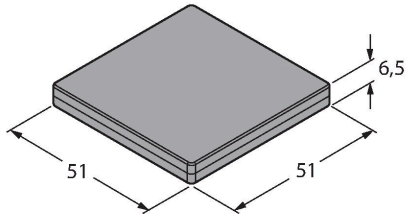
TW-Q51WH-HT-B128
HF Tag – High Temperature



Technical data

Type	TW-Q51WH-HT-B128
ID	7030661
Remark to product	High-temperature
Data transfer	Inductive coupling
Technology	HF RFID
Operating frequency	13.56 MHz
Radio communication and protocol standards	ISO 15693 NFC Typ 5
Storage temperature	-40…+210 °C
Extended storage temperature range	Applicable to the HF part
Design	Hard tag, Q51
Housing material	Plastic
Active area material	Plastic, PPS, black
Protection class	IP68
Packaging unit	1

Technical data

Type	TW-Q51WH-HT-B128
ID	7030661
Remark to product	High-temperature
Data transfer	Inductive coupling
Technology	HF RFID
Operating frequency	13.56 MHz
Memory type	EEPROM
Chip	NXP I-Code SLI-X
Memory size	128 Byte
Memory	Read/Write
Freely usable memory	112 Byte
Number of read operations	unlimited

Features

- The high-temperature tags must undergo adequate stress tests within the proposed temperature processes before deployment.
- The following stress test was performed on this tag:
  Cyclic temperature stress: 20 min. at 20 °C – 20 min. at 220 °C.
  Number of tested cycles: 1500
  This successfully performed test does not imply suitability for a specific high-temperature application, but merely serves as proof of the basic usability.
- The TH-Q51S-HT and TH-Q51T-HT brackets protect the tag from mechanical loads and allow the mounting on metal.
- EEPROM, memory 128 byte
- Not for direct mounting on metal

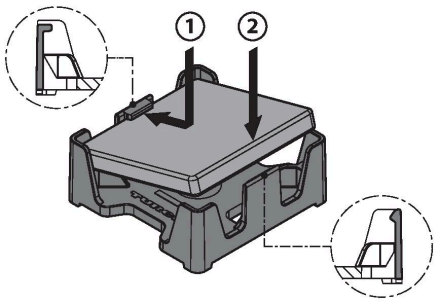
Functional principle

The HF read/write devices operating at a frequency of 13.56 MHz form a transmission zone the size of which (0…500 mm) varies, depending on the combination of read/write head and tag used.
The read/write distances mentioned here only represent standard values measured under laboratory conditions, free from any influences caused by surrounding materials.
The read/write distances of tags suitable for mounting in/on metal were determined in/on metal.
Attainable distances may vary by up to 30 % due to component tolerances, mounting conditions, ambient conditions and material qualities (especially when mounted in metal). Testing of the application under real operating conditions is therefore essential, especially with on-the-fly reading and writing!

Technical data

Number of write operations	10^5
Typical read time	2 ms/Byte
Typical write time	3 ms/Byte
Radio communication and protocol standards	ISO 15693 NFC Typ 5
Minimum distance to metal	10 mm
Temperature during read/write access	-25…+85 °C
Storage temperature	-40…+210 °C
Temperature outside detection range	-55…+185 °C
Extended storage temperature range	Applicable to the HF part
	200 °C, 60 min
	220 °C, 45 min
	240 °C, 30 min
Design	Hard tag, Q51
Housing length	51 mm
Housing width	51 mm
Housing height	6.5 mm
Housing material	Plastic
Active area material	Plastic, PPS, black
Protection class	IP68
Packaging unit	1

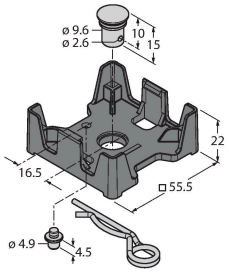
Mounting instructions/Description



Mounting the data carrier properly in the retainer
To avoid damage to the retainer, follow the instructions below.
Carefully push both sides of the data carrier in the retainer until they latch (the latches are designed differently):
1. Insert data carrier
2. Latch data carrier

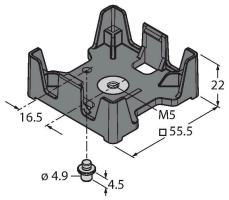
Accessories

TH-Q51S-HT	7030541



Retainer with spring cotter for Q51 tag. The use of the 4.5 mm lock pin ensures protection against twisting of the retainer or the tag For mounting on metal. Suitable for repeated use in high-temperature. Only suitable for a single assembly (engage the tag in the retainer). The use of the retainer results in a clearance of 12 mm between metal to tag.

TH-Q51T-HT	7030540



Retainer with M5 threaded bush to screw on Q51 tags. The use of the 4.5 mm lock pin ensures protection against twisting of the retainer or the tag For mounting on metal. Suitable for repeated use in high-temperature. Only suitable for a single assembly (engage the tag in the retainer). The use of the retainer results in a clearance of 12 mm between metal to tag.