

Clearguard Surge Reduction Filter (SRF)

Axle Counter Surge Protection



Benefits

Protect axle counters from Line-Line and Line-Earth transient voltages.

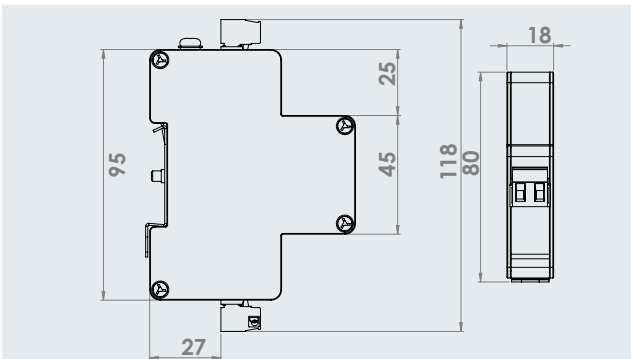
Prevents false occupations triggered by surge protection operation

Improves overall EMC immunity

Clips directly on to a DIN mounting rail

Low impedance earth via the DIN mounting rail

Plug coupled terminations



Comprehensive Protection

Combine high energy surge protection and electrical noise reduction in a compact Surge Reduction Filter for new generation axle counter counting head cables.

Optimised for use on Siemens Clearguard ACM family of axle counters.

Surge Protection

Protects the the axle counter circuits by shunting damaging, high energy, transient voltages in the wheel detector cables.

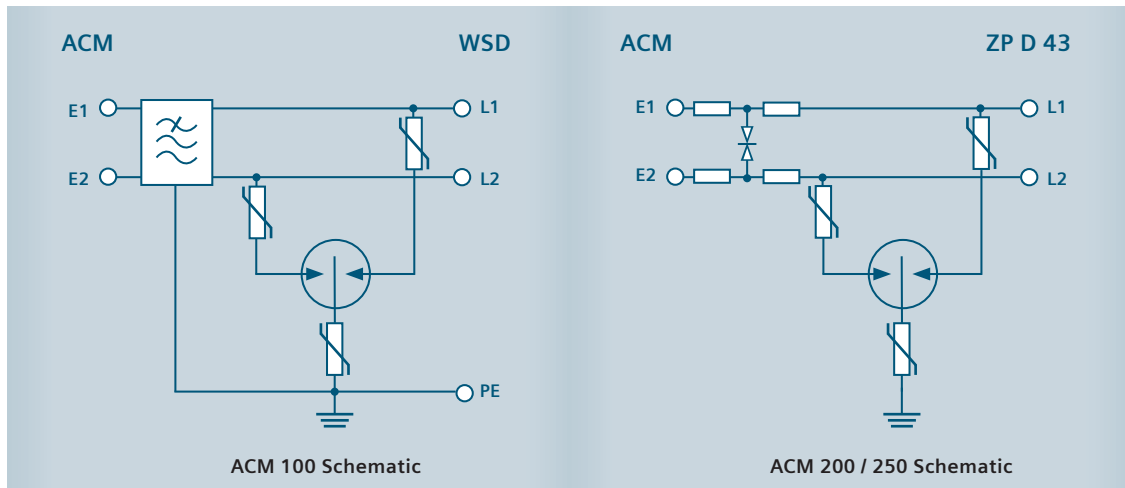
Integrated Earthing

Minimises voltage rise above earth when suppressing transients with a low impedance connection via the mounting DIN rail.

Line Filtering

Line filtering attenuates electrical noise, including from surge protection operation, eliminating noise induced false operation.

High Line-Line (L-L) and Line-Earth (L-E) isolation and high prospective current protection.



Application

Install on every axle counter head cable as close as practical to the entry point to a location case or signal equipment room.

Connect external cables to L1 and L2.

Connect internal twisted pair from E1 and E2 to the evaluator.

Earth the SRF to the DIN rail or cable to earth bus.

Construction

High energy components mounted on FR4 epoxy glass printed circuit boards with heavy duty tracks.

Protected with a powder coated aluminium case.

Line connection via plug in, screw cage terminals.

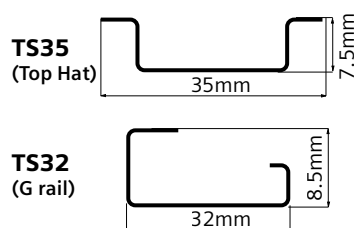
Recommendations

- install as close as practical to cable entry
- earth via inherent connection to DIN rail
- connect bottom of DIN rail directly to earth bus bar or via minimum 25 mm² cable to earth bus
- keep earth cables short and straight
- twist all internal cables from arrester to evaluator
- do not mix dirty external wiring with clean internal wiring
- replace the SRF immediately if there is any evidence of damage

Specifications	ACM 100	ACM 200 / 250
Electrical Specifications		
Connection Type	Series	Series
Lines	1 pair	1 pair
Nominal voltage (U ₀)	24 Vdc	72 Vdc
Maximum voltage (U _c)	36 Vdc	84 Vdc
Maximum load current (I _L)	50 mA	500 mA
Maximum discharge current (I _{max})	10 kA	10 kA
Voltage protection level @5 kA (8/20 μs)	< 600 V	(L_L) < 150 V (L_PE) < 1500 V
Response Time (t _A)	< 100 ns	< 100 ns
Earth leakage current	< 10 μA	< 10 μA
Mechanical Specifications		
Operating temperature	-40°C to +80°C	
Humidity	0 to 90% non-condensing	
Connection type	Pluggable screw terminal	
Terminal capacity—signal	2.5 mm ²	
Terminal screw torque—signal	1 Nm	
Alternative Earth Connection	4 mm ID ring lug	none
Environmental	IP 20 compliant	
Mounting	TS35 or TS32 DIN rail	
Enclosure	Black powder coated aluminium	
Weight	180 g	
Dimensions	Width 18 mm Height 118 mm Depth 80mm	

DIN Rail Mount Variants

SRF variants are available for mounting on 'Top Hat' (TS35) or G rail (TS32) DIN rail variants.



Ordering

To order, quote part number

ACM 100

S25552-A1739-C1 Top Hat mount
S25552-A1739-C1-TS32 G rail mount

ACM 200 / 250

V25552-B343-C1 Top Hat mount
V25552-B343-C1-TS32 G rail mount

or discuss your requirements with our sales staff.

This equipment complies with Australia's Regulatory Compliance legislation when installed and used in accordance with the instructions supplied.



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