

1. DESCRIPTION

The Advisor A90-SS Panel Meter has a five digit display and a bargraph that can be configured to be any colour. Housed in a rugged stainless steel enclosure, it is primarily intended for displaying a current, voltage or resistance analogue process variable in engineering units. The instrument can also display temperature directly from a Pt100 resistance thermometer.

Models are available for use with a 10-36V dc or a 115 / 230v ac supply. The supply voltage of the meter is shown on the instrument terminal identification label.

A90-SS panel meters can be supplied with the following factory fitted options:

Dual alarms each with a single pole change over contact.

Isolated 4/20mA output plus separately isolated 24V dc power supply.

Isolated Modbus RTU interface

This abbreviated instruction sheet is intended to assist with installation and commissioning, a comprehensive instruction manual describing system design, installation and calibration is available from the BEKA associates sales office or may be downloaded from the BEKA website www.beka.co.uk. A separate A90 Modbus interface guide is also available.

2. INSTALLATION

The A90-SS has impact and IP66 front of panel ingress protection, but should be shielded from continuous direct sunlight and severe weather conditions. The rear of the meter has IP20 protection.

Panel cut-out 90 +0.5 / -0.0 x 43.5 +0.5 / -0.0

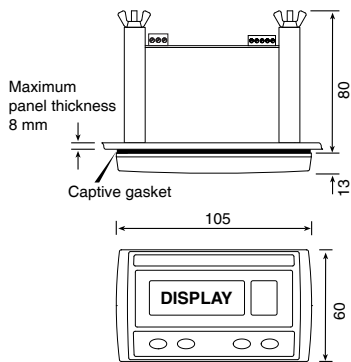


Fig 1 Meter and cut-out dimensions

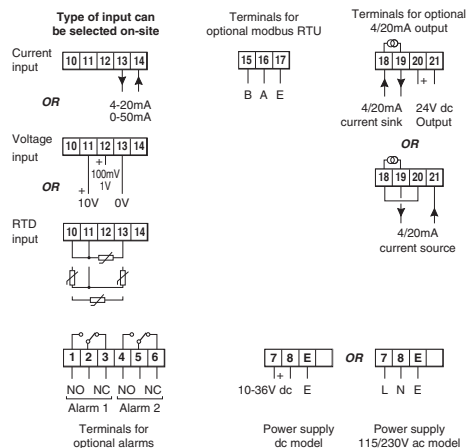
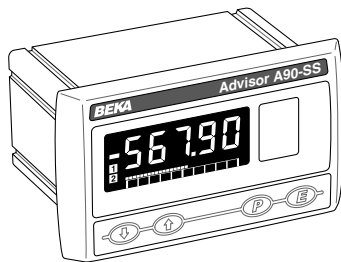


Fig 2 Terminals

Support panel wiring to prevent vibration damage

Abbreviated instructions for
Advisor A90-SS Rugged universal
Process Panel Meter with multicolour display



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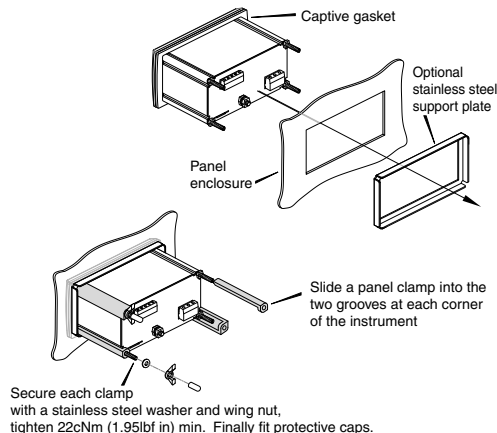


Fig 3 Installation procedure

EMC

For specified immunity all signal wiring should be in screened twisted pairs, with the screens earthed at one point. Voltage and current input wiring should be in twisted pairs.

Scale card

The meter's units of measurement may be shown on a printed scale card visible through a window at the right hand end of the display. The scale card is mounted on a flexible strip that is inserted into a slot at the rear of the instrument as shown below.

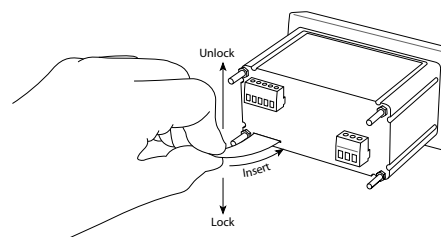


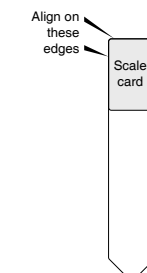
Fig 4 Inserting flexible strip carrying scale card into slot at the rear of meter.

Thus the scale card can easily be changed without removing the A90-SS meter from the panel or opening the instrument enclosure.

New meters are supplied with a printed scale card showing the requested units of measurement, if this information is not supplied when the meter is ordered a blank card will be fitted.

A pack of self-adhesive scale cards printed with common units of measurement is available as an accessory from BEKA associates. Custom printed scale cards can also be supplied.

To change a scale card, unclip the protruding end of the flexible strip by gently pushing it upwards and pulling it out of the enclosure. Peel the existing scale card from the flexible strip and replace it with a new printed card, which should be aligned as shown below. Do not fit a new scale card on top of an existing card.



Align the self-adhesive printed scale card onto the flexible strip and insert the strip into the meter as shown.

