

# LED Banner Repeater Signal



The LED Banner Repeater Signal from Variable Message Signs Limited is a lineside repeater signal that provides high optical performance and extended reliability from utilising LEDs to create clearly interpreted aspects.

Network Rail / HMRI approved for use either for new installations or to replace existing low-reliability types such as fibre-optics, it is offered in two versions: a) 2-state white and b) 3-state white/green.

The BRS is a repeater type signal used to provide a train driver advance notification of the state of the next colour light signal. The signal is derived from displaying a black bar on a circular white background. This signal has 2 states; a diagonal bar and a horizontal bar.

Where a third aspect is required, this is achieved from a diagonal black bar on a circular green background.

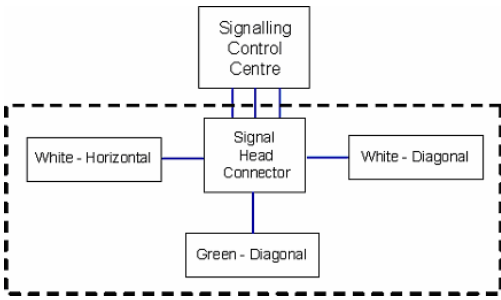
## Signal Features

Designed with consideration to RT/E/S10062 (Long Range CLS) and BR1651pt3 (Fibre Optic Banner Signal), the BRS offers the following features:

- Long life LED light source
- Clear and distinct “black bar”
- 2-state: white horizontal and diagonal aspects
- 3-state: white horizontal and diagonal aspects, green diagonal aspects
- Wide angle viewing
- Backwards compatibility with existing signals
- Current proving compatible with BR941 relay and SSI (CP1 or CP4)
- Auto regulating from 78V to 131V AC
- Low power – 27 watts (white), 32 watts (green)
- No external hoods – construction provides phantom immunity
- Each aspect is electrically independent
- Non-corrosive materials used throughout
- Only 70mm thick and weighing 15 Kg – easily hand-carried
- Can be mounted “upside-down” without modification
- “Plug & Play”; speedy connection / disconnection
- Maintenance free
- Easily retrofitable



