

Data Sheet 5.81/8

Impulse Current Shunts, Type SMW, and Type ISM

Application

The impulse current shunt is designed for impulse current measurements during lightning voltage tests on low inductive test objects (e.g. power transformers). It can also be used for impulse current measurements with wave shapes 4/10 μ s, 1/20 μ s, 8/20 μ s and 30/80 μ s on metal-oxide surge arresters according to IEC 62475:2010 and IEC 60099-4:2014.

Table 1: Nominal data

Type	Rated resistance Ω	Rated impulse current A	Sensitivity V / A	I^2t value A^2s	Rise time ns	Critical frequency MHz
SMW 50	10	50	10	0.09	< 10	> 35
SMW 100	5	100	5	0.36	< 10	> 35
SMW 250	2	250	2	2.25	< 10	> 35
SMW 500	1	500	1	9	< 10	> 35
SMW 1000	0.5	1000	0.5	36	< 10	> 35
SMW 2500	0.2	2500	0.2	225	< 10	> 35
SMW 5000	0.1	5000	0.1	900	< 24	> 15
SMW 10000	0.05	10000	0.05	3600	< 24	> 15
SMW 25000	0.02	25000	0.02	22500	< 24	> 15
ISM 100	0.001	40000	0.001	50000	< 2	> 175
ISM 250	0.001	100000	0.001	560000	< 2	> 175

Minimum time difference between impulses: 60 s

Dimensions, type SMW

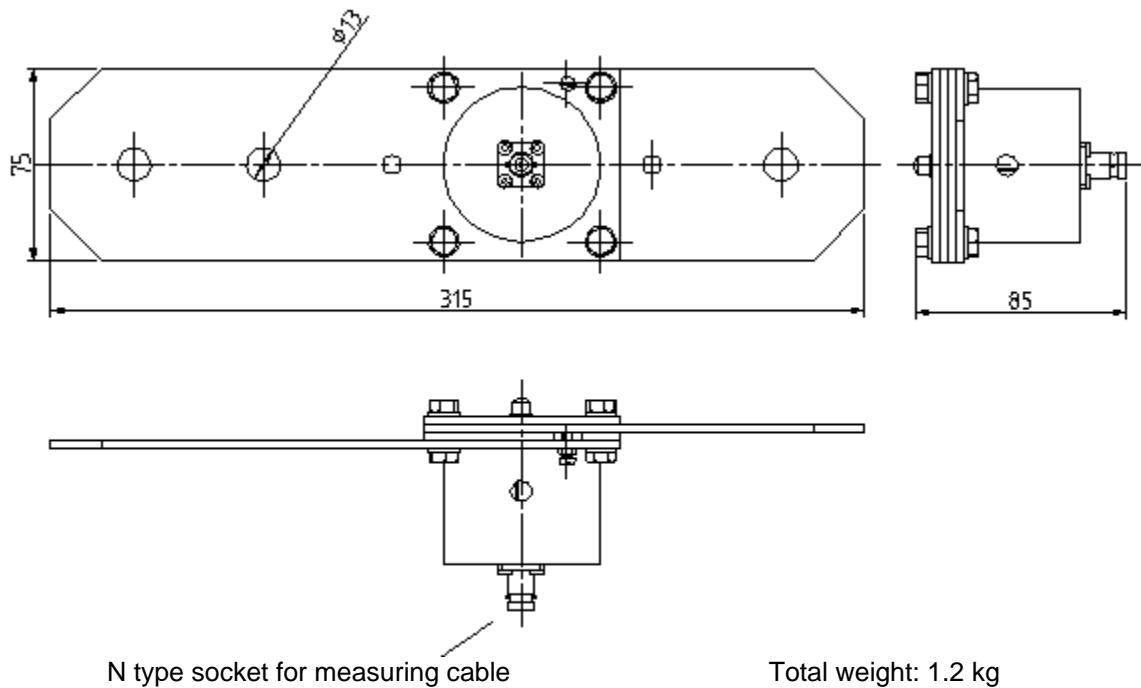


Figure 1: Dimensioned sketch

The shunt can be completed to form an impulse current measuring system by adding:

- a coaxial double screened 50 Ω measuring cable
- a terminating resistor 50 Ω for socket N
- a transient recorder type HiRES (see separate Catalog Sheet 5.50)