

DC-3H-08 Emergency Radiometer



The robust universal emergency radiometer DC-3H-08 is designed for demanding work environments.

It excels with the simplicity of its control, display size, effective information display, and wide measurement range.

Purpose

The handheld radiometer DC-3H-08 is designed to check radiation situation in the environments and to check materials, work tools, or contaminated surfaces. The large-area detection unit is able to detect both beta and gamma radiation. The simplicity of use and high electrical protection make the radiometer especially suitable for on-site measurements.

Possible device applications:

- measures the kerma rate in air (Gy/h)
- measures the ambient dose equivalent rate (Sv/h)
- measures the area activity (Bq/cm²)
- personal contamination check
- measures doses and calculates permitted period of stay (Sv)

Measurement is performed in one of the following modes:

- search mode (quick response of the detector)
- measure mode (automatic switching between the detectors and the measurement period)

Description

The robust structure of the radiometer with IP 65 protection rating is suitable for on-site measurements and consists of two autonomous components – the basic unit and the indication unit.

The basic unit contains detectors with electronics, a handle with the indication unit connection, a switch, and a battery power source. A battery-charger and USB connectors are positioned on the device case. The indication unit includes a control unit with a processor, control buttons, a display, a bar-graph, piezo buzzers, and a battery power source. Both units communicate mutually through the wireless technology, Bluetooth, which automatically activates after the indication unit has been ejected.

Main Advantages

- Wide measurement range
- Simple operational control
- Large and well-arranged display
- Displays dose with a single button
- High ingress protection rating IP 65

Standards and Certification

Type Approval Certificate TCM 441/09-4663 issued by the Czech Metrology Institute

EN 60325 – Radiation protection instrumentation - Alpha, beta and alpha/beta contamination meters and monitors

Electromagnetic Compatibility (EMC)
EN 55022/B, EN 61000-4-2B, 61000-6-2B



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Description

Measurement of surface contamination and the kerma rate up to 10 mGy/h is provided by a large-area detector located on the bottom side of the basic unit (the detector window is covered with a protective grid which is also covered by a sliding compensation blind on slide rails); high rates are then detected by the second detector located on the front side.

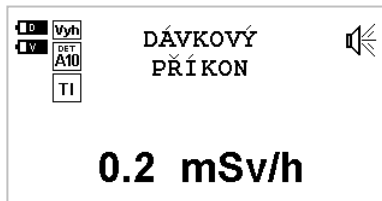
The DC-3H-08 radiometer is equipped with a large display, which exhibits the measured value clearly and shows the device's status and function using pictograms. A three-colour bar-graph and acoustic signalization are accessories to the displayed readout.

Operational control is made easy by means of four buttons located on the indication unit. Three buttons (arrow, arrow, ENTER) are positioned under the display, the fourth button is a double button and is placed on the bottom side of the indication unit.

The device is powered by accumulators. Both the indication and base units have their own autonomous power supplies.

In the measure mode, the DC3H08 radiometer can be used during certain inclement climate conditions: snow, mist or slight rain.

DC-3H-08 main parts:



Specification

Detector type	2x GM trubice
Measuring range beta	0.3 Bq/cm ² ~ 30 kBq/cm ²
Effective detection area	35 cm ² (5½ in ²)
Energy range beta	¹⁴ C ~ 2.5 MeV
Measuring range gamma	0.1 µGy/h ~ 10 mGy/h
Energy range gamma	59 keV ~ 1.5 MeV
Charging power supply	5 V
Batteries NiMH	2x 2 pcs, type R14, C
Electric protection	IP 65
Dimensions	
▪ base unit	210 x 103 x 108 mm (8¼ x 4 x 4¼ in)
▪ indication unit	235 x 100 x 67 mm (9¼ x 4 x 2⅝ in)
Weight	
▪ base unit	1767 g (3.90 lb)
▪ indication unit	650 g (1.43 lb)
Data transfer to PC	USB
Ambient temperature	-10 ~ +40 °C (+14 ~ 104 °F)
Mechanical endurance	withstand a fall from 1 m (40 in) onto concrete

Models and Accessories

Type	Description
K0733	Emergency radiometer DC-3H-08
Optional Accessories	
K0733-50	Charger for DC-3H-08
Related products	
K095X	Portable activity meter – PAM series
K123X	(detection area 100 cm ² or 170 cm ²)
K1153	RadCount-2 Radiation Ratemeter
K1130	RadCount-2S Display Unit



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