

Frisking Contamination Monitor FCM-02



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Purpose

The Frisking Contamination Monitor FCM-02 enables workers in radiation controlled areas to quickly measure the alpha, beta and gamma contamination on their clothes.

Tools and other items being brought out of controlled areas can also be measured.

Description

The FCM-02 monitor compares the measured value with up to two preset alarm levels and gives an audible and visual alarm if a level is exceeded.

Detection is done by means of a large area scintillation probe connected to the main control and display unit by a flexible cable. The standard probe is "smart", and has a processor and memory so the calibration constants can be retained, allowing easy in-situ swapping of probes.

The display unit can be connected to any data or control network via Ethernet. Archiving of measurements can be on a local flash memory card or can be exported to USB flash-drive.

Discrete digital inputs and relay outputs are available to provide safety interlock control or remote alarm annunciation for the FCM-02.



The smart frisking probe

Main advantages

- User friendly interface, intuitive operation
- Settings and calibration factors are stored in the smart probe
- Easy connection of interchangeable smart probes
- Reliable PLC control unit
- Easy maintenance and service
- Optional connection to host system
- Optional hard-wired relay contacts for interlocks and controls

Specification

Display	LCD touchscreen
Probe interface	RS-485
Service interface	Ethernet, USB
Power	(95 ~ 240) V, (48 ~ 62) Hz
Consumption	App. 30 VA
Dimension w/o probe (W x H x D)	400 x 270 x 160 mm (16 x 11 x 6.5 in)
Weight	8 kg (17.5 lb)
Operating temperature range	5 ~ 35 °C 41 ~ 95 °F

Description

Design

The control and display unit can be wall mounted and includes a bracket for storing the probe. A touch-screen display is located on the front of the unit next to the probe bracket. The probe is connected at the bottom of the control and display unit. Alarm and status LED lights indicating "contamination" and "ready for measurement" are placed below the display. The hinged front panel is lockable.

Control and Display

The touch-sensitive screen displays status and warning messages and measurement results can be displayed in the form of bar graph. A USB flash-drive can be connected for data export and monitor settings import/export. For the connection of a service PC or host system is connected at the bottom of the control and display unit. Probe settings can be changed via the USB service connector.

Smart Probe

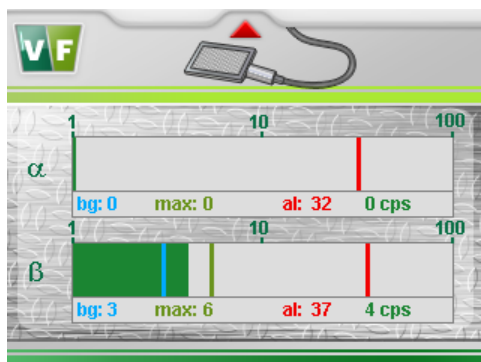
The type of detected ionizing radiation depends on the probe used. The standard smart probes for the FCM-02 are:

- SFP-100A – measurement of alpha in one channel
- SFP-100B – measurement of alpha and beta in one channel
- SFP-100C – measurement of alpha/beta in two channels
- SFP-100D – measurement of alpha, beta and gamma in one channel
- SFP-100E – measurement of alpha/beta and gamma in two channels

The smart probes contain a scintillation detector, a photomultiplier with a dynode string, and electronics for signal processing and evaluation. The FCM-02 control and display unit communicates with smart probes via serial interface.

Non-smart probe operation

Optional module for processing pulse rates from standard scintillation, proportional and GM detectors with high voltage supplied from the monitor is available.



Typical screen with two channel bar graph



Models and Accessories

Type	Description
K1116	Frisking Contamination Monitor FCM-02
Optional Accessories	
K1381	Connection cable for Smart Frisking Probes.
K1153-01-C05B02	Module for processing pulse rates from standard scintillation, proportional and GM detectors with high voltage supplied from the monitor.
K0935	SFP-100A Smart Frisking Probe
K0919	SFP-100B Smart Frisking Probe
K0936	SFP-100C Smart Frisking Probe
K0937	SFP-100D Smart Frisking Probe
K0938	SFP-100E Smart Frisking Probe
Related products	
K0830	ASU-50 Alarm Slave Unit
K101X	HF series, Hand and Foot contamination monitor
K118X	HM series, Hand contamination monitor
K130X	ExitScan-2 series, Personnel Exit Monitor

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