IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres
for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEx TUN 07.0004 issue No.:0	History:
Status:	**Current**	
Date of Issue:	**2007-03-19**	Page 1 of 3
Applicant:	**GeCma Components GmbH** Heisenbergstr. 26-40 50169 Kerpen **Germany**	
Electrical Apparatus: *Optional accessory:*	**Challenger Touch 15i-FMO*, Challenger Touch 15i-2-FMO*, Challenger Touch 18i-FMO*** **"-HB" for high brightness, "-G-Touch" for glass touch**	
Type of Protection:	**Intrinsic safety "i"**	
Marking:	**Ex ib IIC T4**	
Approved for issue on behalf of the IECEx Certification Body:	Mr. Schwedt	
Position:	Head of the certification body	
Signature: *(for printed version)*		
Date:	2007-03-19	

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

TÜV NORD CERT GmbH
Hanover Office
Am TÜV 1
30519 Hannover
Germany

IECEx Certificate of Conformity

Certificate No.: **IECEx TUN 07.0004**

Date of Issue: **2007-03-19** Issue No.: **0**

Manufacturer: **GeCma Components GmbH**
Heisenbergstr. 26-40
50169 Kerpen
Germany

Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacture'rs quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:
The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2004 Edition: 4.0	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
IEC 60079-11 : 1999 Edition: 4	Electrical apparatus for explosive gas atmospheres - Part 11: Intrinsic safety 'i'

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:

DE/TUN/ExTR07.0007/00

Quality Assessment Report:
DE/BVS/QAR06.0006/00

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Schedule

EQUIPMENT:
Equipment and systems covered by this certificate are as follows:

The touchdisplays Challenger Touch 1*i**-FMO* are used for the visualization of data and processes and for data entry via touchscreen. The units are designed for use in hazardous area. The electronic components in the display are securely mounted in a metal housing. A window is located on the front of the housing.
The intrinsically-safe circuits are connected using terminals located behind a cover on the rearside of the housing.

CONDITIONS OF CERTIFICATION: NO

Annexe: electrical data for IEC-COC.pdf

TÜV NORD CERT GmbH
Hanover Office
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30519 Hanover
Germany

Testing Laboratory Explosion Protected Equipment and Monitoring Devices

Electrical Data:

Display Challenger Touch 18i-FMO* and Challenger Touch 15i-2-FMO*

Supply circuit touch intrinsically safe Ex ib IIC/IIB
(Terminal strips K40, Terminals 1-4)

Ui	12.5	V
Ii	543	mA
Pi	6.8	W
Ci		negligible
Li		negligible
Io	95	mA, dynamic

Data circuit touch intrinsically safe Ex ib IIC/IIB
(Terminal strips K40, Terminals 5-7)

Ui	12.5	V
Ii	543	mA
Pi	6.8	W
Ci		negligible
Li		negligible

Supply circuit display intrinsically safe Ex ib IIC/IIB
(Terminal strips K1, Terminals 3 - 4, 5 - 6, 7 - 8, 11 - 12, 13 - 14 and 15 – 16)

Ui	12.5	V
Ii	543	mA
Pi	6.8	W
Ci		negligible
Li		negligible

Supply circuit display intrinsically safe Ex ib IIC/IIB
(Terminal strips K2 and K3, Value each Terminal 1-2)

Ui	12.5	V
Ii	543	mA
Pi	6.8	W
Ci		negligible
Li		negligible

Terminal strips K4 to connect a ASD (application supporting device) for data input/output e.g. to connect a keyboard. Intrinsically safe Ex ib IIC/IIB. Max. cablelength 5m.

Uo	5.5	V
Io	71	mA
Po	100	mW
Co	40	µF
Lo	1	mH

Terminal strips K5: to connect a datacable to a transmissionunit e.g. Challenger TCV 2i, Values each cablepair. Intrinsically safe Ex ib IIC/IIB.

Ui	5.5	V
Ci		negligible
Li		negligible

Terminal strips K9 to connect a ASD (application supporting device) for data input/output e.g. to connect a keyboard. Intrinsically safe Ex ib IIC/IIB.
Terminal 1 and 2: powersupplyoutput, identical potential like circuit at terminal K3

Uo	12.5	V
Io	543	mA
Po	6.8	W

Max. external capacity and inductivity depend on used powersupply at terminal K3

Terminal 3 to 7: to connect a ASD (application supporting device) for data input/output e.g. to connect a keyboard. Ex ib IIC/IIB. Max. cablelength 5m.

Uo	5.5	V
Io	71	mA
Po	100	mW
Co	40	µF
Lo	1	mH

Video-Input (Terminal X2). Intrinsically safe Ex ib IIC/IIB.

Uo	2.5	V
Io	88	mA
Po	176	mW
Co	100	µF
Lo	4	mH

To connect an intrinsically safe videocircuit with follow max. electrical ratings. Ex ib IIC/IIB:

Ui	6	V
Ii	188	mA
Pi	194	mW
Ci		negligible
Li		negligible

Ambient temperature: Ta -10 °C to +60 °C