R.B.Elettronica R.B.Elettronica R.B.Elettronica R.B.Elettronica R.B.Elettronica R.B.Elettronica R.B.Elettronica R.B.Elettronica R.B.Elettronica R.B.Elettronica R.B.Elettronica R.B.Elettronica
TRADE MARK MADE IN ITALY ALL RESERVED COPYRIGHT PAT PENDING PARTS

VISUALIZATION AND INDICATION SYSTEM OF FLAPS WORKING ANGLE

CODE

3.82.013

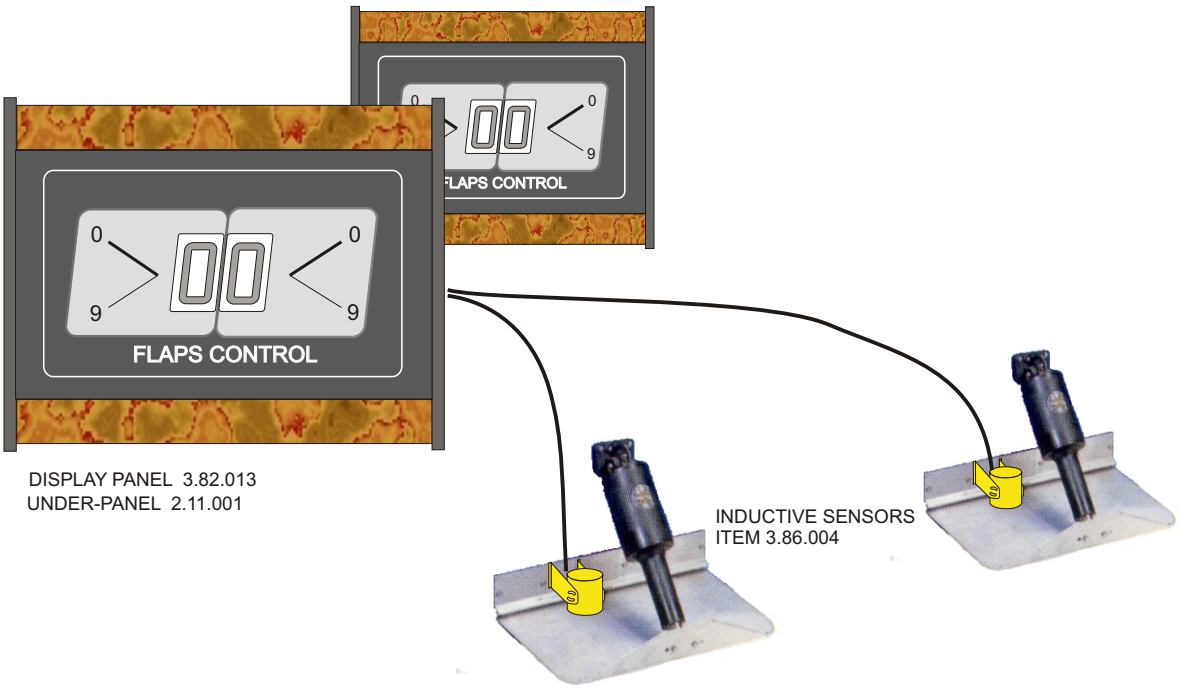
EASY TO INSTALL ON ANY KIND OF FLAPS

EASIER AND SAFER WAY TO CONTROL FLAP POSITION

SENSORS ARE ELECTRONIC INDUCTIVE WITHOUT ANY PART IN MOTION,UNALTERABLE IN THE TIME. MEASURE CAN BE EFFECTED DIRECTLY THROUGH PROXIMITY ON FLAP BLADE WITHOUT ANY DAMAGE TO SYSTEM OR DEVICES.

