SIEMENS

Prüf-Nr./Q-Nr.: *Certificate No.:* **2807 b**

Dienststelle: *Department:* **SI EP R&D TC 1 / Drutschmann**

Ort: *Place:* **Amberg** Tag: *Date:* **2021-02-25**

Anlagen: *Enclosures:* **Product Description 2807 b**

Typprüfbescheinigung / *Type Test Certificate*

Erzeugnis / *Product:* **ET200pro Solid-state Motor Starter**

Typ: *Type:* **3RK1304-5KS70-....** **3RK1304-5LS70-....**

Tech. Daten: *Specification:* **$I_{e\ (AC-3)}$ = 2 A at 400 Vac** **$I_{e\ (AC-3)}$ = 12 A at 400 Vac**

Hersteller: *Manufacturer:* **Siemens AG SI EP**

Art der Prüfung / *Type of test:* **Type Test**

Prüfer / *Tested by:* **Mr. Stadlbauer**

Labor / *Laboratory:* **Type Test Center Siemens AG, Amberg DAkkS accredited Testing Laboratory**

Angewandte Prüfbestimmungen / *Test specifications applied:*
IEC 60947-4-2:2011-05
IEC 60947-5-1:2009-07
IEC 60947-8:2011-10

Durchgeführte Prüfungen / *Tests conducted:*
IEC 60947-4-2: Test Sequences I, II, III, IV, V and Annex B
IEC 60947-5-1: Test Sequences Annex H and EMC
IEC 60947-8: Test Sequence Annex 1

Prüfergebnis / *Test results:*
All requirements of the test specification are met.

Bemerkungen / *Remarks:* **Issued: 2007-09-14**
Index a, 2012-01-24: Standard update. First pages of test reports replaced by summary.
Index b, 2021-02-25: Test Report 17037IR02 added.

Bogner Walter
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Datum: 2021.04.12 15:20:08 +02'00'

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SI EP R&D TC 3 Mr. Bogner

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Datum: 2021.04.12 17:35:11 +02'00'

i.V.
SI EP R&D CP PMM Mr. Royer

General

Type designation: Types 3RK1304-5.S70
ET200pro Solid-state Motor Starter

Manufacturer: Siemens AG, SI EP
92220 Amberg, Werner-von-Siemens-Str. 48, Germany

Production site: Siemens AG, SI EP
92220 Amberg, Werner-von-Siemens-Str. 48, Germany

Nomenclature breakdown

3RK1304	-	**5**	**K**	**S**	**7**	**0**	-	**2**	**AA**	**0**
I		II	III	IV	V	VI		VII	VIII	IX

I. Basic Type
3RK1304 - Motorstarter ET200pro, Profibus-DP

II. Motor protection
5 - Electronic

III. Setting Range
-K - 0,15A – 2A
-L - 1,5A – 12A

IV. Enclusure Protection Degree
S - IP65

V. Type of Function
7 - Solid-state

VI. Version
0 - ET200pro

VII. Mode of Operation
-2 - Direct-starter
-3 - Reversing-starter

VIII. Model
AA - Standard model

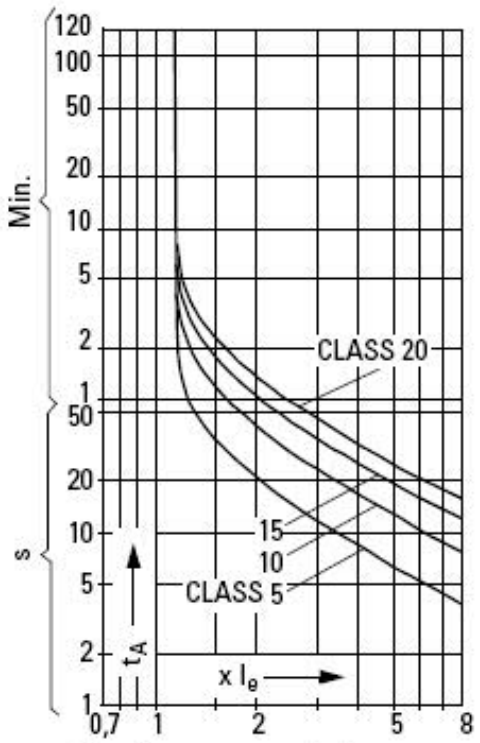
IX. Brake Output
0 - without brake output
3 - with brake output 400VAC

