Grinsty Rail Ltd
Electronics Division

DSD
Driver Safety Device Vigilance Unit

The Driver Safety Device (DSD) Vigilance Unit is a key component of any vehicle safety system and is suitable for use with Diesel or Electric Multiple Units, locomotives or other railway traction units. The DSD ensures that in the event of an unresponsive driver the train will come to a safe stop.

It achieves this by monitoring the state of certain resettable or variable inputs e.g. DSD Pedal, Direction Selector, Power Controller, Brake Controller, Warning Horns, Automatic Warning System (AWS) caution acknowledgement.

If state changes of the system inputs do not occur within a pre-set time interval, a warning is issued to the driver requiring positive action to prevent the system subsequently applying the emergency brakes. The DSD Vigilance Unit meets all relevant performance and environmental specifications required by the rail industry and is service proven.

Features

- High immunity to electrical disturbances and interference prevents spurious operation
- Zero maintenance; comprehensive Built-in-Test and Fail-Safe Watchdog, with LED display
- High reliability - Service proven
- The unit requires no setting up or configuration
- The DSD Vigilance Unit monitors the activity of the driver whilst the train is in motion
- The unit allows operation from either cab or multiple cab rolling stock, and only sound the warning buzzer in the active cab

SPECIFICATION

Power Supply	24Vdc, 110Vdc (V supply)
Power Consumption	Typically 5W (24Vdc), 25W (110Vdc)
Inputs	1 x DSD pedal input 1 x Speed switch input 6 x Digital 0V to V supply 3 x Optically isolated digital inputs (Brakes) 1 x Optically isolated input (AWS) 1 x Optically isolated input (ATP) 4 x Analogue inputs 0V to 10Vdc
Outputs	1 x Buzzer relay output 150mA resistive 1 x Brake circuit relay 1.5A inductive 24dc or 0.75A inductive 110Vdc
Time Constants	Action time (t1 = 6 sec ± 1 sec) Delay time (t2 = 60 sec ± 3 sec)
Display LED	Operational (green) Input transition (yellow) Fault (red)
Fault Isolation	Via vigilance isolation switch (VIS)
Ingress Protection	IP54
Temperature Range	-25°C to +55°C
Standards	EN50155, EN50121-3-2, RIA12
Typical Weight	4.1 Kg
Typical Dimensions (W x H x D)	356mm x 80mm x 320mm

Grinsty Rail Ltd
Electronics Division

Arrow Business Park
Shawbank Road
Lakeside, Redditch
Worcestershire
B98 8YN
United Kingdom

+44 (0)1527 514 151
www.grinstyrail.co.uk

Specification subject to change without prior notification.