



Marine &amp; Offshore

Certificate number: 40462/A1 BV

File number: ACE11/322/2

Product code: 3896H

*This certificate is not valid when presented without the full attached schedule composed of 7 sections*

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## TYPE APPROVAL CERTIFICATE

*This certificate is issued to*

**ISKRA d.d.**

LJUBLJANA - SLOVENIA

*for the type of product*

**MEASURING DEVICE TRANSDUCERS**

Multifunction Transducer MT440

Supervision Relay SR100

**Requirements:**

Bureau Veritas Rules for the Classification of Steel Ships

EC Code: 31

*This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.*

**This certificate will expire on: 02 Feb 2020**

**For Bureau Veritas Marine & Offshore,**

At BV RIJEKA, on 26 Jun 2018,

Slaven Celic



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

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BV Mod. Ad.E 530 June 2017

This certificate consists of 3 page(s)

## THE SCHEDULE OF APPROVAL

### 1. PRODUCT DESCRIPTION :

The **MT440** and **SR100** are intended for the measuring and monitoring single-phase or three-phase electrical power network for Marine and Offshore applications.

#### 1.1 - Product's datas:

Model:	MT440	SR100
Designation:	Multifunction Transducer	Supervision Relay
Power supply voltage:	48 ... 276V (AC), 20 ... 300V (DC)	
Power supply frequency:	45 ... 65 Hz	
Nominal measuring voltage range:	50 ... 500 V	
Nominal measuring frequency:	50/60, 400Hz	
Nominal current range:	1 A, 5 A, 10 A	
Max measured current:	12.5A	
Degree of protection:	IP20	
Communication:	USB (service port), RS232, RS485	USB (service port) , RS232, RS485 CANopen,
Protection function:	-	Up to 13
Input/Output:	Analog output, relay output, solid state output	Relay output
Software version:	1.27	

### 2. DOCUMENTS AND DRAWINGS :

Data sheet MT440 N° GB P 22.496.500 Ver. 2.01 / Dec-2014

#### Rev. A1

Data sheet SR100 N° GB P 22.496.520 Ver. 2.11 / May-2018

### 3. TEST REPORTS :

#### **Iskra:**

- Tests report dated 22.Dec.2014.

#### **SIQ:**

- Tests report N°T251-0953/14, dated 19/12/2014
- Test report N°T223-0494/14, dated 26/11//2014
- Tests report N°T211-0624/14, dated 01/12/2014

#### Rev. A1

#### **Iskra:**

- Tests reports dated N°26/2017 dated 19/12/2017 and N°26/2017\_v2\_annex\_1 dated 07/05/2018 witnessed by a BV Surveyor

#### **SIQ:**

- Tests report N°T251-0880/17, dated 08/01/2018

### 4. APPLICATION / LIMITATION :

4.1 - BUREAU VERITAS Rules and Regulations for the Classification of Steel Ships.

4.2 - Approval valid for ships intended to be granted with the following additional class notations: **AUT-UMS, AUT-CCS, AUT-PORT and AUT-IMS.**

4.3 - BUREAU VERITAS Environmental Category, **EC Code: 31**

4.4 - The equipment fulfils the EMC requirements for installation in General Power Distribution Zones.

### 5. PRODUCTION SURVEY REQUIREMENTS :

5.1 - The **MT440** and **SR100** are to be supplied by **ISKRA d.d.** in compliance with the type described in this certificate.

5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320 and as such does not require a BV product certificate.

5.3 - **ISKRA d.d.** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products.

5.4 - **ISKRA d.d.** has declared to Bureau Veritas the following production site:

**ISKRA d.d., PE Instrumenti**  
**Otoce 5a**  
**SI-4244 PODNART**  
**SLOVENIA**

**6. MARKING OF PRODUCT :**

6.1 - Trade name.

6.2 - Date of manufacture and serial number.

6.3 - Equipment type or model identification under which it was type-tested

**7. OTHERS :**

7.1 - It is **ISKRA d.d.** responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

7.2 - This certificate supersedes the Type Approval Certificate No. 40462/A0 BV issued on 25 Feb. 2015 by the Society.

**\*\*\* END OF CERTIFICATE \*\*\***