INTERNATIONAL STANDARD

ISO 16844-7

Second edition
2015-01-15

Road vehicles — Tachograph systems —

Part 7: Parameters

Véhicules routiers — Systèmes tachygraphes —

Partie 7: Paramètres

Reference number
ISO 16844-7:2015(E)

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Contents

Page

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT), see the following URL: Foreword — Supplementary information.

This second edition cancels and replaces the first edition (ISO 16844—7:2004), which has been technically revised.

The committee responsible for this document is ISO/TC 22, *Road vehicles*, Subcommittee SC 3, *Electrical and electronic equipment*.

ISO 16844 consists of the following parts, under the general title *Road vehicles — Tachograph systems*:

— *Part 1: Electrical connectors*

— *Part 2: Electrical interface with recording unit*

— *Part 3: Motion sensor interface*

— *Part 4: CAN interface*

— *Part 5: Secured CAN interface*

— *Part 6: Diagnostics*

— *Part 7: Parameters*

Introduction

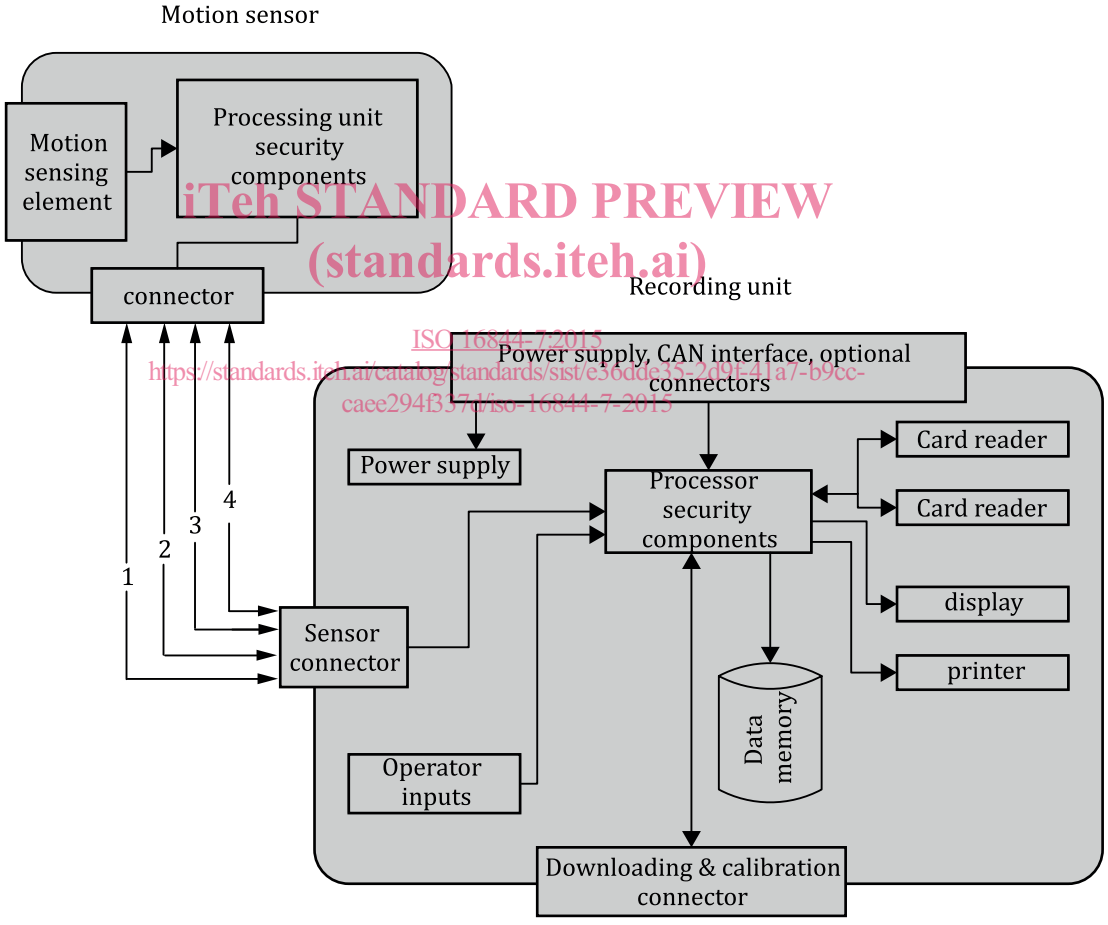
This International Standard supports and facilitates the communication between electronic control units and a tachograph. The tachograph is based upon the European Council Regulation (EC) No 561/2006[2] and (EEC) No 3821/85[3] as last amended.

