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the future

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BRAUMS

Smarter Safer Greener Living

**EXTRA-LOW VOLTAGE
DIM-BY-WIRE
TRAFFIC LANTERN**

Improved Safety for the General Public

Leading LED Technology

Energy Efficient

Lower Maintenance Costs

Retrofits Easily

Proven Reliability

ELV DIM-BY-WIRE TRAFFIC LANTERN

Safe and Reliable Signalling

The BRAUMS Dim-By-Wire Traffic Signal Lantern offers the highest standard in optical and electrical performance, with the added safety of Extra-Low Voltage (ELV) operation. The Dim-by-Wire system initiates signal lantern dimming through the use of a single wire. This simple alternative to phase-dimming mitigates the obstacle of unintentional dimming at large sites from voltage drops - delivering a safer traffic signalling solution, without compromising on reliability.



Extra-Low Voltage Operation

Extra-Low Voltage (ELV) as defined in AS/NZS3000:2010 includes anything not exceeding 50VAC, which is a safe voltage, considered to carry a low risk of dangerous electrical shock.

The BRAUMS Dim-by-Wire lantern operates at 42VAC regardless of light conditions and therefore poses far less of a safety risk to members of the public, maintenance personnel, and incidence response teams when compared to the potentially lethal 240VAC used to power standard traffic lanterns.



Installation & Retrofitting

All BRAUMS Dim-by-Wire lanterns are compatible with existing first generation ELV and 240VAC hardware infrastructure and the full range of Dim-by-Wire LED modules are compatible with existing ELV signal group controllers using Amplitude (transformer) dimming.

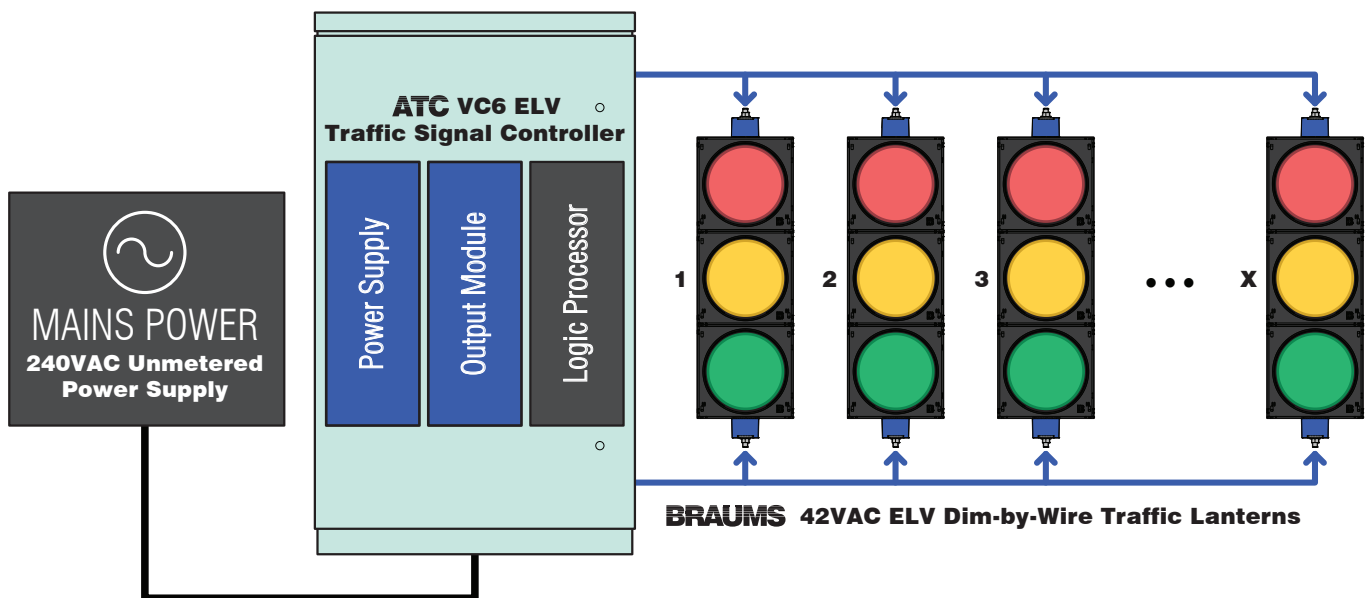
During Dim-by-Wire lantern installation, one common core within the existing traffic signal cable is allocated for Dim-by-Wire control of all lanterns on any post so lantern wiring infrastructure from the traffic signal controller to each post remains the same. This enables the use of existing traffic signal site cables and lantern bodies for easy retrofitting and more cost effective intersection upgrades.

