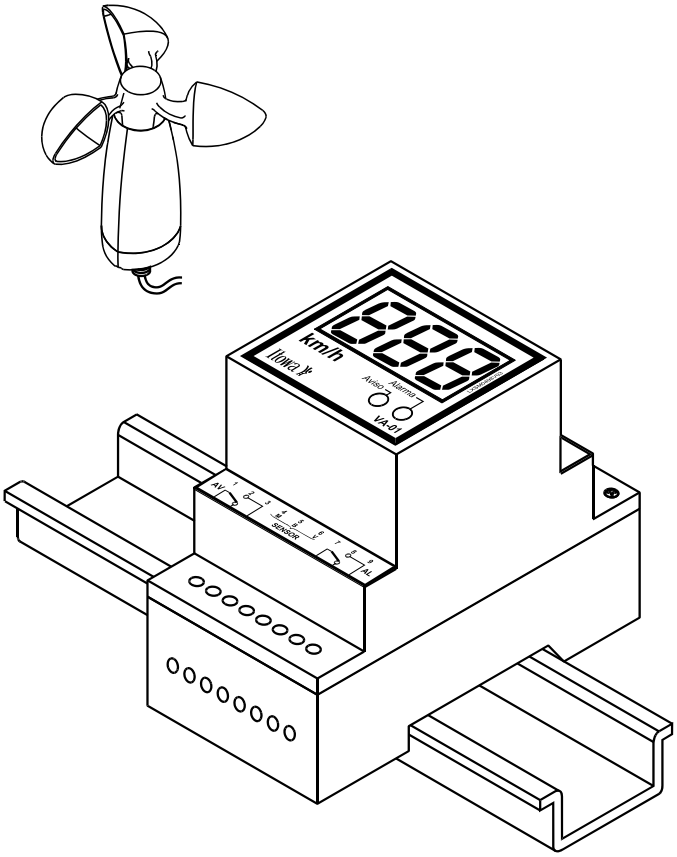
USER'S MANUAL

DISPLAY VA-01



ITOWA

1. INTRODUCTION

This manual is a guide to the correct use of the display VA-1.

This set has been specially designed to accomplish with the ITC "MIE-AEM-2" regulation for lifting and maintenance equipment, referring to tower cranes in constructions or other applications.

This device reads through the RS485 cable the information sent by the ITOWA anemometer and it has been designed to display the instant speed of wind (fig 1). When the wind reaches 50 km/h, the display activates one relay (**AV**) and the notice led (Aviso). When the wind reaches 70 km/h, the display activates one relay (**AL**) and the warning led (Alarma). (Figure 3 and Figure 1 respectively)

Figure 1

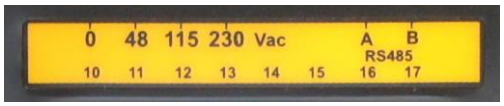


Figure 2

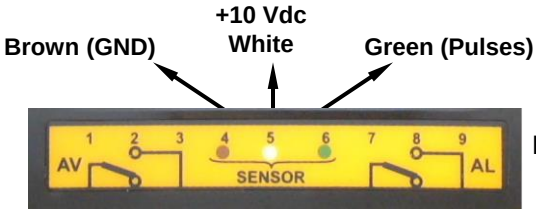


Figure 3

A connection RS485 to an anemometrical sensor ITOWA is allowed, by realizing an initial test. This means that all the displays are connected and all the relays are activated during 4 seconds. The connection type will be automatically selected (RS485 or Sensor). In case it did not detect any connection during 12 seconds, the message failure "Er. 6" (see attached table of display messages) would appear and the relays of notice **AV** (aviso) and warning **AL** (alarma) would be activated.

Whenever there is a wrong connection or a break of any cables of the sensor, the display shows message "Er 5" (see attached table of display messages) and the notice **AV** relay blinks.

2. TECHNICAL CHARACTERISTICS

Display of Infomation	**Display:**	36 x 13 mm
	Speed range:	0 a 250 Km/h.
	Resolution:	0.1 Km/h. de 0 a 99.9 Km/h. 1 Km/h. a vel. > 100 Km/h.
	Led:	3 mm. alta luminosidad
	Notice:	A 50 Km/h.
	Warning:	A 70 Km/h.
Comunication	RS485	
Outputs	2 commuted relays Notice (**AV**) Warning (**AL**)	0,6 Amp. a 110 Vac 2 Amp. a 30 Vdc
Power supply	48,115 or 230 Vac (±10-15%)	3.5 VA
Connection	By connector:	Margin of closing (∅ 0.14-2.5 mm.)
Working temperature	-20 a +60º C	
Protection degree	IP 20	
Optional protection degree	IP 66 by means of a special box (dimensions 130 x 130 x 75 mm) Fastening by means of 4 screws	
Dimensions	90 x 53 x 70 mm.	
Fastening	Slide DIN 35 mm.	