READING DISPLAYED ON LCD PANEL IS ESTIMATED WITH A PERCENTAGE ENCLOSED FROM “0” TO “ 9” ON STROKE OF EACH FLAP

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



ON PANEL 3.82.013 THE NUMBERS ON DISPLAY INDICATE A PERCENTAGE FROM “0” TO “9” THE POSITION OF FLAPS

EASIER MODE OF AUTO-SETTING CALIBRATION AT FIRST INSTALLATION

- CIRCUITS TO SOLID STATUS; FACILITY AND CONTAINER FOR MARINE USE
.
- 12 OR 30 V POWER SUPPLY WITH PROTECTION AGAINST REVERSE POLARITY.
.
-INDUCTIVE POSITION SENSOR WITHOUT ANY MECHANICAL PART IN MOTION

-PANEL OF CONTROL AND DISPLAY COULD BE ENLIGHTENED

-POSSIBILITY TO PRODUCE DEVICES WITH MORE PANELS
.
-AUTOMATIC MODE OF AUTO-SETTING CALIBRATION

-PANEL FIXED THROUGH O BRACKET AS ANY OTHER PANEL INSTRUMENT

-SENSORS FIXED THROUGH SPECIAL BRACKET THAT ENABLE TO ADAPT TO ANY CONFIGURATION
.
-PRODUCED UNDER UNI DIN CEI STANDARDS, ACCORDING CE STANDARD REGULATIONS