ELV DIM-BY-WIRE TRAFFIC LANTERN

Maintenance

Field testing and maintenance of Dim-by-Wire traffic signals is more simple and safe for technicians. Using ground accessed terminal boxes, only possible with ELV systems due to safety constraints, the time spent working at heights for field technicians can be greatly reduced. Lantern dim state can also be more easily tested by simply placing a voltage meter on the dim control wire to find either 42VAC for full luminance, or 21VAC for dimmed luminance.

Connection Overview



DBW Traffic Signal Controller

The majority of traffic signal controllers are designed to be interchangeable between standard ELV and Dim-by-Wire ELV versions to provide cost effective adoption of ELV Dim-by-Wire signalling across all intersections. The ELV Dim-by-Wire Traffic Signal Controller remains the same as the original VicRoads approved ELV controller in that:

- VicRoads Type Roadside Cabinet and 240VAC circuitry is common
- VicRoads approved control rack remains the same
- VicRoads specified 51 core traffic signal cables remains the same
- Power consumption between ELV Dim-by-Wire and phase dimming remains the same

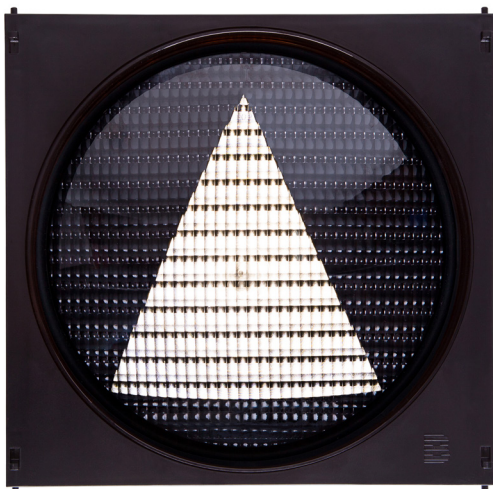
ELV DIM-BY-WIRE TRAFFIC LANTERN

Key Benefits

- **Extra-Low Voltage Safety**
for the public, incidence response teams and site technicians
- **Stable Dim Mode Operation**
during unexpected power drops
- **Reduced False Lamp Faults**
as a result of more stable operation
- **Lower Life of Asset cost**
through reduced non-routine site maintenance attendance
- **Potential to Reduce CO2 Emissions**
through reduced maintenance vehicle run times
- **Easy Retrofitting**
due to 240VAC and standard ELV compatibility



ELV Dim-by-Wire Internal Wiring



Futurled6 Triangle Aspect

Futurled6 Technology

The Futurled6 system offers the highest level of optical performance in regard to both chromaticity and luminance. Each LED module has automatic light compensation in case of diode failure, and optimum heat dissipation for reduced degradation over time.

Additional features include low power consumption and class 5 anti-phantom performance. The central light source and dual lens system delivers a brilliant and uniform signal display that meets and exceeds Australian Standards for Traffic Signal Lanterns (AS 2144:2014).

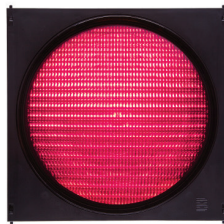
ELV DIM-BY-WIRE TRAFFIC LANTERN

Product Variants

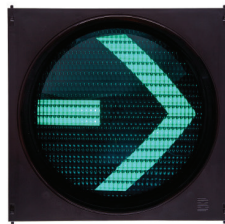
BRAUMS ELV Dim-by-Wire Traffic Lanterns are modular, so any combination of colours and symbols and be assembled. Standard colours include red, amber, green and white, available in the following vehicle and symbolic aspects:

Vehicle Aspects

BRAUMS standard aspects are available in **Vehicle Roundels** and **Vehicle Arrows**. Arrows can be configured for any direction, and both are available in 200mm or 300mm sizes.



Vehicle Roundels



Vehicle Arrows



Tee



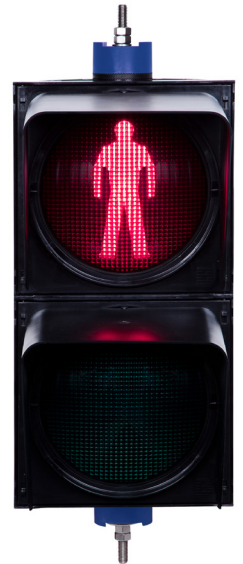
Bicycle



U-Turn

Symbolic Aspects

BRAUMS symbolic aspect range:
**Cross • Tee • Triangle • Bicycle • E
Bus • Don't Walk • Walk • U-turn**