3. DYSPLAY MESSAGES

FAILURE MESSAGES	DESCRIPTION
"Er.1"	FAILURE OF COMMUNICATION RS485 (EXCESS OF DISTANCE OF THE CABLE, ELECTRONIC NOISE, ETC)
"Er.2"	CABLE RS485 BROKEN OR ANEMOMETER WITH NO POWER SUPPLY.
"Er.3"	CABLE OF SENSOR BROKEN OR ZERO WIND SPEED DURING MORE THAN 30 MINUTES
"Er.4"	SOFTWARE IN ANEMOMETER INCOMPATIBLE
"Er.5"	SENSOR CABLE BROKEN (CONECTION SENSOR WITH ANEMMETER)
"Er.6"	NO CONECTION RS485 OR SENSOR.

4. INSTALLATION IN ANEMOMETER 400SERIES

- **STEPS TO FOLLOW**

1. Unscrew the connection's lid of the anemometer.

2. In case the board for RS485 was not installed, connect it to the closest connector to the power supply block (**figure 4)**

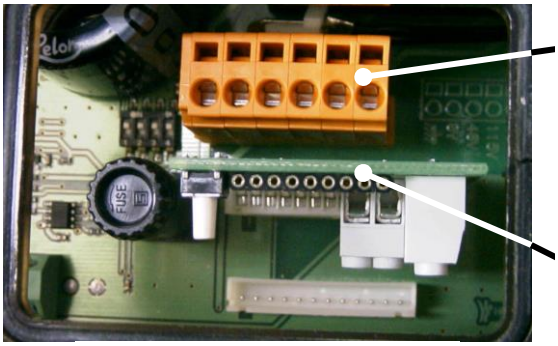


Figure 4

3. Connect (with a cable) the display to the previous circuit, always respecting the position of the cables indicated in the connector A and B of the display's circuit (**figure 5)**

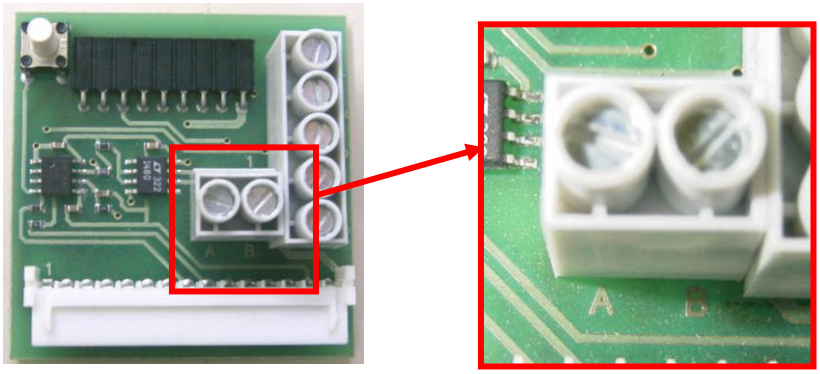


Figure 5

5. INSTALLATION IN ANEMOMETER 100, 200 & 300 SERIES

- **STEPS TO FOLLOW**

1. Open the anemometer siren and unscrew the 2 screws securing the printed circuit board. (**figure 6**).

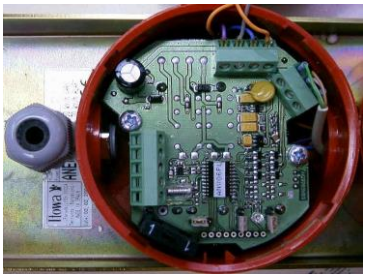


Figure 6

2. Remove the board an connect the circuit AHG3802Vxx to it (**figure 7**)

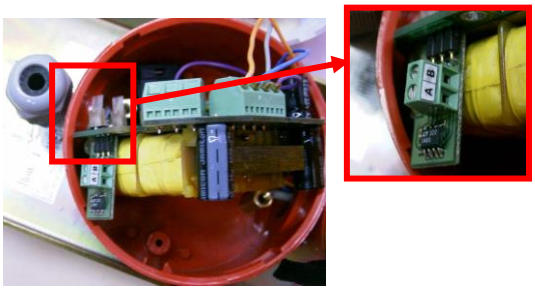


Figure 7

3. Connect (with a wire) the display to the previous circuit, taking into account the position of the wires indicated on terminals A and B for the circuit and the display.

6. RECYCLING

INFORMATION FOR THE PROPER MANAGEMENT OF ELECTRIC AND ELECTRONIC DEVICES (RAEE)

The equipment's refuses should never be mixed with general refuses. These refuses can be delivered, without any extra cost, to the centers of refuse collection. For further information, please contact your local authorities.

To recycle an electronic device separately from the general refuses avoids possible negative consequences for the environment. Furthermore, it allows a proper recycling process for all the pieces.

This implies both energy and resources saving.

This symbol is marked in all products. It highlights both the obligation to collaborate with the refuse collection and the warning of not using traditional containers for the elimination of the products.

For further information, please contact your local authorities.

6.1. PACKAGING

→ The materials used for packaging are recyclable.
→ Please, consider the local norms with regards to the recycling of these products.