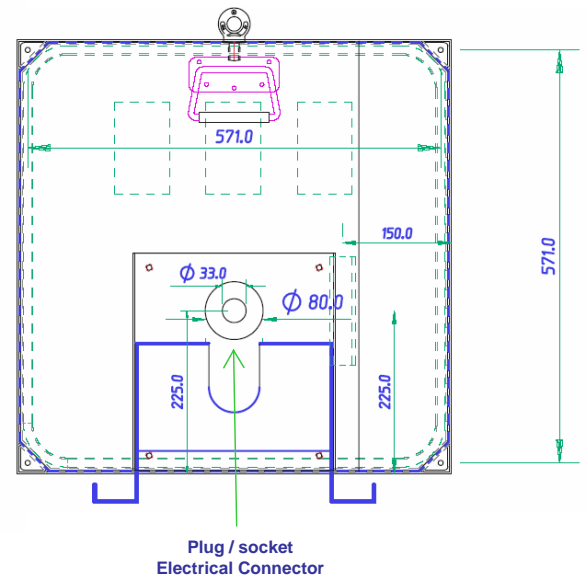
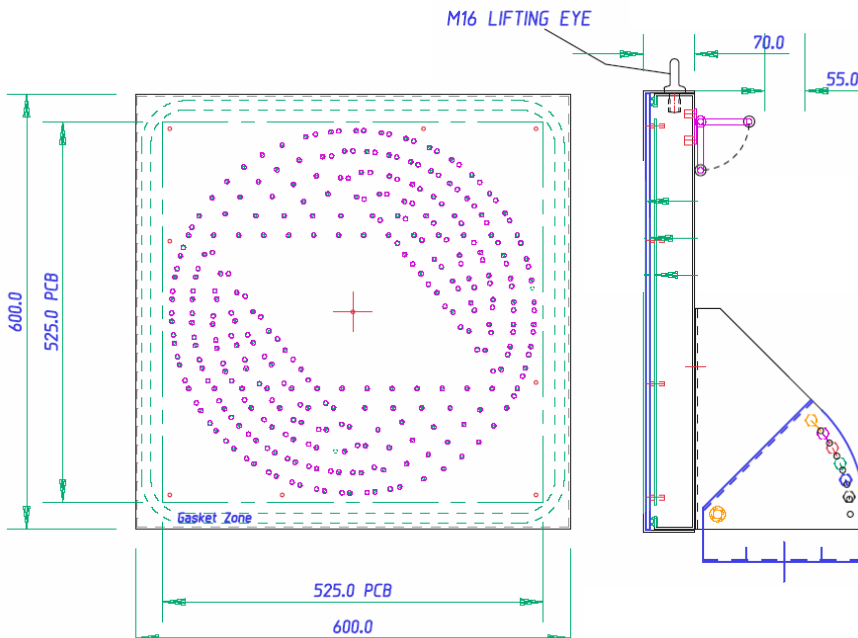
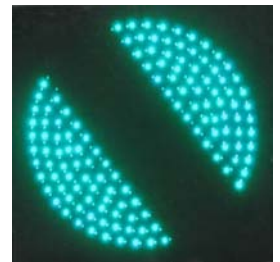
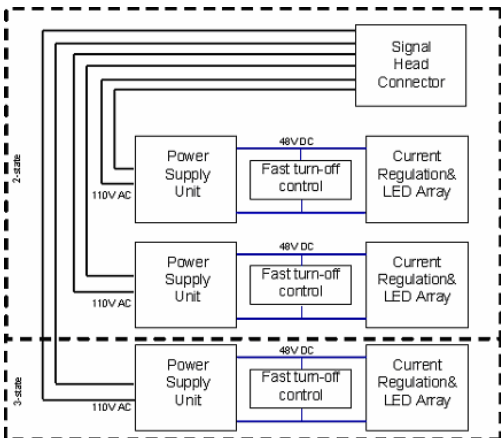
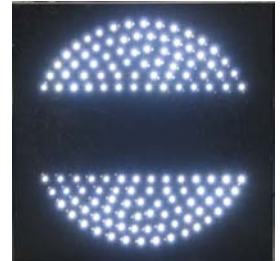
# LED Banner Repeater Signal



The VMSL BRS is controlled directly from the signalling control system. It contains no inbuilt intelligence.



The BRS is a self-contained signal head. Within the common enclosure are individual components for each signal aspect; white diagonal, white horizontal and green diagonal. Each aspect contains its own light-emitting elements, power supply, current regulation circuitry and fast turn-off control. Incoming electrical connections are via a common connector plug. It is mounted to the infrastructure via an adjustable bracket.



| PADS No.   | Description  | VMSL No.  |
|------------|--|-----------|
| 086/001340 | 2-state (White) Banner Repeater Signal in LED Form, 110V ac, 300mA nominal (with mounting bracket).    | A100-1707 |
| 086/001341 | 3-state (Green) Banner Repeater Signal in LED Form, 110V ac, 300mA nominal (with mounting bracket).    | A100-1708 |
| 086/001342 | 2-state (White) Banner Repeater Signal in LED Form, 110V ac, 300mA nominal (without mounting bracket). | A100-1709 |
| 086/001343 | 3-state (Green) Banner Repeater Signal in LED Form, 110V ac, 300mA nominal (without mounting bracket). | A100-1710 |
| 086/001344 | Pre-terminated tail cable for VMS Banner Repeater Signal – 10m length.                                 | A100-1711 |
| 086/001345 | Pre-terminated tail cable for VMS Banner Repeater Signal – user specified length.                      | A100-1712 |

|             |   |     |
|-------------|---|-----|
| 086/029010  | Long Shank Padlock Type RKE221              | N/A |
| 0085/001350 | QECX1 – current proving relay (180 / 110mA) | N/A |

**Network Rail Product Acceptance:**  
PA05/02934



VMSL's LED Banner Repeater Signal is an EU Registered Community Design