

## HYBRID SURGE DIVERTER, SINGLE PHASE

### Product Description

Novaris hybrid surge diverters are designed to protect electrical equipment against direct and induced transient overvoltages caused by lightning and temporary overvoltage on AC power supply circuits.

Novaris surge diverters suit TN-C, TN-S, TN-C-S (MEN), TT and IT distribution systems. They provide all mode protection against transient overvoltages between phase and neutral, phase and earth and neutral and earth.

Novaris surge diverters comply with all major lightning protection standards and are configured in accordance with IEC recommendations.



### Operation

These surge diverters feature all mode transient protection. Spark gap series with metal oxide varistor is connected between line and neutral. This component continuously monitored for integrity for both overcurrent and over temperature with status display via a built in LED indicator. The 8/20 $\mu$ s rating for this component is 250kA. There is no follow on current.

In accordance with IEC61643-11 recommendations (and IEC62305-4) all mode protection is achieved by the addition of fast acting gas discharge tube connected from neutral to earth. This GDT is rated at 100kA for an 8/20 $\mu$ s impulse (option).

All Novaris power line surge arresters are housed in rugged and safe metal cases and are easily replaced should this be required. Plastic enclosures are not recommended.

In addition to the LED alarm indicator on each module an external alarm is generated which allows for remote monitoring. This is provided by a clean contact either normally closed or normally open.

An optional surge counter is available. This provides a count of surges diverted and has a sensitivity of 150A for an 8/20 $\mu$ s impulse.

The HSGx-25-275 is designed for AC shunt diverter connection inside switchboards. Just like any other load it should be protected with an upstream over current protection device. A 63A HRC fuse or 32A circuit breaker is recommended.



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## Specifications

Description:		Power Line hybrid spark gap surge diverter
Protection Mode:		Line-Neutral
Configuration:		Voltage switching (Spark gap)series voltage limiting (MOV)
Model:		HSG1-25-275
Nominal Voltage:	$U_b$	220-240VAC / 50Hz
Max.discharge current:	$I_{max}$	250kA, 8/20 $\mu$ s
Max.continuous voltage:	$U_c$	480VAC/ 50Hz
Response time:	$t_A$	<100ns
Lightning impulse voltage sparkover :	$U_p$	<1.1kV at 1.2/50 $\mu$ s as IEC61643-1
Let through voltage:		<1.0kV at 3kA,8/20 $\mu$ s & 6kV,1.2/50 $\mu$ s as IEEE C62.41
Specific energy:	W/R	625kJ/ $\Omega$
Charge:	Q	12.5As
Indicator:		Internal LED
External alarm:		Clean SPDT contact
Alarm isolation:		4kV
Backup fuse:		63A HRC fuse
Operating Temperature:		-40 to +85 degC, 0 - 95% RH
Terminal capacity-power:		16 mm <sup>2</sup>
Screw torque – power:		1.0 Nm
Terminal capacity – alarm:		2.5 mm <sup>2</sup>
Screw torque – alarm:		0.5 Nm
Dimensions:		200H x 60W x 70D
Weight:		1.2kg
Environmental Rating:		IP20
Enclosure/Colour:		Metal / Black
Mounting:		Panel mount /TS35 DIN rail
Standards Compliance:		IEC61643-1 Class I ,IEC61643-11 IEC62305 IEC1000-4-5 AS/NZS1768-2007 IEEE C62.41 category C UL1449 fourth edition

