



**SLOVENSKI STANDARD**  
**oSIST prEN ISO 19014-3:2024**  
**01-november-2024**

---

**Stroji za zemeljska dela - Funkcijska varnost - 3. del: Okoljske in preskusne zahteve za elektronske in električne komponente, uporabljene v delih krmilnega sistema, ki so povezani z varnostjo (ISO/DIS 19014-3:2024)**

Earth-moving machinery - Functional safety - Part 3: Environmental performance and test requirements of electronic and electrical components used in safety-related parts of the control system (ISO/DIS 19014-3:2024)

Erdbaumaschinen - Funktionale Sicherheit - Teil 3: Umweltaanforderungen und Prüfungsanforderungen von elektronischen und elektrischen Komponenten des sicherheitsrelevanten Steuerungssystems (ISO/DIS 19014-3:2024)

Engins de terrassement - Sécurité fonctionnelle - Partie 3: Exigences pour la performance environnementale et l'essai des composants électroniques et électriques utilisés dans les parties relatives à la sécurité du système de commande (ISO/DIS 19014-3:2024)

**Ta slovenski standard je istoveten z: prEN ISO 19014-3**

**ICS:**

53.100      Stroji za zemeljska dela      Earth-moving machinery

**oSIST prEN ISO 19014-3:2024**      **en,fr,de**





# DRAFT International Standard

## ISO/DIS 19014-3

### Earth-moving machinery — Functional safety —

#### Part 3: Environmental performance and test requirements of electronic and electrical components used in safety-related parts of the control system

*Engins de terrassement — Sécurité fonctionnelle —*

*Partie 3: Exigences pour la performance environnementale et  
l'essai des composants électroniques et électriques utilisés dans  
les parties relatives à la sécurité du système de commande*

ICS: 53.100

This document is circulated as received from the committee secretariat.

**ISO/CEN PARALLEL PROCESSING**

Reference number  
ISO/DIS 19014-3:2024(en)

ISO/TC 127/SC 2

Secretariat: ANSI

Voting begins on:  
**2024-08-29**

Voting terminates on:  
**2024-11-21**

THIS DOCUMENT IS A DRAFT CIRCULATED FOR COMMENTS AND APPROVAL. IT IS THEREFORE SUBJECT TO CHANGE AND MAY NOT BE REFERRED TO AS AN INTERNATIONAL STANDARD UNTIL PUBLISHED AS SUCH.

IN ADDITION TO THEIR EVALUATION AS BEING ACCEPTABLE FOR INDUSTRIAL, TECHNOLOGICAL, COMMERCIAL AND USER PURPOSES, DRAFT INTERNATIONAL STANDARDS MAY ON OCCASION HAVE TO BE CONSIDERED IN THE LIGHT OF THEIR POTENTIAL TO BECOME STANDARDS TO WHICH REFERENCE MAY BE MADE IN NATIONAL REGULATIONS.

RECIPIENTS OF THIS DRAFT ARE INVITED TO SUBMIT, WITH THEIR COMMENTS, NOTIFICATION OF ANY RELEVANT PATENT RIGHTS OF WHICH THEY ARE AWARE AND TO PROVIDE SUPPORTING DOCUMENTATION.

© ISO 2024

## ISO/DIS 19014-3:2024(en)

# iTeh Standards (<https://standards.itih.ai>) Document Preview

[oSIST prEN ISO 19014-3:2024](https://standards.itih.ai/catalog/standards/sist/c2763f7c-9d8b-4ff1-8bac-09670a140847/osist-pren-iso-19014-3-2024)

<https://standards.itih.ai/catalog/standards/sist/c2763f7c-9d8b-4ff1-8bac-09670a140847/osist-pren-iso-19014-3-2024>



### **COPYRIGHT PROTECTED DOCUMENT**

© ISO 2024

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](mailto:copyright@iso.org)  
Website: [www.iso.org](http://www.iso.org)

Published in Switzerland

## ISO/DIS 19014-3:2024(en)

## Contents

	Page
<b>Foreword</b> .....	<b>v</b>
<b>Introduction</b> .....	<b>vi</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms and definitions</b> .....	<b>2</b>
<b>4 Information for use</b> .....	<b>2</b>
<b>5 Functional status classifications</b> .....	<b>2</b>
5.1 Class A.....	2
5.2 Class B.....	2
5.3 Class C.....	2
5.4 Class D.....	2
5.5 Class E.....	2
<b>6 Tests and requirements</b> .....	<b>3</b>
6.1 General.....	3
6.2 Dust.....	3
6.2.1 Purpose.....	3
6.2.2 Test method.....	3
6.3 Chemical resistance.....	3
6.3.1 Purpose.....	3
6.3.2 Test method.....	4
6.4 Salt spray.....	4
6.4.1 Purpose.....	4
6.4.2 Test method.....	4
6.5 Pressure wash.....	4
6.5.1 Purpose.....	4
6.5.2 Test method.....	4
6.6 Random vibration.....	4
6.6.1 Purpose.....	4
6.6.2 Test method.....	5
6.7 Operating shock.....	6
6.7.1 Purpose.....	6
6.7.2 Test method.....	6
6.8 Temperature cycles.....	6
6.8.1 Purpose.....	6
6.8.2 Test method.....	6
6.9 Thermal shock.....	7
6.9.1 Purpose.....	7
6.9.2 Test method.....	7
6.10 Humidity cycles.....	7
6.10.1 Purpose.....	7
6.10.2 Test method.....	8
6.11 Overvoltage condition.....	8
6.11.1 Purpose.....	8
6.11.2 Test method.....	8
6.12 Undervoltage condition (reset behaviour at voltage drop).....	8
6.12.1 Purpose.....	8
6.12.2 Test method.....	8
6.13 Electromagnetic compatibility.....	8
6.13.1 Purpose.....	8
6.13.2 Test method.....	8
6.14 Reverse polarity.....	8
6.14.1 Purpose.....	8
6.14.2 Test method.....	9

## ISO/DIS 19014-3:2024(en)

<b>Annex A (informative) Test checklist</b> .....	<b>10</b>
<b>Bibliography</b> .....	<b>11</b>

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

[oSIST prEN ISO 19014-3:2024](https://standards.iteh.ai/catalog/standards/sist/c2763f7c-9d8b-4ff1-8bac-09670a140847/osist-pren-iso-19014-3-2024)

<https://standards.iteh.ai/catalog/standards/sist/c2763f7c-9d8b-4ff1-8bac-09670a140847/osist-pren-iso-19014-3-2024>