

The new generation of truly smart radiation detectors.

## FHT 40 NBR

Portable NBR radiation monitor



### Operational areas

- First responders
- Civil defense
- Fire brigades
- Environmental monitoring
- Remediation



### FHZ 672 E-10

The detector of the new FHZ 672 E-10 is a complex combination of organic scintillator material, a NaI(Tl)-crystal and extremely fast evaluation electronics.

With this combination of detectors, an energy characteristic according to the ambient dose equivalent  $H^*(10)$  is achieved.

The high efficiency of this detector allows an accurate determination of the dose rate within a few seconds and an immediate decision about whether it is natural or artificial radiation.

## FH 40 GL-10

The development of the high-tech radiation meter FH 40 GL-10 was governed by customers' requirements and the need for versatility.

### Flexible data storage

The stored measured values can be accessed any time and seen on the display of the advanced survey meter. For further processing and archiving purposes, it is possible to transfer the history contents to a PC via the FH 40 GL-10 interface.

### Intelligent Ratemeter-Algorithm (ADF-Mode)

Guarantees that even the smallest changes of dose rate are immediately detected, while at the same time, statistical fluctuations are effectively suppressed.

### Configuration by PC

The desired functions can be activated or hidden to the user by using the Windows™ based operating system. This means that the characteristics of the FH 40 GL-10 precisely correspond to the measurement task, thus operator errors are minimized. It can be made as simple or complex as the users application needs.

#### Technical data

##### FH 40 GL-10

Energy range:	30 keV to 4.4 MeV
Measuring range:	500 nSv/h to 100 mSv/h
Sensitivity:	approx. 2 s <sup>-1</sup> / μSv/h
Weight:	approx. 410 g (0.9 lbs.) without batteries
Operating time without FHZ 672 E-10:	> 250 h
Operating time with FHZ 672 E-10:	> 30 h

##### FHZ 672 E-10

Energy range:	48 keV to 6 MeV
Measuring range:	1 nSv/h to 100 μSv/h
Sensitivity:	approx. 2000 s <sup>-1</sup> / μSv/h
Detection limit of artificial gamma radiation:	< 20 % of natural dose rate typically
Weight:	approx. 4000 g (8.8 lbs.)



#### NBR = Natural Background Rejection

- The NBR measurement method has been developed by Thermo Fisher Scientific, Erlangen (Germany) for extremely fast discrimination between natural and artificial gamma radiation. Worldwide, more than 1000 devices based on this technology are in use.
- NBR has a rapid response time. Artificial gamma radiation sources are identified in seconds by operators with basic training levels.
- Unlike conventional spectroscopic based gamma identification systems, the systems using NBR do not require the presence and resolution of gamma spectral lines. Because of this flexibility, NBR can also definitively distinguish artificial high energy beta sources and heavily shielded gamma ray sources from fluctuating natural background sources.

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