

Specification

Attribute	Unit	PZ - MM3 - 5kV SSW	PZ - PM3 -13,8kV SSW	PZ - MM3 -13,8kV SSW	PZ - MM1 - 8kV SSW	PZ - MM1 - 10kV SSW	PZ - MM1 14.5kV SSW
Rated capacitance	µF	3 x 0,2	3 x 0,2	3 x 0,2	1 x 0,2	1 x 0,15	1 x 0,125
Capacitance tolerance	%	-5/+5	-5/+5	-5/+5	-5/+5	-5/+5	-5/+5
Resistance per phase	Ω	30	30	30	30	30	30
Tangent Delta		20 x 10-4	20 x 10-4	20 x 10-4	20 x 10-4	20 x 10-4	20 x 10-4
Dielectric type		all-film	all-film	all-film	all-film	all-film	all-film
Bushings:							
Impulse test voltage	kV	75	95	95	95	125	125
Dry test voltage	kV	28	38	38	38	50	50
Wet test voltage	kV	28	28	28	28	50	50
Minimum creepage	mm	190	305	305	305	600	600
Installation location		Machine Mounted (MM)	Panel Mounted (PM)	Machine Mounted (MM)	Machine Mounted (MM)	Machine Mounted (MM)	Machine Mounted (MM)
Fusing		No internal fusing	No internal fusing	No internal fusing	No internal fusing	No Internal fusing	No internal fusing

Routine tests

Voltage withstand terminal - terminal	kV dc	18,06 for 10s	53,8 for 10s	53,8 for 10s	N/A	N/A	N/A
Voltage test terminal-ground	kV ac	9,05 for 10s	26,9 for 10s	26,9 for 10s	26,9 for 10s	33,33 for 10s	47,3 for 10s
Tangent delta		Yes	Yes	Yes	Yes	Yes	Yes
Capacitance		Yes	Yes	Yes	Yes	Yes	Yes

Reliability

Maintenance requirements		No maintenance required. Recommend yearly visual inspection and bi yearly capacitance verification.					
Performance verification		Via the safety switch					
Expected service life		>15 years	>15 years	>15 years	>15 years	>15 years	>15 years

Construction

Phases		Three phase	Three phase	Three phase	Single phase	Single phase	Single phase
Enclosure fabrication		Welded	Welded	Welded	Welded	Welded	Welded
Enclosure material		304 Stainless steel	304 Stainless steel	304 Stainless steel	304 Stainless steel	304 Stainless steel	304 Stainless steel
Primer		Epoxy	Epoxy	Epoxy	Epoxy	Epoxy	Epoxy
Finish		PUR RAL 7032	PUR RAL 7032	PUR RAL 7032	PUR RAL 7032	PUR RAL 7032	PUR RAL 7032
Connection		YN	YN	YN	I	I	I
Bushing quantity		3	3	3	1	1	1
Bushing type		Ceramic	Ceramic	Ceramic	Ceramic	Ceramic	Ceramic
Insulation		Fluid	Fluid	Fluid	Fluid	Fluid	Fluid
Fluid type		Jarylec C101D	Jarylec C101D	Jarylec C101D	Jarylec C101D	Jarylec C101D	Jarylec C101D
Fluid volume	litre	7	6	6	12	6,5	7,5
Weight	kg	19	22	22	22	22	22
Overall Dimensions (L x H x W)	mm	415 x 430 x 135	520x520x105	520x520x105	520x520x105	415x595x135	415x595x140

Standards

Explosion Protected Ex nA IIC T3A		Yes	Yes	Yes	No	No	No
Routine tests		IEC 60871-1: 2005	IEC 60871-1: 2005	IEC 60871-1: 2005	IEC 60871-1: 2005	IEC 60871-1: 2005	IEC 60871-1: 2005
Temperature category	°C	-25/D (-25/+55)	-25/D (-25/+55)	-25/D (-25/+55)	-25/D (-25/+55)	-25/D (-25/+55)	-25/D (-25/+55)
Quality Management System		ISO 9001:2015		ISO 14001:2015			
Certification Body		Bureau VERITAS					
In compliance with		IEC 60871-1: 2014; VDE 0560 Teil 410; ANSI/IEEE 18-2002; NEMA CP-1-2000					
Marks		CE IA	CE IA	CE IA	CE	CE	CE

Options

Safety switch		Yes	Yes	Yes	Yes	Yes	Yes
Partial discharge sensor		No	No	No	No	No	No

Shipping

Anti-static link		Yes	Yes	Yes	Yes	Yes	Yes
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PROTEC Z +

Combined transient switching surge suppressor with
PD sensors for PD monitoring and rotating machine
management



The PROTEC Z + is an extremely effective sensor for on-line monitoring of the condition of the winding insulation of the protected motor, generator or dry type transformer utilizing partial discharge analysis. It is more effective than coupling capacitors used for this purpose because of the wider frequency response afforded by the PROTEC Z +. This permits seeing deeper into the windings and provides significantly improved coverage, which has always been a weakness of conventional coupling capacitor sensors.

Features

- Robust, high grade stainless steel enclosure.
- Enhanced THD (V) withstand.
- Designed for multi-ranging applications.
- Permits integrity test of functional components.
- Safety switch on all products as a standard.
- Option for integrated partial discharge sensor.
- Recognised quality system certification

Benefits

The Protec Z offers complete protection to the insulation systems of motors, generators and dry type transformers against long and short term damage from over voltage spikes caused by contactors and breakers. In particular, insulation between turns and coils close to the line terminals are not exposed to excessive voltages resulting from non-uniform voltage distribution caused by steep fronted transients.

The Protec Z provides insulation coordination at all practical surge magnitudes and rise times. Multiple pre- and re-strikes in the switchgear are eliminated, resulting in significant life extension of machines.

In addition, the Protec Z + PD option permits measurement and monitoring of partial discharge activity.

Installation

The Protec Z must be installed in accordance with the latest NTSA Protec Z application and installation manual.

Warranty

The Protec Z surge suppressors are backed by a twelve month factory warranty.

NOTE

NTSA reserves the right to apply continuous research and development which may result in improvements affecting any aspect of specification or appearance at any time.

NTSA – Defined Power Protection

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