ISO/TS 20684-10:2021 (E)

Intelligent transport systems — Roadside modules SNMP data interface — Part 10: Variable message signs

Contents

Foreword

Introduction

1 Scope

2 Normative references

3 Terms and definitions

4 Symbols and abbreviated terms

5 Conformance

6 Physical architecture

7 User needs

7.1 Manage the control mode of the VMS
7.2 Manage the sign display
7.3 Monitor the sign display doors
7.4 Monitor the sign display mains power
7.5 Monitor the sign display power supplies

8 Requirements

8.1 Message sign control mode
8.1.1 Message sign control mode definition
8.1.2 Message sign control mode data exchange requirements
8.1.2.1 Configure control mode
8.1.2.2 Verify control mode
8.1.3 Message sign control mode capabilities
8.1.3.1 Support central control mode
8.1.3.2 Support local control mode
8.1.3.3 Support central override control mode
8.2 Message library
8.2.1 Message library definition
8.2.2 Message library data exchange requirements
8.2.2.1 Discover capabilities of the message library
8.2.2.2 Configure default flash times
8.2.2.3 Verify default flash times
8.2.2.4 Configure default page times
8.2.2.5 Verify default page times
8.2.2.6 Configure default line justification
8.2.2.7 Verify default line justification
8.2.2.8 Configure default page justification
8.2.2.9 Verify default page justification
8.2.2.10 Configure default colours
8.2.2.11 Verify default colours
8.2.2.12 Configure message encoding
8.2.2.13 Verify message encoding
8.2.2.14 Configure a message
8.2.2.15 Verify message configuration
8.2.2.16 Verify message code
8.2.2.17 Retrieve message enabled status

8.2.2.18 Toggle message enabled status
8.2.2.19 Delete message
8.2.2.20 Delete all messages
8.2.3 Message library capabilities
8.2.3.1 Supported flash times
8.2.3.1.1 Supported minimum flash time
8.2.3.1.2 Supported maximum flash time
8.2.3.1.3 Supported flash time step size
8.2.3.2 Supported page times
8.2.3.2.1 Supported minimum page time
8.2.3.2.2 Supported maximum page time
8.2.3.2.3 Supported page time step size
8.2.3.3 Supported line justification
8.2.3.3.1 Line justification – Left
8.2.3.3.2 Line justification – Centre
8.2.3.3.3 Line justification – Right
8.2.3.3.4 Line justification – Full
8.2.3.4 Supported page justification
8.2.3.4.1 Page justification – Top
8.2.3.4.2 Page justification – Middle
8.2.3.4.3 Page justification – Bottom
8.2.3.5 Supported Message Encodings
8.2.3.5.1 Message encoding – ASCII
8.2.3.5.2 Message encoding – UTF-8
8.2.3.6 Supported moving text
8.2.3.6.1 Circular moving text
8.2.3.6.2 Linear moving text
8.3 Sign display
8.3.1 Sign display definition
8.3.2 Sign display data exchange requirements
8.3.2.1 Discover characteristics of the sign display
8.3.2.2 Configure location of sign display
8.3.2.3 Verify location of sign display
8.3.2.4 Configure end duration message
8.3.2.5 Verify end duration message
8.3.2.6 Display a message on the sign display
8.3.2.7 Monitor current message
8.3.2.8 Monitor dynamic fields of current message
8.4 Sign display doors
8.4.1 Sign display doors definition
8.4.2 Sign display doors data exchange requirements
8.4.3 Sign display door capability requirements
8.4.3.1 Sign display doors monitored
8.4.4 Sign display door design constraints
8.4.4.1 Sign display doors monitored through general-purpose I/O
8.5 Sign display mains power
8.5.1 Sign display mains power definition
8.5.2 Sign display mains power data exchange requirements
8.5.3 Sign display mains power capability requirements
8.5.3.1 Sign display mains power voltage
8.5.3.2 Sign display mains power current
8.5.4 Sign display mains power design constraints
8.5.4.1 Sign display mains power voltage monitored through general-purpose I/O
8.5.4.2 Sign display mains power current monitored through general-purpose I/O
8.6 Sign display power supplies
8.6.1 Sign display power supplies definition
8.6.2 Sign display power supplies exchange requirements
8.6.3 Sign display power supplies capability requirements
8.6.3.1 Sign display power supplies voltage
8.6.3.2 Sign display power supplies current
8.6.4 Sign display power supplies design constraints
8.6.4.1 Sign display power supplies voltage monitored through general-purpose I/O
8.6.4.2 Sign display power supplies current monitored through general-purpose I/O
8.7 Sign display light sensors

8.7.1 Sign display light sensors definition
8.7.2 Sign display light sensors exchange requirements
8.7.3 Sign display light sensors capability requirements
8.7.3.1 Sign display light sensors monitored
8.7.4 Sign display light sensors design constraints
8.7.4.1 Sign display light sensors monitored through general-purpose I/O
8.8 Sign display pixels
8.8.1 Sign display pixels definition
8.8.2 Sign display pixels data exchange requirements
8.8.2.1 Discover characteristics of sign display pixels
8.8.2.2 Perform pixel test
8.8.3 Sign display pixels capability
8.8.3.1 Sign display pixels monitored
8.8.3.2 Colourful pixel

Annex A (normative) Management Information Base

Annex B (normative) Requirements Traceability Matrix

Annex C (informative) Relationship to NTCIP 1203

Page count: 27