3.82.013

IT IS VERY EASY TO INSTALL ON ANY TYPE OF FLAPS

THE EASIEST AND SAFEST WAY TO CONTROL THE POSITION OF THE FLAPS

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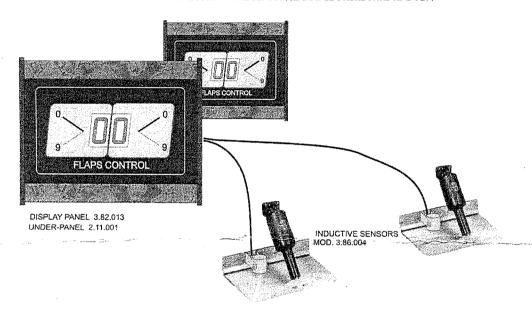
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PENDING PARTS

THE SENSOR ARE OF INDUCTIVE ELECTRONIC TYPE WITHOUT SOME PART IN MOTION, THEREFORE UNALTERABLE IN THE TIME. THE MEASURE IS CARRIED OUT DIRECTLY FOR PROXIMITY ON THE BLADE OF THE FLAP WITHOUT SOME VIOLATION TO THE SYSTEM OR THE APPARATUS.

THE READING VISUALIZED ON THE LCD PANEL IS ESTIMATED IN PERCENTAGE FROM "0" TO "9" ON THE EVERY RACE OF SINGLE FLAP

ONE OR MORE DISPLAY PANELS CAN BE CONNECTED TO THE SENSOR, (EXAMPLE DASHBOARD AND FLY)



ON THE PANEL 3.82.013 THE NUMBERS OF THE DISPLAY INDICATE IN PERCENTAGE FROM "0" TO "9" THE POSITION OF THE RELATIVE FLAPS

EASIEST PROCEDURE OF AUTO-PROGRAMMING CALIBRATION TO THE FIRST INSTALLATION

- CIRCUITS TO THE SOLID STATE; STRUCTURE AND CONTAINER FOR MARINE USE
- 12 OR 30 V POWER SUPPLY PROTECTED AGAINST REVERSE POLARITY.
- . -INDUCTIVE SENSOR OF POSITION WITHOUT SOME MECHANICAL PART IN MOTION
- -LIGHTED DISPLAY PANELS OF CONTROL AND VISUALIZATION
- -POSSIBILITY TO DESIGN SYSTEMS WITH MORE PANELS
- -AUTOMATIC PROCEDURE OF AUTO-PROGRAMMING CALIBRATION
- -THE PANEL IS FIXED TO BRACKET AS ANY OTHER PANEL INSTRUMENT
- -THE SENSORS ARE FIXED THROUGH SPECIAL BRACKET THAT ALLOW TO THE ADAPTATION OF THE SENSORS TO ALL THE ASSEMBLY CONFIGURATION
- -CREATED IN CONFORMITY WITH THE UNI DIN CEI STANDARDS, CORRESPONDING TO THE CE STANDARD-

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VISUALIZATION AND INDICATION SYSTEM OF THE FLAPS **WORKING ANGLE**

The system of visualization of the flap position can be realized using one or more display panel 3.82.013 and a couple of sensor connects between of them like under indicated.

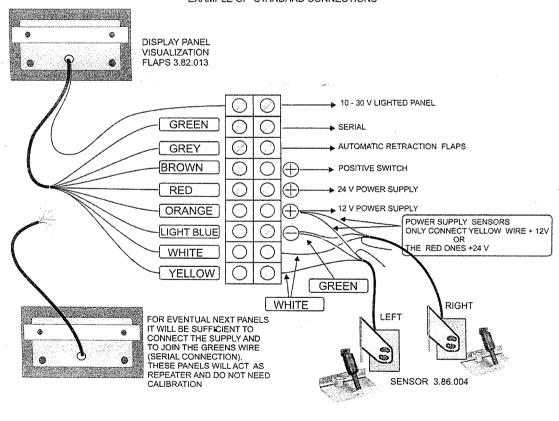
The power supply of the panels can be 12 or 24 V For the sensors is necessary use the yellow wire for 12V or the red ones for 24V

The exit for the automatic retraction of the flaps to the shut off the engine must be managed from one appropriate central mod. 3.83.011 to which they will be it connects also the controls of the movement of the flaps.

