



**This Attachment forms an Integral Part of the IECEx Certificate and all pages
MUST be presented and read whenever the IECEx ITA 07.0017X Certificate is
presented**

Conditions of Certification

The following conditions listed under A and B Groups apply to certificate IECEx ITA 07.0017X :

A. Conditions regarding the Associated Apparatus:

- 1 The following input parameters are to be taken in to account in the system

MLB Module Terminals 1 wrt terminals 3, 9, 10,11,12		
$U_o =$	250	V

The SA16 module L1 Connections are only to be connected to a Master Line Barrier;

Module	Input Connections	C_i	L_j
SA16	(+L1, -L1) Terminals 12 & 13	negligible	negligible

SA16 Module Terminals 1 to 8		
$U_o =$	250	V

2. The following output parameters are to be taken in to account in the system;

MLB Module Terminals 7, 8 L1+, L1- wrt terminals 9 to 12		
$U_o =$	21.5	V
$I_o =$	481.52	mA
$P_o =$	2.58	W
$C_o =$	6.1	μ F
$L_o =$	2	mH
$C_i =$	negligible	μ F
$L_j =$	negligible	μ H



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Conditions of Certification, continued

SA16 Module Terminals 12 wrt 13		
$U_o =$	0	V
$I_o =$	0	A
$C_i =$	negligible	μF
$L_i =$	negligible	μH

The above load parameters apply where:

- a. The external circuit contains no combined lumped inductance L_i and capacitance C_i greater than 1% of the above values. or
- b. The inductance and capacitance are distributed as in a cable. or
- c. The external circuit contains only lumped inductance or only lumped capacitance in combination with a cable.

In all other situations, e.g. the external circuit contains combined lumped inductance and capacitance, up to 50% of each of the inductance and capacitance values is allowed.

3. The MLB or SA16 modules must be located in a suitable enclosure that provides a degree of protection not less than IP20.
4. A copy of the instruction must be provided with each module



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Conditions of Certification, continued

B. All other conditions

1. The following modules are only to be connected to a Master Line Barrier;

Module	Input Connections	C_i	L_i
AIM	(+L1, -L1) Red & Black wires	negligible	negligible
GM1	(+L1, -L1) Red, Black and White wires	negligible	negligible
GM1-D	(+L1, -L1) Terminals 10, 11 & 12	negligible	negligible
GM2	(+L1, -L1) Red & Black wires	negligible	negligible
SIM	(+L1, -L1) Terminals 1 & 2	negligible	negligible

The following input parameters are to be taken in to account in the system

AIM Terminals		
$U_i =$	16.5	V
$I_i =$	3	A
$C_i =$	negligible	nF
$L_i =$	negligible	μ H

SIM Terminals PS+ PS-		
$U_i =$	16.5	V
$I_i =$	3.5	A
$C_i =$	negligible	nF
$L_i =$	negligible	μ H

SIM Terminals TR+ TR-		
$U_i =$	7.14	V
$I_i =$	2	A
$C_i =$	negligible	nF
$L_i =$	negligible	μ H

2. The following output parameters are to be taken in to account in the system;

AIM Module (NOT Red or Black coloured wires)		
$U_o =$	0	V
$I_o =$	0	A
$C_i =$	negligible	nF
$L_i =$	negligible	μ H



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Conditions of Certification, continued

GM1 Module (NOT Red, Black or White coloured wires) & GM1-D Terminals 1 to 9		
$U_o =$	21.5	V
$I_o =$	0.202	A
$P_o =$	1.09	W
$C_o =$	0.27	μF
$L_o =$	11.4	mH
$C_i =$	5.83	μF
$L_i =$	negligible	μH

GM1-D Module Terminals 1 to 9		
$U_o =$	21.5	V
$I_o =$	0.202	A
$P_o =$	1.09	W
$C_o =$	0.27	μF
$L_o =$	11.4	mH
$C_i =$	5.83	μF
$L_i =$	negligible	μH

GM2 Module (X+, X-) Pink & Grey wires		
$U_o =$	21.5	V
$I_o =$	79	mA
$P_o =$	426	mW
$C_o =$	6.1	μF
$L_o =$	72	mH
L/R	840	$\mu\text{H}/\Omega$
$C_i =$	negligible	μF
$L_i =$	negligible	μH



