

Technical Bulletin

TB 0329 - DSub Monitors in Greenfield Padmount Substations

Date: 22/06/2023

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Approved By: Peter Langdon – Head of Asset Planning & Performance

Purpose

To outline timing of the change to new padmount substation designs relating to the incorporation of distribution substation (Dsub) monitors.

Background

Endeavour Energy has been reactively installing Dsub monitors into numerous brownfield locations where there are power quality concerns typically driven by high penetration of solar panels.

These monitors have proven effective in aiding Endeavour Energy to manage power quality requirements, and with the high penetration of solar expected in new greenfield locations it is prudent to install Dsub monitors in the majority of greenfield padmount substations going forward.

Actions

1. This change will come into effect for padmount/indoor substations assembled from **July 2023** onwards.
2. The Dsub Monitors will be 'free issued' to our approved padmount substation suppliers. An initial allocation based on typical 3 month volumes will be issued to each of the padmount substation suppliers in **late June 2023**.
3. Ongoing orders should then be placed by padmount substation suppliers with our Power Quality team who will liaise with Endeavour Energy's Central Logistic Facility.

Material number	Supplier Part no.	Description
1000007339	EE-600-110	Dsub monitor for Padmount / indoor substation

Note: Dsub monitors issued over the next 9 months will come supplied with an internal antenna, however there will be a change to the design to an external antenna and instructions will be provided prior to the change.

4. Installation instructions will be issued to Distribution padmount substation assemblers after the release of this TB. (For padmount substations, the Dsub monitor is mounted on the RHS of the LV switchgear)

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5. The Dsub Monitors will require a commissioning process to be completed by Construction Coordinators of CNS section after the substation is electrically commissioned.

Instructions on the commissioning process using a Mobile App will be communicated to Construction Coordinators during **June 2023**.

Implementation

The contents of this Technical Bulletin shall be implemented effective from **July 2023**.

Impacted Standards

The standards impacted by this change are

- MDI0028 'Underground distribution network design' and
- MDI0031 'Overhead distribution: Design standards manual'

MDI0028: A new clause '6.14 Distribution Substation Monitoring' is added effective from 1 July 2023.

"Only Endeavour Energy approved distribution substation monitors will be used.

All padmount distribution substations will have an approved distribution substation monitor installed."

Note: As the Dsub monitors are maintenance free, there is no change required to SMI160 and SMI107.

Contacts

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Figure 1: Padmount Substation Illustration

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