AVIOR®-2

Desktop Dose Rate and Survey Meter

The AVIOR-2 unit is a versatile alarm desktop, portable or wall-mounted dose rate and survey meter for contamination control and dose-rate assessment.

DESCRIPTION

The extensive experience of Mirion in nuclear measurement combined with valuable feedback from our users, drove us to create a product that better supports situations encountered in the field such as laboratories, industrial sites, nuclear power plants, open air yards, and emergency situations.

The AVIOR-2 meter is equipped with two Canberra™ Smart Probe (CSP™) inputs and features a simultaneous display of both probes. When an Alpha/Beta CSP probe is connected, the display automatically toggles to a dual screen and provides the user with discriminated alpha from beta measurement results, allowing to check and measure for contamination twice as fast as most instruments available on the market.

A dedicated OneHand/OneFoot mode to operate with SAB-250 and SABP-525 smart probes offers an affordable system to control contamination in areas with limited footprint.

RELATED PRODUCTS

CSP Probes: SAB-250™, SABP-525™, SPAB-15™, SG-1R™, SG-2R™, SAB-100™, SAB(G)-100™, SA-100™, SB-100™, SX-2R™ probes...

FEATURES

- ✔ Measurement of contamination and dose rate
- ✔ Two simultaneous probe channels
- ✔ Dual alpha/beta display for each probe
- ✔ Customized alarm setpoint for each connected probe
- ✔ Multiple measurement modes: Frisking, Scaler-Timer and Go/No-go
- ✔ Specific OneHand/OneFoot mode with body detection and automatic background management
- ✔ Manual background deduction for net measurement of contamination
- ✔ Backlit graphical digital display
- ✔ Analog-like bar graph with digital display
- ✔ Backup built-in rechargeable battery with no memory effect
- ✔ Rugged, lightweight and easy to use
- ✔ Upgradable product through firmware upgrade

PHYSICAL CHARACTERISTICS

- Units displayed (depending on probe): c/s, Bq_{eq}, Bq_{eq}/cm^2, Sv/h, Sv_{eq}/h
- Alarm threshold:
  - CSP probe: 10 values for each unit to display, stored in probe memory. Each value is editable via PC setup Canberra Smart Probe Software (CSPS™) or directly on the AVIOR-2 meter
- Response time:
  - As fast as 1/4 s for bargraph display depending on probe, on a semi-logarithmic scale
  - 1 s for clear digital readout display

ELECTRICAL CHARACTERISTICS

- Built-in rechargeable Li-ion battery pack
- Battery Life with Backlight: (Maximum/turned off): 31/70 hours with one SAB-100 probe connected, 29/60 hours with SA-100 and SB-100 probes connected
- Built-in charger
- Universal Mains power input, 100−240 V ac, 50/60 Hz. Rear-panel IEC-type connector. Cordset included.
- Display of remaining charge with battery pictogram

ENVIRONMENTAL CHARACTERISTICS

- Operating temperature: -10 °C to +50 °C. Between -10 °C and -20 °C, the instrument remains operational but the display becomes more difficult to read.
- Storage temperature: -25 °C to + 60 °C
- Ingress protection: IP54

MECHANICAL CHARACTERISTICS

HOUSING
- Molded rugged Polycarbonate

DIMENSIONS
- 184 x 105 x 105 mm (7.2 x 4.1 x 4.1 in.) (L x W x H)

WEIGHT
- 950 g (33.5 oz), battery included
- Connector for external probes: S 104 A066 137+ Fisher socket (CSP) or equivalent

FUNCTIONAL CHARACTERISTICS

- Two simultaneous CSP probe channels
- Specific OneHand/OneFoot mode with body detection and automatic background management

DISPLAY
- Grand display: Large LCD display with constant backlight

ALARMS
- Audible: > 85 dB(A) at 30 cm (11.8 in.)
- Visual: Flashing alarm pictogram and LED for each channel (Red, orange, green)

KEYBOARD
- Ruggedized keyboard with five buttons featuring primary and secondary functions: Enter (Power on), Up arrow (Backlight), Down arrow (Audio on/off), Left arrow (Lock), Right arrow (Data Log)

OPERATING CONTROL
- Complete and automatic self-test when switching on. Periodical self-control of key operational functions when operating
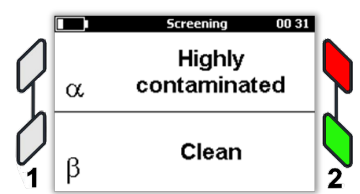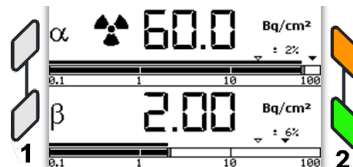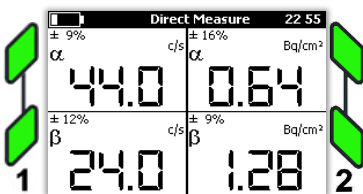
WALL MOUNTING
- Back panel with dedicated print for wall accessory

