

The **Advisor A70** is a panel meter for displaying process variables in engineering units. Although low cost, performance has not been sacrificed. The meter is housed in a robust enclosure with a high quality display, push-buttons and terminals and will provide many years of reliable service.

Main application of the A70 is to display a current or voltage such as 4/20mA or 0/10V in engineering units. The instrument is supplied with one of fifteen standard input ranges, and can be calibrated on-site to display this input in any linear engineering units such as level, pressure or position. For flow applications all A70 meters include a selectable root extractor to linearise the display. Optional accessories which further extend the applications include an isolated supply to power a remote 2-wire transmitter, a four wire transducer power supply, a 4/20mA isolated output proportional to the display, and two alarms. To prevent operators being dazzled, the display brilliance is continuously adjustable from the front panel.

Calibration and programming is performed via the four front panel push-buttons which 'click' when operated. To prevent accidental or unauthorised adjustment, the programming functions are contained in easy to understand menus protected by a four digit user definable security code. All the instrument functions, except the type of input, are programmable. The display can easily be recalibrated on-site using the internal references or an external voltage or current source. Loss of power does not affect calibration as all settings are retained for at least five years after power loss or disconnection.

The front panel is a robust, easy to clean Noryl moulding sealed with a non-reflective, scratch resistant polyester membrane. All A70 panel meters have a captive neoprene gasket which provides an IP65 seal between the enclosure and the panel, thus making the instrument suitable for installation in panels which are frequently hosed down.

The transmitter power supply is an optional fully isolated dc supply which may be used to power any external instrument which consumes less than 22mA. It is primarily intended for energising remote loop powered 4/20mA temperature or pressure transmitters.

An optional isolated four wire power supply is available for powering remote bridges, enabling the A70 panel meter to display linear weights and pressures without the need for a separate transmitter. The sensing wires eliminate the effect of cable resistance, and five different output voltages may be selected by the position of an internal link.

A 4/20mA current proportional to the A70 display is obtainable from the optional re-transmitted output. This current is fully isolated and may be programmed to represent any part of the display.

For weighing applications an optional tare function modifies the operation of the front panel push-buttons so the display may be zeroed at any input. The initial reading is therefore automatically subtracted from subsequent readings. A front panel LED is illuminated when the tare button has been operated.

Optional alarms provide two channels, each with a relay output which may be independently programmed as a high or low trip. The alarm set-points are adjusted via the front panel push-buttons and may be accessed from the display mode via a separate security code. Separate front panel LED annunciators show the status of each alarm.

Reliability is ensured by an ISO9001 approved quality control system. The A70 is protected from reverse connection and overrange inputs, and incorporates extensive radio frequency filtering to comply with the European EMC Directive.

A universal panel meter with programmable inputs is also available, see datasheet for Advisor A75.

Advisor A70

Process input panel meter

Factory set input range

- ◆ **4 digit LED display with adjustable brilliance**
- ◆ **24Vdc, 115Vac & 230Vac models**
- ◆ **Available with any common process voltage or current input.**
- ◆ **Maximum & minimum display**
- ◆ **Optional:**
 - Transmitter power supply**
 - Transducer power supply**
 - Alarms**
 - Isolated 4/20mA output**
 - Tare function**
- ◆ **96 x 48mm DIN enclosure with easy to clean IP65 front.**
- ◆ **3 year guarantee**

BEKA

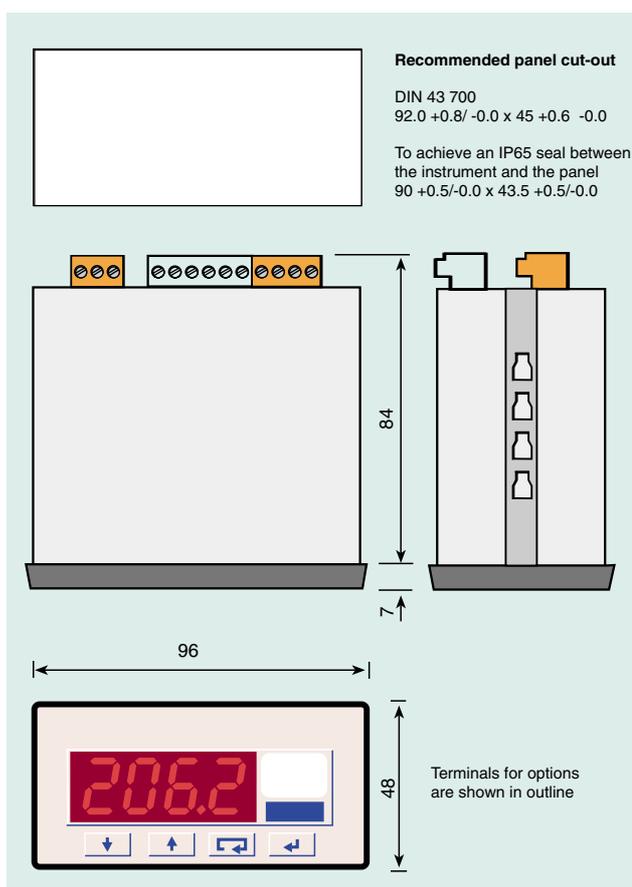
associates

BEKA associates Ltd. Old Charlton Rd.
Hitchin, Hertfordshire, SG5 2DA, U.K.
Tel. (01462) 438301 Fax (01462) 453971
e-mail sales@beka.co.uk www.beka.co.uk

