MIRION TECHNOLOGIES

Radiation. **Safety.**

# Telescopic Set

## with RDS-31 and external probes

Nuclear Power | Homeland Security & Defense | Industrial and Manufacturing | Healthcare | Labs and Education

## OVERVIEW

The telescopic set consists of
1) Telescopic pole
2) RDS-31 Advanced Survey Meter
3) GMP-12SD, GMP-12UW , GMP-12GSD gamma probe or GMP-25i Pancake Beta Probe

- Telescope pole is stiff, light-weight glass fiber laminated material
- Electrically isolative, high chemical resistance
- Standard color light grey RAL7040
- Easy to manage and transport
- Telescope diameter 38 mm max / 26 mm min, divided in four sections approx. 1 m each
- Length retracted 1,2 m, extended 3,9 m without the probe and 1,4 m / 4,1 m with the probe attached
- Quick locking levers, each section can be locked into different lengths
- Retractable spiral cord runs inside the pole, and contains Binder connector to the meter and Ikelite connector to the GMP-12 series and GMP-25i probes.

## KEY FEATURES

- The pole sections can be locked to any desired length with the quick locking levers.
- The RDS-31 meter and probes can be easily mounted/ dismounted to/from the telescopic pole for standard radiation protection applications.
- The RDS-31meter is configured for dual display function, thus the user can simultaneously follow the dose rates / contamination from both internal and external detector.
- Configurable alarm levels for both detectors
- Histogram from both detectors with optional CSW-PRO configuration software.

Health Physics

## RADIOLOGICAL PROBE CHARACTERISTICS

| | GPM-12SD | GMP12GSD | GMP-12UW | GMP-25i Contamination Probe |
|---|---|---|---|---|
| Radiation detected | Gamma and x-rays according to ambient dose equivalent H*(10) | Gamma and x-rays according to ambient dose equivalent H*(10) | Gamma and x-rays according to ambient dose equivalent H*(10) | Alpha >2 MeV<br>Beta Emax >100 keV, Gamma > 6keV |
| Detector | Silicone PIN diode | One halogen quenched, energy compensated GM tube (type ZP 1202) and small silicon PIN diode; internal detector switching point 30 mSv/h and 10 mSv/h | Silicone PIN diode | GM tube, pancake type with end window<br>Area 15.5 $cm^2$, window thickness 1.5 - 2 mg/cm2 |
| Measuring range | 10 µSv/h - 10 Sv/h | 0.05 µSv/h – 10 Sv/h | 10 µSv/h - 10 Sv/h | 1 to 50000 cps<br>sensitivity: 2.8 cps (170cpm) for 90Sr/90Y uniform source of 0.37 Bq/cm2 |
| Energy range | 60 keV - 6 MeV | • 48 keV - 3 MeV for dose rate range 0.05 µSv/h - 30 mSv/h<br>• 60 keV – 6 MeV for dose rate range 30 mSv/h - 10 Sv/h | 60 keV - 6 MeV | Efficiency (2 π)<br><br>Am-241, α > 15%<br>C-14, β> 7 ± 1%<br>Sr-90/Y-90, β > 35 ± 4%<br>Cl-36, β > 29 ± 4% |

## MECHANICAL PROBE CHARACTERISTICS

| | GMP-12SD | GMP-12GSD | GMP-12UW | GMP-25i Contamination Probe |
|---|---|---|---|---|
| Enclosure class | IP 67 (short term) | IP 67 (short term), optionally IP 68 up to 40 m depth | IP 68 selfsubmersing | IP64 ( the body of the probe is water and dust resistant, but the coating of the GM-tube window is not waterproof) |
| Dimensions | Length 177 mm, cylinder diameter 35 mm | Length 208 mm, cylinder diameter 35 mm | Length 185 mm, cylinder diameter 35 mm | length 330 mm, width 74 mm |
| Weight | 180 g | 220 g | 210 g with submersing weight | 490 g |
| Casing | Epoxy powder painted aluminum | Epoxy powder painted aluminum | Epoxy powder painted aluminum | Casing of durable ABS/polycarbonate, lenght 375 mm (14.8 in), width 70 mm (2.75 in) (max) |

## MECHANICAL POLE CHARACTERISTICS

- Telescopic pole glass fiber laminated tube
- Length retracted 1118 mm and 3890 mm extended without the probe
- Length retracted 1415 mm and 4120 mm extended with the probe attached
- Telescope diameter 38 mm max, divided in four sections approx. 1 m each

## ACCESSORIES

- Carrying case for the telescopic set, made of abrasion resistant material with shock absorber layers inside the case

## RDS-31 RADIOLOGICAL CHARACTERISTICS

- Radiation detected: gamma and X-rays, 48keV...3MeV. Alpha & Beta radiation with external probes
- Detectors: one energy-compensated GM tube, energy response according to ambient dose equivalent H*(10)
- Dose rate measurement range: 0.01 µSv/h...0.1 Sv/h or 1 µrem/h...10 rem/h
- Dose measurement range: 0.01 µSv...10 Sv or 1 µrem...1000 rem
- Resolution: three significant digits or 0.01 µSv/h on dose rate and 0.01 µSv on dose ( 1 µrem/h on dose rate and 1 µrem on dose)

A connection cable with IKELITE connector on top is running inside the telepole for connecting RDS-31 and the external probe. Both RDS-31 and the probes can be easily attached to and detached from the telescopic pole e.g. for calibration purpose or to be used without the pole as portable hand held devices. A separate connection cable with Binder connector for RDS-31 and IKELITE connector for the probes is required for using the instruments as portable equipment.

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