CODE

3.82.013

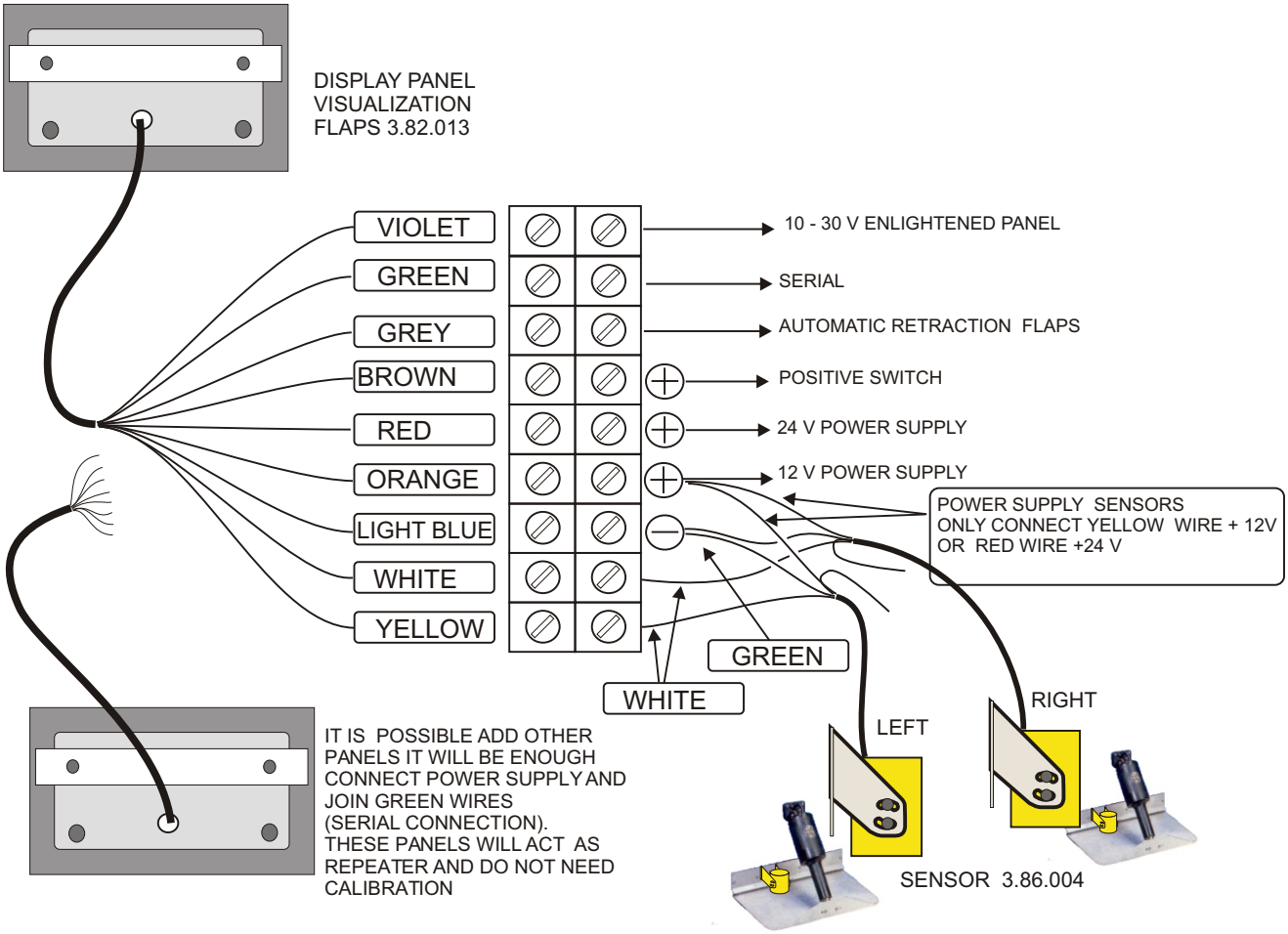
VISUALIZATION AND INDICATION SYSTEM OF FLAPS WORKING ANGLE

System of visualization of the flap position can be arranged using one or more display panel 3.82.013 and a pair of sensors connects between them as showed here below.

.
Power supply of panels can be 12 or 24 V
For sensors use yellow wire for 12V or red wire for 24V
.Output for automatic retraction of flaps at engine power off must be managed from a proper power unit as for item 3.PFA which will be connects also to the controls of flaps movement.
.
if there isn't a proper power unit, connections for flaps retraction (grey wire) and positive switch (brown wire) are not used.

TECHNICAL FEATURES	ITEM
DISPLAY PANEL	3.82.013
Power supply voltage	12 o 24 V
Circuit input	7 mA
Connection with sensors code	3.86.004
Max number of panels with the same sensors pair	5
Internal circuit protected against polarity reverse	Yes
Enlightened display	Yes
Output for automatic flaps retraction to engine switch off	Yes
Automatic calibration procedure at the first installation	Yes
Fixing of panel through a bracket as any other dashboard instrument	Yes
Sensors with bracket that enable to adapt to all configurations	Yes

EXAMPLE OF STANDARD CONNECTIONS



R.B.Elettronica TRADE MARK MADE IN ITALY ALL RESERVED COPYRIGHT PAT PENDING PARTS

VISUALIZATION AND INDICATION SYSTEM OF FLAPS WORKING ANGLE

CODE

3.82.013

WORKING PRINCIPLE

.

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

INSTALLATION INSTRUCTION

Retract the flaps.

.

Loose screws nut that joint sensor to the brackets.

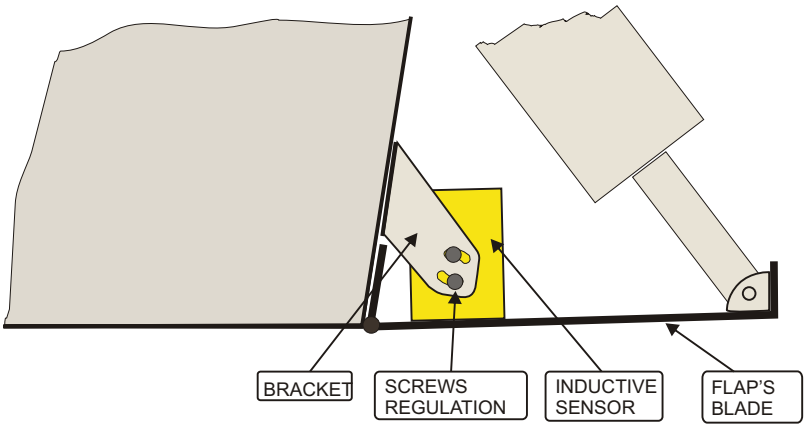
Fix the sensor to the stern using BRACKET AND TAKE CARE THAT BASE OF SENSOR SUPPORTS PERFECTLY TO THE SURFACE OF FLAP

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.

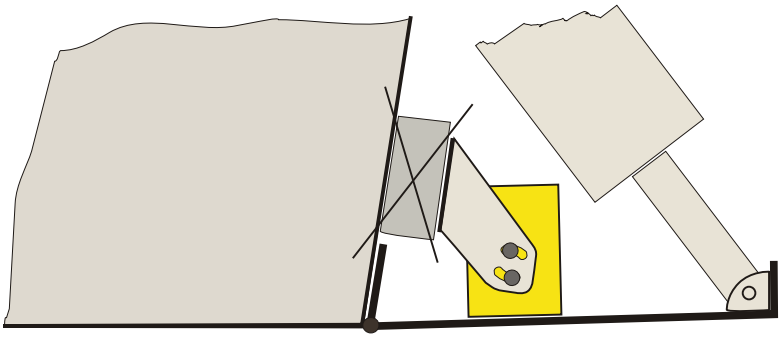
If flap doesn't have a smooth surface it will be necessary put metal plate (made in alluminium or stainless steel)of any thicknessand with minimum size of 100 X 80 mm. to fix and center the sensor.

