PRODUCT DATASHEET

TELID® RFID Sensors

TELID® 521.3D

RFID temperature and sensitive shock logger

- semi-passive UHF RFID sensor device, event logger
- contactless interface compatible ISO 18000-6C
- temperature range -25°C ... +85°C
- sensitive shock events down to 30 mg (300 mm/s²)

RFID Sensor TELID® devices are an integral part of *microsensys* iID® system solution. They are very useful for wireless sensors applications in industry, transport and logistics. TELIDs are operating optimal with microsensys standard RFID reader.

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RFID Technology:	RFID system TELID®400/500, based on ISO 18000-6C	
Chip Type:	iID®-4000	long distance UHF sensor solution
Carrier Frequency:	868 MHz	also useable at 915MHz
Communication Rate:	up link max.128 kbps, down link max. 640 kbps	
Communication Distance:	0 ... 200 cm	depending on reader antenna and environmental conditions
Data Memory:	EEPROM	read write type endurance >100.000 cycles, data retention > 10 years
Static Memory:	EPC up to 160 bit, TID 96 bit, manufacturer OTP possible	
Data Memory:	approx.. 1 Mbit	
Recording Capacity:	SIMPLE MODE:	approx.. 6000 events
	ADVANCED MODE:	max. 123 events, including wave recording
Temperature Sensor:	semiconductor sensor	
Working Temperature:	-25°C .... +85°C	
Sample Rate:	not programmable	measurement at event
Accuracy:	+/- 0.5 K	at 0°C … +65°C
	+/- 1.0 K	at -25°C … +85°C
Acceleration Sensor:	MEMS sensor, 3D (x, y, z-axis)	
Range:	0 ... ±8 g	programmable range: ±2 g, ±4 g or ±8 g
Limit Range:	30 mg ... max.	programmable in steps of 1 mg
Frequency Range:	0 … 200 Hz	programmable bandwidth
Sample Rate:	12.5 Hz, 25 Hz, 50 Hz, 100 Hz, 200 Hz, 400 Hz	programmable
Sensitivity:	0.5 mg/√Hz	theoretical
Event Recording:	date and time of events	
Event Types:	LIMIT, FREE FALL or INACTIVITY detection	programmable
Repetition Time:	approx. 10ms, 1s, 10s or 60s (1 s preferred setting)	programmable
Samples per wave:	170 samples per waveform and axis	only ADVANCED MODE
Clock:	quartz RTC	time synchronization while device programming, 1s resolution
Logger Operating Mode:	SLEEP, ACTIVE	
Measure Modes:		STOP FULL (event counter)
Basic Functions:		programming of sensor parameters, read parameters, read memory, read status information, start/stop logging, read EPC and TID
Parameters:		useable memory size, start time, sample rate, measurement range, bandwidth, shock limit, absolute calibration data (optional)
Battery:	Li-Thionylchlorid, 400 mAh	
Life Time:	up to 3 years	depending on using conditions
Working Temperature:	-25°C ... +85°C	
Storage Temperature:	-35°C ... +95°C	recommended 25°C
Dimensions:	approx. D30 mm , thickness 18 mm	
Protection Class:	IP 67	
Packaging:	PEEK ring, epoxy filling (black)	
Marking:	laser printed product type on top	optional unique ID-No
Mounting Instruction:	see application note	
Appropriate RFID Reader:	INDUSTRY0906 UHF reader	with RS232TTL, Ethernet or USB interface
	CASIO IT-800 or IT-G500	with UHF reader module
Software:	TELIDsoft (PC and Mobile)	on inquiry and depending on application

Type:	14.521.400*	14.521.402*	14.521.401	*) in development or on request
Data Memory:	256 kbit	256 kbit	1 Mbit	
Wave Recording:	no	yes	yes	