



GEM elettronica



RIVER RADAR

LD-1800 R SERIES

The radar series

**LD-1804R/6, LD-1804R/7,
LD-1804R/9, LD-1810R/6,
LD-1810R/7, LD-1810R/9**

belongs to the newest generation of **GEM elettronica** radars using S-TFT 19" LCD technology and exploiting the most updated graphical and digital processing techniques.



Type approved n. R-4-012

LD-1804R/7 - LD-1804R/9

River Radar - Technical specification

ANTENNA

	array 6	array 7.5	array 9
Type	Slotted Waveguide Array		
Polarization	Horizontal		
Beamwidth (- 3 db)			
HORIZONTAL	1.25° ± 0,1°	1.0° ± 0,1°	0.85° ± 0,1°
VERTICAL	25° ± 10%	25° ± 10%	25° ± 10%
Sidelobes			
WITHIN ± 10	≤ - 27 dB	≤ - 26 dB	≤ - 25 dB
OUTSIDE ± 10	≤ - 30 dB	≤ - 32 dB	≤ - 32 dB
Gain	≥ 29 dBi	≥ 30 dBi	≥ 31 dBi
Rotation speed	30 r.p.m. nominal		
Wind load	100 Km relative		

RF TRANSCEIVER

Peak power	4 or 12 kW nominal (±20%)											
Frequency	9410 MHz +/- 30 MHz											
Pulse Type	Range Scale in kilometer											
	0.15	0.3	0.5	0.8	1.2	1.6	2	4	8	16	32	64
Short	●	●	●	●	●	●	●					
Medium							●	●	●			
Long								●	●	●	●	●
Pulse Type	4 kW				12 kW							
	PW		PRF		PW		PRF					
Short	0.04 μs		4000 Hz		0.08 μs		3200 Hz					
Medium	0.2 μs		2000 Hz		0.3 μs		1600 Hz					
Long	0.4 μs		1000 Hz		0.6 μs		800 Hz					
Receiver type	Solid state, logarithmic											
Front-end module	Microwave integrated circuit											
Intermediate Frequency (I.F.)	60 MHz											
I.F. bandwidth	25 MHz with short and medium pulses 4 MHz with long pulses											
Duplexer	Ferrite circulator with solid state limiter diode											
Noise figure (overall)	< 4.5 dB											
IF Dynamics	≥ 100 dB											

ENVIRONMENTAL PERFORMANCE

	Display+Keyboard	Scanner
High temperature	+55° C	+55° C
Low temperature	-15° C	-25° C
Humidity	95% R.H. at +40° C	

DISPLAY UNIT

Type	LCD, Super TFT Technology, high resolution, color.											
Display size (diagonal)	19", equivalent to 20" standard CRT											
Video resolution	1280 x 1024 pixels, 16 levels											
Range scale (n. Km.)	0.15	0.3	0.5	0.8	1.2	1.6	2	4	8	16	32	64
Ring spacing (n. Km.)	0.05	0.1	0.1	0.2	0.2	0.4	0.4	1	2	4	8	16
Minimum distance	better than 15 mt, target cross section=10m ² , short pulse											
Range discrimination	better than 12 mt, target cross section=10m ² , short pulse											
Electromagnetic compatibility	IEC-945											
Vibrations	IEC-945											
VRM precision	5 m or less than 1.5 % of the range in use, whichever the greater											
EBL accuracy	better than 0,5°											
Rate of Turn indicator	Programmable scale: 30, 60, 90, 180, 300 °/min.											

INTERFACES

Rate of Turn	Standard NMEA interface, decoded messages: ROT and analog interface compliant to ZKR1989-11-34
GPS	Standard NMEA interface, decoded messages: RMC
Compass	Standard NMEA interface, decoded messages: HDM, HDT, HDG
Echosounder	Standard NMEA interface, decoded messages: DBT, DBS, DBK
Rudder angle	Standard NMEA interface, decoded messages: RSA

