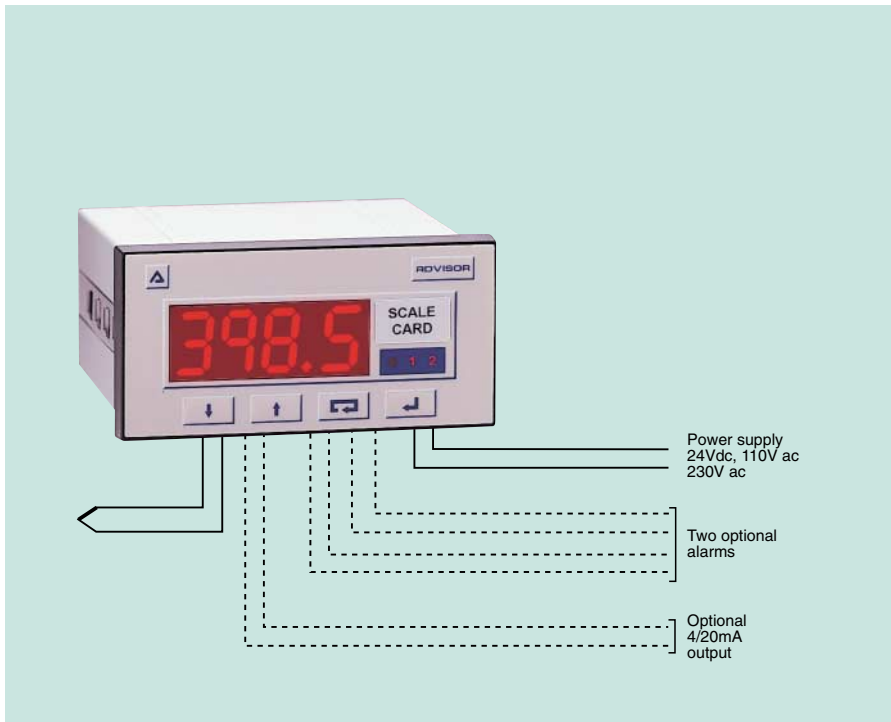


# Advisor A85 Temperature panel meter

*for thermocouple inputs*



The Advisor A85 is a panel meter which provides an accurate temperature display from most common thermocouples. The meter is housed in a robust enclosure and incorporates a high quality display, push-buttons and terminals to ensure many years of reliable service. For resistance thermometer inputs, the complementary Advisor A80 has similar features.

**Main application** of the A85 is to display process temperature, although the instrument is equally suitable for use in laboratory and non-industrial applications. The A85 may be programmed on-site to operate with seven different thermocouples, and includes facilities for differential temperature measurement. Units of display may be °C or °F, and the minimum and maximum displayed temperatures may be recalled from the front panel push-buttons. Accessories include a 4/20mA isolated output proportional to the display, and two alarms with relay contact outputs. To prevent operators being dazzled, the display brilliance is continuously adjustable from the front panel.

**Calibration and programming** is performed via the front panel push-buttons. To prevent accidental or unauthorised adjustment all programming functions are contained in easy to understand menus protected by a four digit user definable security code. The display can easily be recalibrated on-site using the internal references or an external voltage 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 A85 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.

**A 4/20mA current** proportional to the A85 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.

**Optional alarms** provide two channels each with a single pole change-over contact 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. Front panel LED annunciators show the status of each alarm.

**Reliability is ensured** by an ISO9001 approved quality control system. The A85 is protected from reverse connection and overrange inputs, and incorporates extensive radio frequency filtering to comply with the European EMC Directive.

