

**en** Installation instructions for Plastic Enclosures for DOL-Starters

**de** Installationsanleitung

**fr** Notice d'installation

**it** Istruzioni per l'installazione

**zh** 安装说明

**es** Instrucciones de instalación

**ru** инструкция по установке

**pt** Instruções de instalação

**ko** 설치 매뉴얼

**KS7-A0S\***

EN / IEC 62208

EN / IEC 60947-4-1

**KS7-C0S\***

EN / IEC 62208

EN / IEC 60947-4-1

UL 50

UL 60947-4-1

CAN/CSA-C22.2 No. 60947-4-1



At the end of its life, this equipment should be collected separately from any unsorted municipal waste.



**en ATTENTION! HAZARDOUS VOLTAGE!**

The installation and the operation of this device and any maintenance must be carried out by a qualified person in accordance with specific local standards and safety regulations. Before installing this device, read these operating instructions carefully. Do not touch live parts. To avoid damages to persons and material the devices have to be replaced in case of mechanical and/or electrical damage. (Follow NFPA 70E requirements).

**de ACHTUNG! GEFÄHRLICHE SPANNUNG!**

Die Installation und der Betrieb dieses Geräts sowie jegliche Wartung müssen von einer qualifizierten Person gemäß den spezifischen örtlichen Normen und Sicherheitsvorschriften durchgeführt werden. Lesen Sie vor der Installation des Geräts diese Betriebsanleitung sorgfältig durch. Aktive Teile dürfen nicht berührt werden. Um Schäden an Personen und Material zu vermeiden, müssen die Geräte bei mechanischen und/oder elektrischen Schäden and den Geräten ersetzt werden.

**fr ATTENTION! TENSION DANGEREUSE!**

L'installation, l'utilisation et la maintenance de ce dispositif doivent être réalisées par du personnel qualifié conformément aux normes et réglementations de sécurité locales. Avant d'installer le dispositif, lisez attentivement ces directives d'utilisation. Ne touchez pas les pièces sous tension. Afin d'éviter les dommages causés aux personnes et aux biens, les dispositifs doivent être remplacés en cas de dommage mécanique et/ou électrique. (Respectez les exigences NFPA 70E).

**it ATTENZIONE! PERICOLO TENSIONE!**

L'installazione e il funzionamento di questo dispositivo e qualsiasi manutenzione devono essere eseguiti da una persona qualificata in conformità con le norme locali e di sicurezza specifiche. Prima di installare questo dispositivo, leggere attentamente queste istruzioni per l'uso. Non toccare le parti in tensione. Per evitare danni a persone e materiali, i dispositivi devono essere sostituiti in caso di danni meccanici e/o elettrici.

**zh 注意! 电压危险!**

本设备的安装和操作以及所有维护工作均必须由合格的人员按照当地的具体标准和安安全守则进行。安装本设备前, 请仔细阅读这些操作说明。请勿触摸带电部分。为了避免人员伤害和材料损害, 如果在出现机械和/或电气损坏, 必须更换此设备。

**es ¡ATENCIÓN! ¡VOLTAJE PELIGROSO!**

La instalación y operación de este dispositivo, así como cualquier mantenimiento, debe ser realizado por una persona cualificada de acuerdo con estándares locales y reglamentos de seguridad específicos. Antes de instalar este dispositivo, lea atentamente las instrucciones de uso. No toque piezas bajo tensión. Para evitar daños personales y materiales, los dispositivos deben reemplazarse en caso de fallo mecánico o eléctrico. (Siga los requisitos NFPA 70E).

**ru ВНИМАНИЕ! ОПАСНОЕ НАПРЯЖЕНИЕ!**

Установка и эксплуатация этого устройства, а также любое техническое обслуживание и ремонт должны выполняться квалифицированным специалистом согласно соответствующим местным стандартам и нормам техники безопасности. Перед установкой данного устройства внимательно прочтите настоящую инструкцию по эксплуатации. Не прикасайтесь к токоведущим частям. В случае возникновения механических и/или электрических повреждений необходимо заменять устройства во избежание травматизма персонала и повреждения материальной части.