The digital tachograph concept is based upon a RU storing data, related to the activities of the various drivers driving the vehicle, on which it is installed.

During the normal operational status of the RU, data stored in its memory are accessible to different entities (drivers, authorities, workshops, transport companies) in different ways (displayed on a screen, printed by a printing device, downloaded to an external device). Access to stored data is controlled by smart card inserted in the tachograph.

In order to prevent manipulation of the tachograph system, the speed signal sender (motion sensor) is provided with an encrypted data link.

A typical tachograph system is shown in Figure 1.



Key

1 positive supply
2 battery minus
3 speed signal, real time
4 data signal in/out

Figure 1 — Typical tachograph system

Road vehicles — Tachograph systems —

Part 7: Parameters

1 Scope

This part of ISO 16844 specifies the parameters used in the interchange of digital information between a road vehicle's tachograph system and vehicle units or a diagnostic tester, or within the tachograph system itself. The parameters are applicable for normal communication and/or diagnostic services. Parameters included in this part of ISO 16844 rely in particular on regulations stated in References [2] and [3].

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 14229-1, *Road vehicles — Unified diagnostic services (UDS) — Part 1: Specification and requirements*

ISO 16844-4, *Road vehicles — Tachograph systems —Part 4: CAN interface*

ISO 16844-6, *Road vehicles — Tachograph systems —Part 6: Diagnostics*

ISO/IEC 8859 (all parts), *Information technology — 8-bit single-byte coded graphic character sets*

3 Symbols and abbreviated terms

CAN	controller area network
Cvt	convention
DID	data identifier
DTC	diagnostic trouble code
ECU	electronic control unit
M	mandatory
n/a	not applicable
R	accessible in reading using diagnostic services
RID	routine identifier
RMS	registering member state
R/W	accessible in reading and writing, using diagnostic services
SJW	resynchronisation jump width

t_q time quantum

U user option

UTC universal time coordinated

VIN vehicle identification number

VRN vehicle registration number

4 Identifier specification for diagnostic services

4.1 Data identifiers (DID)

The DIDs used in the diagnostic services ReadDataByIdentifier WriteDatatByIdentifier and InputOutputControlByIdentifier specified in ISO 16844-6 shall be supported in accordance with Table 1. The DIDs shall be implemented as specified in Clause 5.

In general,

— assignment of identifiers shall comply with the definitions given in ISO 14229-1,

— undefined identifiers in the range of tachograph IDs from $F900_{16}$ to $F9FF_{16}$ shall be reserved for future use, and

— all identifiers in the range of $F180_{16}$ to $F1A0_{16}$ shall be implemented as specified in ISO 14229-1 if not specified in Clause 5.

Table 1 — Data identifier

Data Identifier name	Value [Hex]	Cvt	Simplified mnemonic	Access	Specified in section
VehicleManufacturerSparePartNumber	F187	U	VMSPN	R/W	—
VehicleManufacturerECUSoftwareNumber	F188	U	VMECUSWN	R/W	—
VehicleManufacturerECUSoftwareVersionNumber	F189	U	VMECUSWVN	R/W	—
SystemSupplierIdentifier	F18A	M	SSID	R	—
ECUManufacturingDate	F18B	M	ECUMD	R	—
ECUSerialNumber	F18C	M	ECUSN	R	—
VehicleIdentificationNumber	F190	M	VIN	R/W	5.4.2
VehicleManufacturerECUHardwareNumber	F191	M	VMECUHWN	R/W	—
SystemSupplierECUHardwareNumber	F192	M	SSECUHWN	R	—
SystemSupplierECUHardwareVersionNumber	F193	M	SSECUHWVN	R	—
SystemSupplierECUSoftwareNumber	F194	M	SSECUSWN	R	—
SystemSupplierECUSoftwareVersionNumber	F195	M	SSECUSWVN	R	—
ExhaustRegulationOrTypeApprovalNumber	F196	M	EROTAN	R	—
SystemNameOrEngineType	F197	U	SNOET	R/W	—
RepairShopCodeOrTesterSerialNumber	F198	U	RSCOTSN	R/W	—
ProgrammingDate	F199	U	PD	R/W	—
CalibrationRepairShopCodeOrCalibrationEquipementSerialNumber	F19A	M	CRSCOCESN	R/W	—
CalibrationDate	F19B	M	CD	R/W	—
CalibrationEquipmentSWNumber	F19C	M	CESWN	R/W	—
ECUInstallationDate	F19D	M	EID	R/W	—