- **4 digit LED display with adjustable brilliance**

- **24Vdc, 115Vac & 230Vac models**

- **7 selectable thermocouple inputs**

- **Maximum & minimum display**

- **Optional: Alarms Isolated 4/20mA output**

- **96 x 48mm DIN enclosure with easy to clean IP65 front.**

- **3 year guarantee**

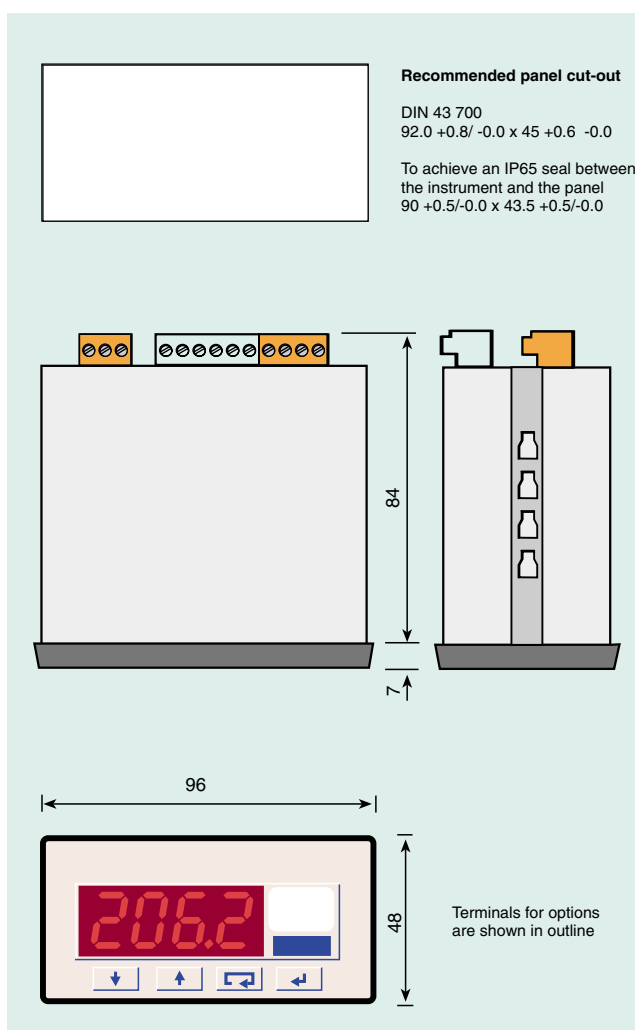
**BEKA**  
associates

**ABLE**  
Instruments & Controls

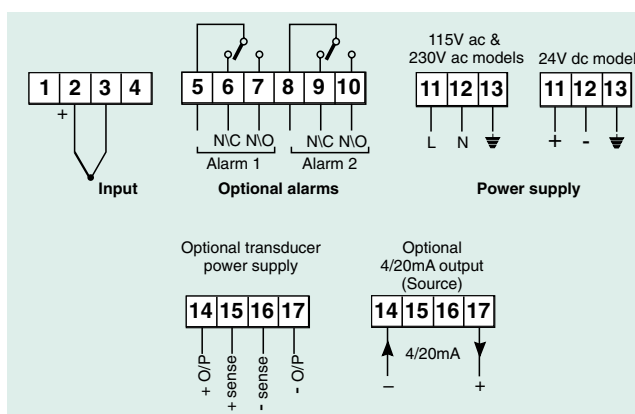
## SPECIFICATION

|                             |   |  |
|-----------------------------|---|--|
| <b>Supply</b>               |   |  |
| Voltage                     | 10 to 35Vdc<br>99 to 132Vac 50/60Hz<br>198 to 264Vac 50/60Hz                                  | } 4W max                                     |
| <b>Display</b>              |   |  |
| Type                        | 4 digit LED 14.2mm high with adjustable brilliance.   |  |
| Zero blanking               | Only 1 leading zero is displayed  |  |
| Polarity                    | Automatic minus sign  |  |
| Ovrrange                    | Displays -1 or 1  |  |
| Resolution                  | Selectable 1°C or maximum   |  |
| Reading rate                | Greater than 2 per second   |  |
| <b>Push-buttons</b>         |   |  |
| Down ▼                      | Shows minimum temperature   | <i>In operating mode without accessories</i> |
| Up ▲                        | Shows maximum temperature   |  |
| Scroll ◀▶                   | Only functions when alarms are fitted.  |  |
| <b>Input</b>                |   |  |
| Thermocouple type           | Display range   | Resolution °C between 25 & 75% of span       |
| E                           | -199.9 (-270) to 999.9 (1000)   | 0.2  |
| J                           | -199.9 (-210) to 999.9 (1200)   | 0.2  |
| K                           | -199.9 (-270) to 999.9 (1372)   | 0.3  |
| N                           | -199.9 (-270) to 999.9 (1300)   | 0.3  |
| R                           | -48.3 (-48) to 999.9 (1767)   | 1.0  |
| T                           | -199.9 (-270) to 400.0 (400)  | 0.2  |
| Pallaplat                   | -100.0 (-100) to 490.0 (490)  | 0.3  |
|                             | Figures in brackets ( ) are with 1°C display resolution                                       |  |
| Cold junction compensation. | Selectable on or off  |  |
| Broken THC detection        | Selectable drive: Up, down or off   |  |
| Resolution                  |   |  |
| °C display                  | Selectable 0.1°C or 1°C   |  |
| °F display                  | Fixed 1°F   |  |
| Isolation                   | 500V rms between input, power supply and optional accessory outputs.                          |  |
| <b>Performance</b>          |   |  |
| Accuracy                    | Including non-linearity at 20°C<br>±0.1% of span ±1/2 digit                                   |  |
| Series mode ac rejection    | Less than 1% error for 200mV rms<br>45 - 55Hz. 2% at 60Hz                                     |  |
| Common mode ac rejection    | Less than 0.1% error for 250V rms<br>50Hz.  |  |
| Temp. effect                |   |  |
| Zero drift                  | 50ppm max/°C of display span  |  |
| Span drift                  | 100ppm max/°C of display span   |  |
| <b>Environmental</b>        |   |  |
| Operating temp              | -20 to +50°C  |  |
| Storage                     | -40 to +70°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.  |  |
| <b>Mechanical</b>           |   |  |
| Terminals                   | Screw clamp for 0.5 to 1.5mm <sup>2</sup> cables  |  |
| Weight                      |   |  |
| 24Vdc                       | 0.25kg  |  |
| 110 & 230Vac                | 0.45kg  |  |
| <b>Accessories</b>          |   |  |
| Alarms                      | Two independent alarm channels  |  |
| Output                      | Single pole change over contact   |  |
| Rating                      | 250V 5A ac; 30V 5A dc   |  |
| Programmable function       | High or low trip. Latching or non-latching  |  |
| 4/20mA output               | Isolated analogue output programmable to represent any part of the display.                   |  |
| Load                        | 500 Ω maximum   |  |
| 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       | <b>Please specify</b>          |
| Power supply       | A85                            |
| Input              | 24Vdc, 115Vac or 230Vac        |
| CJ compensation    | E, J, K, N, R, T or pallaplat* |
| Display units      | On or Off                      |
| Display resolution | °C or °F*                      |
| Broken THC drive   | High or low *                  |
|                    | Up, Down or Off *              |

\*Will be set for K input; °C; high resolution with no broken THC drive if calibration information is not supplied.

|                             |                                   |
|-----------------------------|-----------------------------------|
| <b>Accessories</b>          | <b>Please specify if required</b> |
| 4/20mA retransmitted output | 4/20mA output                     |
|                             | Meter display for 4mA output      |
|                             | Meter display for 20mA output     |
| Alarms                      | Alarms                            |
| Custom scale card           | Legend                            |
| Tag number                  | Legend                            |