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Specification (Measurement)

Transport and Main Roads Specifications
MRS228 Electrical Switchboards

July 2021

Queensland Government

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1 Introduction

This Specification applies to the supply and installation of switchboards for the supply of electrical power to electrical installations including traffic signal installations and Rates 2 and 3 road lighting installations.

This Specification shall be read in conjunction with MRS01 *Introduction to Specifications*, MRTS228 *Electrical Switchboards* and other Specifications as appropriate.

This Specification forms part of the Transport and Main Roads Specifications Manual.

2 Measurement of works

To prevent double charge on work items 64251 and 64252, which are listed as separate work items 62101 and 62102 in MRS210 *Provision of Mains Power*, these two items from this Specification have now been removed.

2.1 Standard Work Items

In accordance with the provisions of Clause 2.1.3 of MRS01 *Introduction to Specifications*, the Standard Work Items covered by this Specification are listed in Table 2.1.

Table 2.1 – Standard Work Items

Standard Item No.	Description	Unit of Measurement
	Switchboards	
64201	Supply of top mounted switchboard and ancillary components	each
64202	Supply and construction of a concrete pad for the erection of switchboard post	lump sum
64203	Installation of top mounted switchboard and ancillary components	each
64204	Supply and installation of joint use traffic signal and road lighting pole, [*length*] metres long	each

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2.2 Work Operations

Item 64201 Supply of top mounted switchboard and ancillary components

Work Operations incorporated in the above item include:

a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*

b) supply of switchboard post as per Standard Drawing 1628

c) supply of top mounted switchboard enclosure

d) supply of electrical components including din rail, mains isolation switch, circuit breakers, change over switch and contactors

e) supply of photoelectric control switch and socket

f) supply of earth stake, cable and clip

g) supply of circular electrical pit, pit collar and cover (as per Standard Drawing 1417) 100 mm PVC conduit to switchboard

h) supply of Type 3 electrical pit, pit cover, and 20 mm HD PVC conduit to switchboard, and

i) supply of ragbolt sub-assembly as per Standard Drawing 1422.

Item 64202 Supply and construction of a concrete pad for the erection of switchboard post

Work Operations incorporated in the above item include:

a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*, and

b) supply and construction of a 150 mm thick, N25/20 concrete pad for the erection of the switchboard post as per Standard Drawing 1627.

Item 64203 Installation of top mounted switchboard and ancillary components

Work Operations incorporated in the above item include:

a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*

b) installation of switchboard post

c) installation of switchboard enclosure on switchboard post

d) installation of pits and conduits as per Standard Drawing 1627

e) installation of ragbolt sub-assembly and concrete as per Standard Drawing 1421

f) installation and mounting of switchboard electrical components

g) installation of photoelectric control switch and cabling to switchboard

h) installation and cabling of earth stake

i) connection of mains connection cabling and road lighting cabling to switchboard

j) testing of installation, and

k) installation of switchboard cover.

Item 64204 Supply and installation of joint use traffic signal and road lighting pole, [*length*] metres long

Work Operations incorporated in the above item include:

a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*

b) supply, fabrication and installation of pole

c) mortar grouting of base plate

d) supply and installation of traffic signal terminal panel and road lighting terminal panel

e) supply and installation of road lighting cable from pit to luminaire and supply and installation of road lighting junction box in pit

f) supply of all fixing bolts, nuts and washers, and

g) testing of road lighting installation.

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