<u>Ocean Signal's rescue ME AIS Alarm box, a overview of the possibilities.</u>

Ocean Signal's AIS Alarm box is already on the market for some time. Quite often I receive questions about it's operation and the possibilities. Herein I would like to explain the device, installation and some examples about integration options when looking at the relay function.

Introduction:

The AIS Alarm box is designed to read NMEA 0183 data from a suitable AIS receiver or transceiver and will sound an audible and/or visible alarm whenever an AIS SART or AIS MOB messages is received. The AIS Alarm Box is user configurable to allow different responses to individual MMSI numbers and test messages.
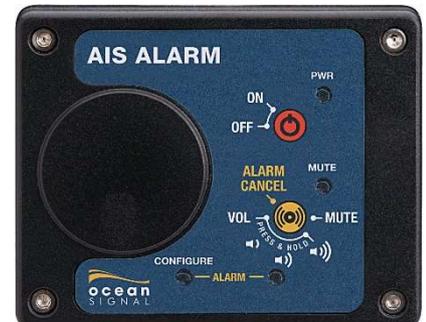
Technical:

An AIS transponder Data output consists of a variety of data sentences, for the Alarm Box we are only looking at VDM ,other (then our own) vessels or devices, sentences. The sentences are composed of several Message types. Message type 1, 2, 3 and 5. Each messages may have a different update rate, and not all messages contain all information. Every message does however have the MMSI number as indicator from where the message was broadcasted.

The following data is decoded from the above messages by a plotter:

- MMSI (Mobile Maritime Service Identity) number
- Name
- Call sign
- Destination
- Navigational status
- Position (WGS'84)
- SOG (Speed Over Ground) (knots)
- COG (Course Over Ground) (deg)
- Heading (deg)
- ROT (Rate Of Turn) (deg/min)

Whereas the MMSI number is the only part within a VDM messages to what the AIS Alarm box is programmed to look at.

AIS SART has a unique identity within his MMSI number, it always starts with <u>970</u> xxx xxx and an AIS MOB always starts with <u>972</u> xxx xxx. Normally the three digits that tell the receiver the Country of Origin of the Vessel (It's MID number).

When programming the Alarm box you can set the parameters to react on <u>all AIS SART's and or AIS MOB's</u>. Next to that you can specify certain MMSI numbers with it's own unique sounding alarm. Your personal AIS MOB's on board of your vessel, or a friends vessel in the neighbourhood. (up to 30 different MMSI numbers).

RELAY option:

A relay means an action that will happen once a specified data string has been seen by the AIS Alarm box. In the case of the Alarm box we operate a (electronic) switch. There are two option for this switch namely, NO (normally open) and NC (normally closed). In other words, Normally open, no current (8 amps, 250V AC) is running, whereas an AIS MOB messages is received the switch closes and the current will start running. With this current you can operate a General Alarm (GA), light or a Kill Switch on your engine and even a autopilot to engage a predefined emergency action.
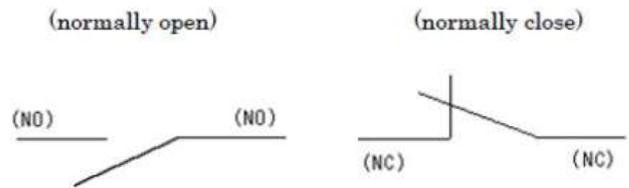
Schematic configuration of the AIS Alarm box to a Kill switch:
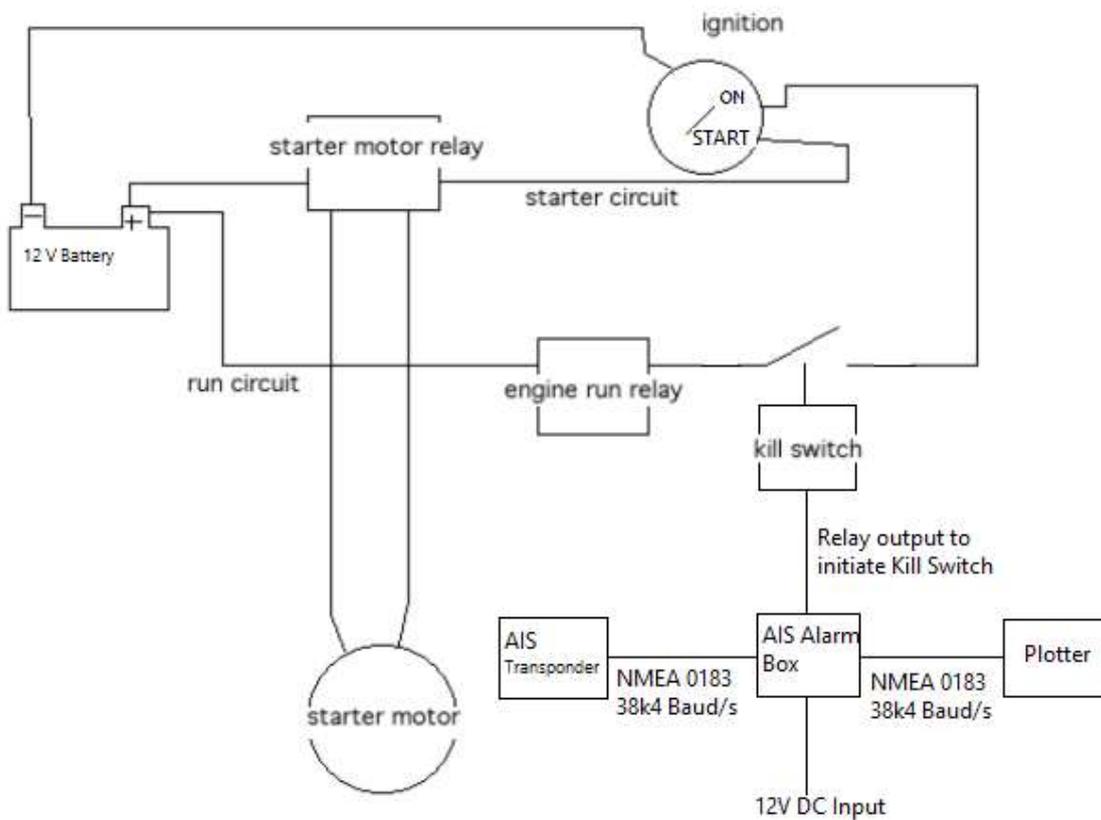
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