Table 1 *(continued)*

Data Identifier name	Value [Hex]	Cvt	Simplified mnemonic	Access	Specified in section
ODXFileIdentifier	F19E	U	OFID	R/W	—
RemoteSessionDiagnsosticSessionType	F900	M	RSDST	R/W	
TachographVehicleSpeed	F902	M	TVS	R	5.4.12
Driver1WorkingState	F903	M	D1WS	R	5.4.13
Driver2WorkingState	F904	M	D2WS	R	5.4.14
DriveRecognize	F905	M	DR	R	5.4.15
Driver1TimeRelatedStates	F906	M	D1TRS	R	5.4.16
Driver2TimeRelatedStates	F909	M	D2TRS	R	5.4.17
DriverCardDriver1	F907	M	DCD1	R	5.4.18
DriverCardDriver2	F90A	M	DCD2	R	5.4.19
OverSpeed	F908	M	OS	R	5.4.20
TimeDate	F90B	M	TD	R/W	5.4.21
ResetHeartbeatMessage	F90C	M	RHM	R/W	5.4.22
AdjustLocalMinuteOffset	F90D	M	ALMO	R/W	5.4.23
AdjustLocalHourOffset	F90E	M	ALHO	R/W	5.4.24
PriorityLevelOfTCO1Message	F90F	M	PLOTM	R/W	5.4.25
HighResolutionTotalVehicleDistance	F912	M	HRTVD	R/W	5.4.26
HighResolutionTripDistance	F913	M	HRTD	R/W	5.4.27
ServiceComponentIdentification	F914	M	SCI	R	5.4.28
ServiceDelayCalendarTimeBased	F915	M	SDCTB	R	5.4.29
Driver1Identification	F916	M	D1I	R	5.4.30
Driver2Identification	F917	M	D2I	R	5.4.31
KFactor	F918	M	KF	R/W	5.4.32
SpeedMeasurementRange	F919	M	SMR	R	5.4.33
NumberOfTeethOnPhonicWheel	F91A	U	NOTOPW	R/W	5.4.34
TachographOutputShaftSpeed	F91B	M	TOSS	R	5.4.35
LFactorTyreCircumference	F91C	M	LFTC	R/W	5.4.36
WVehicleCharacteristicFactor	F91D	M	WVCF	R/W	5.4.37
PulsesPerRevolutionOfOutputShaft	F91E	M	PPROOS	R/W	5.4.38
TransmissionRepetitionRateOfTCO1Message	F920	M	TRROTM	R/W	5.4.39
TyreSize	F921	M	TS	R/W	5.4.40
NextCalibrationDate	F922	M	NCD	R/W	5.4.41
Driver1ContinuousDrivingTime	F923	M	D1CDT	R	5.4.42
Driver2ContinuousDrivingTime	F924	M	D2CDT	R	5.4.43
Driver1CumulativeBreakTime	F925	M	D1CBT	R	5.4.44
Driver2CumulativeBreakTime	F926	M	D2CBT	R	5.4.45
Driver1CurrentDurationOfSelectedActivity	F927	M	D1CDOSA	R	5.4.46
Driver2CurrentDurationOfSelectedActivity	F928	M	D2CDOSA	R	5.4.47
SpeedAuthorised	F92C	M	SA	R/W	5.4.48
TachographCardSlot1	F930	M	TCS1	R	5.4.49
TachographCardSlot2	F933	M	TCS2	R	5.4.50
Driver1Name	F931	M	D1N	R	5.4.51

