

# **5 WAY SWITCH UNIT**

**MODEL No 60163**

**OPERATOR'S HANDBOOK (PART No 34218)**

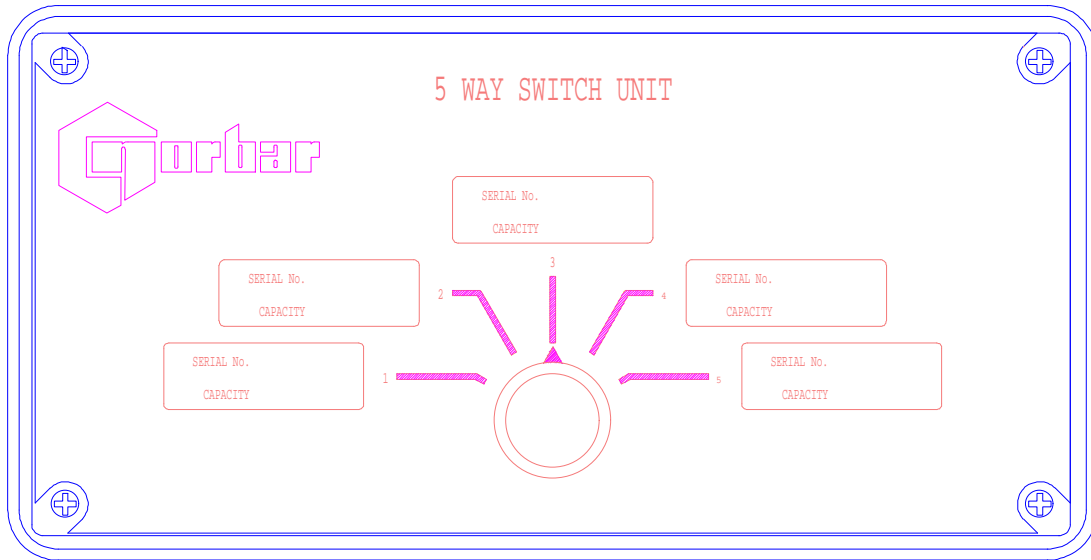
**ISSUE 5**



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## INTRODUCTION



The Norbar 5 way switch unit conforms to the current EC Directives and safety standards. The unit enables any one of up to five Norbar transducers to be switched to the Norbar Electronic Transducer System (ETS), instrument.

A single front panel rotary switch selects the Transducer and Amplifier to be interfaced to the ETS display instrument.

Each Norbar transducer plugs into the back of the unit via a transducer lead, with its matching amplifier being housed internally under the lid of the switch unit.

Labels on the lid indicate each transducers amplifier zero adjustment position. A trim screwdriver provided allows easy adjustment via an internal guide plate.

To identify each transducers capacity and serial number details, individual coloured labels (which can be typed on) are included to affix to the front panel switch positions. These labels can also be affixed to the corresponding plugs and cables.

Housed in the Norbar robust metal case, it is easily stacked with the Norbar ETS range of instruments using additional coupling extrusions.

### CLEANING :-

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Do not use abrasives or solvent based cleaners. We recommend a propriety brand of foam based fabric / vinyl cleaner. Use a soft cloth to avoid scratches.

## SPECIFICATIONS

### SWITCH UNIT SPECIFICATIONS :-

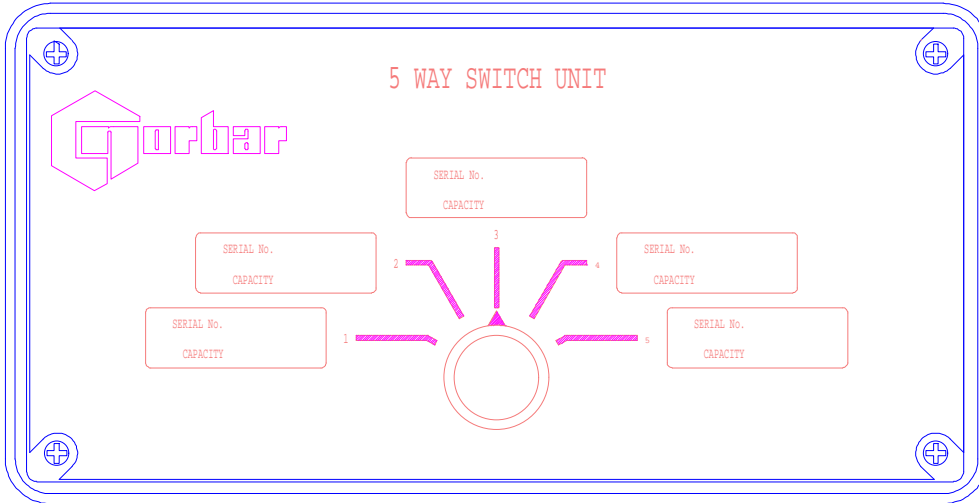
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NUMBER OF SELECTABLE CHANNELS	5
OPERATING TEMP RANGE	0 °C to 50 °C.
MAXIMUM OPERATING HUMIDITY	85% Relative Humidity @30°C.
CONNECTING CABLES TO ETS	0.4 metres (16 ins) long (2 off).
WEIGHT	2.5 kg (5.5 lb).
DIMENSIONS	108 mm high x 197 mm wide x 282 mm long.
CASE MATERIALS / FINISH	Case engineered in aluminium extrusions and castings. Finished in tough texture paint.
ENVIRONMENT	Indoor use within a light industrial environment.
ELECTROMAGNETIC COMPATIBILITY (EMC) DIRECTIVE	In conformance with EN 50081-1 : 1992 & EN 50082-1 : 1992.

