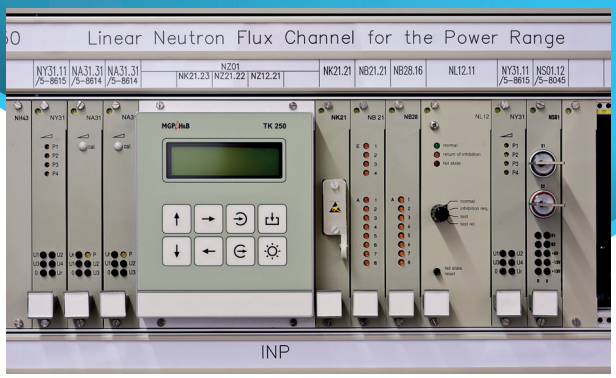
MIRION TECHNOLOGIES

PROTK

DGK 250™

Digital Power Range Channel



Neutron flux monitoring in the power range in combination with neutron ionization chambers.

FEATURES

- Two signal paths for two ionization chambers
- Calibration to neutron flux signal (nv, P/Pn)
- Calculation of mean value and deviation
- Generation of analog and binary signals for the reactor protection system
- Short response time < 10 ms
- Remote test signal generators
- RS232/485 data interface

DESCRIPTION

The DGK 250 digital power range channel forms part of the proTK™ product line.

It has been designed for neutron flux monitoring in the power range in combination with neutron ionization chambers. Hardware and software of the DGK 250 are designed and qualified for applications at the level of the reactor protection system.

DGK 250 | DIGITAL POWER RANGE CHANNEL

DETECTORS AND INPUT SIGNALS

- Boron coated ionization chambers (compensated or non-compensated) e.g. KNU 50 or KNK 50
- No external preamplifiers
- Cable to the DGK 250: coaxial cable, no limitation of length
- Detector supply 0 ... 1 kV located in the central electronic unit
- Selectable ranges of input signals 0 ... 10/20/50 µA

DIGITAL SIGNAL PROCESSING

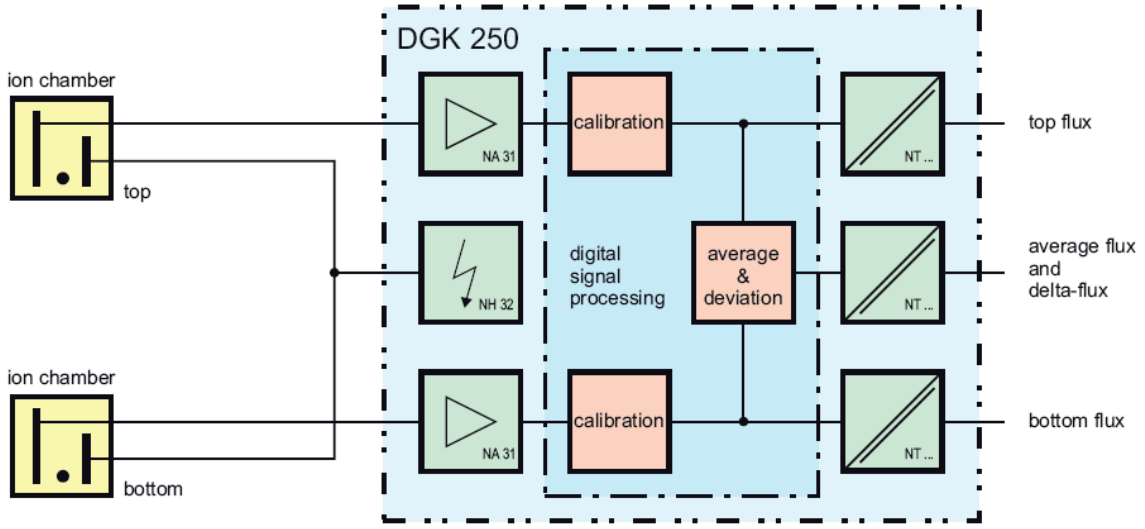
- 80C31/32 multi-processor system
- Program memory: EPROM
- Parameter memory: CMOS-RAM with integrated Li-battery
- Data interface: RS232 and/or RS485
- Internal LC-display: 2 x 16 characters

OUTPUT SIGNALS

- Neutron flux at top and bottom position, individually calibrated
- Average neutron flux, calibrated to reactor power, e.g. 0 ... 125 %Pn
- Neutron flux deviation between top and bottom
- Analog outputs: 0/4 ... 20mA/600 Ω, insulated
- Binary outputs: insulated relays change overs, 60V/0.5A or 125V/1A

OTHER CHARACTERISTICS

- DC power supply: 18 ... 33 VDC, approx. 1.6A at 24 V
- Optional: AC power supply: 230 VAC or 115 VAC +10%/-15%, approx. 40 VA
- Operating temperature: 0 ... 70°C (32 ... 158°F) for the main electronics
- Mechanical vibrations: < 5 g, 5 ... 100 Hz
- 19” modular system according to IEC 60297
- Rack size (W×H×D): 483 mm × 133 mm × 280 mm (19 in x 5.2 in x 11 in)
- Plug-in boards: 100 mm × 160 mm (3.9 in x 6.3 in)



Featuring:

MGPi H&B

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