

# SLOVENSKI STANDARD SIST EN IEC 62769-115-2:2021

01-februar-2021

Vključitev procesne terenske naprave (FDI) - 115-2. del: Profili - Modbus-RTU (IEC 62769-115-2:2020)

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

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

## iTeh STANDARD PREVIEW

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

SIST EN IEC 62769-115-2:2021

Ta slovenski standard je istoveten z log/stan EN/IEC 62769-115-2:2020 c4dc58047798/sist-en-icc-62769-115-2-2021

### ICS:

25.040.40 Merjenje in krmiljenje Industrial process industrijskih postopkov measurement and control
35.240.50 Uporabniške rešitve IT v IT applications in industry industriji

SIST EN IEC 62769-115-2:2021 en,fr,de

SIST EN IEC 62769-115-2:2021

# iTeh STANDARD PREVIEW (standards.iteh.ai)

SIST EN IEC 62769-115-2:2021

https://standards.iteh.ai/catalog/standards/sist/e22482e0-e8dd-4a16-91a7-c4dc58047798/sist-en-iec-62769-115-2-2021

EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM EN IEC 62769-115-2

November 2020

ICS 25.040.40; 35.100.05

### **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.

ITEM STANDARD PREVIEW

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, Celand, Iteland, 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

### EN IEC 62769-115-2:2020 (E)

### **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 (dop) 2021-07-30 level by publication of an identical national standard or by endorsement
- 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.

(standards.iteh.ai)

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

SIST EN IEC 62769-115-2:2021

https://standards.iteh.ai/catalog/standards/sist/e22482e0-e8dd-4a16-91a7-

IEC 61784-2 ANOTE 779Harmonized as EN IEC 61784-2

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

EN IEC 62769-115-2:2020 (E)

# 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>	EN/HD	<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) (standards.iteh.ai)	VEN IEC 61804	series
IEC 62541-100	- https:/	OPC Unifieds: Architecture (-) Part 2100:1 Device //sInterface.eh.ai/catalog/standards/sist/e22482e0-e8dd-4aic4dc58047798/sist-en-iec-62769-115-2-2021		-
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	-	-

SIST EN IEC 62769-115-2:2021

# iTeh STANDARD PREVIEW (standards.iteh.ai)

SIST EN IEC 62769-115-2:2021

https://standards.iteh.ai/catalog/standards/sist/e22482e0-e8dd-4a16-91a7-c4dc58047798/sist-en-iec-62769-115-2-2021



IEC 62769-115-2

Edition 1.0 2020-09

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE

Field device integration (FDI) ANDARD PREVIEW Part 115-2: Profiles – Modbus-RTU ards.iteh.ai)

Intégration des appareils de <u>sterrain (FDI)</u> <u>9-115-2:2021</u>

Partie 115-2: Profils an Modbus-RTU standards/sist/e22482e0-e8dd-4a16-91a7-c4dc58047798/sist-en-iec-62769-115-2-2021

INTERNATIONAL ELECTROTECHNICAL COMMISSION

COMMISSION ELECTROTECHNIQUE INTERNATIONALE

ICS 25.040.40; 35.100.05 ISBN 978-2-8322-8859-7

Warning! Make sure that you obtained this publication from an authorized distributor.

Attention! Veuillez vous assurer que vous avez obtenu cette publication via un distributeur agréé.

## - 2 - IEC 62769-115-2:2020 © IEC 2020

## CONTENTS

Г	JKEWU	KU			
1	Scop	e	5		
2	Norm	ative References	5		
3	Term	s, 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			
	4.8	SerialNumber Tag 1Teh STANDARD PREVIEW	9		
	4.9				
	4.10	ProfileId(standards.iteh.ai)	9		
	4.11	Version	9		
	4.12	ProtocolSupportFileSIST-EN-IEC 62769-115-22021			
5	Exam	ple for Modbüs-Ritards.iteh.ai/catalog/standards/sist/e22482e0-e8dd-4a16-9.1a7-			
	5.1	General c4dc58047798/sist-en-iec-62769-115-2-2021	10		
	5.2	Called functionality (success)	10		
	5.3	Called functionality (Error)	10		
	5.4	EDD command	11		
6	Scan	ning	11		
Bi	bliograp	hy	12		
Ta	able 1 –	Modbus functions and their representation in an EDD HEADER	7		
Ta	Table 2 – Example Modbus PDU				
Ta	able 3 –	Example Modbus PDU with error response	10		
		·			

### INTERNATIONAL ELECTROTECHNICAL COMMISSION

### FIELD DEVICE INTEGRATION (FDI) -

### Part 115-2: Profiles - Modbus-RTU

### **FOREWORD**

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity. IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.

  SIST EN IEC 62769-115-2:2021
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 62769-115-2 has been prepared by subcommittee 65E: Devices and integration in enterprise systems, of IEC technical committee 65: Industrial-process measurement, control and automation.

FCG\_TS62769-115-2\_Profiles\_PSD ModbusRTU\_1.1.0.4, a specification of the FieldComm Group, PROFIBUS Nutzerorganisation e. V., OPC Foundation and FDT Group, has served as a basis for the elaboration of this standard.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
65E/740/FDIS	65E/744/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

- 4 - IEC 62769-115-2:2020 © IEC 2020

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 62769 series, published under the general title *Field Device Integration (FDI)*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific document. At this date, the document will be

- · reconfirmed,
- withdrawn,
- · replaced by a revised edition, or
- amended.

# iTeh STANDARD PREVIEW (standards.iteh.ai)

SIST EN IEC 62769-115-2:2021 https://standards.iteh.ai/catalog/standards/sist/e22482e0-e8dd-4a16-91a7-c4dc58047798/sist-en-iec-62769-115-2-2021