POWER REQUIREMENTS

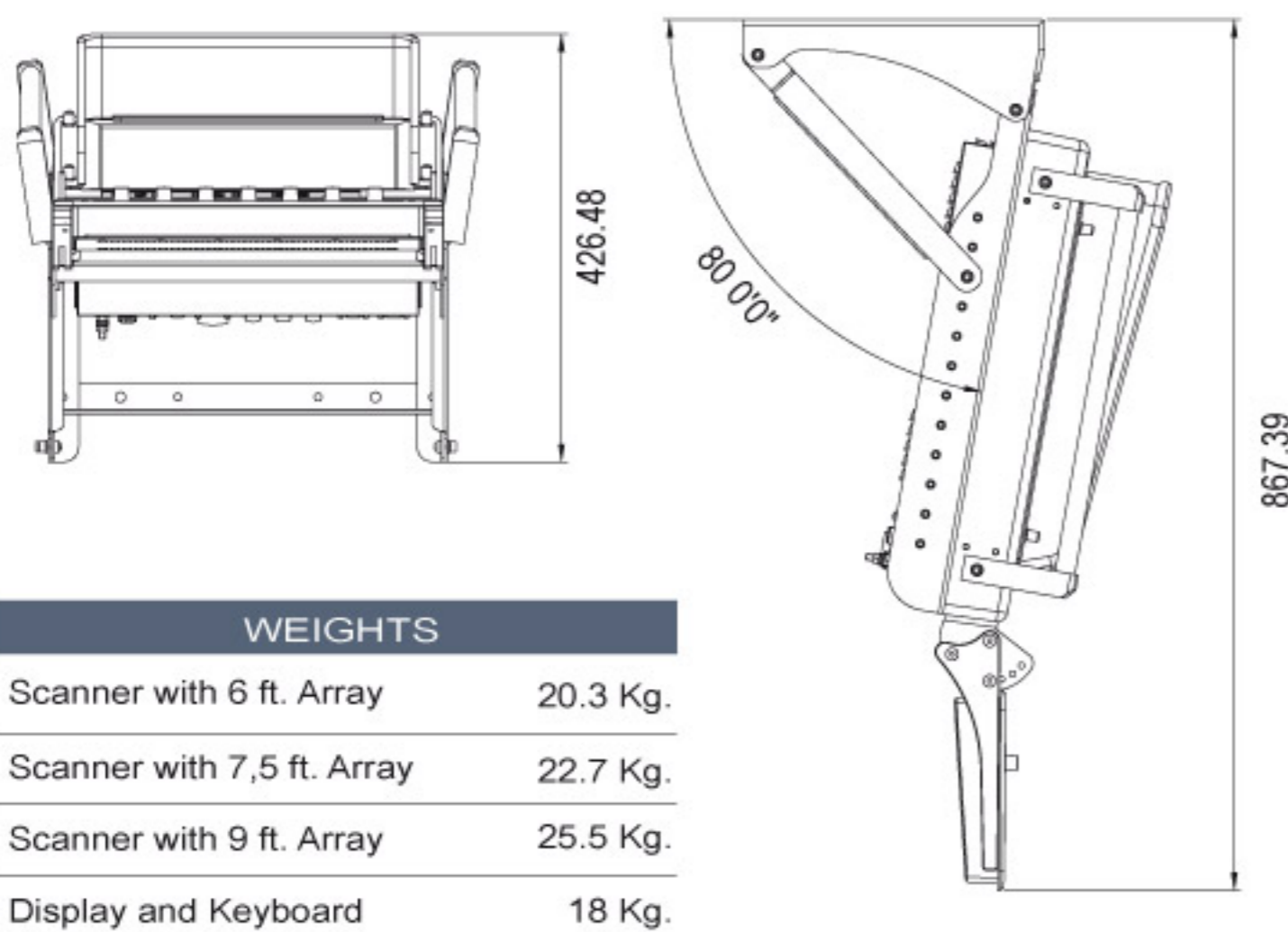
Required supply	From 18 to 40 Vdc
Maximum absorption	200 Watts

EQUIPMENT

Standard	Upmast scanner, display indicator, keyboard, sun shield, 15 meters cable CB20, operation and installation manual, mounting hardware, consumable spares
Optional	<ul style="list-style-type: none"> - GB 20-10 Gyro interface unit - RU 40-24 Rectifier unit - RUGB 70-24 Gyro interface unit - NMEA Cable - PM 30-01 Performance monitor - External audio alarm

