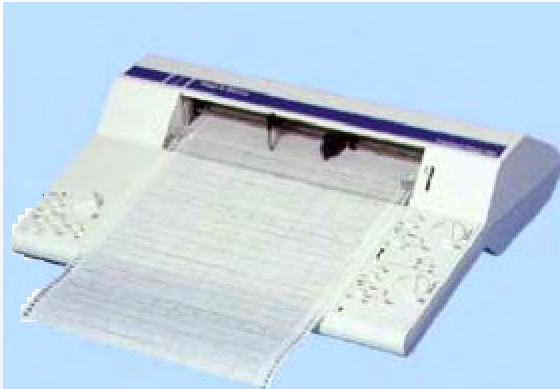


BD11-BD 12E Flatbed recorder



Features

New electronic design one or two channel recorder with state of the art technology
 Differential inputs
 User selectable left and right zero-position
 Zero adjustment by rotating knob
 RS-232 serial data output for both channels ¹⁾
 Pen Offset Compensation with on/off switch ¹⁾
 Home function and grid function
 Electrical pen lift
 Remote control

¹⁾ optional

This line of instruments is based on a proven robust and reliable design that is recognised world-wide as being the standard in recording. All models have differential inputs with constant impedance over all input ranges, which allow for accurate measurements from almost any source. The high sensitivity (up to 400 V full scale) and gilded input contacts allow even very low voltages to be measured accurately. The high-speed servo system records signals up to 5 Hz and the 6th order 14 Hz low pass filter eliminates the 50/60 Hz noise completely. The newly designed penholder has improved grip and simplifies the exchange of pens.

The motors used in the models are from the same brand and similar to the ones used in the Mars Pathfinder.

Additionally available:

Dust cover
 Safety banana plugs
 Flight case
 Spillage cover
 19" rack mount

Four different models:

- BD 11** Single channel flatbed recorder
- BD 12** Dual channel flatbed recorder
- BD 11E** Single channel flatbed recorder with electrical penlift and remote control
- BD 12E** Dual channel flatbed recorder with electrical penlift and remote control

In addition to the standard voltage inputs, the following input modules are also available for monitoring:

Temperature
 (TC: J, K and Pt-100) from -100 C to 1200 C
 Current
 0-20 mA or 4-20 mA and 0-16A
 Voltage
 up to 500 Volt DC, Attenuation 10x or 100x



Thermocouple Module J

Attenuator



The new electronic design not only fulfils the CE requirements but also the new cUL mark is applied for world-wide recognition of its safety.

BD11-BD 12E Flatbed recorder



Technical specifications

General specifications

recording system	potentiometric servo balance system
recording paper	roll chart
pen	disposable fibre tip cartridges
power supply	935 .132 V /187 .264 V, 50/60 Hz (voltage selector)
max. consumption	30 VA (1 channel), 40 VA (2 channels)
safety	Certified in accordance with cUL 3101 -1 and IEC 1010-1
emission	EN 50081-1 (group standard) RFI: EN 55022
imission	EN 50082-1 (group standard) ESD: IEC 1000-4-2 EMF: IEC 1000-4-3 EFT: IEC1000-4-4

Environmental conditions

ambient temperature range	operating: -10 C to +40 C, storage: -40 C to +75 C
relative humidity	operating: 20- 85 % non condensing, storage: 5- 95 %
housing material	Bay Blend no FR 110-00005; colour: white
flammability rating	according to UL 94 V-0
weight	3.5 kg including roll of chart
dimensions	380 x 290 x 90 mm (W x D x H)

Servo system

span settings	1-2-5-10-20-50-100-200-500 mV, 1-2-5-10-20 V
pen travel	200 mm
number of pens	1 or 2, factory installed
pen response time	<0.2 s for 5-95% fsd (full scale deflection)
span accuracy	<0.3% fsd
non linearity	<0.3% fsd
dead zone	<0.2% fsd
input terminals	2 safety terminals input
impedance	1 M Ω for DC, 10 k in series with 1.5 μ F for AC
input configuration	Floating
maximum input voltage	42 VDC/ 30 VAC (personal safety limits)
zero adjustment	-50 to +150% full scale
zero	selectable left-hand or right-hand side off the paper (default left)
zero drift	< 1 μ V/C
common mode rejection	130 dB (DC and 50 Hz AC)
variable range setting	40 .100% of selected span
pen lift	mechanical, pen 1 and 2 combined up/down (BD 11/ BD 12) electrical, pen 1 and 2 independent up/down (BD 11E / BD 12E)

Chart drive system

speed setting	0.1-0.2-0.5-1-2-5-10-20 mm/mm or mm/sec
step size	0.05 mm
inaccuracy time-base	better than \pm 50 ppm
recording paper	chart roll according to DIN 16230
paper length	25 metres

Standard included

manual, power cord, fuses, chart roll, one pen per channel

Options

. POC module for channel 2 with RS-232-C output ¹⁾
. RS-232-C output for channel 1 ¹⁾

¹⁾RS-232-C output only in combination with BD 11E/ BE) 12E