**pt ATENÇÃO! TENSÃO PERIGOSA!**

A instalação e operação deste dispositivo e qualquer manutenção devem ser feitas por pessoal qualificado, de acordo com as normas locais e regulamentações de segurança. Antes de instalar este dispositivo, leia com atenção as instruções de operação. Não toque em peças energizadas. Para evitar danos a pessoas e materiais, os dispositivos devem ser substituídos em caso de dano mecânico e/ou elétrico.

**ko 주의! 위험한 전압!**

이 장치의 설치 및 작동과 유지 보수는 유자격 직원이 지역 표준 및 안전 규정에 따라 수행해야 합니다. 이 장치를 설치하기 전에 사용자 매뉴얼을 주의 깊게 읽으십시오. 작동 중인 부품에 손을 대지 마십시오. 인적 및 물적 피해를 방지할 수 있도록 기계적 및/또는 전기적 손상이 발생하는 경우에 장치를 교체해야 합니다.



START / STOP  
Push Buttons



RESET  
Push Button

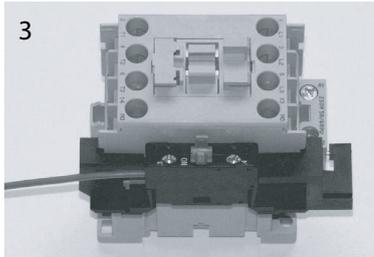
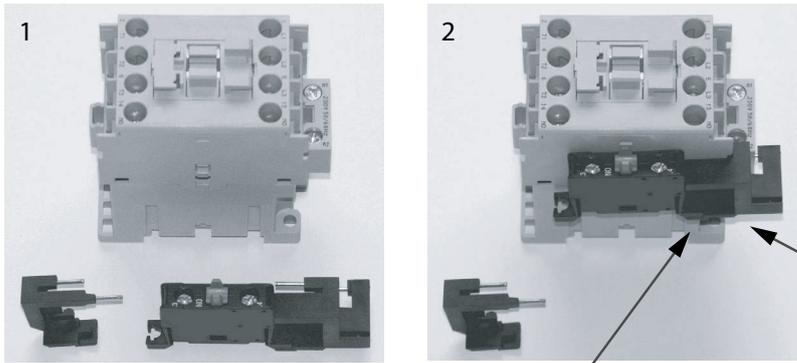


Pilot Light (Run)  
Green

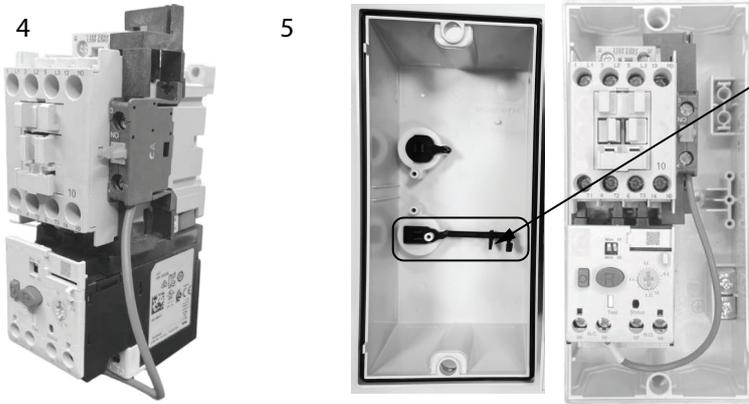
Pilot Light (Failure)  
red

Options

### KS7-A0S4 / -C0S4 with START / STOP Push Buttons



**⚠️ KS7-PLA:**  
 Replace connection module  
 Verbindungsmodul austauschen  
 Remplacer le module de connexion  
 Sostituire il modulo di collegamento  
 Reemplazar el módulo de conexión



