

Description

Thermochron iButtons labeled with “WP” (waterproof) are an enhanced version of the iButton® temperature loggers in terms of their protection level. These iButtons provide effective protection against moisture, various chemicals, and are suitable for continuous submersion. The protection level complies with IPX8 according to DIN EN60529.

In a process developed by us, the iButton is filled with potting compound, preventing moisture from penetrating the sensitive areas of the housing. The battery and electronic components are shielded from external influences. Existing accessories for reading or programming iButtons can be used without restrictions.

Our approach preserves the advantage of the small size of the iButton, and the thermal response time is even slightly shorter than with an unprotected iButton. In comparison to solutions with a protective capsule, the cumbersome and sometimes error-prone procedure of placing and removing the iButton from the protective capsule is also eliminated.

For technical information on the various models of waterproof iButton temperature loggers, please refer to the respective datasheet.

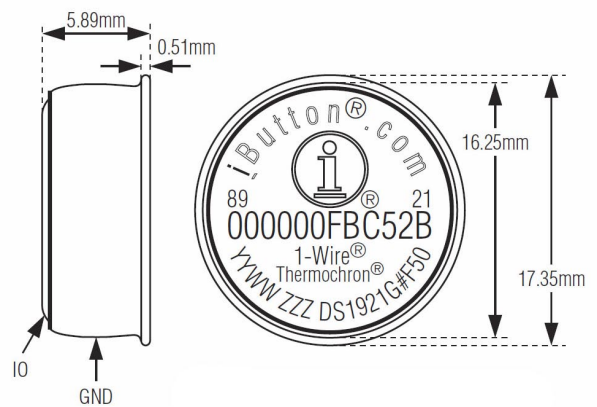
Applications

- Outdoor Temperature Monitoring
- Monitoring of Soil Temperature
- Temperature Monitoring in Liquids
- Research & Development

Features

- Ingress Protection Rating IPX8 according to DIN EN 60529
- Suitable for continuous submersion
- Waterproof up to 30 meters
- Size of the iButton remains unchanged
- Compatible with standard accessories

Technical Drawing



Examples of Accessories

PART	TYPE
DS9490R#	1-Wire USB Adapter
DS1402D-DR8+	1-Wire Network Cable
DS9093F+	Plastic snap-in fob



Absolute Maximum Ratings

Operating Temperature Range*

-25 °C to +70 °C

**Storage or operation above +50 °C significantly reduces battery life.*

Stresses beyond those listed under “Absolute Maximum Ratings” may cause permanent damage to the device. These are stress ratings only, and functional operation of the device at these or any other conditions beyond those indicated in the operational sections of the specifications is not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

Specifications

Parameter	Conditions	MIN	TYP	MAX	Units
Weight			3.6		g
Physical Dimensions		See technical drawing			mm
Water Resistance	24 h at 23 °C			3	bar
Thermal Response Time Constant	(Note 1)		15		s

Hinweis 1: This value was derived from submerging a DS1922L-WP into 55 °C water. The initial temperature was 22.5 °C. The response time constant of an unprotected iButton is approximately 30s. Do not drop an unprotected iButton into water or any other liquid.

Accessories

For our waterproof iButtons, no special accessories are required. The standard accessories for programming and reading iButtons, as well as all accessories for attaching iButtons, can be reused without any restrictions. Software for programming and reading the iButtons can be downloaded free of charge from the manufacturer's website.

For pricing, delivery, and ordering information, please call +49 751 6 528 430 or visit our website at www.mfelabs.com.

Revision History

Revision Date	Description	Pages Changed
23/12	Initial release.	—