Fig 5 Fitting scale card to flexible strip

3. OPERATION

The Advisor A90-SS is controlled via the four front panel push buttons located below the display. In the display mode i.e. when the meter is displaying a process variable, these buttons have the following functions:

- P** Meter will display the input as a percentage of the instrument span or, depending upon configuration, the analogue input in milliamps, volts or ohms. Function changes when optional alarms are fitted and $L R E H$ or S, L are enabled.
- ▼** Meter will display calibration with minimum input i.e. 4 mA or 0V. If the hold function $H o L d$ is enabled, meter will display the lowest value since the $H o L d$ function was last reset.
- ▲** Meter will display calibration with maximum input i.e. 20mA or 1V. If the hold function $H o L d$ is enabled, meter will display the highest value since the $H o L d$ function was last reset.
- ▼ + ▲** Resets $H o L d$ function
- E + ▼** Decreases display brilliance
- E + ▲** Increases display brilliance
- P + ▼** Shows firmware number followed by version
- P + E** Access to configuration menu via optional security code.
- E** Unused unless tare function $t a r E$ is enabled
- P + ▲** Direct access to the alarm setpoints when optional alarms are fitted.

4. CONFIGURATION

Meters are supplied calibrated as requested when ordered, if not specified default configuration will be supplied but can easily be changed on-site.

Fig 6 shows the location of each function within the configuration menu with a brief summary of the function. Please refer to the full instruction manual for detailed configuration information and for a description of the optional dual alarms and 4/20mA output.

Access to the configuration menu is obtained by pressing the **[P]** and **[E]** buttons simultaneously. If the meter security code is set to the default 0000 the first parameter **nPut** will be displayed. If the meter is protected by a security code, **LoE** will be displayed and the code must be entered to obtain access to the menu.

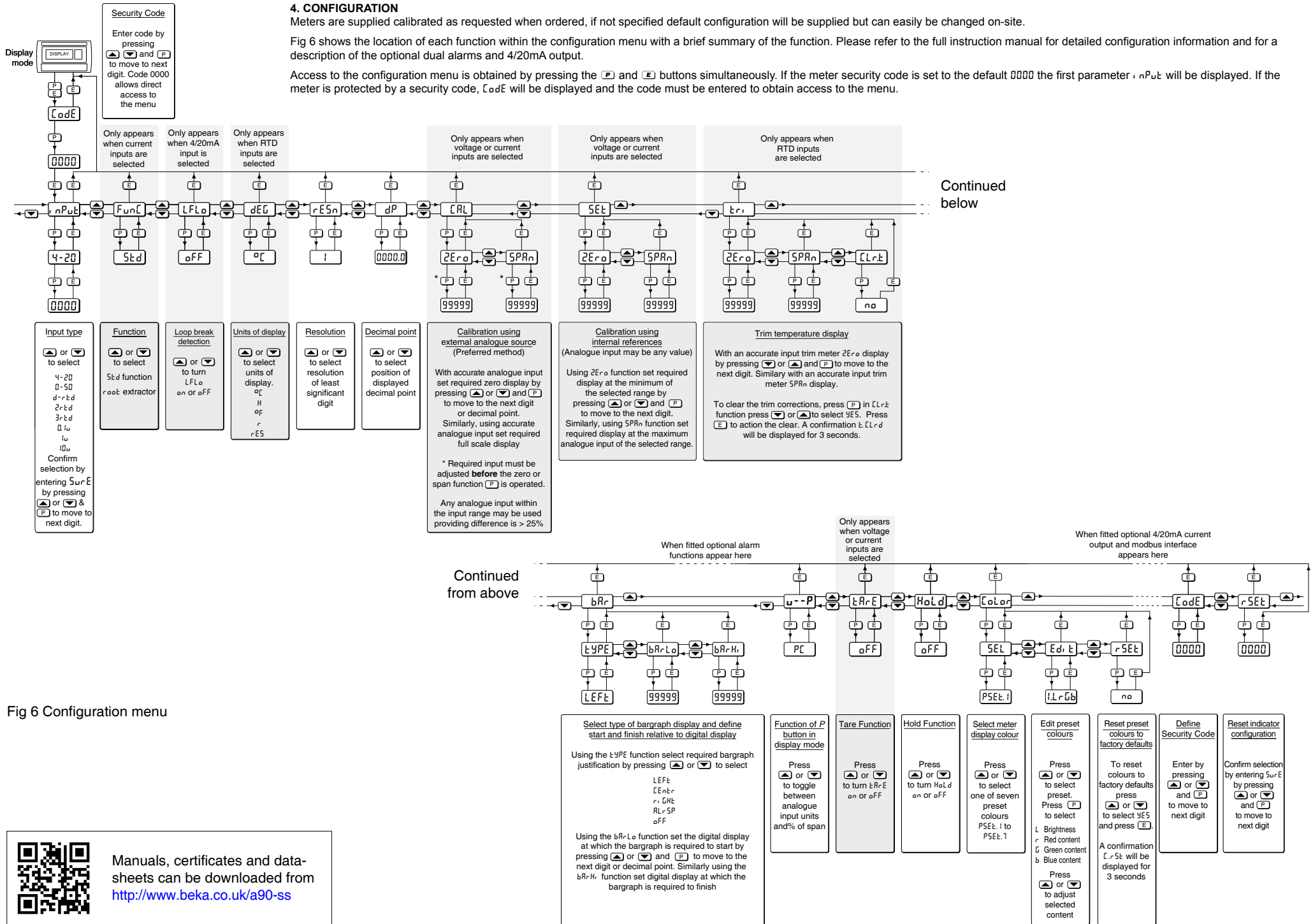


Fig 6 Configuration menu



Manuals, certificates and data-sheets can be downloaded from <http://www.beka.co.uk/a90-ss>