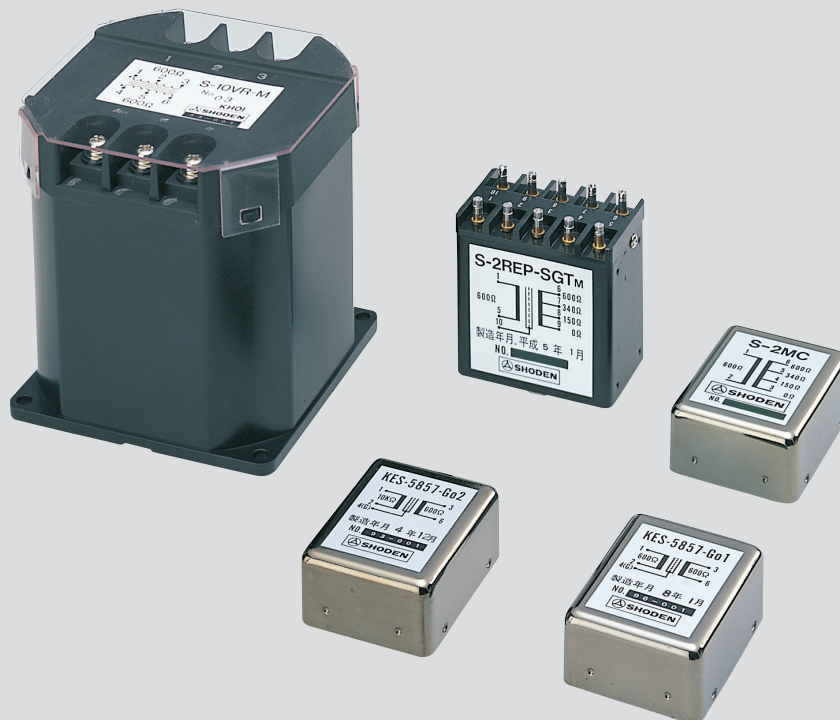


 **Lightning Protection**

Measures to electro magnetic induction, Insulation coil



For reduction and insulation of inductive voltage

These products are used as a protector to reduce and to insulate the inductive voltage caused by lightning surge and power transmission line. Besides the small insulation transformer, which can realize at the same time impedance matching, is also possible to use for warning system against dam-water discharge and for monitoring system.

- Small and lightweight (products with voltage withstanding less than 10kV are molded type).
- By stable quality, easy set-up and wiring etc. high reliability can be obtained (connection with M4 screw).
- Due to small impedance deviation these products are suitable for matching between transmission line and equipment.

S- [] [] -M type

Reduction and insulation of inductive voltage

By using these products inductive voltage caused by lightning surge and power transmission line can be reduced and insulated. Besides standard products the other one with voltage withstanding up to AC25kV can be produced.

Specifications

Type-name	S- [] VR-M	S- [] CV-M	S- [] PCM
Transmission frequency band	0.3 ~ 3.4kHz	0.3 ~ 160kHz	50 ~ 2000kHz
Voltage withstanding	AC7kV 1min or AC10kV 1min		AC7kV 1min
Insulation resistance DC500V	more than 500M Ω		
Operational attenuation	less than 1.0dB		less than 1.5dB
16Hz attenuation	less than 1.5dB	—	—
Impedance	600 (Ω) 600 (Ω)	150 (Ω) 150 (Ω)	110 (Ω) 110 (Ω)
Impedance deviation	$\pm 15\%$		$\pm 20\%$
External measurements (W) \times (H) \times (D)mm	90 \times 100 \times 90		

Remark: Besides the products given in above table the other one with voltage withstanding up to AC25kV can be produced. All products given in above table have a neutral terminal in primary and secondary coil as standard.



Small insulation transformer

Impedance matching is also available at the same time.

Besides reduction and insulation of inductive voltage caused by lightning surge and power transmission line, impedance matching is at the same time also available. For warning system against dam-water discharge, monitoring system etc. these transformers can be used.

Specifications

Type-name	S-2MC	REP-HM	S-2REP-SGTM
Transmission frequency band	0.3 ~ 3.4kHz		
Transmission loss	less than 0.5dB		less than 0.7dB
Transmission level	-20 ~ + 20dB		
Impedance	600 Ω ($\pm 20\%$) : 150, 340, 600 Ω ($\pm 20\%$)		
Voltage withstanding	AC2kV 1min		
Insulation resistance	DC1000V more than 10M Ω		
static shield	no	yes	
Connection method	for mounting on PCB	for both connections, wrapping and soldering	
External measurements (W) \times (H) \times (D)mm	52 \times 22 \times 40	50 \times 56 \times 25	52 \times 60 \times 33



SHODEN CORPORATION

Head Office 3-8 Taihei 4-chome, Sumida-ku, Tokyo 130-8543 Japan

e-mail: f@sdn.co.jp