Table 1 *(continued)*

Data Identifier name	Value [Hex]	Cvt	Simplified mnemonic	Access	Specified in section
Driver2Name	F932	M	D2N	R	5.4.52
OutOfScopeCondition	F936	M	OOSC	R	5.4.53
ModeOfOperation	F937	M	MOO	R	5.4.54
Driver1CumulatedDrivingTimePreviousAndCurrentWeek	F938	M	D1CDTPACW	R	5.4.55
Driver2CumulatedDrivingTimePreviousAndCurrentWeek	F939	M	D2CDTPACW	R	5.4.56
RealTimeSpeedPulses	F940	M	RTSP	R/W	5.4.57
EngineSpeed	F95A	U	ES	R	5.4.58
CalibrationInputOutput	F960	M	CIO	R	5.4.59
SynchronizationJumpWidth	F979	M	SJW	R/W	5.4.60
SamplePoint	F97A	M	SP	R/W	5.4.61
TimeOutMessageErrorDelay	F97B	M	TOMED	R/W	5.4.62
ErrorManagementInitialisationInhibition	F97C	M	EMII	R/W	5.4.63
RegisteringMemberState	F97D	M	RMS	R/W	5.4.64
VehicleRegistrationNumber	F97E	M	VRN	R/W	5.4.65
VehicleRegistrationDate	F97F	M	VRD	R/W	5.4.66
Driver1PreferredLanguage	F981	U	D1PL	R/W	5.4.67
Driver2PreferredLanguage	F982	U	D2PL	R/W	5.4.68
DriverCard1DownloadTimePeriod	F990	U	DC1DTP	R	5.4.69
DriverCard2DownloadTimePeriod	F983	U	DC2DTP	R	5.4.70
TachographDownloadTimePeriod	F991	U	TDTP	R	5.4.71
DriversHoursRulesPreWarningTimeDelay	F992	U	DHRPWTD	R/W	5.4.72
DriverCardExpiryWarningTimeDelay	F993	U	DCEWTD	R/W	5.4.73
NextDriverCard1DownloadWarningTimeDelay	F994	U	NDC1DWTD	R/W	5.4.74
NextDriverCard2DownloadWarningTimeDelay	F984	U	NDC2DWTD	R/W	5.4.75
NextTachographDownloadWarningTimeDelay	F995	U	NTDWTD	R/W	5.4.76
NextCalibrationWarningTimeDelay	F996	U	NCWTD	R/W	5.4.77
Driver1EndOfLastDailyRestPeriod	F997	U	D1EOLDRP	R	5.4.78
Driver2EndOfLastDailyRestPeriod	F985	U	D2EOLDRP	R	5.4.79
Driver1EndOfLastWeeklyRestPeriod	F998	U	D1EOLWRP	R	5.4.80
Driver2EndOfLastWeeklyRestPeriod	F986	U	D2EOLWRP	R	5.4.81
Driver1EndOfSecondLastWeeklyRestPeriod	F999	U	D1EOSLWRP	R	5.4.82
Driver2EndOfSecondLastWeeklyRestPeriod	F987	U	D2EOSLWRP	R	5.4.83
Driver1CurrentDailyDrivingTime	F99A	U	D1CDDT	R	5.4.84
Driver2CurrentDailyDrivingTime	F988	U	D2CDDT	R	5.4.85
Driver1CurrentWeeklyDrivingTime	F99B	U	D1CWDT	R	5.4.86
Driver2CurrentWeeklyDrivingTime	F989	U	D2CWDT	R	5.4.87
Driver1TimeLeftUntilNewDailyRestPeriod	F99C	U	D1TLUNDRP	R	5.4.88
Driver2TimeLeftUntilNewDailyRestPeriod	F98A	U	D2TLUNDRP	R	5.4.89
Driver1CardExpiryDate	F99D	U	D1CED	R	5.4.90
Driver2CardExpiryDate	F98B	U	D2CED	R	5.4.91
Driver1CardNextMandatoryDownloadDate	F99E	U	D1CNMDD	R	5.4.92
Driver2CardNextMandatoryDownloadDate	F98C	U	D2CNMDD	R	5.4.93

