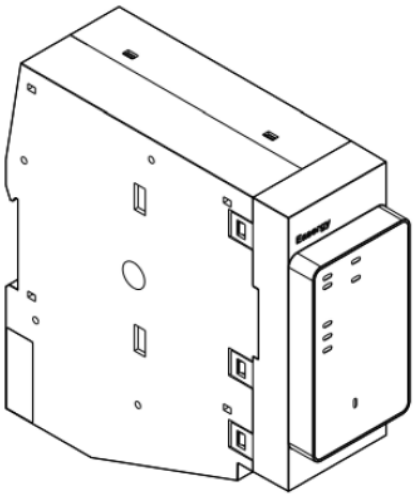
LCIE SUD EST
Laboratoire de Moirans
Z.I. Centr'Alp
170, Rue de Chatagnon
38430 MOIRANS – FRANCE

GENERAL INFORMATION

FCCID: **2AHHK-EASERGYLV150**

1.1. Product description

The Easergy LV150 is a low voltage monitoring module for the Easergy T300 offer range. This module offers monitoring of current, voltage and temperature. The Easergy HU250 embeds a wireless communication which is the Zigbee : it allows the LV150 to be interfaced with wireless current sensors. The Zigbee communication is ensured by a Texas Instrument Zigbee transceiver: **CC2520**.



The commercial and technical (internal) references of the products are:

Product description	Low Voltage module - EASERGY LV150
Commercial reference	EMS59300
Technical Reference	NHA92573

Data sheet of equipment

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1.2. Tested System Details

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Equipment under test (EUT):

EMS59300 **Serial Number:**
NHA9257300-1640281

Photography of EUT

Power supply:
During all the tests, EUT is supplied by V_{nom}: 12Vdc
For measurement with different voltage, it will be presented in test method.

Name	Type	Rating	Reference / Sn	Comments
Supply1	☐ AC ☑ DC ☐ Battery	12Vdc	/	/

Inputs/outputs - Cable:

Access	Type	Length used (m)	Declared <3m	Shielded	Under test	Comments
1	Power supply DC (24VDC)	0.1	☐	☐	☑	
2	Ethernet 1	3	☐	☑	☑	
3	Ethernet 2	3	☐	☑	☑	
4	Ethernet 3	3	☐	☑	☑	
5	I/O 3 wires – Port 1	1	☐	☐	☑	
6	I/O 3 wires – Port 2	1	☐	☐	☑	
7	I/O 3 wires – Port 3	1	☐	☐	☑	
8	I/O 6 wires – Port 4	1	☐	☐	☑	

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Auxiliary equipment used during test:

Type	Reference	Sn	Comments
BASE	SCHNEIDER ELECTRIC EMS58588 Easergy PS50-48	RN16110002 EAV96678	/
Laptop	HEWLETT PACKARD EliteBook8570w	5CB3083QBZ	/

Type:	☑ **ZIGBEE**		☐ **RF4CE**
Frequency band:	[2400 – 2483.5] MHz		
Sub-band REC7003:	Annex 3 (a)		
Spectrum Modulation:	☑ DSSS		
Number of Channel:	16		
Spacing channel:	5 MHz		
Channel bandwidth:	2 MHz		
Antenna Type:	☑ Integral	☐ External	☐ Dedicated
Antenna connector:	☐ Yes	☑ No	☐ Temporary for test
Transmit chains:	☑ 1		
	Single antenna		
	Gain: 5.3 dBi		
Beam forming gain:	No		
Receiver chains	1		
Type of equipment:	☑ Stand-alone	☐ Plug-in	☐ Combined
Ad-Hoc mode:	☐ Yes		☑ No
Adaptivity mode:	☐ Yes (Load Based DAA)	☐ Off mode	☑ No
	Clear Channel Assessment Time:		µs
Duty cycle:	☑ Continuous duty	☐ Intermittent duty	☐ 100% duty
Equipment type:	☑ Production model		☐ Pre-production model
Operating temperature range:	Tmin:	☐ -20°C	☐ 0°C	☑ -40°C
	Tnom:	20°C		
	Tmax:	☐ 35°C	☐ 55°C	☑ 70°C
Type of power source:	☑ AC power supply	☐ DC power supply	☐ Battery
Operating voltage range:	Vnom:	☑ 230V/50Hz	☐ XVdc

NC: ***Not communicated by customer***

CHANNEL PLAN	
Channel	**Frequency (MHz)**
Cmin: 11	2405
12	2410
13	2415
14	2420
15	2425
16	2430
17	2435
Cmid: 18	2440
19	2445
20	2450
21	2455
22	2460
23	2465
24	2470
25	2475
Cmax: 26	2480

DATA RATE		
Data Rate (Mbps)	**Modulation Type**	**Worst Case Modulation**
0.25	O-QPSK	☑

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1.3. Test Methodology

Both conducted and radiated testing were performed according to the procedures in ANSI C63.4 or ANSI C63.10, FCC Part 15 Subpart C.
Radiated testing was performed at an antenna to EUT distance of 10 meters. During testing, all equipment's and cables were moved relative to each other in order to identify the worst case set-up.

1.4. Test facility

Tests have been performed from **December 22th, 2016 from June 1st, 2017**.

This test facility has been fully described in a report and accepted by FCC as compliant with the radiated and AC line conducted test site criteria in ANSI C63.4 and ANSI C63.10 (registration number 94821).
This test facility has also been accredited by COFRAC (French accreditation authority for European Union test lab accreditation organization) according to NF EN ISO/IEC 17025, accreditation number 1-1633 as compliant with test site criteria and competence in 47 CFR Part 15/ANSI C63.4 and EN55022/CISPR22 norms for 89/336/EEC European EMC Directive application. All pertinent data for this test facility remains unchanged.