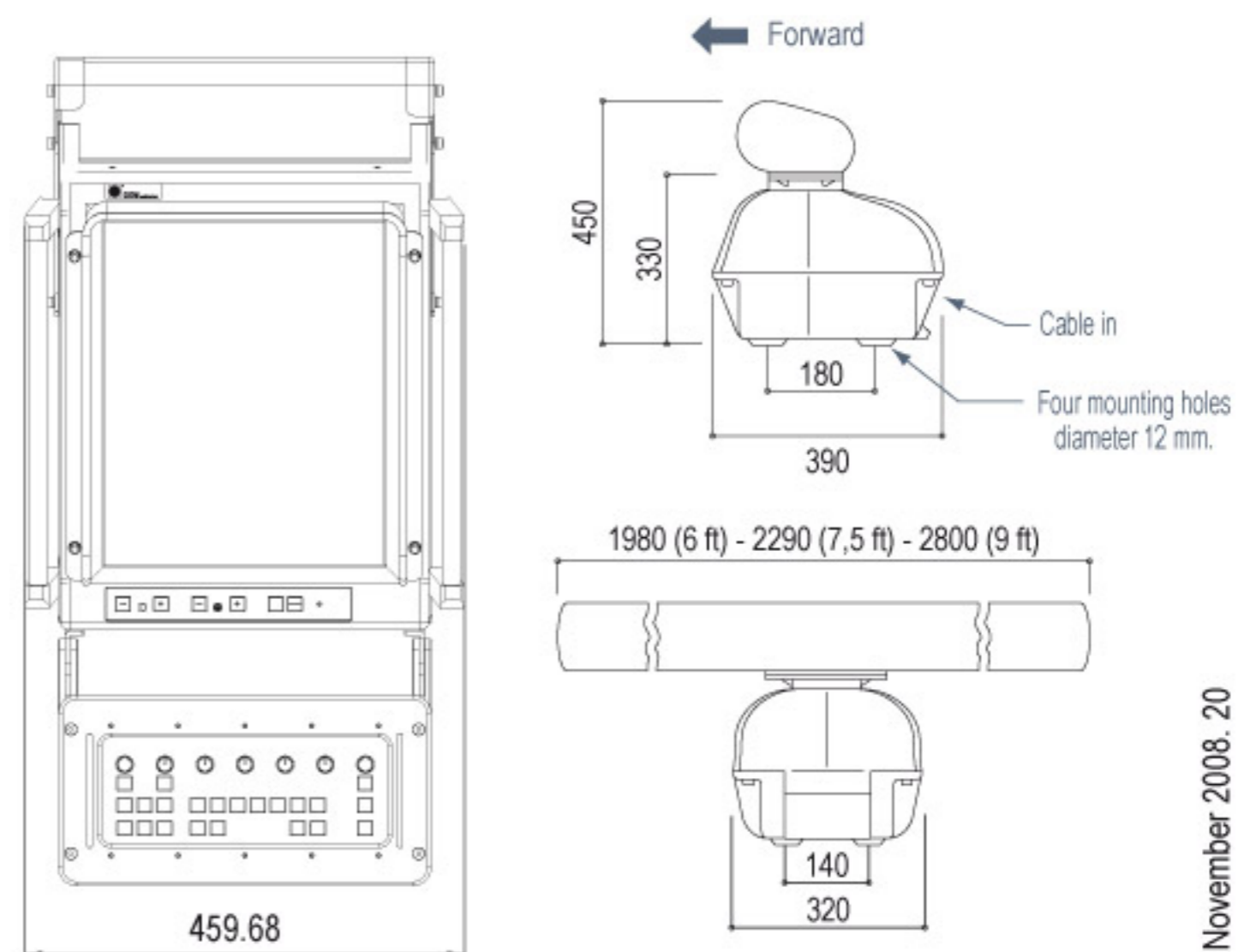
DIMENSIONS AND WEIGHTS

All dimensions are expressed in millimeters.



WEIGHTS

Scanner with 6 ft. Array	20.3 Kg.
Scanner with 7,5 ft. Array	22.7 Kg.
Scanner with 9 ft. Array	25.5 Kg.
Display and Keyboard	18 Kg.



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