



BSI Standards Publication

Field device integration (FDI)

Part 115-2: Profiles — Modbus-RTU

National foreword

This British Standard is the UK implementation of EN IEC 62769-115-2:2020. It is identical to IEC 62769-115-2:2020.

The UK participation in its preparation was entrusted to Technical Committee GEL/65/3, Industrial communications: process measurement and control, including fieldbus.

A list of organizations represented on this committee can be obtained on request to its committee manager.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2020
Published by BSI Standards Limited 2020

ISBN 978 0 580 52037 2

ICS 25.040.40; 35.100.05

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 30 November 2020.

Amendments/corrigenda issued since publication

Date	Text affected
------	---------------

English Version

Field device integration (FDI) - Part 115-2: Profiles - Modbus-
RTU
(IEC 62769-115-2:2020)

Intégration des appareils de terrain (FDI) - Partie 115-2:
Profils - Modbus-RTU
(IEC 62769-115-2:2020)

Feldgeräteintegration (FDI) - Teil 115-2: Profile - Modbus-
RTU
(IEC 62769-115-2:2020)

This European Standard was approved by CENELEC on 2020-10-30. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

European foreword

The text of document 65E/740/FDIS, future edition 1 of IEC 62769-115-2, prepared by SC 65E "Devices and integration in enterprise systems" of IEC/TC 65 "Industrial-process measurement, control and automation" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 62769-115-2:2020.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2021-07-30
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2023-10-30

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC shall not be held responsible for identifying any or all such patent rights.

Endorsement notice

The text of the International Standard IEC 62769-115-2:2020 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 61784-2 NOTE Harmonized as EN IEC 61784-2

IEC 61804 (series) NOTE Harmonized as EN IEC 61804 (series)

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61784-1	-	Industrial communication networks - Profiles Part 1: Fieldbus profiles	EN IEC 61784-1	-
IEC 61804	series	Function blocks (FB) for process control and electronic device description language (EDDL)	EN IEC 61804	series
IEC 62541-100	-	OPC Unified Architecture - Part 100: Device Interface	EN 62541-100	-
IEC 62769-2	-	Field Device Integration (FDI) - Part 2: FDI Client	-	-
IEC 62769-4	-	Field Device Integration (FDI) - Part 4: FDI Packages	-	-
IEC 62769-5	-	Field Device Integration (FDI) - Part 5: FDI Information Model	-	-
IEC 62769-7	-	Field Device Integration (FDI) - Part 7: FDI Communication Devices	-	-
MOD06	-	Modbus.org: MODBUS over serial line specification and implementation guide V1.02	-	-
MOD12	-	Modbus.org: MODBUS application protocol specification, V1.1b3	-	-

CONTENTS

FOREWORD.....	3
1 Scope.....	5
2 Normative References	5
3 Terms, definitions, abbreviated terms and conventions.....	5
3.1 Terms and definitions.....	5
3.2 Abbreviated terms.....	6
3.3 Conventions.....	6
3.3.1 EDDL syntax.....	6
3.3.2 Capitalizations	6
4 PSDs for ModbusRTU.....	7
4.1 General.....	7
4.2 Header.....	7
4.3 ProtocolIdentifier.....	9
4.4 Address	9
4.5 Manufacturer	9
4.6 DeviceModel	9
4.7 DeviceRevision	9
4.8 SerialNumber.....	9
4.9 Tag	9
4.10 ProfileId	9
4.11 Version	9
4.12 ProtocolSupportFile	9
5 Example for ModbusRTU.....	10
5.1 General.....	10
5.2 Called functionality (success).....	10
5.3 Called functionality (Error)	10
5.4 EDD command.....	11
6 Scanning	11
Bibliography.....	12
Table 1 – Modbus functions and their representation in an EDD HEADER	7
Table 2 – Example Modbus PDU.....	10
Table 3 – Example Modbus PDU with error response.....	10