

# PRODUCT DATASHEET

iID® Transponder

## MINI-TAGspecial U4.5-C

**UHF-RFID miniature transponder, for extreme environmental conditions, mounting in metal**

- passive RFID communication ISM UHF band, EPC Class1 Gen2 or ISO 18000-6C
- round TAG, diameter 4.5 mm
- PEEK packaging, for mounting in metal surface
- EEPROM memory
- designed for small item tagging, tool management solutions, aircraft and automotive part tagging

These transponder device is an integral part of *microsensys* iID® system solution.

This TAG operates with *microsensys* standard RFID reader components and high sensitive demodulators.

*microsensys* GmbH  
In der Hochstedter Ecke 2  
D 99098 Erfurt

TEL +49-361-59874 0  
E-MAIL info@microsensys.de  
FAX +49-361-59874 17  
WEB www.microsensys.de

**microsensys**  
RFID in motion

This data sheet is subject to change  
contact *microsensys* for latest information

MTsp-U45-C 001.docx

<b>RFID Technology:</b>	UHF closed coupling system iID®4000, based on ISO 18000-6c, EPC Class1 Gen2	
<b>Chip Types:</b>	NXP UCODE G2XM or Impinj Monza 5	
<b>Frequency Range:</b>	preferably EU ISM Band 860-868MHz	
<b>Polarisation:</b>	without polarisation, inductive coupled	
<b>Communication Rate:</b>	forward link: 40-160kBit/s return link: 40-640kBit/s	
<b>Communication Distance:</b>	0 ... 5 mm with closed coupling UHF readers in every case depending on reader system and environmental conditions	
<b>Memory:</b>	EEPROM endurance 100000 cycles, data retention 50 year (T<55°C) features are depending on used RFID chip	
<b>Memory Capacity:</b>	128 bit EPC, 64 bit TID Monza 5 240 bit EPC, 64 bit TID G2XM 512 bit only G2XM	
<b>User Memory:</b>		
<b>Special Functionality:</b>	see application note <i>microsensys</i>	
<b>Operating Temperature:</b>	-25°C ... +85°C	
<b>Storage Temperature:</b>	-45°C ... +125°C (for short time +150°C)	
<b>Dimensions:</b>	D 4.5 +/-0.1 mm, TH 1.3 mm	
<b>Packaging Material:</b>	PEEK, back side epoxy inlet mixed ferrite epoxy PEEK material in black or nature colour, depending on the availability using flat in metal possible	
<b>Mounting Instructions:</b>	plane side on top, see application note recommended glue: 2K-EP "plus endfest 300" UHU GmbH Germany	
<b>Protection Class:</b>	IP67	
<b>Marking:</b>	no marking	
<b>Appropriate RFID Reader:</b>	POCKETwork UHFcc wireless handheld reader PENsolid UHFcc wireless pen reader INDUSTRY 0906 UHF plus M18 UHFcc stationary industrial read write unit others possible	
<b>HOST Command Set:</b>	see actual API documentation of <i>microsensys</i> iID® driver engine	

<b>Type :</b>	<b>18.911.515.00*</b>	<b>18.933.515.00</b>	*on inquiry
<b>Chip Type:</b>	UCODE G2XM	Monza 5	
<b>User Memory:</b>	512	0	
<b>Communication Distance:</b>	5	3	mm measured with M18 UHF antenna