NORMS
- EMC: Conform
- IEC: Conform to IEC60846-2002 and IEC60325-2006
- CE: Conform

AVIOR-2 ALARMS
- Green/Orange/Red LED
- Linked to display channel
- Audible sound
- Can be muted by pressing any button when alarming
- Visual display
- Visual display depending on window arrangement

Alarm Displays

AVIOR-2 SYSTEM CONFIGURATIONS ARE A COMPLETE RANGE OF SOLUTIONS

AVIOR-2 meters cover multiple applications with one instrument for contamination or dose rate measurements, with or without background subtraction and with minimal training requirements.

AVIOR-2H/F-S
Self-standing Hand/Foot System

- Hand/Foot monitoring
- Probes are permanently attached
- SAB-250 probe for hand, SABP-525 probe for foot
- Small footprint
- Simple to move with integrated wheels
- Dynamic background reduction

AVIOR-2H/H-S
Self-standing Hand/Hand System

- Dual hand monitoring SAB-250 probe for each hand
- Small footprint
- Simple to move with integrated wheels
- Dynamic background reduction

AVIOR-2H
Wall-mounted Hand System

- Hand frisking or counting for glove boxes
- Probe is either permanently attached or available for frisking (setup in AVIOR-2 system)
- Large area SAB-250 probe can be taken from holder after hand check in frisking mode
- Zero footprint
- Dynamic background reduction

Can be upgraded with Foot probe

AVIOR-2H/F-W
Wall-mounted Hand System

- Hand/Foot monitoring
- Minimal footprint
- Foot probe is placed at wall corner
- Fixed system
- Dynamic background reduction

Self-standing Frisking System

- Using 100 cm² probe, alpha, beta, or alpha/beta with discrimination
- Basic and economical cost
- No dynamic background reduction
- Extremely small footprint

Self-standing Hand System

- Hand counting or frisking (setup in AVIOR-2 system)
- Probe can be permanently attached
- Large area SAB-250 probe can be taken from holder after hand check in frisking mode
- Small footprint
- Simple to move with integrated wheels
- Dynamic background reduction

AVIOR®-2 DESKTOP DOSE RATE AND SURVEY METER

Part Number	Product Name	Description
NOM006566/ EM105053	AVIOR-2	Desktop survey meter with two CSP inputs
NOM006594/ EM105470	AVIOR-2 I/O	Desktop survey meter with two CSP inputs I/O: relay outputs, RS485 Modbus, 24 V DC input, audio jack
NOM006554/ EM104616	SAB-250	Alpha/beta external 250 cm² probe
NOM006603/ EM106271	SABP-525	Alpha/beta 525 cm² foot probe
ANT007271/ EM102034	AVIOR/Wall	Wall mounting for AVIOR-2/MIP-2
ANT007294/ EM105105	SAB-250/Wall	Wall mounting for SAB-250
ANT007293/ EM105083	AVIOR-2-SAB-250/COMBO WALL	Wall mounting combo for AVIOR-2 and SAB-250
NOM006574/ EM105118	AVIOR-2H/F-W	AVIOR-2 hand/foot complete system (wall-mounted). Includes: AVIOR-2, SAB-250 probe, SABP-525 probe, combo wall, cable-2, coil cable
NOM006575/ EM105119	AVIOR-2H	AVIOR-2 hand complete system (wall-mounted). Includes: AVIOR-2, SAB-250 probe, combo wall, coil cable
NOM006595/ EM105575	AVIOR-2H/F-S	AVIOR-2 hand/foot complete system (self-standing). Includes: AVIOR-2, SAB-250 probe, SABP-525 probe, hand/foot support, Cable-2, Cable coil
NOM006599/ EM105722	AVIOR-2H/H-S	AVIOR-2 hand/hand complete system (self-standing). Includes: AVIOR-2, two SAB-250 probes, hand/hand support, two coil cables
NOM006585/ EM105325	CSP-METER COIL CABLE	0.7 meter extends to 1.5 meters with 90 degree angle connector on one end
NOM006565/ EM105028	CSP-Meter cable 2	Generic CSP probe/monitor cable 2 m length with 90 degree connector on one end
ANT007297/ EM105378	H/F Support	Self-standing hand/foot structure for AVIOR-2, SAB-250 and SABP-525
ANT007301/ EM105819	H/H Support	Self-standing hand/hand structure for AVIOR-2 and two SAB-250
NOM006202/ EM18364	Digital stand	AVIOR-2, MIP-2 and MIP-10 Digital stand includes a hook for SBM-2D
NOM006366/ EM86510	CSP Probe holder for stand	CSP probe holder that adapts on Digital stand

MIRION TECHNOLOGIES