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Conditions of Certification, continued

GM2 Module (A+, A-) Orange & Yellow (B+, B-) Purple & Green		
$U_o =$	12.6V	V
$I_o =$	39.5	mA
$P_o =$	125	mW
$C_o =$	29	μ F
$L_o =$	306	mH
L/R	3000	μ H/ Ω
$C_i =$	negligible	μ F
$L_i =$	negligible	μ H

SIM Module Terminals 11 & 12		
$U_o =$	5.88	V
$I_o =$	19.8	mA
$P_o =$	29.1	mW
$C_o =$	1000	μ F
$L_o =$	1	H
L/R	1600	μ H/ Ω
$C_i =$	negligible	μ F
$L_i =$	negligible	μ H

The above load parameters apply where:

- d. The external circuit contains no combined lumped inductance L_i and capacitance C_i greater than 1% of the above values. or
- e. The inductance and capacitance are distributed as in a cable. or
- f. The external circuit contains only lumped inductance or only lumped capacitance in combination with a cable.

In all other situations, e.g. the external circuit contains combined lumped inductance and capacitance, up to 50% of each of the inductance and capacitance values is allowed.



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Conditions of Certification, continued

3. The SIM and GM1-D Modules must be located in a suitable enclosure that provides a degree of protection not less than IP54.
4. The terminals of the AIM, GM1 & GM2 modules must be made via suitable enclosure that provides a degree of protection not less than IP20 and mounted in such a manner that the encapsulation is not exposed.
5. A copy of the instructions must be supplied with each module.



**ATTACHMENT To IECEx CERTIFICATE
IECEX ITA 07.0017X**

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DRAWINGS. The following list of drawings apply to this Certificate.

Drawing list associated with ExTR: **AU/ITA/ExTR08.0014/00**

Title:	Drawing No.:	Rev. Level:	Date:
MLB Master Line Barrier General Arrangement	iMAC-Z-013	0	2008/03/07
iMAC MLB Schematic	iMAC-Z-014	0	2008/02/25
iMAC MLB PCB	iMAC-Z-015 Sheets 1 & 2	0	2008/02/25
SA16 Slave Active ERNI16 Interface General Arrangement	iMAC-Z-016	0	2008-02-25
iMAC SA16 Schematic	iMAC-Z-017	0	2008-02-25
iMAC SA16 PCB	iMAC-Z-018 Sheets 1 & 2	0	2008-02-25

Drawing List associated with ExTR: **AU/ITA/ExTR08.0013/00**

Title:	Drawing No.:	Rev. Level:	Date:
AIM Analog Input Module General Arrangement	iMAC-Z-029	0	2008/02/25
iMAC AIM Schematic	iMAC-Z-030	0	2008/02/25
iMAC AIM PCB	iMAC-Z-031 Sheets 1 & 2	0	2008/02/25
GM1 General Module 1 General Arrangement	iMAC-Z-033	0	2008/02/25
iMAC GM1 Schematic	iMAC-Z-005	0	2008/02/25
iMAC GM1 PCB	iMAC-Z-006 Sheets 1 & 2	0	2008/02/25
GM1-D General Module 1 (ERNI12 Style) General Arrangement	iMAC-Z-007	0	2008/03/06
iMAC GM1-D Schematic	iMAC-Z-008	0	2008/02/25
iMAC GM1-D PCB	iMAC-Z-009 Sheets 1 & 2	0	2008/02/25
GM2 General Module 2 General Arrangement	iMAC-Z-010	0	2008/02/25
iMAC GM2 Schematic	iMAC-Z-011 Sheets 1 & 2	0	2008/02/25
iMAC GM2 PCB 1/2	iMAC-Z-012 Sheets 1 to 2	0	2008/03/06
iMAC GM2 PCB 2/2	iMAC-Z-012 Sheets 3 & 4	0	2008/03/06
SIM Serial Interface Module General Arrangement	iMAC-Z-019	0	2008/03/07
iMAC SIM Schematic	iMAC-Z-020 Sheets 1 & 2	0	2008/02/25
iMAC SIM PCB	iMAC-Z-021 Sheets 1 & 2	0	2008/02/25
iMAC System Overview Master Line Barrier, Slave Cons.	iMAC-Z-032	0	2008/02/25