



Radiation Sensor DR-19

Nuclear Beta and Gamma Radiation Sensor
Ultra Low Power Requirement
 Work at BALANCE system with D100 Radiomodule

DJV-COM
Communication
and Sensor
Technologies

The **DR19** is capable of detecting beta radiation (electrons), gamma radiation (photons) and X-rays. The **DR19** has high immunity to electrostatic fields.

Profile Recording and Radiation Safety Monitoring:

- In public places: educational institutions, kindergartens, hospitals, clinics, in municipal and residential buildings.
- In public transport and bus stations.
- In the territories of enterprises, warehouses and markets.
- At landfills

DR19 detectează radiația beta (electroni), radiația gamma (fotoni) și razele X. **DR19** este rezistent la static.

Înregistrarea profilului și controlul siguranței la radiații:

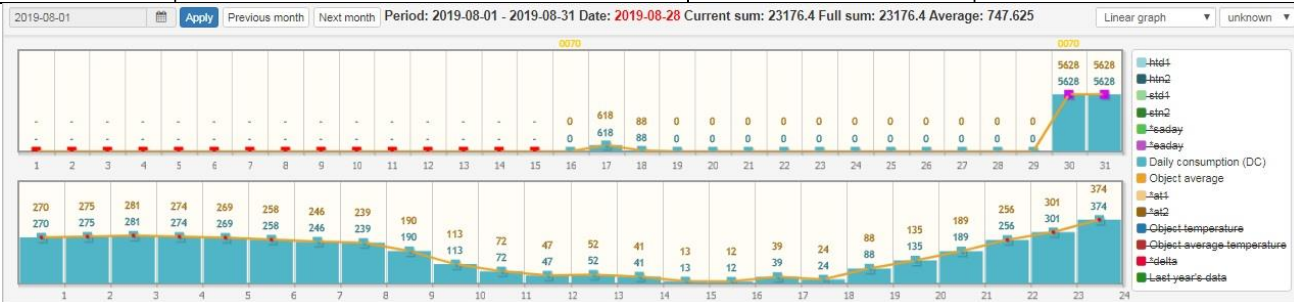
- În locuri publice: instituții de învățământ, grădinițe, spitale, clinici, în clădiri municipale și rezidențiale.
- În stațiile de transport public și autobuze.
- Pe teritoriile întreprinderilor, depozitelor, depozitelor și piețelor.
- La amplasamentele și depozitele de deșeuri

An example of continuous monitoring.

The graph shows the hourly profiles of radio emission in $\mu\text{R}/\text{h}$ dimension. The graph shows, that at 15 and 16 hours the radiation level corresponds to the BACKGROUND RADIATION level of 12-13 $\mu\text{R}/\text{h}$.

Un exemplu de monitorizare continuă.

Graficul prezintă profilurile orare ale emisiilor radio în termeni de $\mu\text{R} / \text{oră}$. Graficul arată că, la 15 și 16 ore, nivelul de radiație corespunde nivelului de RADIARE DE FOND de 12-13 $\mu\text{R} / \text{oră}$



Допустимые дозы

В России допустимые нормы радиации регламентируются «Нормами радиационной безопасности».

Мощность дозы, допустимая в помещениях	Мощность дозы, допустимая для открытых местностей	Среднегодовая доза	Максимально допустимый уровень радиации	Уровень радиации в помещениях и открытых местностях
15-20 мкР/час	8-12 мкР/час	до 30 мкР/час	65 мкР/час	10-13 мкР/час



Рекомендации Международной комиссии по радиационной защите и Всемирного общества здравоохранения

Естественный радиационный фон:
 10 – 20 мкР/ч - **нормальный**
 20 – 60 мкР/ч - **допустимый**
 60 – 120 мкР/ч - **повышенный**



TECHNICAL CHARACTERISTICS		SPECIFICAȚII	
Ultra low power 16 μA	6 years on battery power	Consum de energie 16 μA	6 ani cu baterie
Detector sensitivity:	5 cpm for 1 $\mu\text{Sv}/\text{h}$	Sensibilitate detector:	5 impulsuri pe minut la 1 $\mu\text{Sv} / \text{h}$
Measurement range of dose rate	0.1 $\mu\text{Sv}/\text{h}$ to 6.5 mSv/h	Domeniul de măsurare a dozelor	0,1 $\mu\text{Sv} / \text{h}$ până la 6,5 mSv / h
Energy response	50 KeV to above 2 MeV	Gama de energie a particulelor	50 KeV la 2 MeV
TYPE REMOTE UNIT	Totalizer/ Microprocessor	TIP DE ACTIVITATE	Totalizator / Microprocesor
POWER SUPPLY	VDC 3,3 - 3,6 Volt,	ALIMENTARE ELECTRICĂ	U = 3,3-3,6 volți DC,
MAX PULSE FREQUENCY	No more then 10 Hz	FRECVENȚA DE PULS	Nu mai mult de 10 Hz
CERTIFICATION (CE)	(EMC) and safety.	Certificare (CE)	(EMC) și siguranță.
AMBIENT CONDITIONS (temperature)	Storage: - 20°C ÷ 70°C Working: + 0°C ÷ 55°C	CONDIȚII DE MEDIU (temperatură)	Depozitare: - 20 ° C + 70 ° C
PROTECTION CLASS	IP 30 (installed in the radio module)	Clasa de protecție	De lucru: + 0 ° C + 55 ° C
MOUNTING (CABLE LENGTH = 0)	To the radio module D100	Instalare (lungimea cablului = 0)	IP 30 (instalat în modulul radio)
OUTPUT PULSE (LOAD) Communication interface	Open drain + 2,7 kOhm Pulse Output	leșire / sarcină impuls	La modulul radio D100
MIN/MAX OUTPUT TENSION	0,9V / 3,3V	Interfață de comunicare	Drenaj deschis / 2,7 k Ω
MAX CURRENT	1,0 mA (DC)	Tensiune MIN / MAX	leșire impuls
PULSE DURATION	> 30ms	Curent maxim	0,9V / 3,3V

Photo DR-19	Block Diagram	Dimension	Connection
			<p>View from top</p> <p>GND Power supply and output signal ground VCC Power supply OUT Output signal</p>

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