

ICS 27.010
CCS F01



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

GB 21518-2022

Replacing GB 21518-2008

**Minimum allowable values of energy efficiency and energy
efficiency grades for AC contactors**

交流接触器能效限定值及能效等级

Issued on: December 29, 2022

Implemented on: January 1, 2024

**Issued by: State Administration for Market Regulation;
Standardization Administration of China**

Table of Contents

- 2 Normative References
- 3 Terms and Definitions
- 5 Technical Requirements

Foreword

NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA ICS

Replacing GB 21518-2008

Minimum Allowable Values of Energy Efficiency and Energy Efficiency Grades for AC Contactors

8 Table of Contents Foreword

.....	3
1 Scope	4
2 Normative References	4
3 Terms and Definitions	4
4 Energy Efficiency Grades	5
5 Technical Requirements	6

Minimum Allowable Values of Energy Efficiency and Energy Efficiency Grades for AC Contactors 1 Scope

This document specifies the energy efficiency grades, minimum allowable values of energy efficiency, sampling, test and calculation methods for AC contactors (hereinafter referred to as contactors). This document is applicable to three-pole electromechanical, direct-acting integral contactors with a rated frequency of

50 Hz, a rated operating voltage of the main circuit of 1,000 V and below, a rated operating current of 6 A ~ 630 A, a rated control power supply voltage of the contactors of AC 440 V and below, and an application category of AC-3. This document does not apply to household and similar-purpose contactors with external power-saving devices and semi-conductor contactors (solid-state contactors). NOTE: the "direct-acting" type described in this document refers to products in which both the contact system and the electromagnetic system are direct-acting.

2 Normative References

The contents of the following documents constitute indispensable clauses of this document through the normative references in the text. In terms of references with a specified date, only versions with a specified date are applicable to this document. In terms of references without a specified date, the latest version (including all the modifications) is applicable to this document.

GB/T 14048.1 (TRANSLATOR NOTE: it should be

GB 14048.1) Low-voltage Switchgear and Controlgear - Part 1: General Rules

GB/T 14048.4 Low-voltage Switchgear and Controlgear - Part 4-1: Contactors and Motor-starters - Electromechanical Contactors and Motor-starters (including motor protector)

3 Terms and Definitions

The terms and definitions defined in GB 14048.1 and GB/T 14048.4, and the following terms and definitions are applicable to this document.

5 Technical Requirements

The minimum allowable values of energy efficiency of the AC contactors are Grade-3 energy efficiency in Table 1.

6 Test and Calculation Methods 6.1 Test Methods 6.1.1 When contactors of same frame size have different rated control power supply voltage (U_s) and different main circuit rated operating current (I_e), the test shall be carried out in accordance with the following mode: a) When the number of rated control power supply voltage specifications is less than 5, the contactors with the maximum rated control power supply voltage and the minimum rated operating current shall be selected for the test; b) When the number of rated control power supply voltage specifications is greater than or equal to 5, 5 samples shall be selected, one of which is the minimum rated control power supply voltage, one is the maximum rated control power supply voltage, and another three rated control power supply voltage specifications that the manufacturer considers to have a larger holding power. For each voltage specification, select the contactor with the minimum rated operating current for the test.

6.1.2 When the rated control power supply voltage of the contactors of same frame size is in a range, the test shall be carried out in accordance with the following mode. In addition, take the maximum value as the holding power of the wide voltage specification.

a) When the upper limit of the rated control power supply voltage range is twice the lower limit, or above, respectively carry out the test at the upper limit and the lower limit of the

voltage range;

b) When the upper limit of the rated control power supply voltage range is less than twice the lower limit, carry out the test at the upper limit of the voltage range.

6.1.3 The accuracy of the voltmeter and ammeter for the measurement shall be Grade 0.2 or above.

--- The End ---

chinastandards.org - PREVIEW