


Type Examination Certificate

for Electrical Equipment used in Potentially Explosive Atmosphere

Issued by Certification Management Limited, Unit 1 Newport Business Park, New Port Road, Ellesmere Port CH65 4LZ, UK	
Applicant	i.safe MOBILE GmbH i_Park Tauberfranken 10, 97922 Lauda-Koenigshofen, Germany
Manufacturer name	i.safe MOBILE GmbH i_Park Tauberfranken 10, 97922 Lauda-Koenigshofen, Germany
Product name	Head Mounted Tablet
Type/model code	HMT-1Z1, intrinsically safe Head-Mounted-Tablet, model T1100S
Type of protection	Intrinsic Safety (ib)
Group, Temperature Class and EPL	IIC T4 Gb IIIC T135°C Db
The equipment shall be marked with the following	Ex ib IIC T4 Gb Ex ib IIIC T135°C Db IP6X -20°C ≤ Ta ≤ +60°C
Ratings	See attachment 1
Special condition for safe use	<ol style="list-style-type: none"> 1. The battery shall be charged outside explosion hazardous areas only. 2. The device must be protected from impacts with high impact energy, against excessive UV light emission and high electrostatic charge processes. 3. The permitted ambient temperature range is -20°C °C to +60 °C.
Certificate number	CML 18JPN2258X
Term of validity	From 12-10-2018 to 11-10-2021 

This is to certify that the equipment specified above complies with the requirements stipulated in Ordinance on Examination of Machines and Other Equipment of the Ministry of Health, Labour and Welfare, Japan.

Issue date: 12-10-2018



Signature of examiner:

Attachment 1: Ratings

Electrical data:	
Power Supply:	The device has a fixed installed rechargeable battery. Li-ion battery $U_o = 3.8\text{ V}$ ($U_o_max = 4.2\text{ V}$) / 3.48 Ah /12.528 Wh
USB Interface:	The device has an USB interface for charging and data transfer. The opening of the USB interface cover in explosive atmospheres is not permitted. Wired data connection and charging is only allowed outside explosion hazardous areas and only with the i.safe PROTECTOR cable from i.safe MOBILE GmbH or other accessories specified by i.safe MOBILE GmbH.
Audio Jack:	The device has a 3.5 mm audio jack. The Ear Bud Hearing Protection Headphone Model H1100G or other accessory fulfilling the entity parameters are allowed to use inside explosion hazardous areas. The audio jack interface is not mandatory to cover

Entity parameters for the audio jack (AJ):

Output voltage (spark):	$U_AJ_spark = U_o_max = 4.2\text{ V}$
Output voltage (thermal):	$U_AJ = U_o = 3.8\text{ V}$
Output current (spark):	$I_o_max = 249\text{ mA}$ (linear characteristic)
Output power (thermal):	$P_o = 214\text{ mW}$
Effective internal capacitance:	$C_i = 0\text{ }\mu\text{F}$
Effective internal inductance:	$L_i = 0\text{ }\mu\text{H}$
Internal resistance:	$R_AJ_res = 16.841\text{ Ohm}$
It is also allowed to connect an approved headset with high resistance.	
Permissible input voltage:	$U_i = 4.2\text{ V}$
Permissible input power:	$P_i = 10\text{ mW}$

Gas group: IIC

Lo [mH]	1	0.5	0.2	0.1	0.05	0.02	0.01	0.005	0.002	0.001
Co [μF]	2.9	4.6	6.8	8.9	12	17	25	40	130	420

Gas group: IIB

Lo [mH]	4.1	2	1	0.5	0.2	0.1	0.05	0.02	0.01	0.005
Co [μF]	12	19	25	32	45	59	83	150	310	1000

By using gas group IIB parameters for accessory, the gas group of the combination (HMT-1Z1 with approved accessory) is reduced to gas group IIB.

The HMT-1Z1 product may also be optionally co-branded with RealWear Inc., Honeywell Inc. or another manufacturers logo's that does not affect the certification.

With exception of accessories connecting to the audio jack, only RealWear accessories approved by i.safe MOBILE GmbH are allowed to be used with the HMT-1Z1 inside explosion hazardous areas, and they are only approved when used with the HMT-1Z1.

For a list of approved accessories, see:

www.realwear.com/...

www.isafe-mobile.com/...