### KS7-A0S1 / -C0S1 with RESET Push Button

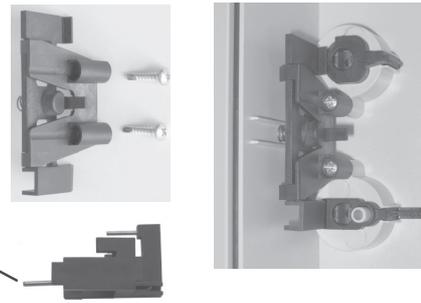


	<b>⚠️ PERIGO</b> Fuentes de alimentación MÚLTIPLES Riesgo de lesiones graves o muerte Desconecte TODA la alimentación antes de efectuar la manipulación
	<b>⚠️ DANGER</b> MULTIPLE sources of power Risque de blessures graves ou de mort Débranchez TOUTES les alimentations avant l'intervention
	<b>⚠️ PERICOLO</b> Sorgenti di alimentazione MULTIPLE Rischio di lesioni gravi o morte Scollegare TUTTE le fonti di alimentazione prima di eseguire lavori di manutenzione
	<b>⚠️ GEFÄHR</b> MEHRERE Stromquellen Gefahr von schweren Verletzungen oder Lebensgefahr Vor Wartungsarbeiten Stromzufuhr KOMPLETT trennen
	<b>⚠️ PELIGRO</b> Fuentes MÚLTIPLES de alimentación eléctrica Riesgo de lesiones graves o mortales Desconecte TODA la alimentación eléctrica antes de realizar el servicio

**IMPORTANT NOTICE:**

- In case of a separate control voltage circuit place the included warning label in the appropriate language on the front of the enclosure.
- Bei separater Steuerspannung ist das mitgelieferte Warnschild in der passenden Sprache auf der Frontseite des Gehäuses anzubringen.
- En cas d'une tension de commande séparée, placer l'étiquette d'avertissement incluse, dans la langue appropriée, sur la face du boîtier.
- In caso di tensione di controllo separata posizionare l'etichetta d'avvertimento inclusa, nella lingua appropriata sulla parte anteriore della custodia.
- En caso de una tensión de circuito de control separado, colocar la etiqueta de advertencia incluido en el idioma adecuado en la parte frontal del cofre.

### Accessories

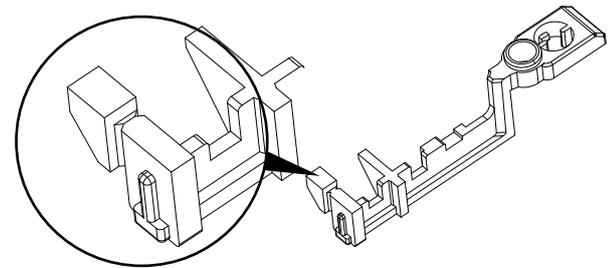


#### KS7-PLA

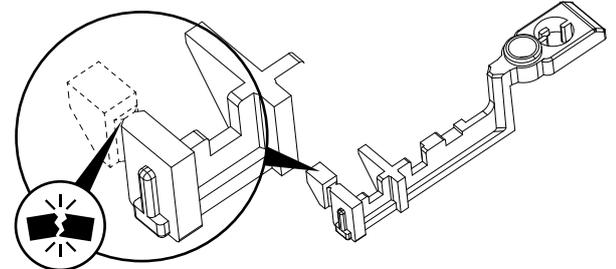
- Push button latch for maintained control
- Drucktasten-Verklüftung für Dauerkontakt-Steuerung
- Accrochage des bouton-poussoirs pour commande de contact permanent
- Ritenuta di pulsante per comando a contatto permanente
- Retención de pulsador para mando a contacto permanente

#### Latch

- CEP7-1 Overload Relays:



- CEP7-ED1/EE Overload Relays:



#### KS7-PNT

- Neutral Terminal
- Neutralleiterklemme
- Borne de neutre
- Morsetto di neutro
- Borna de neutro



