# TM13 | TM14

# THICKNESS MONITOR SENSORS







# DESCRIPTION

The TM13 and TM14 devices comprise: quartz oscillator, frequency measuring system and communication interface. It is connected to the input element of a quartz resonator. The measurement results are transmitted via RS232 to the master device: either a PC or TMC13 controller.

Remote control via TMC13 controller or PC.

## FEATURES

#### TM13:

- Frequency Resolution: 0.1Hz
- Number of measurements per second: 4 (fixed)
- Maximum frequency of quartz oscillator: 6 MHz
- Stability: 0.5 ppm

#### TM14

- Frequency Resolution: 0.01 Hz
- Number of measurements per second: 0.5, 1, 2, 4, 10 (selectable)
- Maximum frequency of quartz oscillator: 6 MHz
- Stability: 0.5 ppm

### TM SENSOR CONTROL APPLICATION



# TECHNICAL DATA

Power supply	5V DC	
Current consumption	max 500 mA	
	TM13	TM14
Thickness resolution	0.1 Å	0.01 Å
Rate resolution	0.1 Å/s	0.01 Å/s
Frequency resolution	0.1 Hz	0.01 Hz
Frequency stability	0.5 ppm	0.5 ppm
Number of measurements per second	4	0.5; 1; 2; 4; 10 (selectable)
Communication interface	RS232	
Dimensions	80.0 × 50.0 × 27.0 mm (W×H×D)	
Weight (approx.)	0.1 kg	

#### OPTIONS

Communication interface RS485 (specify at order)

