
Changes to legislation: There are currently no known outstanding effects for the Council Regulation (EEC) No 3821/85, Division 7.. (See end of Document for details)

[^{F1}]^{F2}ANNEX I B

REQUIREMENTS FOR CONSTRUCTION, TESTING, INSTALLATION AND INSPECTION

Textual Amendments

- F1** Inserted by Council Regulation (EC) No 2135/98 of 24 September 1998 amending Regulation (EEC) No 3821/85 on recording equipment in road transport and Directive 88/599/EEC concerning the application of Regulations (EEC) No 3820/85 and (EEC) No 3821/85.
- F2** Substituted by Commission Regulation (EC) No 1360/2002 of 13 June 2002 adapting for the seventh time to technical progress Council Regulation (EEC) No 3821/85 on recording equipment in road transport (Text with EEA relevance).

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Appendix 8

CALIBRATION PROTOCOL

7. CONTROL OF TEST PULSES — INPUT/OUTPUT CONTROL FUNCTIONAL UNIT

The services available are detailed in the following table:

TABLE 32

Input/Output control functional unit	
Service name	Description
InputOutputControlByIdentifier	The client requests the control of an input/output specific to the server

7.1. Message description

7.1.1. Message description

There is a connection via the front connector which allows test pulses to be controlled or monitored using a suitable tester.

This calibration I/O signal line can be configured by K-line command using the InputOutputControlByIdentifier service to select the required input or output function for the line. The available states of the line are:

- disabled,
- speedSignalInput, where the calibration I/O signal line is used to input a speed signal (test signal) replacing the motion sensor speed signal,
- realTimeSpeedSignalOutputSensor, where the calibration I/O signal line is used to output the speed signal of the motion sensor,
- RTCOutput, where the calibration I/O signal line is used to output the UTC clock signal.

The vehicle unit must have entered an adjustment session and must be in CALIBRATION mode to configure the state of the line. On exit of the adjustment session or of the CALIBRATION mode the vehicle unit must ensure the calibration I/O signal line is returned to the 'disabled' (default) state.

If speed pulses are received at the real time speed signal input line of the VU while the calibration I/O signal line is set to input then the calibration I/O signal line shall be set to output or returned to the disabled state.

The sequence shall be:

- establish communications by StartCommunication Service
- enter an adjustment session by StartDiagnosticSession Service and be in CALIBRATION mode of operation (the order of these two operations is not important).
- change the state of the output by InputOutputControlByIdentifier Service.

7.1.2. Message format

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The message formats for the InputOutputControlByIdentifier primitives are detailed in the following tables:

TABLE 33

InputOutputControlByIdentifier request message

Byte #	Parameter name	Hex value	Mnemonic
#1	Format byte — physical addressing	80	FMT
#2	Target address byte	EE	TGT
#3	Source address byte	tt	SRC
#4	Additional length byte	xx	LEN
#5	InputOutputControlByIdentifier request Sid	FF	IOCB I
#6 and #7	InputOutputIdentifier = (CalibrationInputOutput)	F960	IOI_CIO
#8 or #8 to #9	ControlOptionRecord = (inputOutputControlParameter — one value from Table 36)	xx	COR_ ... IOCP_ ...
	controlState — one value from Table 38 (see note below))	xx	CS_ ...
#9 or #10	Checksum	00-FF	CS

Note: The controlState parameter is present only in some cases (see 7.1.3).

TABLE 34

InputOutputControlByIdentifier positive response message

Byte #	Parameter Name	Hex value	Mnemonic
#1	Format byte — physical addressing	80	FMT
#2	Target address byte	tt	TGT
#3	Source address byte	EE	SRC
#4	Additional length byte	xx	LEN
#5	inputOutputControlByIdentifier positive response Sid	FF	IOCBIPR
#6 and #7	inputOutputIdentifier = (CalibrationInputOutput)	F960	IOI_CIO

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#8 or #8 to #9	controlStatusRecord = (inputOutputControlParameter (same value as byte #8 Table 33))	xx	CSR IOCP_ ...
	controlState (same value as byte #9 Table 33)) (if applicable)	xx	CS_ ...
#9 or #10	Checksum	00-FF	CS

TABLE 35

InputOutputControlByIdentifier negative response message

Byte #	Parameter Name	Hex value	Mnemonic
#1	Format byte — physical addressing	80	FMT
#2	Target address byte	tt	TGT
#3	Source address byte	EE	SRC
#4	Additional length byte	03	LEN
#5	negativeResponse Service Id	7F	NR
#6	inputOutputControlByIdentifier request SId	0F	IOCBI
#7	responseCode = (incorrectMessageLength	13	RC_IML
	conditionsNotCorrect	22	RC_CNC
	requestOutOfRange	31	RC_ROOR
	deviceControlLimitsExceeded)	7A	RC_DCLE
#8	Checksum	00-FF	CS

7.1.3. Parameter definition

The parameter inputOutputControlParameter (IOCP_) is defined in the following table:

TABLE 36

Definition of inputOutputControlParameter values

Hex	Description	Mnemonic
00	ReturnControlToECU This value shall indicate to the server (VU) that the tester does no longer have control	RCTECU

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	about the calibration I/O signal line.	
01	ResetToDefault This value shall indicate to the server (VU) that it is requested to reset the calibration I/O signal line to its default state.	RTD
03	ShortTermAdjustment This value shall indicate to the server (VU) that it is requested to adjust the calibration I/O signal line to the value included in the controlState parameter.	STA

The parameter controlState is present only when the inputOutputControlParameter is set to ShortTermAdjustment and is defined in the following table:

TABLE 37

Definition of controlState values

Mode	Hex value	Description
Disable	00	I/O line is disabled (default state)
Enable	01	Enable calibration I/O line as speedSignalInput
Enable	02	Enable calibration I/O line as realTimeSpeedSignalOutputSensor
Enable	03	Enable calibration I/O line as RTCOutput[]

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