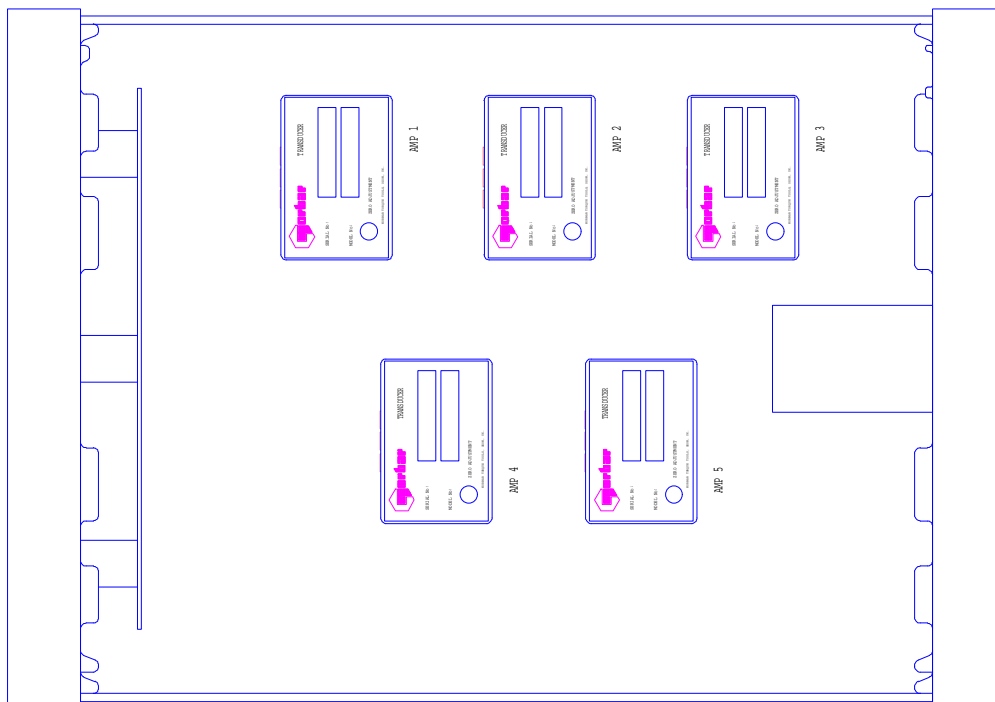
Note : If equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment could be impaired.

## OPERATING INSTRUCTIONS

1. Type or write the transducer details on the coloured labels provided, ie. capacity and serial number. Affix these labels to the front of the switch unit in the bounded areas around the switch shown below. Also affix to the corresponding transducer cable and transducer as required.



