



A message from Technical Standards



CitiPower/Powercor Technical Standards Update for May 2020

Please ensure that this information is passed on to all employees and contractors with in your organisation.

The following updates are relevant to all technical, field employees and contractors undertaking design, construction and maintenance activities on the CitiPower and Powercor networks.

Technical Standards are available on our [website](#).

All new design and construction proposals commenced after the 10 July 2020 are required to comply with these updates.

If you have further questions, please contact the relevant team member associated with the published documents.

Standard Category	Technical Standard	Description	Overview	Impacted Key Stakeholder/s
E - Overhead	EB001	Distribution Construction Standard - Poles - General Information	Standards updated to provide further guidance on the use of boron grease on pre-drilled or field drilled holes in wood poles. Contact: Darren Martini - (03) 9683 4738	CONSTRUCTION MAINTENANCE
	EB171	Distribution Construction Standard - Poles - Pre-drilled Holes, Wood Poles		
	EB321	Distribution Construction Standard - Poles - Preservative Treatment		
	EB601-841	Distribution Material Standard - Poles - Accessories		

Standard Category	Technical Standard	Description	Overview	Impacted Key Stakeholder/s
E - Overhead	EE801-951	Distribution Material Standard - Crossarms	Standards updated to provide further guidance on the attachment arrangement of the CCT aluminium dropper to the bridging insulator on ACR structures. Contact: Darren Martini - (03) 9683 4738	DESIGN CONSTRUCTION MAINTENANCE
	ER101	Distribution Construction Standard - ACR Assembly - Three Phase, 22kV, 630A, Rural		
	ER121	Distribution Construction Standard - ACR Assembly - Three Phase, 11/22kV, 630A, Urban		
	EM531	Distribution Construction Standard - LV Fuse Mounts, FOLCB Assembly	Standards updated to remove the use of coach screws and replace them with self-tapping wood screws to attach FOLCBs and function boxes to wood poles. Contact: Darren Martini - (03) 9683 4738	DESIGN CONSTRUCTION MAINTENANCE
	EM535	Distribution Construction Standard - LV Fuse Mounts, Junction Box Assembly	Standards updated to include a Bird Flight Diverter Spiral to mitigate against large bird strikes on overhead lines. Contact: Darren Martini - (03) 9683 4738	DESIGN CONSTRUCTION
	EV021	Distribution Construction Standard - Animal Mitigation - Birds		
	EV901-999	Distribution Material Standard - Animal Mitigation		
F - Public Lighting	FA056	Distribution Construction Standard - Public Lighting - Standard Fittings	Standards update to reflect recent changes in products and to align closer to current industry practice, ratings and terminology for LED luminaires. Contact: Stephen McGuire - (03) 9297 6414	DESIGN CONSTRUCTION MAINTENANCE
	FA101	Distribution Construction Standard - Public Lighting - Maintenance		
	FL001	Distribution Construction Standard - Public Lighting - Luminaires - General Information		
	FL021	Distribution Construction Standard - Public Lighting - Luminaire Lamps		
	FL101	Distribution Construction Standard - Public Lighting - Luminaires - Mercury Vapour Assembly Superseded by FL131		
	FL131	Distribution Construction Standard - Public Lighting - Luminaires - LED Luminaire Assembly		
	FL905-985	Distribution Material Standard - Public Lighting - Luminaires		

<i>Standard Category</i>	<i>Technical Standard</i>	<i>Description</i>	<i>Overview</i>	<i>Impacted Key Stakeholder/s</i>
F - Public Lighting	FL011	Distribution Construction Standard - Public Lighting - Luminaires	Standard update align the marking codes painted on the luminaire with the standards, construction plans and packaging. Contact: Stephen McGuire - (03) 9297 6414	DESIGN CONSTRUCTION MAINTENANCE
Permitted Materials	PM005	Permitted Material List - Connectors	Permitted material lists updated to include the latest approved materials & supplier information Contact: Stephen McGuire - (03) 9297 6414	DESIGN CONSTRUCTION PROJECT MANAGEMENT OPTION 2 CONTRACTORS

LEGEND
HIGH IMPACT
MEDIUM IMPACT
LOW IMPACT

EB Series - EB001, EB171, EB321 & EB641A.

Key changes*

Release date: 10 June 2020

**Please refer to official standard for details*

What has changed?:

- Technical Standards EB001, EB171 and EB321 have been updated provide further guidance on the treatment of pre-drilled holes, field drilled holes and the application of boron grease on wood poles. The current practice of using boron grease has not changed.
- Brand new wood poles with pre-drilled holes are supplied with silicon within the drilled hole, if the pre-drilled hole is not used for the particular installation then the silicon shall be left in the pre-drilled hole to help maintain wood preservation.
- All drilled holes (pre-drilled and field drilled) in wood poles must have boron grease generously applied prior to the insertion of bolt or screw hardware. Boron grease can be ordered via Technical Standards EB641.
- All un-used drill holes in wood poles shall also have boron grease generously applied to help maintain wood preservation.

