



Digital Tilt Logger

MEMS
TILT & INCLINATION
SERIES

Digital Tilt Logger shown in typical installation with Mounting Bracket.



The Digital Tilt Logger can also be equipped with an optional radio antenna to incorporate it into an RSTAR or DT LINK wireless system. RST's RSTAR system uses wireless technology to provide automated data acquisition and DT LINK allows wireless collection of data logger data in hard to access areas.



ordering info

UNIAXIAL	PART #
MEMS Uniaxial Tilt Logger	IC6560
BIAXIAL	PART #
MEMS Biaxial Tilt Logger	IC6660
MOUNTING	PART #
MEMS Digital Tilt Logger Horizontal Mounting Plate	IC6568
MEMS Digital Tilt Logger Vertical Mounting Bracket	IC6569
READOUTS & DATALOGGERS	PART #
Ultra-Rugged Field PC ²	IC32000-AR2-RSTS
OPTIONAL	
RSTAR L900 - automated wireless data collection	
IC6560 DTLINK - wireless data collection	
IC6660 DTLINK - wireless data collection	

The Digital Tilt Logger is a low cost, battery powered data logger and tilt meter in a single, compact unit. It measures tilt in either one or two perpendicular axes in the plane of the base. The unit is intended to be permanently installed to provide long term observation with maximum resolution and sensitivity, and is conveniently designed for manual monitoring or remote data acquisition with RST's rstar Array Radio Series which takes advantage of the latest wireless technology.

The Digital Tilt Logger consists of one or two MEMS tilt sensors, a battery supply, non-volatile memory, USB cable and Windows® host software. The tiltmeter may either be uniaxial or biaxial. The electronics are housed in a NEMA 4X (IP-66) enclosure for environmental protection, and is typically bolted to the structure via mounting plate or bracket. The internal MEMS accelerometer is the same as used in the In-place MEMS Digital Tilt Meter models IC6554 and IC6654.

tilt specifications

ITEM	DESCRIPTION
Range	±15° (other ranges upon request)
Resolution	±2 arc sec. (±0.0006°) (0.01 mm/m)
Non-linearity	±0.0125% F.S. (±0.002°) (0.03 mm/m)
Repeatability	±0.0125% F.S. (±0.002°) (0.03 mm/m)
Sensor	MEMS (Micro-Electro-Mechanical Systems) Accelerometer
Power Source	Lithium size C 3.6V
Battery Life	> 1-2 years
Operating Temp.	-40 to 60°C (-40 to 140°F)
Dimensions	100 x 100 x 82 mm (3.94 x 3.94 x 3.23 in.)

data storage specifications

DESCRIPTION	SPECIFICATION
Memory	4 MB
USB Data Transfer	> 5,000 data points per second
Interval Mode	10 seconds to 1 day
Variable Rate Mode	16 user programmable sampling rates
Time Format	Month / day / year Hour / minute / second
Memory Full Behaviour	"Wrap around" or "fill & stop" option
Communication	USB type B connector

software specifications

User friendly Windows® host software included.
Compatible with most spreadsheet software.
Data stores in CSV format, and opens in Microsoft® Excel.

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applications

Monitor and log tilt data from retaining and building walls.

Tilt of concrete dams.

Structural load testing.

Landslide monitoring.

Building safety along adjacent excavations.

Applications where the failure mode is expected to have a rotational component.

Observation of benches and berms in open pit mines.

Bridge pier monitoring.

Ground subsidence.

features

Data logging and tilt monitoring capabilities in a single, compact unit.

Compatible with RST's rstar Array Radio Series:

A wireless system using wireless technology to provide continuous data acquisition.

High accuracy and repeatability.

Uniaxial or biaxial sensors available.

Horizontal or vertical applications.

Cost effective and easy to install.

NEMA 4X (IP-66) weather-proof enclosure.

4MB memory.

Battery powered for remote sites.

100 year memory backup.

-40°C to 60°C (-40°F to 140°F) operating range.

16 bit analog/digital converter.