Technical Data

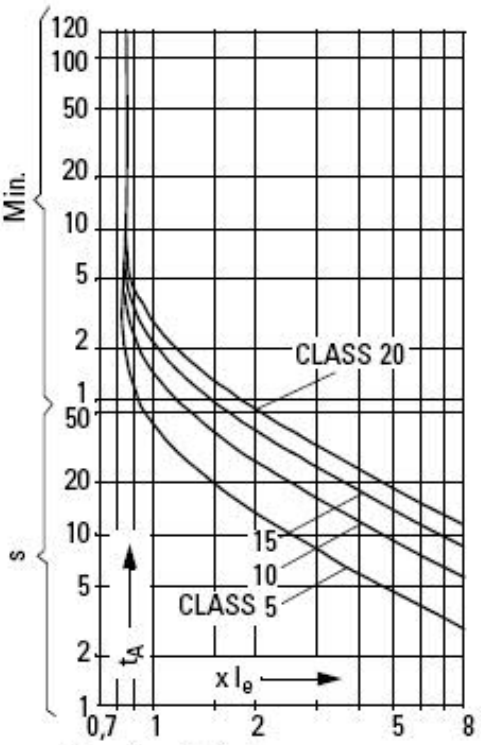
Test item particulars:	
- kind of equipment ..... :	semiconductor motor starter
- number of main poles ..... :	3
- number of main poles controlled by semiconductor switching element ..... :	2
- kind of current..... :	AC
- interrupting medium ..... :	semiconductor
- method of operation..... :	N/A
- method of control..... :	manual / automatic
- method of connecting for particular types of starters.. :	load in delta, load in star
Rated and limiting values, main circuit:	
- rated operational voltage U_e (V) ..... :	400V
- rated insulation voltage U_i (V) ..... :	400V
- rated impulse withstand voltage U_{imp} (kV)..... :	4kV
- conventional free air thermal current I_{th}(A)..... :	2A, 7/12A (Thyristor/Bypass)
- conventional enclosed thermal current I_{the} (A) ..... :	N/A
- rated operational current I_e (A) or rated operational powers..... :	2A, 9A (direct start), 12A (soft start)
- rated uninterrupted current I_u (A)..... :	2A, 9A (direct start), 12A (soft start)
- rated frequency..... :	50/60Hz
- rated duties..... :	8h duty
Short-circuit characteristic:	
- rated prospective short-circuit current "r" (kA)..... :	N/A
- rated conditional short-circuit current I_q (kA)..... :	100kA
Overload current profile:	Ie * X
Operating capability: Operating capability represents the combined capabilities of,	
- current commutation and current carrying in the ON-state; and.....:	Ie=2A: X=6; Tx=9; F=70; S=150; Ie=9A: X=6; Tx=9; F=30; S=22; Ie=12A: X=5,5; Tx=12; F=30; S=11;

- establishing and sustaining the OFF-state (blocking), at full voltage under normal load and overload conditions in accordance with utilization category, overload current profile and specified duty cycles.....:	Ie=2A: X=6; Tx=9; F=70; S=150; Ie=9A: X=6; Tx=9; F=30; S=22; Ie=12A: X=5,5; Tx=12; F=30; S=11;
Operating capability is characterized by, - rated duty (see 5.3.4);.....: - rated operational voltage (see 5.3.1.1); .....: - overload current profile (see 5.3.5.1);.....: - utilization category (see 5.4); .....:	 8h duty 400V Ie * X AC53a
Rated and limiting values of the electronically controlled electro-magnet c - kind of current..... : - power consumption..... : - rated frequency (or d.c.) ..... : - rated control circuit voltage U_c (nature: a.c. / d.c.) ..... : - rated control supply voltage U_s (nature: a.c. / d.c.) .... : - nature of external control circuit devices..... :	 N/A N/A N/A N/A N/A N/A
Rated and limiting values of relays and relaises (overload relays) **-** types of relay or release..... :	 ☐ a) dependent on previous load (e.g. thermal overload relay) ☒ b) dependent on previous load (e.g. thermal overload relay) and else sensitive to phase loss
- **characteristic values** -rated frequency, when necessary (for example in case of a current transformer operated overload relay) ..... : - trip class according to classification in table B.1, or the value of maximum tripping time, in seconds, under the conditions specified in B.2.1.1, when this time exceeds 30 s. ..... : - number of poles..... : Nature of the relay: thermal, magnetic or solid state .... :	 50/60Hz 10A, 10, 15, 20 (adjustable) 3 solid state
Designation and current settings of overload relays (see B.1.4);..... :	0,15A-2A 1,5A-12A

Time-current characteristics of overload relays (see B.1.5); ..... :	see page 6
Influence of ambient air temperature (see B.1.6); ..... :	independent
Rated and limiting values, auxiliary circuits:	
- rated operational voltage (V) ..... :	400
- rated frequency (Hz) ..... :	50/60
- number of circuits ..... :	1
- number and kind of contact elements ..... :	1 semiconductor
Co-ordination of short-circuit protective devices :	
- kind of protective device ..... :	Fuse, slow-blow, 1A, 400V



3-polige symmetrische Belastung



2-polige Belastung (Ausfall einer Phase oder Stromunsymmetrie >40 %)

time-current characteristics of overload relays