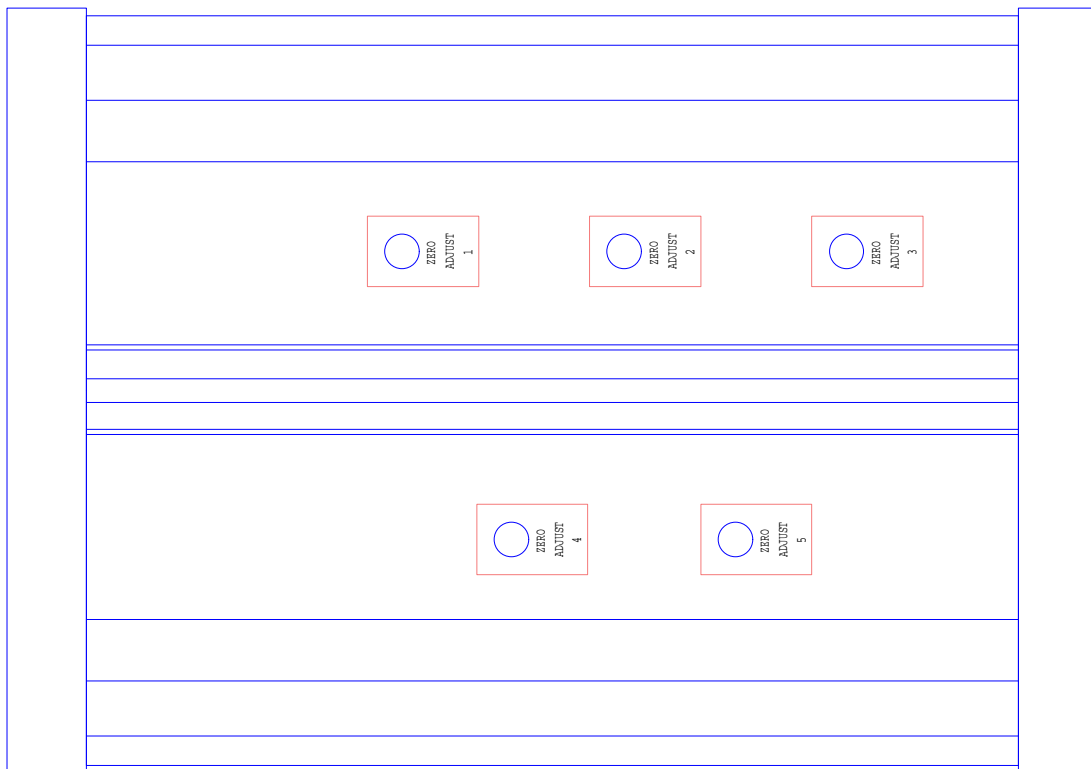
2. Remove the top lid of the 5 way switch unit by undoing the screws at the top corners of both the front and rear. Slacken the lower front panel screws in the bottom corners. Lift up the back of the lid and slide the lid backwards to remove it. Ensure the internal guide plate in the lid and corner segment extrusion parts stay in the lid.
3. Plug the transducer amplifiers into their correct positions on the printed circuit board (as set by you with the labels on the front panel). Each amplifiers channel number is marked on the board (see picture below), and corresponds to the position of the front panel selection switch.



- If you wish to stack the instruments, follow separate sheet 'ETS Racking Instructions' before re-assembling the lid to the 5 way.

NOTE: *This module must not be assembled beneath an ETS or the initial zero adjustment holes will be blocked.*

- Plug the two leads from the back of the 5 way into the transducer input and amplifier input on the back of the ETS. Ensure that the 'TOP' indication on the amplifier connector faces upwards.
- Plug transducer cables into rear of 5 way. Colour code cables with labels if you wish.
- Plug in transducers. Ensure they match the correct cable, amplifier and switch positions.
- Switch on the ETS, and select 'TRACK' mode. Allow 5 minutes for the ETS to warm up and stabilise.
- Select channel 1 on switch unit and using the trim screw driver provided, insert into zero adjustment 1 (labelled on lid of 5 way). by pushing through slot in rubber sealing strip. Continue pushing screw driver carefully through internal guide plate until it stops (see picture below).



- Carefully rotate the screwdriver until it engages into the amplifier zero adjustments 'slot'.
- Rotate the screwdriver whilst watching the ETS display to zero the transducers amplifier.
- Remove the screwdriver and press the 'TEST' button on the ETS to display the transducers full scale value.
- Repeat steps 10 - 12 for each channel in turn.
- The switch unit is now ready for use, select the channel required to be displayed on the ETS.

## TROUBLE SHOOTING

### 1. Unable to adjust for zero on ETS display

- a) Check that the correct channel has been selected for the transducer you wish to use on the 5 way front panel.
- b) Ensure that the transducer amplifier is plugged in the correct way up. Amplifier label reads from left to right with the 5 way switch unit front panel nearest you.
- c) Ensure that the transducer lead is connected to the correct transducer and that the transducer connector on the 5 way switch unit back panel correlates with the amplifier position.
- d) Check that the ETS is in the 'Track' mode, ie. 'Power On' switch enabled only.
- e) Check that the connecting leads from the 5 way to the ETS have been plugged in correctly with the amplifier connector the correct way up, ie. 'Top' label facing upwards, and the transducer connector lead fitted.
- f) If fault still exists, return ETS, 5 way switch unit, transducer leads and transducer(s) and amplifier(s) to Norbar, or a Norbar approved agent for evaluation.

### 2. Test button on ETS inoperative.

- a) Check a to e above.
- b) Ensure that there is not a fault with the 5 way switch unit by disconnecting the 5 way connecting leads to the ETS, and plugging the transducer and amplifier directly into the ETS.
- c) If fault still exists, return ETS, 5 way switch unit, transducer leads and transducer(s) and amplifier(s) to Norbar, or a Norbar approved agent for evaluation.