ICS 29.280

S 35



NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC

OF CHINA

中华人民共和国国家标准

GB/T 25890.1-2010/IEC 61992-1: 2006

Railway applications—Fixed installations—

DC switchgear—Part 1: General

轨道交通 地面装置 直流开关设备

第1部分: 总则

(IEC 61992-1: 2006, IDT)

Issued on January 10, 2011

Implemented on June 01, 2011

Issued by General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China

Standardization Administration of the People's Republic of China

Contents

Fore	word		I	
1	Scope		6	
2	Norma	Normative References		
3	Terms and definitions		7	
	3.1	General terms	7	
	3.2	Performance characteristics	14	
	3.3	Components	25	
	3.4	Terms relating to d.c. circuit-breakers, switch-disconnectors and associated relays		
4	Servic	Service conditions and requirements41		
	4.1	Environmental conditions	41	
	4.2	Insulation levels	41	
5	Standa	ard features and conventional assumptions	44	
	5.1	Standard features and conventional parameters for the main circuit	44	
	5.2	Standard features for auxiliary and control circuits	46	
6	Tempe	erature-rise limits	47	
7	Tests			
	7.1	General		
	7.2	Test tolerances		
	7.3	Tests on movable devices	50	
	7.4	Temperature-rise test	52	
	7.5	Dielectric tests	55	
	7.6	Short-circuit and load-switching conditions	56	
	7.7	Verification of the behaviour during short-time withstand current test		
	7.8	Verification of the manual control device for sturdiness and position inc	licator	
	reliab	ility	59	
Annex A (Normative) Diagrams for tests				
Ann	ex B (N	lormative) Environmental conditions for indoor installations	63	
Annex C (Normative) Search of critical currents for d.c. circuit-breakers and switches				

Annex D (Informative) Recommended creepage distances	68
Annex E (Informative) Determination of maximum energy fault location	69
Annex NA (Informative) Correspondence between Normative References and National Standard	72
Bibliography	77

Foreword

GB/T 25890 Railway applications—Fixed installations—DC switchgear consists of following parts:

- Part 1: General;
- Part 2: DC circuit breakers;
- Part 3:Indoor d.c. disconnectors switch disconnectors and earthing switches;
- Part 4: Outdoor d.c. disconnectors switch-disconnectors and earthing switches;
- Part 5: Railway applications—Fixed installations—DC switchgear—Part 5:Surge arresters and low-voltage limiters for specific use in d.c. system;
- Part 6: DC switchgear assemblies;
- Part 7-1:Measurement control and protection devices for specific use in d.c. traction systems—Application guide;
- Part 7-2:Measurement, control and protection devices for specific use in d.c. traction systems—Isolating current transducers and other current measuring devices;
- Part 7-3: Measurement, control and protection devices for specific use in d.c. traction systems—Isolating voltage transducers and other voltage measuring devices

This Part is part 1 of GB/T 25890.

This Part is drafted according to the rules given in GB/T 1.1-2009.

This Part is identical to IEC 61992-1: 2006 *Railway applications - Fixed installations - DC switchgear - Part 1: General* (in English version).

International Standard corresponding to National Standard in normative references of this Part see Annex NA.

Following editorial changes have been made:

IEC 60466 in NOTE 3.3.28.3 replaced by IEC 62271-201, updated;

- After table 8 adjusted to the behind of 7.8.3, there is initial shown "Table 8" in 7.8.2;
- Reference in IEC 60913 changed as without version number and specific clause and articles, corresponding changed as without version number in Clause 2;

Added informative annex NA.

This standard was proposed by Ministry of Railways of P.R. China.

This standard is under the jurisdiction of National Technical Committee 278 on Traction Electrical Apparatus and System of Standardization Administration of China (SAC/TC 278).

The responsible drafting organization is China Railway Electrification Survey Design & Research Institute Co., Ltd.

The participating drafting organization includes China Railway Siyuan Survey and Design Group Co., Ltd.

The chief drafting staff of this standard includes Wang Yanli, Tian Shengli and Miu Yaoshan.

The participating drafter includes Wen Jianmin.

Railway applications—Fixed installations—

DC switchgear—Part 1: General

1 Scope

This Part of GB/T 25890 specifies requirements for d.c. switchgear and controlgear and is intended to be used in fixed electrical installations with nominal voltage not exceeding 3 000 V d.c., which supply electrical power to vehicles for public guided transport (i.e. railway vehicles, tramway vehicles, underground vehicles and trolley-buses, etc.).

This Part specifies general requirements in GB/T 25890.

2 Normative References

The articles contained in the following documents have become this standard when they are quoted herein. For the dated documents so quoted, all the modifications (including corrections) or revisions made thereafter shall be applicable to this Standard.

IEC 60050-441:1984, International Electrotechnical Vocabulary (IEV) - Chapter 441: Switchgear, controlgear and fuses

IEC 60050-446:1983, International Electrotechnical Vocabulary (IEV) - Chapter 446: Electrical relays

IEC 60050-605:1983, International Electrotechnical Vocabulary (IEV) - Chapter 605: Generation, transmission and distribution of electricity - Substations

IEC 60050-811:1991, International Electrotechnical Vocabulary (IEV) - Chapter 811: Electric traction

IEC 60060-1:1989, High-voltage test techniques - Part 1: General definitions and test requirements

IEC 60099-1:1999, Surge arresters - Part 1: Non-linear resistor type gapped surge arresters for a.c. systems

6



北京文心雕语翻译有限公司 Beijing Lancarver Translation Inc.

完整版本请在线下单

或咨询: TEL: 400-678-1309 QQ: 19315219 Email:<u>info@lancarver.com</u> <u>http://www.lancarver.com</u>

线下付款方式:

1. 对公账户:

单位名称:北京文心雕语翻译有限公司

开户行:中国工商银行北京清河镇支行

账 号: 0200 1486 0900 0006 131

2. 支付宝账户 : info@lancarver.com

注: 付款成功后,请预留电邮,完整版本将在一个工作日内通过电子 PDF 或 Word 形式发送至您的预留邮箱,如需索取发票,下单成功后的三个工作日内安 排开具并寄出,预祝合作愉快!