#### USA + Canada:

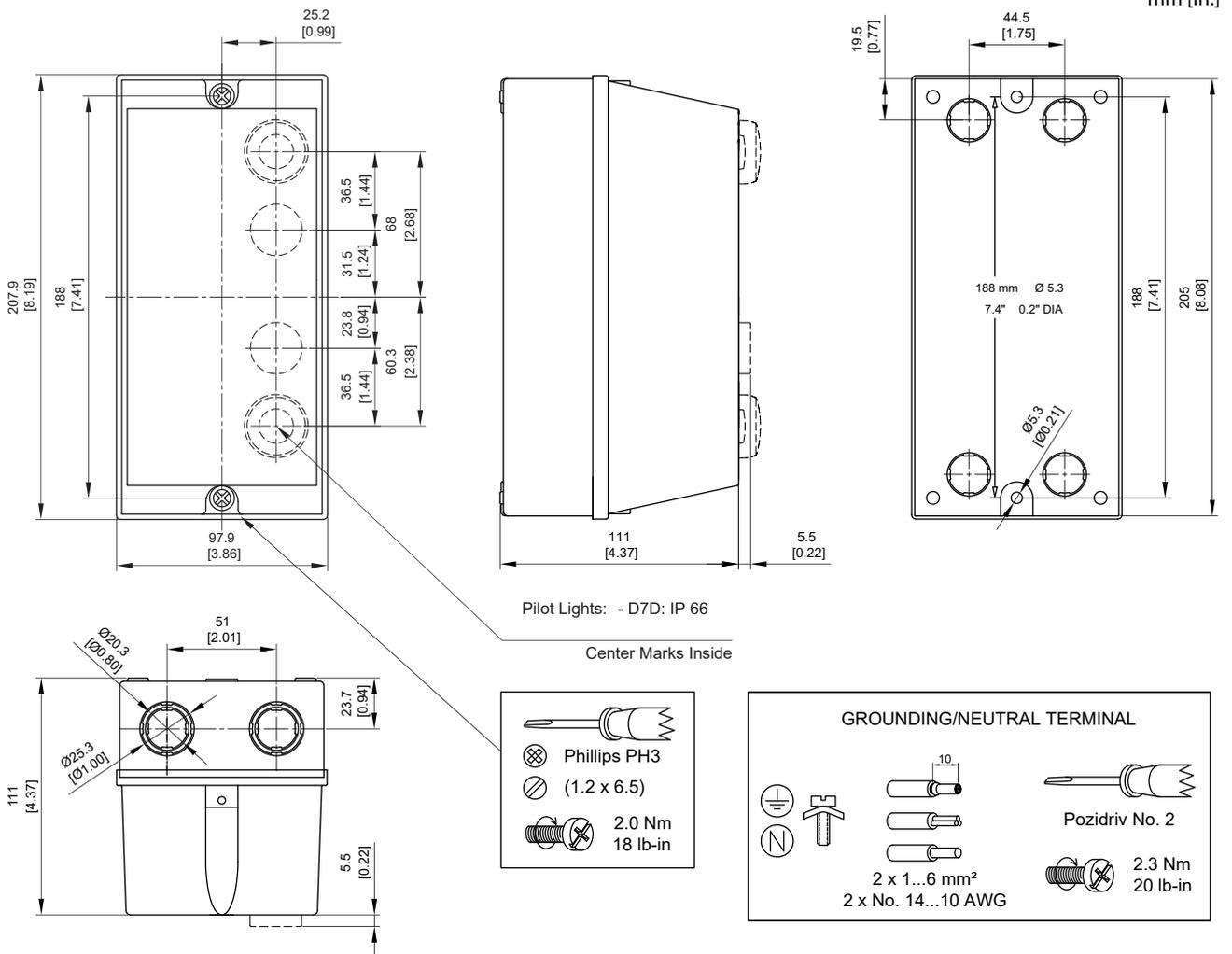
(Use D7 Pilot Lights only)

#### D7D-P...

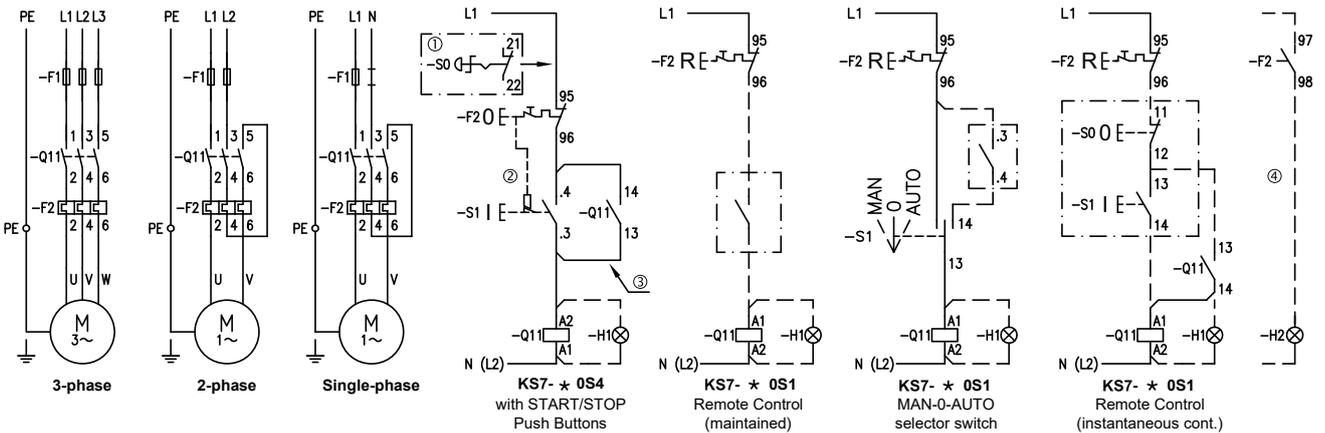
- Pilot Lights
- Meldeleuchten
- Voyants lumineux
- Lampade spia
- Lámparas de señalización



