INTERNATIONAL STANDARD

ISO 22772

First edition 2020-07

Space systems — Requirements of launch vehicle (LV) to electrical ground support equipment (EGSE) interfaces

Systèmes spatiaux - Exigences d'interface entre le lanceur et les équipements électrique de support au sol

iTeh Standards

(https://standards.iteh.ai)
Document Preview

ISO 22772:2020



iTeh Standards (https://standards.iteh.ai) Document Preview

ISO 22772:2020

https://standards.iteh.ai/catalog/standards/iso/aac3ad25-54e6-4d0c-8646-c886edb8095a/iso-22772-2020



COPYRIGHT PROTECTED DOCUMENT

© ISO 2020

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office CP 401 • Ch. de Blandonnet 8 CH-1214 Vernier, Geneva Phone: +41 22 749 01 11 Email: copyright@iso.org Website: www.iso.org

Published in Switzerland

Contents				
Fore	word		iv	
Intro	oductio	011	v	
1		De		
_	-			
2		Normative references Terms and definitions		
3	Term			
4	Abbr	reviated terms	1	
5	Interface design principles			
	5.1	General		
	5.2 5.3	Design process		
6	6.1	rface design requirements General		
	6.2	Types of interface implementation		
		6.2.1 Bus interface	4	
		6.2.2 Digital I/O interface		
		6.2.3 Analog interface		
		6.2.4 AC/DC power supply interface		
	6.3	Interface connectors		
7	Induced environment			
,	7.1 7.2	General SIZMOZIMOS III.		
		Mechanical environment		
		7.2.1 Low frequency vibration	6	
		7.2.2 Random vibrations		
		7.2.3 Acoustic noise		
	7.3 _s			
	municis.	7.3.1 General		
		7.3.2 Thermal environment during pre-launch phase	7	
	7.4	7.3.3 Thermal environment during launch phase		
		Radio and electromagnetic environment		
		7.4.1 Launch-vehicle-generated 7.4.2 EGSE-generated		
		7.4.3 Launch-range-generated		
8	Vorif	fication analysis and test		
Ū	8.1 Verification analysis methods			
	8.2	Verification analysis implementation		
		8.2.1 Feasibility analysis		
		8.2.2 Simulation analysis		
		8.2.3 Verification 8.2.4 Launch preparation state evaluation		
_	_	F		
9	Inter 9.1	rface documentation requirements		
	9.1 9.2	Interface requirements document Interface control document		
10				
10	10.1	rface inspection and operation at launch site		
	10.1			
	10.3	1		
	10.4	Safety requirements	9	
Bibl	iograph	hy	10	

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 of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 20, Aircraft and space vehicles, Subcommittee SC 14, Space systems and operations.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

This document provides design requirements of electrical interfaces between launch vehicles (LV) and electrical ground support equipment (EGSE) for launch system or interface designers. The defined interface type and requirements constitute the LV to EGSE interface control document (ICD).

The purpose of this document is to specify standardized requirements and help the designer specify the LV to EGSE ICD and subsequently help users to clearly understand the designer's intentions, and hence minimize costs and reduce risk from errors resulting from miscommunication. This document does not consider interface design details and does not limit LV or EGSE organizational requirements to specify a unique interface.

iTeh Standards (https://standards.iteh.ai) Document Preview

ISO 22772:2020

iTeh Standards (https://standards.iteh.ai) Document Preview

ISO 22772:2020