Why?:

- The standards have been updated to provide further guidance to the application of boron grease as recent field queries have shown an inconsistent application.
- Boron grease helps maintain wood preservation by preventing internal decay and also provides anti-rust protection for the bolt or screw hardware.



Figure 1 – Boron grease

EM531 FOLCB Assembly & EM535 Junction Box Assembly

Key changes*

Release date: 10 June 2020

**Please refer to official standard for details*

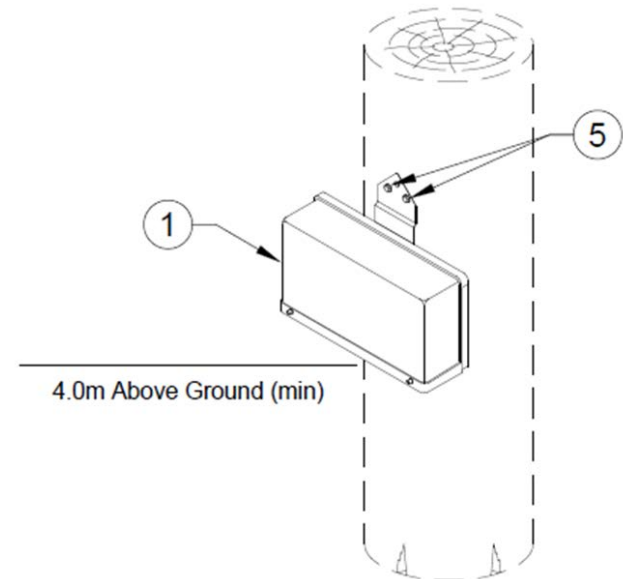
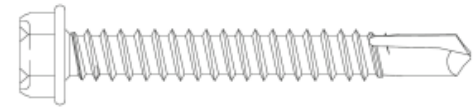
What has changed?:

- Technical Standard EM531 has been updated to remove the use of M10 x 50mm coach screws and replace them with the use of 14 gauge 40mm self tapping wood screws to attach an FOLCB to a wood pole.
- Technical Standard EM535 has been updated to remove the use of a single M10 x 50mm coach screw and replaced it with the use of two 14 gauge 40mm self tapping wood screws to attach a junction box to a wood pole.

Why?:

- The change has been made based on field feedback advising that the self tapping screws are easier to install when compared to coach screws (which require a pilot hole to be drilled prior to coach screw).
- Two screws are also being used with the junction box to prevent it from swinging.

Screw, Wood, Self-Drill, Gal, 14 Gauge



ER101 & ER121 - ACR Assembly - Three Phase, 22kV, 630A, Rural & Urban

Key changes*

Release date: 10 June 2020

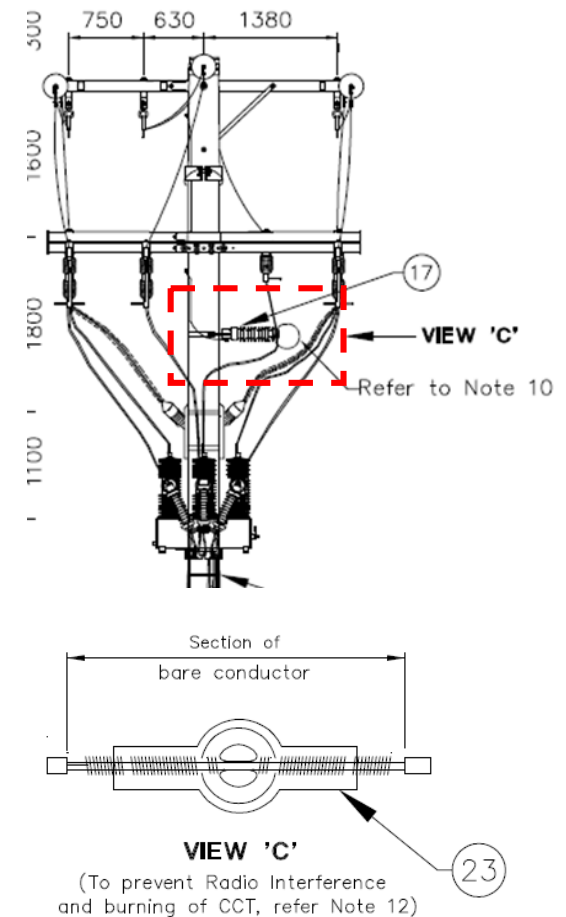
**Please refer to official standard for details*

What has changed?:

- Technical Standards ER101 and 121 have been updated to provide further guidance on the attachment arrangement of the CCT aluminium dropper to the bridging insulator.
- Additional materials required for this attachment arrangement have also been added to the standard component assembly.
- For the wood pole version of the arrangement an insulator saddle (EE944) has also been added for use with the centre phase bridging insulator.

Why?:

- Field feedback advise that further information was required for the attachment arrangement of the CCT aluminium dropper to the bridging insulator.



