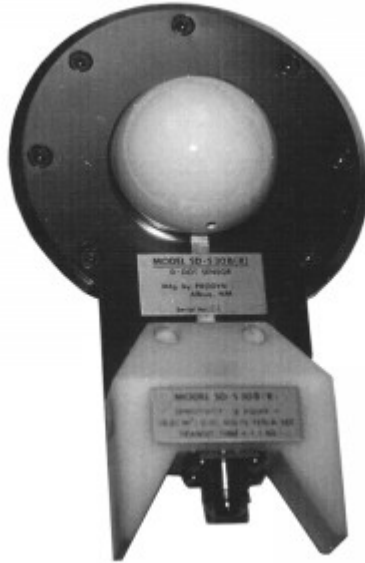


Surface current density electric field sensors

PRODYN models SD-S10 and SD-S30 sensors are qs or D-sensors equivalent to AFWL Models HSD-SI and HSD-S3 respectively. These sensors can be used as D-Dot sensors or to measure the time rate-of-change of surface current density. The sensor consists of a hemispherical dome supported above a metal mounting surface by a dielectric ring.



The sensors are equipped for purging with a gas such as dry air, nitrogen or SF6. No external power source is required.

SPECIFICATION

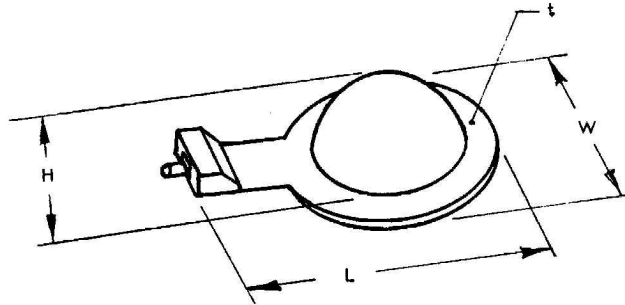
	SD-S10	SD-S30
Equivalent Area (Aeq)	1 x 10 ⁻¹ m ²	1 x 10 ⁻² m ²
Freq. Resp.(3 db pt.)	>130MHz	>350MHz
Risetime (tr 10-90)	<2.7ns	<1.0ns
Maximum output (pk)	+4kV	+4kV
Output connector (female)	GR 874-L-50	GR 874-L-50

EQUATION

$$V_0 = R A_{eq} \frac{dq_s}{dt}$$

Where V_0 = sensor output (volts), R = load impedance (50Ω), A_{eq} = sensor equivalent area (m²) and dq_s = surface current density (coul/m²).

DIMENSIONS



	SD-S10	SD-S30
Mass	1.6Kg	1.4Kg
L (cm) - see outline	36.8	22.1
H (cm) - see outline	10.4	3.6
W (cm) - see outline	28.2	13.7
t (cm) - see outline	0.3	0.2