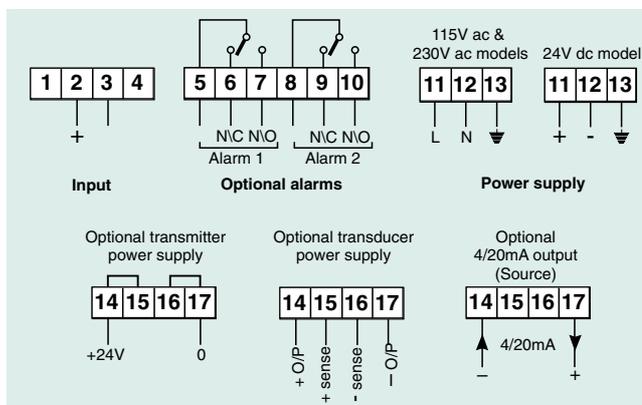
SPECIFICATION

| | |
|--|--|
| Supply | |
| Voltage | 10 to 35Vdc 99 to 132Vac 50/60Hz 198 to 264Vac 50/60Hz |
| | 4W max |
| Display | |
| Type | 4 digit LED 14.2mm high with adjustable brilliance. |
| Zero | Adjustable between -1999 and 9999 |
| Span | Adjustable between 0 and ±11989 |
| Decimal point | 1 of 4 positions selectable or absent |
| Zero blanking | Only 1 leading zero is displayed |
| Polarity | Automatic minus sign |
| Overrange | Displays -1 or 1 |
| Reading rate | Greater than 2 per second |
| Push-buttons | <i>In operating mode without accessories</i> |
| Down ▼ | Shows display at minimum input |
| Up ▲ | Shows display at maximum input |
| Scroll ↲ | Displays input in mA or volts, or as a percentage of input range. When tare or alarm accessories are fitted has modified function. |
| Input | One factory set range selected at time of ordering from: |
| Range | 0 - 100mV, 0 - 200mV, 0 - 500mV, 0 - 1V, 0 - 2V, 0 - 5V, 1 - 5V, 0 - 10V, 0 - 20mA, 4 - 20mA, 0 - 50mA, 10 - 50mA, 0 - 0.5A, 0 - 1A, and 0 - 2A. |
| Impedance | |
| Voltage ranges | Greater than 1MΩ |
| Current ranges | Less than 10Ω |
| Isolation | 500V rms between input, power supply and optional accessory outputs. |
| Performance | |
| Accuracy including non-linearity at 20°C | |
| Linear | ±0.05% of display ±1/2 digit |
| Root extracting | ±0.1% of range at input ±1 digit |
| Clip-off | Meter displays 0 below 5% input |
| Resolution | 1 part in 10,000 |
| Series mode ac rejection | Less than 1% error for 200mV rms 45 - 55Hz. 2% at 60Hz |
| Common mode ac rejection | Less than 0.2% error for 250V rms 50Hz. |
| Temp. effect | |
| Zero drift | 50ppm max/°C of display span |
| Span drift | 100ppm max/°C of display span |
| Environmental | |
| Operating temp | -20 to +50°C |
| Storage temp | -40 to +85°C |
| Humidity | To 95% at 40°C non-condensing |
| Enclosure | Front IP65 rear IP20 |
| EMC | In accordance with EU Directive 89/336/EEC, full report available. |
| LVD | In accordance with EU Directive 73/23/EEC, full report available |
| Mechanical | |
| Terminals | Screw clamp for 0.5 to 1.5mm ² cables |
| Weight | |
| 24Vdc | 0.25kg |
| 110 & 230Vac | 0.45kg |
| Accessories | |
| Transmitter power supply | 24Vdc at 22mA max short circuit protected |
| Transducer supply | 5V, 10V, 12V or 15V at 22mA Two sense wires eliminate effect of cable resistance. |
| Drift | Less than 100ppm/°C |
| Alarms | Two independent alarm channels |
| Output | Single pole change over contact |
| Rating | 250V; 5A ac; 30V; 5A dc |
| Programmable functions | High and low trip. Latching or non-latching |
| 4/20mA output | Isolated analogue output programmable to represent any part of the display. |
| Load | 500Ω maximum |
| Tare function | Primarily intended for weighing applications, sets meter display to zero when  button is operated. Function indicated by front panel LED. |
| Typeset scale card | Selection of common units supplied with each instrument. Custom typeset card can be supplied. |
| Tag number | Thermally printed number on rear of the instrument. |

DIMENSIONS (mm)



TERMINAL CONNECTIONS



HOW TO ORDER

| | | |
|-----------------------------|---|--------------------------|
| Model number | Please specify | |
| Power supply | A70 | |
| Input | 24Vdc, 115Vac or 230Vac | |
| | Required factory set input range | |
| | 0 - 100mV, 0 - 200mV, 0 - 500mV, 0 - 1V, | |
| | 0 - 2V, 0 - 5V, 1 - 5V, 0 - 10V, 0 - 20mA, | |
| | 4 - 20mA, 0 - 50mA, 10 - 50mA, 0 - 0.5A, | |
| | 0 - 1A, or 0 - 2A. | |
| Display | Required display at zero and full scale input.* | |
| Root extractor | ON or OFF* | |
| | <i>*Display will be calibrated 0.0 to 100.0 with rooter OFF if information is not supplied.</i> | |
| Accessories | Please specify if required | |
| Transmitter power supply | Transmitter supply | } Only one can be fitted |
| Transducer power supply | Transducer supply | |
| Output voltage | 5V, 10V, 12V or 15V | |
| 4/20mA retransmitted output | 4/20mA output | |
| | Meter display for 4mA Meter display for 20mA | |
| Alarms | Alarms | |
| Tare function | Tare | |
| Custom scale card | Legend | |
| Tag number | Legend | |