In lack of the appropriated central, the connections for the retraction (grey wire) and the positive switch (brown wire) they are not uses.

TECHNICAL SPECIFICATIONS	MODEL
DISPLAY PANEL	3.82.013
Power supply voltage	12 o 24 V
Circuit input	7 mA
Connection with sensors mod.,	3,86004
Max number of panels with the same couple of sensors	5
Internal circuit protected against reverse polarity	Yes
Lighted display	Yes
Exit for automatic retraction of the flaps to the shut off the engine	Yes
Automatic calibration procedure at the first installation	Yes
The panel s is fixed to a bracket as any other panel instrument	Yes
Sensors with bracket that allow to the adaptation to all assembly configurations	Yes

EXAMPLE OF STANDARD CONNECTIONS



WORKING PRINCIPLE

The sensor applied over the surface of the flaps, for a electro-inductive principle, "feel" and transform in electric signal the distance between if same and the metal of the blade of the flap. This signal is sended to one or more display panels which eleborating and digitizing the signal, numerically visualize the exact angle of position of the flaps expressed in percentage of race total with values from "0" to "9" for every blade. The sensor doesn't work with plastic blade or other not metallic materials. In these cases a metal plate is necessary to apply on the blade under the

INSTRUCTION FOR INSTALLATION

Retract the flaps.

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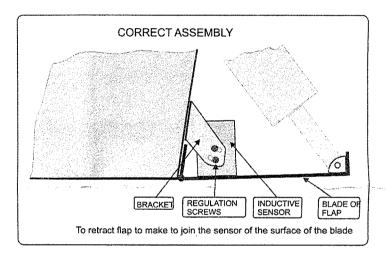
To loosen the nut of the screw that joint the sensor to the bracket.

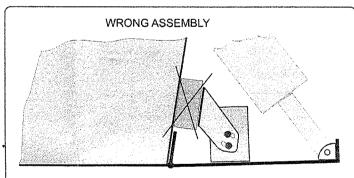
To fix in the more convenient way the sensor through the appropriate BRACKET HAVING CURE THAT THE BASE OF THE SENSOR SUPPORTS PERFECTLY TO THE SURFACE OF THE FLAP

To avoid for how much possible thickness between the hull and the sensor. The better operation is obtained with the sensor mounted more close possible to the axis of the hinge of the flaps.

To block to all the screws controlling that the base of the sensor remains always adherent to the surface of the flap.

In case of flap with stiffening rib, therefore without one smooth surface on which supporting the sensor, it will be necessary to apply to the flap a metal plate (alluminium, stainless steel or other) of wichever thickness with minimal dimension of 100×80 mm on which centering and supporting the sensor



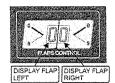


To avoid to interpose thickness between the hull and the sensor. For a good operation the sensor it must be mounted more close possible to the axis of the hinge of the flaps

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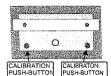
VISUALIZATION AND INDICATION SYSTEM OF THE FLAPS **WORKING ANGLE**

CALIBRATION PROCEDURE AT THE FIRST INSTALLATION

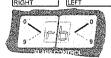


On every boat, the angle of race of the flaps can be various, therefore at the first installation is necessary to carry out a calibration that it will be permanently stored even in the event of a cut in the power supply; it will be however possible to execute a new calibration repeating the indicated procedure as follows:

ATTENTION: before beginning the calibration to verify that the sliding of the flaps is fluid and continuous without jamming or hops; these last one prevent one corrected calibration..



On the back of the panel there are two push-buttons in order to open the calibration procedure of the relative right and left flap that they must calibrated singulary proceeding as follow indicated.