Table 1 *(continued)*

Data Identifier name	Value [Hex]	Cvt	Simplified mnemonic	Access	Specified in section
TachographNextMandatoryDownloadDate	F99F	U	TNMDD	R	5.4.94
Driver1TimeLeftUntilNewWeeklyRestPeriod	F9A1	U	D1TLUNWRP	R	5.4.95
Driver2TimeLeftUntilNewWeeklyRestPeriod	F98D	U	D2TLUNWRP	R	5.4.96
Driver1NumberOfTimes9hDailyDrivingTimesExceeded	F9A0	U	D1NOT9HDDTE	R	5.4.97
Driver2NumberOfTimes9hDailyDrivingTimesExceeced	F98E	U	D2NOT9HDDTE	R	5.4.98
Driver1CumulativeUninterruptedRestTime	F9A2	U	D1CURT	R	5.4.99
Driver2CumulativeUninterruptedRestTime	F98F	U	D2CURT	R	5.4.100
Driver1MinimumDailyRest	F9A3	U	D1MDR	R	5.4.101
Driver2MinimumDailyRest	F9A7	U	D2MDR	R	5.4.102
Driver1MinimumWeeklyRest	F9A4	U	D1MWR	R	5.4.103
Driver2MinimumWeeklyRest	F9A8	U	D2MWR	R	5.4.104
Driver1MaximumDailyPeriod	F9A5	U	D1MDP	R	5.4.105
Driver2MaximumDailyPeriod	F9A9	U	D2MDP	R	5.4.106
Driver1MaximumDailyDrivingTime	F9A6	U	D1MDDT	R	5.4.107
Driver2MaximumDailyDrivingTime	F9AA	U	D2MDDT	R	5.4.108
Driver1NumberOfUsedReducedDailyRestPeriods	F9AB	U	D1NOURDRP	R	5.4.109
Driver2NumberOfUsedReducedDailyRestPeriods	F9AC	U	D2NOURDRP	R	5.4.110
Driver1RemainingCurrentDrivingTime	F9AD	U	D1RCDT	R	5.4.111
Driver2RemainingCurrentDrivingTime	F9AE	U	D2RCDT	R	5.4.112
Driver1RemainingDrivingTimeOnCurrentShift	F9AF	U	D1RDTOCS	R	5.4.113
Driver2RemainingDrivingTimeOnCurrentShift	F9B0	U	D2RDTOCS	R	5.4.114
Driver1RemainingDrivingTimeOfCurrentWeek	F9B1	U	D1RDTOCW	R	5.4.115
Driver2RemainingDrivingTimeOfCurrentWeek	F9B2	U	D2RDTOCW	R	5.4.116
Driver1Remaining2WeeksDrivingTime	F9B3	U	D1R2WDT	R	5.4.117
Driver2Remaining2WeeksDrivingTime	F9B4	U	D2R2WDT	R	5.4.118
Driver1TimeLeftUntilNextDrivingPeriod	F9B5	U	D1TLUNDP	R	5.4.119
Driver2TimeLeftUntilNextDrivingPeriod	F9B6	U	D2TLUNDP	R	5.4.120
Driver1DurationOfNextDrivingPeriod	F9B7	U	D1DONDP	R	5.4.121
Driver2DurationOfNextDrivingPeriod	F9B8	U	D2DONDP	R	5.4.122
Driver1DurationOfNextBreakRest	F9B9	U	D1DONBR	R	5.4.123
Driver2DurationOfNextBreakRest	F9BF	U	D2DONBR	R	5.4.124
Driver1RemainingTimeOfCurrentBreakRest	F9C0	U	D1RTOCBR	R	5.4.125
Driver2RemainingTimeOfCurrentBreakRest	F9C1	U	D2RTOCBR	R	5.4.126
Driver1RemainingTimeUntilNextBreakOrRest	F9C2	U	D1RTUNBOR	R	5.4.127
Driver2RemainingTimeUntilNextBreakOrRest	F9C3	U	D2RTUNBOR	R	5.4.128
Driver1OpenCompensationInTheLastWeek	F9C7	U	D1OCITLW	R	5.4.129
Driver2OpenCompensationInTheLastWeek	F9C8	U	D2OCITLW	R	5.4.130
Driver1OpenCompensationInWeekBeforeLast	F9C9	U	D1OCIWBL	R	5.4.131
Driver2OpenCompensationInWeekBeforeLast	F9CA	U	D2OCIWBL	R	5.4.132
Driver1OpenCompensationIn2ndWeekBeforeLast	F9CB	U	D1OCI2WBL	R	5.4.133
Driver2OpenCompensationIn2ndWeekBeforeLast	F9CC	U	D2OCI2WBL	R	5.4.134
Driver1AdditionalInformation	F9CD	V	D1AI	R	5.4.135

