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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 12668.7202-2024

**Adjustable speed electrical power drive systems - Part 7-202:
Generic interface and use of profiles for power drive systems -
Profile type 2 specification**

调速电气传动系统 第7-202部分：电气传动系统的通用接口和使用规范 2型规范
说明

(English Translation)

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting:

This document is part 7-202 of GB/T 12668 "Speed-controlled electrical drive systems": GB/T 12668 has been published in the following parts:

- Part 1: General requirements for rated values of low voltage DC speed regulating electrical drive systems;
- Part 2: General requirements for rated values of low voltage AC variable frequency electrical drive systems;
- Part 3: Electromagnetic compatibility requirements and specific test methods;
- Part 4: Rated voltage of AC speed regulating electric drive system with AC voltage above 1000V but not exceeding 35kV is generally required Provision of values;
- Part 5-1: Safety requirements electrical, thermal and energy;
- Part 5-2: Safety requirements functions;
- Part 6: Guidelines for determining the type of load duty and the corresponding current rating;
- Part 701: General interfaces and usage specifications for electrical drive systems Interface definitions;
- Part 7-201: General interface and use specification for electrical drive systems Type 1 specification description;
- Part 7-202: General interface and use specification for electrical drive systems Type 2 specification description;
- Part 7-301: Common interfaces and use specifications for electrical drive systems Type 1 specifications correspond to network technology;
- Part 7-302: Common interfaces and use specifications for electrical drive systems Type 2 specifications correspond to network technology;
- Part 8: Voltage specification of power interface;
- Part 9-1: Eco-design for electrical drive systems, motor starters, power electronic equipment and their drive applications General requirements for establishing energy efficiency standards for electrical drive equipment using the Product Act (EPA) and the Semi-Analytical Model (SAM);
- Part 9-2: Eco-design of electrical drive systems, motor starters, power electronic

equipment and their drive applications Electrical drives Energy efficiency indicators for systems and motor starters:

This document is equivalent to IEC 61800-7-202:2015 "Speed-controlled electrical drive systems Part 7-202: General specifications for electrical drive systems" Interface and usage specification type 2 specification description:

The following minimal editorial changes were made to this document:

---Replace and unify the confusing symbols in international standards:

- The dash "-" in the original data format diagram is replaced with the symbol "*";
- The dash "-" indicating inapplicable attributes in the original Table 28, Table 29, Table 40 and Table 143 is replaced by the symbol "/";
- The spaces indicating inapplicable attributes in the original Tables 44, 45 and 55 are replaced with the symbol "/";
- The spaces in Table 69 and Table 70 that indicate validity in any state are replaced with the symbol "delta";
- The spaces indicating blank spaces in the original Tables 138 to 142 are replaced with a dash "-";
- The symbol "=" in the original text, which indicates the meaning of the interpretation value, is replaced by the symbol ":";
- The symbol "=" in the original text that represents assignment is replaced by "=";

---Original Table 30, Table 36, Table 39, Table 43, Table 52~Table 60, Table 64~Table 66, Table 68, Table 71~Table 86, Table 89~Table 92, the NV columns of Table 97, Table 99~Table 102, Table 104, Table 106, Table 108, Table 110~Table 114 are all blank, and this document is fully filled Write "Reserved";

--- Rewrite the following clauses and expressions in the table in the original text into a form that complies with the provisions of GB/T 1.1-2020, where the textual expressions Replace with text symbols accordingly:

- Replace SystemTime in 6:4:6:7:2 with Xsystem_time and Local with local clock:

Ysystem_time_offset(drive), Timestampcomp representing the compensation timestamp from the controller is replaced by Xtimestamp,comp, indicates that the timestamp received from the controller is replaced by Timestampprec with Xtimestamp,rec, indicating the offset compensation OffsetCompensation is replaced by Yoffset_compensation, which indicates the current value of the destination system time offset:

Offsetdest is replaced by Yoffset,dest, and Offsetdest(last) representing the previous value of the destination system time offset is replaced by Yoffset,dest(last), represents the

received value of the time offset from the source system: Offsetsrc is replaced by Yoffset,src, represents the received value from the source system:

The previous value of the source system time offset, Offsetsrc(last), is replaced by Yoffset,src(last), which represents the Step value of the step threshold:

Threshold is replaced by Xstep_threshold;

- Replace Variance in 6:4:6:7:3 with Svariance, and replace PhaseCorrection with thetaphase_correction, which means that the RPI of the requested packet interval is replaced by XRPI, which means the phase remaining Replaced by thetaphase_remaining;
- Replace the controller time stamp in 6:5:4 and 7:4:2:2 with Xcontroler_time_stamp, indicating the CPU in the controller update cycle (CIP motion link RPI) is replaced by XCUP, which represents the Trans-SystemTime is replaced by Xcurrent_system_time;
- Replace JerkControl in Table 72, which indicates the acceleration control value, with Vjerk_control, which indicates the positive ramp speed with Ramp VelPositive is replaced by Vramp_vel_positive, RampAccel, which indicates ramp acceleration, is replaced by Vramp_accel, which indicates negative the ramp velocity RampVelNegative is replaced by Vramp_vel_negative, indicating that the ramp deceleration RampDecel is replaced for Vramp_decel;
- Replace Offset0 in 7:6:6:2, which indicates the system time offset of the device when receiving the control command timestamp t0, with Yoffset,0, indicates that the current system time offset Offset1 is replaced by Yoffset,1, indicating the adjusted instruction target time t0 Adjustedt0 is replaced by t2;
- Replace Offset0 in 7:6:8:3, which represents the system time offset of the device when event timestamp t0 occurs, with Yoffset,2:

--- Adjust the normative reference document IEC 61158-5-2:2014 to the latest version IEC 61158-5-2:2023, and the referenced part has no Technological differences:

This document was proposed by the China Electrical Equipment Industry Association:

This document is under the jurisdiction of the National Technical Committee for Standardization of Power Electronics Systems and Equipment (SAC/TC60):

Introduction

0.1 Overview

GB/T 12668 provides a series of general specifications for speed-controlled electrical drive systems: It is intended to consist of the following parts:

--- Part 1: General requirements for low voltage DC speed regulating electric drive system ratings: