

SUPERSEDED

Specification (Measurement)

**Transport and Main Roads Specifications
MRS226 Telecommunications Field Cabinets**

November 2020

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Contents

- 1 Introduction1**
- 2 Measurement of work1**
 - 2.1 Standard Work Items 1
 - 2.2 Work Operations 2
 - 2.3 Method of measurement of telecommunication field cabinet components 7
 - 2.4 Supply of materials 7

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1 Introduction

This Specification applies to the supply and installation of field cabinets for housing roadside telecommunications field equipment as an integral part of the Department of Transport and Main Roads' wider requirement for telecommunications systems.

This Specification shall be read in conjunction with MRS01 *Introduction to Specifications*, MRS50 *Specific Quality System Requirements*, MRTS226 *Telecommunications Field Cabinets*, and other Specifications as appropriate.

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

In this version:

1. update information on copyright, licence, translating and interpreting assistance and disclaimer
2. inclusion of the option of CyberLock requirements to Standard Work Items 64041, 64042 and 64043 of Table 2.1
3. add Standard Work Item 64064 on the '*Supply and Installation of field cabinet CyberLock*' to Table 2.1
4. change Work Item Number 64092 for '*Removal of field cabinet plinth base*' to new Work Item Number 64093 in Table 2.1
5. use existing Work Item Number 64092 for the '*Removal and return of CyberLock*' in Table 2.1
6. inclusion of CyberLock requirements to Standard Work Items 64041, 64042 and 64043 in Clause 2.2
7. add work details to new Work Item Number 64064 in Clause 2.2, and
8. add work details to Work Item Number 64092 in Clause 2.2.

2 Measurement of work

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
Plinth Base		
64001	Supply of [<i>single</i> <i>double</i>] field cabinet plinth base	each
64002	Installation of [<i>single</i> <i>double</i>] field cabinet plinth base	each
64003	Supply and Installation of [<i>single</i> <i>double</i>] field cabinet plinth	each

Standard Item No.	Description	Unit of Measurement
Field Cabinet Mounting Pole / Post		
64021	Supply of field cabinet mounting [<i>pole</i> <i>post</i>]	each
64022	Installation of field cabinet mounting [<i>pole</i> <i>post</i>]	each
64023	Supply and Installation of field cabinet mounting [<i>pole</i> <i>post</i>]	each
Plinth and Pole Mounted Field Cabinets		
64041	Supply of [<i>single plinth</i> <i>double plinth</i> <i>pole-mount</i> <i>top-mount</i>] [<i>metered</i> <i>unmetered</i>] field cabinet, [<i>with</i> <i>without</i>] CyberLocks on [<i>number</i>] doors	each
64042	Installation of [<i>single plinth</i> <i>double plinth</i> <i>pole-mount</i> <i>top-mount</i>] [<i>metered</i> <i>unmetered</i>] field cabinet, [<i>with</i> <i>without</i>] CyberLocks on [<i>number</i>] doors	each
64043	Supply and Installation of [<i>single plinth</i> <i>double plinth</i> <i>pole-mount</i> <i>top-mount</i>] [<i>metered</i> <i>unmetered</i>] field cabinet, [<i>with</i> <i>without</i>] CyberLocks on [<i>number</i>] doors	each
Cabinet Ancillary Equipment		
64061	Supply of field cabinet [<i>fan</i> <i>filter</i> <i>shelf</i>]	each
64062	Installation of field cabinet [<i>fan</i> <i>filter</i> <i>shelf</i>]	each
64063	Supply and Installation of field cabinet [<i>fan</i> <i>filter</i> <i>shelf</i>]	each
64064	Supply and Installation of [<i>number</i>] field cabinet CyberLocks	each
Removal of Existing Equipment		
64091	Removal of [<i>single plinth</i> <i>double plinth</i> <i>pole-mounted</i> <i>top-mounted</i>] field cabinet [<i>for salvage</i> <i>for disposal</i>]	each
64092	Removal of field cabinet plinth base	each
64093	Removal and return of [<i>number</i>] CyberLocks	each

2.2 Work Operations

Item 64001 Supply of [*single* | *double*] field cabinet plinth base

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 of field cabinet plinth in accordance with Standard Drawing 1679 *ITS – Telecommunications Field Cabinet Base Installation Details* and *MRTS226 Telecommunications Field Cabinets*.

Item 64002 Installation of [*single* | *double*] field cabinet plinth base

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) localised excavation
- c) provision of formwork for concrete pad surrounding plinth base

- d) supply and installation of conduit from plinth base to electrical and communications pits, where necessary
- e) sealing of gap between enclosure and plinth, where necessary
- f) supply, placement and finishing of concrete pad surrounding plinth base, where necessary, and
- g) supply and installation of all fixing bolts, nuts and washers as appropriate.

Item 64003 Supply and Installation of [single | double] field cabinet plinth base

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 field cabinet plinth in accordance with Standard Drawing 1679 *ITS – Telecommunications Field Cabinet Base Installation Details* and *MRTS226 Telecommunications Field Cabinets*.
- c) localised excavation
- d) provision of formwork for concrete pad surrounding plinth base
- e) supply and installation of conduit from plinth base to electrical and communications pits, where necessary
- f) supply and installation of plinth base
- g) sealing of gap between enclosure and plinth, where necessary
- h) supply, placement and finishing of concrete pad surrounding plinth base, where necessary, and
- i) supply and installation of all fixing bolts, nuts and washers as appropriate.

Item 64021 Supply of field cabinet mounting [pole | post]

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 [fixed base | slip base | impact absorbent] field cabinet mounting pole, or
- c) supply of [fixed base | slip base | impact absorbent] field cabinet mounting post in accordance with Standard Drawing 1628 *Road lighting – Post – Top Mounted Switchboard*.

Item 64022 Installation of field cabinet mounting [pole | post]

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) for slip base pole, installation of slip base mounts, shear washer, clamping bolts and nuts and cable clamping blocks
- c) for impact absorbent and slip base poles, supply and installation of cable clamping blocks
- d) supply, installation and termination of cabling from terminal panel to electrical and communication pits including supply and installation of pit junction box, if applicable

- e) for post mounted cabinets, installations in accordance with Standard Drawing 1627 *Road lighting – Switchboard – Top Mounted*, and
- f) testing of the installation.

Item 64023 Supply and Installation of field cabinet mounting [pole | post]

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 [fixed base | slip base | impact absorbent] field cabinet mounting pole
- c) for slip base pole, installation of slip base mounts, shear washer, clamping bolts and nuts and cable clamping blocks
- d) for impact absorbent and slip base poles, supply and installation of cable clamping blocks
- e) supply, installation and termination of cabling from terminal panel to electrical and communication pits including supply and installation of pit junction box, if applicable
- f) for post mounted cabinets, post shall be in accordance with Standard Drawing 1628 *Road lighting – Post – Top Mounted Switchboard* and installation in accordance with Standard Drawing 1627 *Road lighting – Switchboard – Top Mounted*, and
- g) testing of the installation.

Item 64041 Supply of [single plinth | double plinth | pole-mount | top-mount] [metered | unmetered] field cabinet, [with | without] CyberLocks on [number] doors

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 [metered | unmetered] plinth-mounted field cabinet complete with all necessary components including cabinet switchboard and internal wiring as per MRTS226 *Telecommunications Field Cabinets*., and/or
- c) supply of [metered | unmetered] pole-mounted or post mounted field cabinet complete with all necessary components including cabinet switchboard and internal wiring as per MRTS201 *General Equipment Requirements*, and
- d) supply of [number] CyberLocks [if required] as per MRTS226 *Telecommunications Field Cabinets*.