Table 1 *(continued)*

Data Identifier name	Value [Hex]	Cvt	Simplified mnemonic	Access	Specified in section
Driver2AdditionalInformation	F9CE	V	D2AI	R	5.4.136
StandardRevision	F9CF	M	SD	R	5.4.1

4.2 Routine identifiers (RID)

The RIDs used in the diagnostic services RoutineControlByIdentifier specified in ISO 16844-6 shall be in accordance with Table 2.

Table 2 — Routine identifiers

Routine identifier	Value	Cvt	Simplified mnemonic
MotionSensorVehicleUnitPairing	$014F_{16}$	U	MSVUP
DisplayTest	0150_{16}	U	DT
LCDNegativeModeTest	0151_{16}	U	LNMT
PrinterTest	0152_{16}	U	PT
HardwareTest	0153_{16}	U	HT
CarderReaderTest	0154_{16}	U	CRT
Reserved by document	0155_{16}	U	RBD
ButtonTestLoop	0156_{16}	U	BTL
CodeTest	0158_{16}	U	CT
RemoteTachographCardDataTransfer	0180_{16}	U	RTCDT

5 Parameters and values

5.1 General

The parameters specified in this section shall be implemented as specified in 5.4 with the general definitions given in 5.2.

All parameters that are referenced in Table 1 or Table 2 shall be supported by diagnostic communication as specified in ISO 16844-6. Parameters supported for normal communication are referenced in ISO 16844-4.

5.2 Transmitted signal ranges

For the ranges used to determine the validity of a transmitted signal, see Table 3. For the ranges used to denote the state of a discrete parameter, see Table 4. For the ranges used to denote the state of a control mode command, see Table 5.

— The values of the *error indicator* range shall be used to immediately indicate that valid parameter data are currently not available due to error in the sending component (e.g. sensor, subsystem, or module).

— The values in the *not available* range shall be used to transmit a message which contains a parameter that is not available or not supported in the module.

— The values in the *don't care/take no action* range shall be used to transmit a command message and identify those parameters where no response is expected from the receiving device.

— The values in the range *Parameter specific indicator* may be used for individual indicators for a parameter. In this case, it is part of the parameter specification.

If a component failure prevents the transmission of valid data of a parameter, the error indicator as specified in Table 3 and Table 4 shall be used instead of the parameter data. However, the error indicator shall not be used if the measured or calculated data have yielded a value but exceed the specified parameter range. Instead, the data shall be transmitted using the appropriate minimum or maximum parameter value.

When a specified parameter of this part of ISO 16844 is transmitted using diagnostic services, padding bits shall be added to increase its length to the next integer number of bytes in the case where its length is not an integer number of bytes. This padding shall be made by setting the relevant most significant bits to zero.

EXAMPLE Driver1WorkingStates, DID $F003_{16}$, 3-bit length: when this parameter value is 010_2, it is transmitted as one byte of the value of 02_{16}.

Table 3 — Transmitted signal ranges

Range name	1 byte	2 byte	4 bytes	ASCII
Valid signal	0_{10} to 250_{10} 0_{16} to FA_{16}	0_{10} to 64255_{10} 0_{16} to $FAFF_{16}$	0_{10} to 4211081215_{10} 0_{16} to $FAFFFFFF_{16}$	1_{10} to 254_{10} 0_{16} to FE_{16}
Parameter specific indicator	251 FB_{16}	64256_{10} to 64511_{10} $FB00_{16}$ to $FBFF_{16}$	4211081216_{10} to 4227858431_{10} $FB00_{16}$ to $FDFF_{16}$	None
Reserved for future indicators	252_{10} to 253_{10} FC_{16} to FD_{16}	64512_{10} to 65023_{10} $FC00_{16}$ to $FDFF_{16}$	4211081216_{10} to 4261412863_{10} $FC000000_{16}$ to $FDFFFFFF_{16}$	None
Error indicator	254_{10} FE_{16}	65024_{10} to 65279_{10} $FE00_{16}$ to $FEFF_{16}$	4261412864_{10} to 4278190079_{10} $FE000000_{16}$ to $FEFFFFFF_{16}$	0
Not available or not requested	255_{10} FF_{16}	65280_{10} to 65535_{10} $FF00_{16}$ to $FFFF_{16}$	4278190080_{10} to 4294967294_{10} $FF000000_{16}$ to $FFFFFFFF_{16}$	255_{10} FF_{16}

