Totalizer - Ratemeter
Totalizer and Ratemeter - LCD, 36 x 72

- **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

Characteristics

		3233	3253	3293
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

		3233	3253	3293
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
	Min. contact-open time	12 ms	20 ms	20 ms
1 input for high-speed counting signal from voltage level		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 ⎓	3 • 30 V ⎓	3 • 30 V ⎓
	Low level	0 • 0.7 V ⎓	0 • 0.7 V ⎓	0 • 0.7 V ⎓
	Minimum pulse time	70 µs	—	—

Reset

		3233	3253	3293
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 kΩ/+3 V ⎓ (High-speed counting) 100 kΩ/+3 V ⎓ (Slow counting)	50 kΩ/+3 V ⎓ (High-speed counting) 100 kΩ/+3 V ⎓ (Slow counting)	50 kΩ/+3 V ⎓ (High-speed counting) 100 kΩ/+3 V ⎓ (Slow counting)
Tachometer mode	Type	—	Reciprocal 1/Tau	Reciprocal 1/Tau
	Accuracy	—	± 0.2 %	± 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 ⎓	3 V ⎓	3 V ⎓
Life		8 Years	8 Years	8 Years
A power supply must be provided for a sensor (12 V ⎓)		●	●	●

Physical details and protection

		3233	3253	3293
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

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Terminal markings
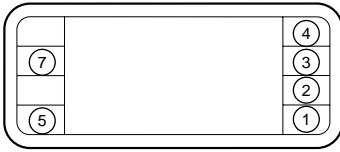
Type 3233

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
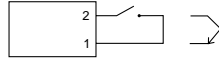2 - Slow counting input
3 - High-speed counting input
5 - Programming

Type 3293

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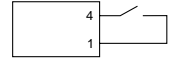3 - High-speed counting input
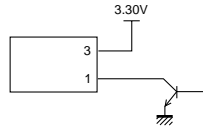4 - Remote reset
5 - Programming

Connections

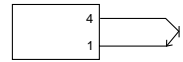**Totalizer 3233**

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.
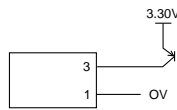
Front reset enable.
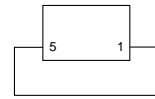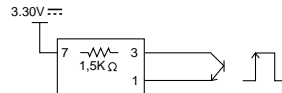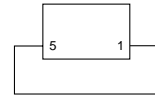
Ratemeter 3253

Slow counting.
Volt-free contact.
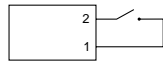
High speed counting.
PNP transistor
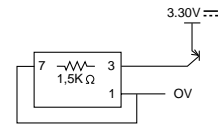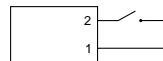
High-speed counting.
NPN transistor or voltage level.

Programming enable.

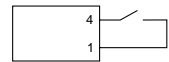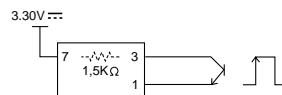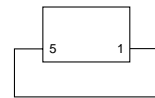**Totalizer and Ratemeter 3293**

Slow counting.
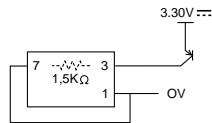Volt-free contact.

Remote reset.
Volt-free contact.

High-speed counting.
NPN transistor or voltage level.

Programming enable.

High-speed counting.
PNP transistor.

Dimensions

Panel cut-out

Mounting

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