EV021- Animal Mitigation Birds & EV993 Animal Mitigation

Key changes*

Release date: 10 June 2020

**Please refer to official standard for details*

What has changed?:

- Technical Standard EV021 and EV993 have been updated to include a new bird mitigation device called a Bird Flight Diverter Spiral.
- The device provides a visual warning for larger birds such as swans
- Field trials of the device have also shown it works well for bark mitigation by stopping bark sliding down spans towards the pole causing phase to earth or phase to phase faults.
- The device comes in 6 different sizes to cover CP/PAL bare overhead conductor ranges.
- The device can only be installed on bare overhead LV, HV & sub-transmission conductors.
- The device is made from the same material as our spiral vibration dampers

Why?:

- The device has been installed on the network to mitigate against large bird strikes on conductors and bark mitigation.
- Trials of the device over a 3 year period in 3 different locations have resulted in zero outages caused by swans



FA & FL – Public Lighting Standard Update

Key changes*

Release date: 10 June 2020

*Please refer to official standard for details

What has changed?:

- Technical Standards FA056, FA101, FL001, FL021, FL101, FL131 and FL905-985 have been updated to include new public lighting information particularly in the following areas:
 - Further guidance on LED luminaires output level equivalencies to traditional wattage ratings
 - Smart PE cells
 - Obsolete luminaires and their LED equivalents
 - Bulk change over period requirements
 - FL101- Mercury vapor assembly has been superseded by FL131 – LED luminaire assembly

Why?:

- The standards have been updated to reflect recent changes in products and to align closer to current industry practice, ratings and terminology for LED luminaires.

Lamp, LED, E27 Cap, Equivalent Mercury Vapour (MV)



FL972		
Description	Mi#	Code
Equivalent to 80W MV	354972	A
Equivalent to 125W MV	363382	B

5. Obsolete Luminaires

Obsolete Luminaire designation and size	Equivalent Standard and CP/PAL Luminaire
2 x 14W Compact Fluorescent	Cat P, LED, Standard Output
2 x 24W Compact Fluorescent	Cat P, LED, High (HO) Output
32W Compact Fluorescent	Cat P, LED, Standard Output
42W Compact Fluorescent	Cat P, LED, High (HO) Output
50W Fluorescent	Cat P, LED, Standard Output
150W High Pressure Sodium	Cat V, LED, Standard (L1) Output
220W High Pressure Sodium	Cat V, LED, Standard (L1) Output
250W High Pressure Sodium	Cat V, LED, Medium (L2) Output
360W High Pressure Sodium	Cat V, LED, Medium (L2) Output
400W High Pressure Sodium	Cat V, LED, High (L4) Output
80W Mercury Vapour	Cat P, LED, Standard Output
125W Mercury Vapour	Cat P, LED, High (HO) Output
250W Mercury Vapour	Cat V, LED, Standard (L1) Output
400W Mercury Vapour	Cat V, LED, Medium (L2) Output
70W Metal Halide	Cat P, LED, Standard Output
100W Metal Halide	Cat P, LED, High (HO) Output
150W Metal Halide	Cat V, LED, Standard (L1) Output
250W Metal Halide	Cat V, LED, Medium (L2) Output

Note: 1. Comparison Table for Discharge Luminaires used in CIPower and Powercor
 2. All LED luminaires are Solid State Lights
 3. Codes HO, L1, L2 and L4, shown in brackets, are the actual markings on the body of the luminaire and indicate the luminaires output. Standard Output Category P luminaires have no marking that indicate the luminaires output.

Table 2 - Wattage Values of Standard Replacements for Obsolete Luminaires

FL011 Luminaire - Markings

Key changes*

Release date: 10 June 2020

*Please refer to official standard for details

What has changed?:

- Technical Standard FL011 has been updated to align the Technical Standards with information that is painted on the base of luminaires.
- The standards has also been updated to specify the luminaire information required on construction plans. See figure 3.
- Luminaire packaging will now also have this information printed, to allow easy identification.

Why?:

- The standard has been updated to align the marking codes painted on the luminaire with the standards, construction plans and packaging.

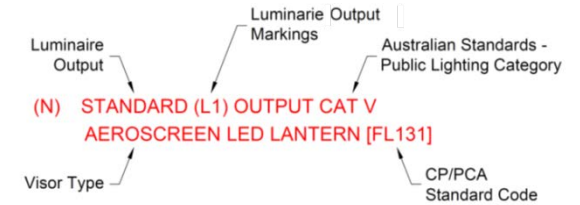


Figure 3 - Typical luminaire details required on a construction plan



Standard Output (L1) Category V	Integral	10 Amp - Switch Base on Luminaire	 SEMI CUT-OFF  AEROSCREEN	L70 A Painted on luminaire base 16 L1 L70 = 70 Watt LED* A = Aeroscreen 16 = year of manufacture L1 = Standard Output
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Figure 1 – Luminaire information in the standards



Figure 2 - Typical markings on the body of a luminaire