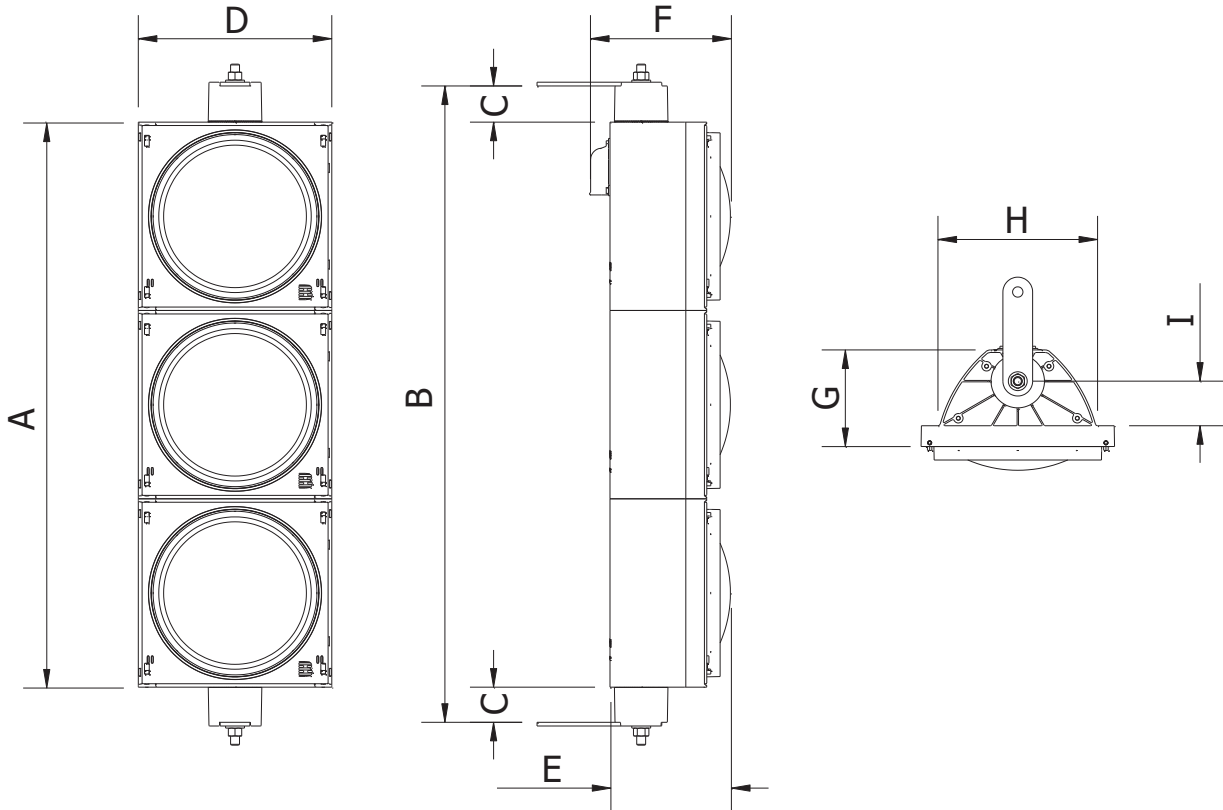
Pedestrian Lantern

Key Features

- 42VAC Full Luminance mode
- 21VAC Dimmed Luminance by Dim Control Wire (DBW)
- AS3000 Compliant
- AS 2144:2014 Compliant
- Accommodates AS/NZS 2144 Compliant accessories
- IP35 rated housing & IP65 rated optical system
- Injection Moulded UV Stabilised Polycarbonate or Pressure Diecast Aluminium housing
- Modular assembly for flexible configuration
- Available sizes: 200mm & 300mm
- Dual hinged doors for left or right opening

ELV DIM-BY-WIRE TRAFFIC LANTERN

Lantern Dimensions



ASPECT SIZE	#ASPECTS	DIMENSION (mm)									
		A	B	B _(AS2144)	C	D	E	F	G	H	I
200mm	1	253.5	317.7	317	32	260	162	189.5	130	215	60
"	2	507	577	577	35	"	"	"	"	"	"
"	3	706.5	856.5	857	46	"	"	"	"	"	"
"	4	1014	1096	1097	41	"	"	"	"	"	"
300mm	1	339.5	403.5	397	32	350	180	210	145	275	60
"	2	679	749	747	35	"	"	"	"	"	"
"	3	1018.5	1094.5	1097	38	"	"	"	"	"	"
"	4	1358	1422	N/A	32	"	"	"	"	"	"



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