Table 4 — Transmitted values for discrete parameters (measured)

Range name	Transmitted value
Disabled (off, passive, insufficient)	00_2
Enabled (on, active, sufficient)	01_2
Error indicator	10_2
Not available or not installed	11_2

Table 5 — Transmitted values for control requests (status)

Range name	Transmitted value
Command to disable function (turn off, etc.)	00_2
Command to enable function (turn on, etc.)	01_2
Reserved	10_2
Don't care/take no action (leave function as it is)	11_2

The data type can be either status or measured.

— Status specifies the present state of a multi-state parameter or function as a result of action taken by the transmitting node. This action is the result of a calculation which uses local and/or network measured and/or status information.

— Measured data convey the current value of a parameter as measured or observed by the transmitting node to determine the condition of the specified parameter.

5.3 Date and time parameter specifications

5.3.1 General

The parameters specified in this section are used in several other parameters or parameter groups.

5.3.2 Seconds

This parameter shall indicate the component "seconds" of the current time of day. This should be reported as the seconds of the current time at UTC; however, it may be reported as the component seconds of the current time at a local time zone. The local hour/minute offset parameters are used to indicate if the time of day is the current UTC time or a local time zone time. The parameter shall be implemented as specified in Table 6.

Table 6 — Specification of parameter seconds

Attribute	Value
Data length	1 byte
Resolution	0,25 s/bit
Offset	0 s
Operating range	0 s to 59,75 s
Type	Measured
DID	n/a, used as part of other DIDs
Access	—

5.3.3 Minutes

This parameter shall indicate the component "minutes" of the current time of day. This should be reported as the minutes of the current time at UTC; however, it may be reported as the component minutes of the current time at a local time zone. The local hour/minute offset parameters are used to indicate if the time of day is the current UTC time or a local time zone time. The parameter shall be implemented as specified in Table 7.

Table 7 — Specification of parameter minutes

Attribute	Value
Data length	1 byte
Resolution	1 min/bit
Offset	0 min
Operating range	0 min to 59 min
Type	Measured
DID	n/a, used as part of other DIDs
Access	—

5.3.4 Hours

This parameter shall indicate the component "hour" of the current time of day. This should be reported as the hours of the current time at UTC; however, it may be reported as the component hours of the current time at a local time zone. The local hour/minute offset parameters are used to indicate if the

time of day is the current UTC time or a local time zone time. The parameter shall be implemented as specified in Table 8.

Table 8 — Specification of parameter hours

Attribute	Value
Data length	1 byte
Resolution	1 h/bit
Offset	0 h
Operating range	0 h to 23 h
Type	Measured
DID	n/a, used as part of other DIDs
Access	—

5.3.5 Day

This parameter shall indicate the component "day" of the current time of day. This should be reported as the day of the current time at UTC; however, it may be reported as the component day of the current time at a local time zone. The local hour/minute offset parameters are used to indicate if the time of day is the current UTC time or a local time zone time. The parameter shall be implemented as specified in Table 9.

Table 9 — Specification of parameter day

Attribute	Value
Data length	1 byte
Resolution	0,25 d/bit
Offset	0 d
Operating range	0,25 d to 31,75 d
Type	Measured
DID	n/a, used as part of other DIDs
Access	—

NOTE 1 A value of 0 for the day is null. The values [1, 2, 3, 4] indicate the first day of a month, the values [5, 6, 7, 8] indicate the second day of the month, etc.

NOTE 2 This parameter does not influence or change the hours parameter above.

5.3.6 Month

This parameter shall indicate the component "month" of the current time of day. This should be reported as the month of the current time at UTC; however, it may be reported as the component month of the current time at a local time zone. The local hour/minute offset parameters are used to indicate if the time of day is the current UTC time or a local time zone time. The parameter shall be implemented as specified in Table 10.