To every start-up the display panels indicates for two seconds "rb" continuation then from a number



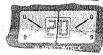
TO RETRACT COMPLETELY THE FLAP BEFORE BEGINNING THE CALIBRATION, press the relative push-button to the calibration flap (example left flap). Release the push-button when the letter "t" appears on the display relative.



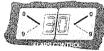
Of continuation and automatically after the letter "t" appears "0" indicating the beginning of the procedure



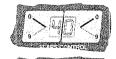
To lower WITHOUT INTERRUPTIONS flap left until to all down The display panels visualize the number "1" to the start of the flap



To run bottom of the flap the display panels visualize the number "2" To retract WITHOUT INTERRUPTIONS the left flap until to all on.



To all on the display panels visualize the number "3" To still lower the flap WITHOUT INTERRUPTIONS OF RACE until to all down. Immediately after the start the display panels visualize the number "4" To all the down the calibration of this flap is completed Retract the flap and control the exactly sequence of the number from 9 to 0



A small overcoming of the calibrated race ago to visualize on the display panel the small letter



A letter "E" indicates a general error; it appears when are present factors regarding not corrected operation, example: connections wrongs, bad mechanical installation on the sensor, jammings or interruptions during the gauging race, breakdowns or damagings to the electronic circuits of the apparatus.

CALIBRATION MORE PANELS DISPLAY ON THE SAME BOAT

Follow the same procedures for calibrate the right flap

If more display panels 3.83.013 are installed onboard (max. 5) example , dashboard, fly, etc. THE CALIBRATION PROCEDURE CAN BE MADE ON ANY OF THEM. This panel will then act as the master panel and perform a serial data transmittion to the other panels, which therefore become its repesters and do not need any other programming

In case of disassembling t of the master panel the calibration will be carried out on a any panel remained repeater onboard which automatically it will became the new one master panel

For cancel the data contained in the memory of a panel or if the master panel is transformed into a repeater, it is sufficient (with the apparatus connected to the supply) to push the both calibration buttons for at last 3 seconds.

WORKING PRINCIPLE

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Sensors put on flaps surface, for an electro-inductive principle, "feel" and transform the distance between them and flap's metal blade in electric signal. This signal will be sent to one or more display panels that eleborate and digitize signal, display numerically correct position's angle of flaps. It is show on percentage of total stroke with values enclosed between "0" and "9" for each blade. Sensor doesn't work with plastic blade or not metallic materials. In these cases it must be put a metal plate on the blade under the sensor

CONNECTION: RED = 24VDC YELLOW = 12 VDC GREEN = GROUND WHITE = SIGNAL

INSTALLATION INSTRUCTION

Retract the flaps.

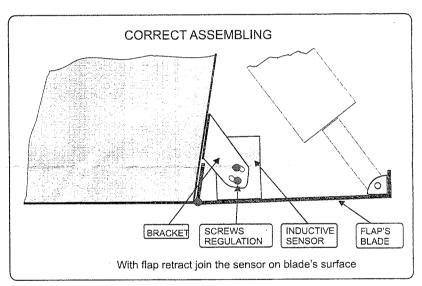
Loose screws nut that joint sensor to the brackets.

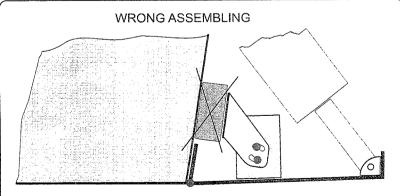
Fix the sensor to the stern using BRACKET AND TAKE CARE THAT BASE OF SENSOR SUPPORTS PERFECTLY TO THE SURFACE OF FLAP

Avoid layer between hull and sensor, to obtain the best operating you have to put the sensor closest axis of flap's hinge.

Fix all screws and check that sensor's base must be joint to flap's surface.

If flap doesn't have a smooth surface it will be necessary put metal plate (made in alluminium or stainless steel)of any thicknessand with minimum size of 100 X 80 mm. to fix and center the sensor.





Avoid layer between hull and sensor. To obtain the best operating you have put the sensor closest axis of flap's hinge.

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