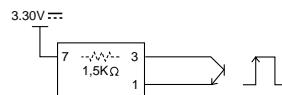
Slow counting.
Volt-free contact.



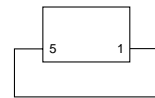
Remote reset.
Volt-free contact.



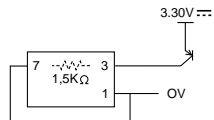
High-speed counting.
NPN transistor or voltage level.



Programming enable.



High-speed counting.
PNP transistor.



Dimensions

