

TECHNICAL SPECIFICATIONS

PHASED ARRAY FLAW DETECTOR FOR SECONDARY RAIL INSPECTION CHAMELEON 32+ (16/64)

The **CHAMELEON 32+** single-rail (PRD) flaw detector (version 16/64, supporting four 16-element 2.5 Mhz PA probes) is used in railway technologies for secondary inspection of individual sections of rails and switch elements.

Characteristic	Value
4 independent PA	2,5 MHz
Input angle range	1 PA probe - 50-70°; 40-50°; 0° 2 PA probe - 50-60°; 34° 3 PA probe - 50-60°; 34° 4 PA probe - 50-70°; 40-50°
Operating gain range up to	80 dB
Support for	A, B, C, D, S scans
Geolocation	GPS, GLONASS
Interfaces	USB, LAN, GSM
Nominal value of the pulse amplitude drive pulse generator	50, 100, 150, 200
Minimum detectable defect area, mm ²	3,0
Maximum value of scan duration, microseconds	1000
Gain control range, dB	from 0 to 80 in increments of 0.5
Error in signal amplitude determination, dB	0,5
Input angles range, deg	0 - 90
Drive pulses duration range setting, ns	from 10 to 1000 in increments of 4
Setting range of PA elements excitation delays, ns	from 0 to 40 000 in increments of 5

Characteristic	Значение
Powered by the battery, at least, h	8
Operating conditions: -ambient temperature, C° -relative humidity at	from -30 to +50 + 25°C, % to 95 (non-condensing)
Average service life, years, at least	5
Permissible absolute error tolerance in defect depth measuring and / or products thickness in range from 10 to 400 mm, mm	$\pm (0.3 + 0.01 \cdot H0)$, where H0 is measured defect depth and/or product thickness, mm
Permissible absolute error tolerance of measuring the distance from the transducer front face to defect projection on the scanning surface in the range from 10 to 100 mm, mm	$\pm (0.3 + 0.01 \cdot L)$, where L is measured value of distance from front face of transducer to defect projection on scanning surface

Automatic defect visualization, its origin coordinate and dimensions determination.

Absence of “dead zones ” while testing with phased arrays, i.e. detection of surface, subsurface defects at a depth of 1.0 mm and with area of 3.0 mm²

SCOPE OF DELIVERY

Rail flaw detector	300x80x1000 mm, weight 7 kg
Power supply unit (adapter)	220V/12V/2A
Rechargeable battery	12V, 12A/h
PC tablet 11”	1280x720px
Additional PA probe 16	5 MHz
Reference block	SO3R