Item 64042 Installation of [single plinth | double plinth | pole-mount | top-mount] [metered | unmetered] field cabinet, [with | without] CyberLocks on [number] doors

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) mounting of field cabinet on plinth or pole / post, as appropriate
- c) installation of [metered | unmetered] field cabinet, as appropriate, complete with all necessary components including cabinet switchboard and internal wiring
- d) installation of [number] CyberLocks [if required] as per MRTS226 *Telecommunications Field Cabinets*

- e) earthing of installation including supply of earthing materials, and
- f) electrical testing of field cabinet.

Item 64043 Supply and Installation of [single plinth | double plinth | pole-mount | top-mount] [metered | unmetered] field cabinet, [with | without] CyberLocks on [number] doors

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) supply and installation of [metered | unmetered] field cabinet, as appropriate, complete with all necessary components including cabinet switchboard and internal wiring
- c) supply and installation of [number] CyberLocks [if required] as per MRS226 *Telecommunications Field Cabinets*
- d) mounting of field cabinet on plinth or pole / post, as appropriate
- e) earthing of installation including supply of earthing materials, and
- f) electrical testing of field cabinet.

Item 64061 Supply of field cabinet [fan | filter | shelf]

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 of field cabinet [fan | filter | shelf] complete with all necessary components.

Item 64062 Installation of field cabinet [fan | filter | shelf]

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 field cabinet [fan | filter | shelf] complete with all necessary components, and
- c) testing of the operation of installed fans.

Item 64063 Supply and Installation of field cabinet [fan | filter | shelf]

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) supply and installation of field cabinet [fan | filter | shelf] complete with all necessary components, and
- c) testing of the operation of installed fans.

Item 64064 Supply and Installation of [number] field cabinet CyberLocks

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) Supply and installation of [number] field cabinet CyberLocks as per MRS226 *Telecommunications Field Cabinets*, and
- c) testing of the operation of the CyberLocks.

Item 64091 Removal of [single plinth | double plinth | pole-mounted | post mounted] field cabinet, [for salvage | for disposal]

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) de-energisation and disconnection of cabling to field cabinet
- c) removal of cabinet and all internal cabling and associated components, as appropriate
- d) for pole / post mounted field cabinets:
 - i. removal of [pole | post]
 - ii. dismantling of [pole | post] and components, where appropriate, and
 - iii. transporting of [pole | post] and associated components to designated storage facility or another station for re-use.
- e) for field cabinets to be salvaged:
 - i. dismantling of equipment, where appropriate, and
 - ii. transporting of field cabinets to designated storage facility or another station for re-use.
- f) for field cabinets to be disposed:
 - i. disposal of field cabinets, and
 - ii. disposal of components.

Item 64092 Removal of field cabinet plinth base

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) removal of plinth base and associated surrounding concrete pad, as required
- c) removal of conduits from plinth to associated electrical and communications pits
- d) disposal of materials, and
- e) backfilling of hole.

Item 64093 Removal and return of [number] CyberLocks

Work Operations incorporated in the above item include:

- f) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- g) removal of [number] CyberLocks as per MRS226 *Telecommunications Field Cabinets*, and
- h) return [number] CyberLocks to the department's Regional Office or a RoadTek depot.

2.3 Method of measurement of telecommunication field cabinet components

This Specification provides Standard Work Items for:

- a) supply only
- b) installation only, and
- c) supply and installation.

of telecommunication field cabinet components.

Any combination of Standard Work Items relating to these methods of measurement may be used in the Schedule of Rates; however, where a Standard Work Item for supply and installation of a particular component or group of components is included in the Schedule of Rates, no supply only nor installation only Standard Work Item shall also apply to that component or group of components, as applicable.

2.4 Supply of materials

Any materials to be supplied by the Principal will be as stated in the Principal Supplied Material List, Form C6827. All other material shall be supplied by the Contractor.

The responsibility for transport to the Site of materials supplied by the Principal shall be as stated in the Principal Supplied Material List, Form C6827. Transport to the Site of all other materials shall be the responsibility of the Contractor.

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