Z-TRAUQ INC.

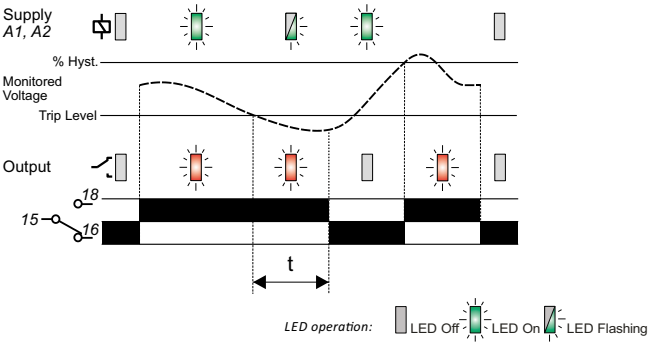
LBVR/A
Battery Voltage Relay

Terminal Protection toIP20

Dims:toDIN 43880 W.17.5mm

- **17.5mm DIN rail housing**
- **Microprocessor based**
- **Suited to 12V and 24V batteries**
- **Monitors own supply and detects an Under voltage condition**
- **Adjustment for Under voltage trip level (9 – 28V)**
- **Adjustment for Time Delay (from an Under voltage condition)**
- **1 x SPDT relay output 8A**
- **Green LED indication for supply status**
- **Red LED indication for relay status**

FUNCTION DIAGRAM



INSTALLATION AND SETTING

Installation work must be carried out by qualified personnel.

BEFORE INSTALLATION, ISOLATE THE SUPPLY.

Connect the unit as required taking note of the polarity of the connections. Terminal **A1** is the positive connection and **A2** the negative.

Setting the unit.

Set the Under voltage"Trip Level (V) " adjustment to the voltage required.

Setthe"Delay(t)" to minimum.

Applying power.

Apply power and the green"Power supply" and red "Relay" LED'swill illuminate, the relay will energise and contacts 15 and 18 will close. Refer to the trouble shooting table if the unit fails to operate correctly.

If the supply voltage drops below the trip level setting, the green LED will start to flash. The relay will then de-energise (contacts 15 and 18 open) after the delay period "t" and the red LED will extinguish. The green LED will then remain permanently lit.

When the voltage increases above the trip level + hysteresis, then relay will re-energise and red LED illuminate.

Troubleshooting.

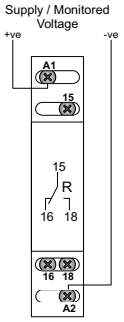
The table below shows the status of the unit during a fault condition.

Supplyfault	GreenLED	RedLED	Relay
No supply	Off	Off	De-energised
Under voltage condition (during timing)	Flashing	On	Energised for set delay (t)
Under voltage condition (after timing)	On	Off	De-energised

TECHNICAL SPECIFICATIONS

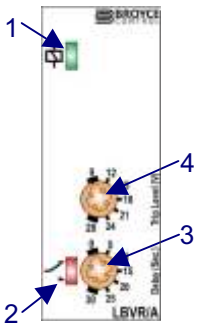
Supply/monitoring voltage	
U **(A1,A2):**	12 – 24VDC
Supply variation:	75 – 125% U
Power consumption (max.):	3W
Monitoring mode:	Under voltage
Trip level:	9 – 28VDC
Hysteresis:	≈ 5% of trip level (factory set)
Setting accuracy:	± 10%
Repeat accuracy:	± 0.5% at constant conditions
Response time:	≈ 100mS
Time delay (t):	0-30 Sec. ± 5%
	Note: actual delay (t) = adjustable delay + response time
Power on delay (Td):	≈ 1sec.(worst case = Td x 2)
Power on indication:	Green LED
Relay status indication:	Red LED
Ambient temp:	-20 to + 60°C
Relative humidity:	+95%
Output **(15,16,18)** :	SPDT relay
Output rating:	AC1 250V 8A (2000VA)
	AC15 250V 5A (no), 3A(nc)
	DC1 25V 8A (200W)
Electrical life:	≥ 150,000 ops at rated load
Dielectric voltage:	2 kVAC (rms) IEC60947-1
Rated impulse withstand voltage:	4 kV (1.2 / 50µS)IEC60664
Housing:	Orange flame retardant UL94
Weight:	70g
Mounting option:	Onto 35mm symmetric DIN rail to BSEN60715
	or direct surface mounting via 2 x M3.5 or 4 BA screws
	using the black clips provided on the rear of the unit.
Terminal conductor size:	≤ 2 x 2.5mm^2 solid or stranded
Approvals:	Conforms to IEC.CE, and RoHS Compliant.
	EMC: Immunity / Emissions to EN61000-6
	cULus Listed

CONNECTION DIAGRAM



SETTING DETAILS

1. Power supply status (Green)LED
2. Relay output status (Red)LED
3. "Delay"adjustment
4. "Under"trip level adjustment



DIMENSIONS