CORRECT ASSEMBLING



With flap retract join the sensor on blade's surface

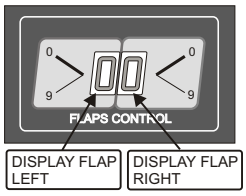
WRONG ASSEMBLING



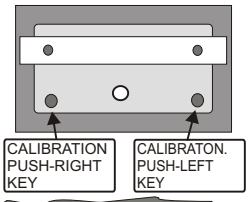
Avoid layer between hull and sensor. To obtain the best operating you have put the sensor closest axis of flap's hinge.

R.B.Elettronica TRADE MARK MADE IN ITALY ALL RESERVED COPYRIGHT PAT PENDING PARTS

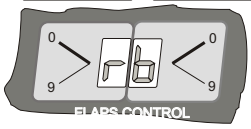
MODE : CALIBRATION AT FIRST INSTALLATION



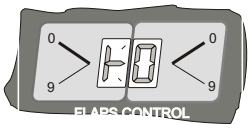
On each boat, stroke's angle of flaps can be different, therefore at first installation it needs arrange a calibration that it will be permanently keep also in case of power cut; it will be possible arrange a new calibration following setting mode as indicate here below:
.
WARNING: before starting with calibration check that sliding of flaps is fluid and continuous without jam or skip; only in this way you can obtain a correct calibration.



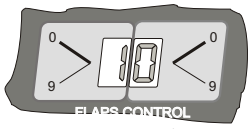
On back side of panel there are two keys. They need to start with calibration mode for left and right flap.They must calibrated separately as follow indicated.



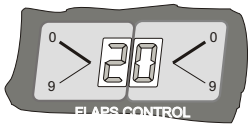
At each start-up on display panels it appear for some seconds inizials "rb" followed from a number
RETRACT COMPLETELY FLAPS BEFORE STARTING WITH CALIBRATION
Push key of flap that you need calibrate (example left flap). Release key when it appears letter "t" on conserning display.



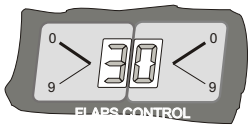
Automatically after letter "t" it appears and flash the number "0" . It indicate that process of calibration start.



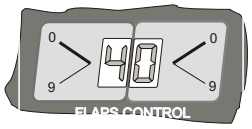
Fall down WITHOUT INTERRUPTIONS left flap
When flap start display panels show the number "1"

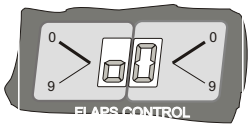


At proximity limit of flap, display panels show the number "2"
Retract WITHOUT INTERRUPTIONS left flap all up.

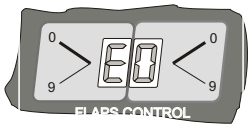


When flap is all up on display panels show the number "3"
Fall down again flap WITHOUT RUN INTERRUPTIONS up till all down.
Immediately after starting it appears the number "4" on display
When all this flap is down calibration is completed
Retract flap and check the exactly sequence of the number from 9 to 0
To calibrate right flap follow the step above indicate





If it happens a little excess of calibrated race on display panel it appears a small letter "o" (overflow))



Letter "E" indicates a general fault; it appears when there are matter that concerning not corrected operation, for example: wrong connections, bad mechanical installation on sensor, jammings or interruptions during calibration race, breakdowns or damagings to electronic circuits of device.

CALIBRATION OF MORE PANELS DISPLAY ON SAME BOAT

If on board there is installed more thatn one display panels 3.83.013 (not more than 5) for example , dashboard, fly, etc. THE CALIBRATION PROCEDURE CAN BE ARRANGED ON ONE EACH THEM. This panel begin master panel and perform a serial data transmittion to the other panels, that become its repeaters and do not need any other setting.
.
In case of disassembling of master panel it needs calibrate one of repeater panel onboard which automatically became the new one master panel
.
To delete data contained on memory panel or if master panel is transformed into a repeater, it is enough (with device connected and power supplied) push both calibration keys for 3 seconds.

R.B.Elettronica TRADE MARK MADE IN ITALY ALL RESERVED COPYRIGHT PAT PENDING PARTS