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Manufacturer	ABB AB Arnöleden 2 SE-611 31 Nyköping Sweden
Measuring instrument	A static Active Electrical Energy Meter Type : B23 and B24 Reference voltage : 3x220/380V...3x240/415V (3-phase 4-wire) 3x380V...3x415V (3-phase 3-wire) Reference current : B23: 5 A (direct connected meter) B24: 1 A (indirect connected meter) Destined for the measurement of : electrical energy, in a - three-phase four-wire network - three-phase three-wire network Accuracy class : B23: A or B B24: B or C Environment classes : M2 / E2 Temperature range : -40 °C / +70 °C Further properties are described in the annexes: - Description T10515 revision 0; - Documentation folder T10515-1.
Valid until	11 July 2023

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1 General information about the instrument

All properties of the static active electrical energy meter, whether mentioned or not, shall not be in conflict with the legislation.

1.1 Essential parts

Description	Document	Remarks
Current transformer B23: - Falco (T87G23) or - Premo (X-10730-001) or - VAC (T60404-E4625-X) or - VAC (T60404-E4625-X501)	10515/0-10 10515/0-11 10515/0-12 10515/0-13	
Current transformer B24: - Premo (X-10730-007-5) or - VAC (T60404-E4622-X501)	10515/0-14 10515/0-15	
Main board B23/B24: - 2CM000036-A002x	10515/0-16, 10515/0-17	All parts of the printed circuit boards are essential, except the components which are related to parts as described in paragraph 1.4 or 1.6.
Input board B23: - 2CM000034-A003x	10515/0-18, 10515/0-19	
Input board B24: - 2CM000037-A003x	10515/0-20, 10515/0-21	

1.2 Essential characteristics

- 1.2.1 See EC type-examination Certificate T10515 revision 0 and the characteristics mentioned below.
- 1.2.2 Approved meter types : B23 ...-.00 and B24 ...-.00
 An explanation of all type designations is presented in document no. 10515/0-03.
- 1.2.3 Frequency : 50 or 60 Hz
- 1.2.4 Meter constant : 1.000 imp./kWh (B23) or 5.000 imp./kWh (B24)
- 1.2.5 Number of registers : 4
- 1.2.6 Error messages : are indicated by a triangle on the display and error codes in the system log. An overview of all error codes is presented in document no.10515/0-05.
- 1.2.7 Phase sequence : the meter is not sensitive to the direction of the applied phase sequence.
- 1.2.8 Export energy : the meter is capable of measuring energy in 2 directions.
 The meter can also be used with 2 phases loaded with import energy and 1 phase loaded with export energy.
- 1.2.9 Software specification (refer to WELMEC guide 7.2):
- Software type P;
 - Risk Class C;

- Extension D, while extensions S and T are not applicable.

Software version	Identification number (checksum)	Remarks
B1.15.0	AFD6F210	The firmware version and checksum are presented on the display. Path: Main Menu / Status / About

1.3 Essential shapes

- 1.3.1 The nameplate is bearing at least, good legible, the information as mentioned in the regulations on energy meters. An example of the markings is shown in document no. 10515/0-06
- 1.3.2 Sealing: see chapter 2.
- 1.3.3 The registration observation is executed by means of a LED.

1.4 Conditional parts

- 1.4.1 Terminal block
 The connections for the current cables on the terminal block have a diameter of at least 7 mm (B23) or 5 mm (B24). The cables are connected with the terminal block via 1 screw. See documents no. 10515/0-07 (B23) and 10515/0-08 (B24).
- 1.4.2 Housing
 The meter has got a dustproof housing, which has sufficient tensile strength. The cover is made of synthetic material. An example of the housing is presented in document no. 10515/0-01 (B23) and 10515/0-02 (B24).
- 1.4.3 Terminal cover
 The terminal cover is made of synthetic material.
- 1.4.4 Register
 The quantity of measured energy is presented by means of a display with at least 6 elements. The way of presentation is described in document no. 10515/0-04.
 For test purposes an indication with a least significant element of at least 0,01 kWh, can be arranged via the display.
- 1.4.5 Tariff control
 When the meter is provided with more than one register, a tariff control is available by means of tariff inputs or communication, whereby the EMC-requirements are fulfilled as described in Annex MI-003 of Directive 2004/22/EC.
- 1.4.6 Communication and I/O
 When the meter is provided with fixed I/O, pulse output, MBUS, RS485, OPTICAL or ZIGBEE communication, the EMC requirements as described in Annex MI-003 of Directive 2004/22/EC must be fulfilled. Via the communication no legally relevant data can be altered.

Description	Document	Remarks
Fix I/O board: - 2CMB000020-A003x	10515/0-22, 10515/0-23	
Pulse output board: - 2CMB000028-A001x	10515/0-24, 10515/0-25	
RS485 board: - 2CMB000032-A004x	10515/0-26, 10515/0-27	
M-Bus board: - 2CMB000044-A002x	10515/0-28, 10515/0-29	
Zigbee board: - 2CMB000033-A003x	10515/0-30, 10515/0-31	

1.5 Conditional characteristics

- 1.5.1 Maximum current:
- B23: smaller than or equal to 65 A, and at least 5 times higher than the reference current.
- B24: smaller than or equal to 6 A, and at least 1,2 times higher than the reference current
- 1.5.2 Minimum current:
- B23: 0,25 A
- B24: 0,01 A

2 Seals

Both sides of the meter are sealed with sealing labels.
 An example of the sealing is presented in document no. 10515/0-09.

3 Conditions for conformity assessment according to module D or F

The influence factors for temperature, frequency and voltage, which are necessary to perform the conformity assessment according to module D or F, are presented in Annex 1, belonging to this EC type-examination certificate.
 Based on the WELMEC Guide 11.1, section 2.5.6, the sum of the square values is presented.