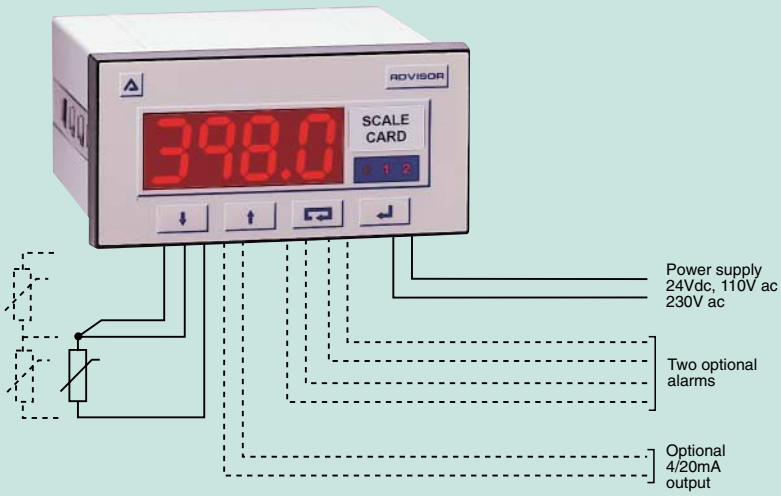
Advisor A80

Temperature panel meter

for resistance thermometer input



- **4 digit LED display with adjustable brilliance**
- **24Vdc, 115Vac & 230Vac models**
- **3-wire PT100 resistance thermometer input**
- **Maximum & minimum display**
- **Optional:**
  - **Alarms**
  - **Isolated 4/20mA output**
- **96 x 48mm DIN enclosure with easy to clean IP65 front.**
- **3 year guarantee**

The Advisor A80 is a panel meter which provides an accurate temperature display from a Pt100 resistance thermometer. 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 thermocouple inputs, the complementary Advisor A85 has similar features.

Main application of the A80 is to display process temperature, although the instrument is equally suitable for use in laboratory and non-industrial applications. 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 temperature calibrator. Loss of power does not affect calibration as all settings are retained for at least five years after the instrument is switched off or disconnected.

The front panel is a robust, easy to clean Noryl moulding sealed with a non-reflective, scratch resistant polyester membrane. All A80 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 A80 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 range.

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 A80 is protected from reverse connection and overrange inputs, and incorporates extensive radio frequency filtering to comply with the European EMC Directive.

Process input meters are also available, see datasheets for Advisor A70 and A75.

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 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

In operating mode without accessories

Down ▼	Shows minimum temperature
Up ▲	Shows maximum temperature
Scroll	Only functions when alarms are fitted.

Input

Type	3-wire Pt100 BS EN60751:1996 resistance thermometer. Accepts two RTDs for differential measurements. Refer to BEKA Sales Office for 4-wire input
Range	-200.0 to 850.0°C
Excitation	460µA
Resolution	
°C display	Selectable 0.1 or 1˚C
°F display	Fixed 1˚F
Isolation	500V rms between input, power supply and optional accessory outputs.

Performance

Accuracy	Including non-linearity at 20˚C ±0.05% of span ±1/2 digit
Series mode ac rejection	Less than 1% error for 200mV rms 45 - 55Hz. 2% at 60Hz
Common mode ac rejection	Less than 0.1% 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.

Mechanical

Terminals	Screw clamp for 0.5 to 1.5mm² cables
Weight	
24Vdc	0.25kg
110 & 230Vac	0.45kg

Accessories

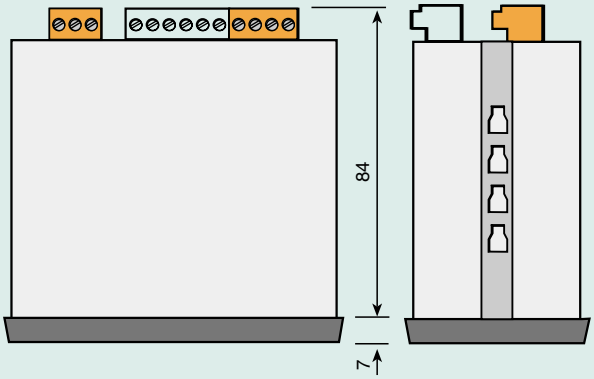
Alarms	Two independent alarm channels
Output	Single pole change over contact
Rating	250V 5A ac; 30V 5A dc
Programmable functions	High or low trip. Latching or non-latching
4/20mA output	Isolated analogue output programmable to represent any part of the display.
Load	500 ohms maximum
Typeset scale card	Selection of common units supplied with each instrument. Custom typeset card can be supplied.
Tag number	Thermally printed number on rear of the instrument.

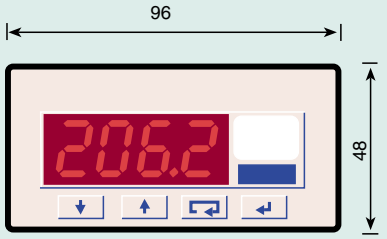
DIMENSIONS (mm)

Recommended panel cut-out

DIN 43 700
92.0 +0.8/ -0.0 x 45 +0.6 -0.0

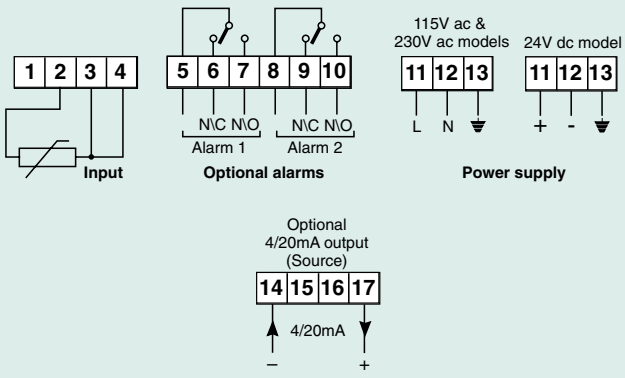
To achieve an IP65 seal between the instrument and the panel
90 +0.5/-0.0 x 43.5 +0.5/-0.0





Terminals for options are shown in outline

TERMINAL CONNECTIONS



HOW TO ORDER

	Please specify
Model number	A80
Power supply	24Vdc, 115Vac or 230Vac
Display units	˚C or ˚F*
Display resolution	High or low *

**Will be set for ˚C with high resolution if calibration information is not supplied.*

Accessories	Please specify if required
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