Product Information
smart-DOME Freestyle Ex F3010 HF

1. Product name/description

The *smart*-**DOME** Freestyle Ex 3010 HF combines maximum industrial resistance with absolute freedom in terms of shape, technology and method of attachment. The base material is a UV and chemical resistant polyurethane. The transponder is certified according to ATEX and IECEx and can be read with a smartphone/tablet as well as with an HF reader.

Article: *smart*-**DOME** Freestyle Ex 3010 HF
Article number: 44004206

Typical applications:

- Maintenance and repair
- General tool/device identication

2. Product design

RFID-Chip

- ISO-standard	ISO/IEC15693	
- Chip type	ICODE SLIX (NXP)*	
	SL2S2002_SL2S2102 / Product data sheet	
	ICODE SLIX Rev. 3.4 — 10 August 2017 (178034)	

- RFID frequency   13.56 MHz HF
- Memory size   User Memory 896bit
- Write cycles   Min. 100.000 per lifetime
- Data retention   50 years[1]

RFID Transponder

- Format   Round
- Diameter   30 mm (+/- 0.3 mm)
- Height   10.5 -11.5 mm (max. 11.5 mm)

- Material parameter
  - Material   ROYALPLAST, hard, colored
                      ROYALPLAST, soft, transparent
  - Color   Light blue RAL 5012
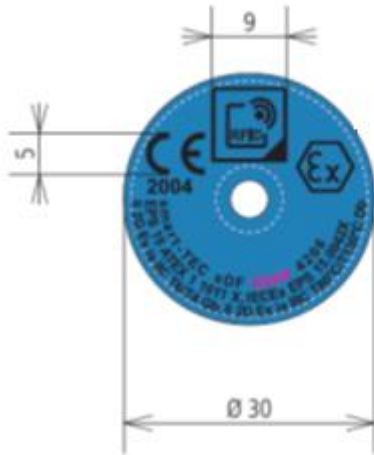- Mounting hole   Ø 4.5 mm (+/- 0.3 mm)
- IP-protection class IP 68

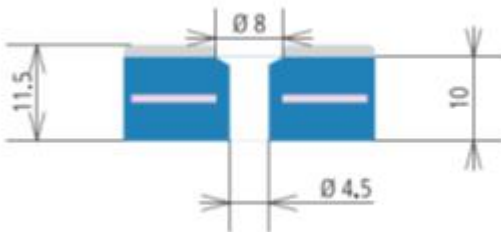[1] 50 years data retention according to NXP datasheet

Marking

- Printing technology   Digital printing
- Personalization   Printed with
  - RFID symbol according to DIN SPEC 91406
  - ATEX and IECEx specifications

Product draft

◼ = Digital print, arial bold black

🟦 = Base body, blue, RAL5012

🟥 = four-digit number based upon the batch number (dynamic), black

🟦 = Base body, blue, RAL5012

🟪 = NFC chip, ICODE SLIX

⬜ = ROYALPLAST, transparent

3. Additional material data of the polyurethane

- Material consisting of two-component hard-elastic polyurethane system (transparent/colored potting compound)
- Hardness 60 according to Shore D

Resistance

- UV-radiation   Successful test according to DIN EN ISO 4892-2
- Weathering   Successful test according to Renault D27 1911 (02/95)
- Climate   Successful test according to Renault 1309 (09/81)
- Max operating temperature   -40°C* bis +85°C
- Max. storage temperature   -55°C bis +110°C[2]
- Max. temperature   Successful test at 130 °C for 2.5h.
- Chemical resistance
    o Very good resistance after 120h immersion in water, salt water, sulfuric acid, sodium hydroxide, ethylene glycol and engine oil 14W40
    o Good resistance after 120h immersion in hydrochloric acid and ammonia water.
    o Unresistant to concentrated acids and alkalis, aromatic and halogenated hydrocarbons, polar solvents (alcohols, esters and ketones), continuous exposure to hot water.
- Scratch/break/impact   Successful test according to PSA D15 1211 (03/81).
- Dimensional stability   Shrinkage fee after 17 days at 80°C and 15 days rest at room temperature

*There is no special shutdown mechanism at -40°C.[3]

4. Explosion protection

Certified according to the directives and standards 94/91EG, IEC 60079-0:2011 and IEC 60079-11:2011.

	ATEX	IECEx
Certificate No.	EPS 15 ATEX 1 1011 X	IECEx EPS 15.0042X
Marking	II 2G Ex ia IIC T6/T4 Gb II 2D Ex ia IIIC T80°C/T130°C Db	
Equipment	smart-DOME Freestyle Ex and smart-DOME Classic Ex	
Specific conditions of use	• Maximum operating temperature range for explosion protection requirements -55°C until +110°C • The RFID-Tags shall never be exposed to high electromagnetic field strengths according to EN 60079-14:2014. • Electrostatic charges shall be avoided. The tags shall never be used next to strong charge generating processes	

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[2] Storage 110°C / 48h: no influence of the electromechanical characteristics after cooling
[3] According to Product Manager RFID Solutions NXP Semiconductors

5. Material properties / standards / certifications

- Complies with REACH regulation (EG) 1907/2006
- Complies with RoHS Directive 2011/65/EU
- Complies with CE directive
- Mercury-free (EU 2017/852)
- California Proposition 65
- Conflict Minerals

Further standards and approvals on request

6. Packaging

- The transponders are packed in opaque polybag
- 25 pieces per bag; 4 bags per carton
- Function check   100%-function check, read UID
- Quality check   according to AQL I/1

7. Transport and storage instructions

The prerequisite for flawless processing and ensuring functionality is already set during transport and storage of our products. Our current storage and processing instructions for RFID and NFC transponders can be downloaded from our homepage:

https://www.smart-tec.com/en/info/services/downloads

In addition, the documents supplied apply to the explosion-proof area.