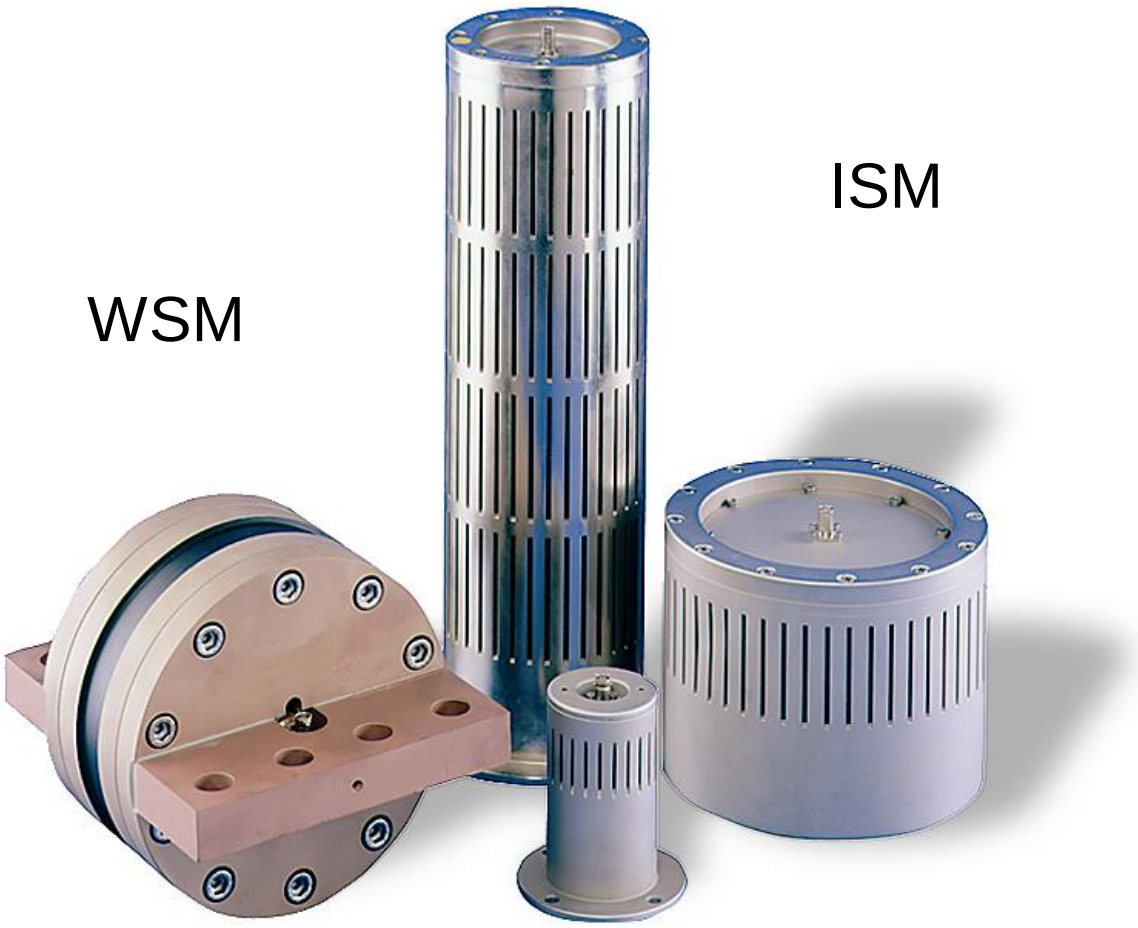
CURRENT-VIEWING RESISTORS

Type WSM

WSM-type AC/DC current-Viewing resistors are designed for precise measurement of pulsed ac- and dc currents, for instance in industrial drives, pulsed welders and plasma physics apparatuses. Moreover they are employed in short-circuit test facilities, measurement of start currents of fuel engines etc.
Compared with other methods, WSM-type current-viewing resistors posses high bandwidth, from dc to the specified upper frequency limit. They avoid auxiliary electronics and do not require auxiliary power. Their high electromagnetic compatibility (EMC) and robust mechanical design permit careless utilisation in adverse environments.
Active parts posses rotational symmetry which, combined with a magnetic guard-ring design, permits deployment of the total skin-effect limited bandwidth. The performance features result from high-precision turned and milled parts, antimagnetic nuts and bolts, vacuum brazing, laser welding etc.



TYPE	Current rating rms	peak	Nominal resistance	Power	Impulse-load-integral	Band-width 1)	Weight
WSM15000	15 kA	150 kA	4 µΩ	900 W	$12*10^9$ A^2s	30 kHz	62 kg
WSM10000	10 kA	100 kA	6 µΩ	600 W	$5.0*10^9$ A^2s	30 kHz	25 kg
WSM 6000	6 kA	100 kA	10 µΩ	360 W	$1.6*10^9$ A^2s	55 kHz	13 kg
WSM 4000	4 kA	60 kA	15 µΩ	240 W	$5.8*10^8$ A^2s	60 kHz	9 kg
WSM 2500	2.5 kA	60 kA	24 µΩ	150 W	$3.2*10^8$ A^2s	120 kHz	6 kg
WSM 1500	1.5 kA	60 kA	40 µΩ	90 W	$1.0*10^8$ A^2s	200 kHz	3.3 kg
WSM 1000	1.0 kA	60 kA	60 µΩ	60 W	$4.4*10^7$ A^2s	200 kHz	1.7 kg
WSM 600	600 A	40 kA	100 µΩ	36 W	$1.5*10^7$ A^2s	500 kHz	1.5 kg
WSM 400	400 A	40 kA	150 µΩ	24 W	$6.7*10^6$ A^2s	1.5 MHz	1.5 kg
WSM 250	250 A	20 kA	240 µΩ	15 W	$2.7*10^6$ A^2s	1.5 MHz	1.5 kg
WSM 150	150 A	10 kA	0.4 mΩ	9.0 W	$3.6*10^6$ A^2s	1.5 MHz	1.2 kg
WSM 100	100 A	10 kA	0.6 mΩ	6.0 W	$1.6*10^6$ A^2s	800 kHz	1.2 kg

Nominal resistance at 20°C, Resistance tolerance from 0 - 70 °C < 0.5%,

T_k = ± 50 ppm/K. Impulse load integral $\int i^2dt$ is based on temperature rise of 100 K.

Voltage signal at rated current is 60 mV.

Voltage pickup: BNC connector

1) Theoretical value