Technical Bulletin

Purpose

To detail the approved automated ring main units (RMU) and remote terminal units (RTU) used in Endeavour Energy's (EE) network.

Background

Endeavour Energy's Automation Strategy in the distribution network began in February 2021 with the installation of automated RMUs as part of the Holec switchgear replacement program.

The automation program is now extended to greenfield development areas in accordance too requirements in MDI 0026. The benefits for automation are as follows:

- Enables Fault Location, Isolation and Service Restoration (FLISR) in ADMS.
- Quicker restoration times and improved SAIDI

Actions

There are 2 types of switchgear that are currently approved to be used in the network:

(1) ABB Safelink 2 used only in 11kV network – *Refer to Table 1*

The RMU is pre-wired with 2.5m control cables and Phoenix male connectors and CTs depending on the number of motorised switches and a local/remote switch. The RTU is placed in front of the RMU on the HV end. The aerial is placed in the top RHS of the HV cubicle end.

(2) Siemens 8DJH used in both 11kV & 22kV network – *Refer to Table 2*

The RMU is pre-wired with 7m control cables and Phoenix male connectors and CTs depending on the number of motorised switches and a local/remote switch. The RTU is mounted on the LHS of the LV switchgear.

The control cable is connected between HV and LV end via the channel of a galvanised steel plinth. The aerial is placed in the top LHS of the LV cubicle end.

(2a) Siemens 8DJH used only in zone substations – *Refer to Table 3*

This is only a motorised switchgear with EE employees connecting the control cable to the Zone's RTU.

Other automated RMUs will be updated in the Approved Material List once an approval is provided.

RTU

There are 2 types of Schneider T300 RTUs used in the distribution network with identical components except with 2 different sizes. *Refer to Table 4 & 5.*

LV supply (220V) is required for the RTU and it can be sourced from the transformer terminals or from the auxiliary strip of the LV switchgear. Switching stations need to be sourced from the nearest LV supply.

The major components of the RTU are: Power supply unit, head and switch control unit, battery, 4G modem and Phoenix female connectors.

The RTU will be pre-tested and free issued to the Accredited Service Providers (ASP) by Endeavour Energy. The RTU should be pre-installed during the assembly of a new padmount in a workshop environment.

Implementation

Effective from **1 December 2021,** design briefs issued by Customer Network Solutions will identify where automated RMUs are required.

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Impacted Standards

The contents of this technical bulletin will be included in the next update of the following standard(s):

- SDI 210 - Siemens 8DJH and 8DJ10/8DJ20 12/24kV switchgear
- SDI 211 – ABB SafeLink 12kV switchgear

Contacts

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Table 1 Stock codes for ABB Safelink 2 automated RMUs used in 11kV network only

Config#	Stock code	SAP Material no.	Manuf. Part no.	Item Description
S-F-S	1573732	1000007186	5812056	ABB Safelink 2 CFC 1 switch automated
S-F-**S**	1573740	1000007187	5812056A	ABB Safelink 2 CFC 2 switches automated
S-F-**S**-**S**	1573757	1000007188	5812057	ABB Safelink 2 CFCC 3 switches automated
S-**S**-**S**	1573765	1000007189	5812058	ABB Safelink 2 CCC 3 switches automated
S-**S**-**S**-**S**	1573773	1000007190	5812059	ABB Safelink 2 CCCC 4 switches automated

 # - Bold indicates automated switch

Table 2 Stock codes for Siemens 8DJH automated RMUs used in 11kV & 22kV network

Config#	Stock code	SAP Material no.	Manuf. Part no.	Item Description
S-F-S	1574722	1000007283	8DJH-342539	Siemens 8DJH RTR 1 switch automated
S-F-**S**	1574730	1000007284	8DJH-344841	Siemens 8DJH RTR 2 switches automated
S-F-**S**-**S**	1574805	1000007291	8DJH-335189	Siemens 8DJH RTRR-C 3 switches automated – **for Padmount use only**
S-F-**S**-**S**	1574748	1000007285	8DJH-342538	Siemens 8DJH RTRR-S 3 switches automated – **for Indoor use only**
S-CB-S	1574771	1000007288	8DJH-344844	Siemens 8DJH RLR 1 switch automated
S-CB-**S**	1574789	1000007289	8DJH-344845	Siemens 8DJH RLR 2 switches automated
S-CB-**S**-**S**	1574797	1000007290	8DJH-344846	Siemens 8DJH RLRR 3 switches automated– **for Indoor use only**
S-**S**-**S**	1574755	1000007286	8DJH-344842	Siemens 8DJH RRR 3 switches automated
S-**S**-**S**-**S**	1574763	1000007287	8DJH-344843	Siemens 8DJH RRRR 4 switches automated

 # - Bold indicates automated switch

Table 3 Stock codes for Siemens 8DJH motorised RMUs used in Zone substations only

Config#	Stock code	SAP Material no.	Manuf. Part no.	Item Description
S-F-S	1567064	1000006583	8DJH-245337	Siemens 8DJH RTR 1 switch motorised
S-F-**S-S**	1570639	1000006898	8DJH-238865	Siemens 8DJH RTRR-S 3 switches automated – **for Indoor use only**
S-CB-S	1567049	1000006581	8DJH-245338	Siemens 8DJH RLR 1 switch automated
S-S-S	1570613	1000006896	8DJH-245344	Siemens 8DJH RRR 3 switches automated
S-S-S-S	1570621	1000006897	8DJH-245352	Siemens 8DJH RRRR 4 switches automated

 # - Bold indicates automated switch

Table 4 Stock codes for Schneider T300 RTUs used with ABB Safelink 2 automated RMUs

Stock code	SAP Material no.	Manuf. Part no.	Item Description
1573781	1000007191	RTU1-MV	Schneider T300 RTU 1 switch
1573799	1000007192	RTU2-MV	Schneider T300 RTU 2 switches
1573807	1000007193	RTU3-MV	Schneider T300 RTU 3 switches
1573815	1000007194	RTU4-MV	Schneider T300 RTU 4 switches

Table 5 Stock codes for Schneider T300 RTUs used with Siemens 8DJH automated RMUs

Stock code	SAP Material no.	Manuf. Part no.	Item Description
1574839	1000007294	RTU1-S	Schneider T300 RTU 1 switch
1574847	1000007295	RTU2-S	Schneider T300 RTU 2 switches
1574854	1000007296	RTU3-S	Schneider T300 RTU 3 switches
1574862	1000007297	RTU4-S	Schneider T300 RTU 4 switches