### Dimensions



### Wiring Diagrams



<p><b>KS7-C0S...</b> cULus Listed Type 4/4X/12K Enclosure</p> <p><b>WARNING:</b> Bonding between metallic conduits must be provided.</p> <p><b>AVERTISSEMENT:</b> Une liaison électrique doit être assurée entre les conduits métalliques.</p>	A-1217 IND CONT. EQ.															
	FOR USE WITH SPRECHER + SCHUH GROUNDING ADAPTER KIT, CAT. NO. KS7-GR1															
	SEE APPLICABLE CODES AND LAW FOR GROUNDING REQUIREMENTS															
	<table border="1"> <thead> <tr> <th>SUPPLY CONDUCTOR SIZE (AWG)</th> <th colspan="2">BONDING CONDUCTOR</th> </tr> <tr> <th></th> <th>QTY.</th> <th>SIZE</th> </tr> </thead> <tbody> <tr> <td>14</td> <td>1</td> <td>14</td> </tr> <tr> <td>12</td> <td>1</td> <td>12</td> </tr> <tr> <td>10</td> <td>2</td> <td>12</td> </tr> </tbody> </table>		SUPPLY CONDUCTOR SIZE (AWG)	BONDING CONDUCTOR			QTY.	SIZE	14	1	14	12	1	12	10	2
SUPPLY CONDUCTOR SIZE (AWG)	BONDING CONDUCTOR															
	QTY.	SIZE														
14	1	14														
12	1	12														
10	2	12														

- ① Option Emergency Stop (with impulse control only)
- ② Option mechanical latch KS7-PLA for maintained control
- ③ Not wired when mechanical latch KS7-PLA is installed
- ④ Option trip indicating pilot light

**WARNING:** The opening of the branch circuit protective device may be an indication that a fault current has been interrupted. To reduce the risk of fire or electric shock, current-carrying parts and other components of the controller should be examined and replaced if damaged.

**WARNING:** With the mechanical latch (☒) installed or when wired for 2-wire control, a motor connected to the circuit may start automatically when the overload relay is in the automatic reset position.

## Component Selection for Enclosed Starters

### 3-phase Motors

Components		Current Range		230V 50Hz	400V 50Hz	500V 50Hz	690V 50Hz	200V 60Hz	230V 60Hz	460V 60Hz	575V 60Hz	100kA, 690V	100kA, 600V
Contactor <sup>1)</sup>	Overload Relay <sup>2)</sup>	Min A	Max A	kW	kW	kW	kW	HP	HP	HP	HP	DIN Fuses Type gL/gG	Max. Fuse Class CC, J
CA7-9-10-*	CEP7-1EEAB	0.10	0.50	0.06...0.09	0.06...0.12	0.06...0.12	0.06...0.18	--	--	--	--	2	3
CA7-9-10-*	CEP7-1EEBB	0.20	1.0	0.12	0.18...0.25	0.18...0.37	0.25...0.55	--	--	1/4...1/3	1/4...1/2	4	4
CA7-9-10-*	CEP7-1EECB	1.0	5.0	0.18...1.1	0.37...1.5	0.55...2.2	0.75...3	1/4...3/4	1/4...1	1/2...2	3/4...3	16	10
CA7-9-10-*	CEP7-1EEDB	3.2	16	1.5...3	2.2...4	3.0...4	4	1...2	1 1/2...2	3...5	5...7 1/2	20	15
CA7-12-10-*	CEP7-1EEDB	3.2	16	4	5.5	5.5	5.5	3	3	7 1/2	10	25	20
CA7-16-10-*	CEP7-1EEDB	3.2	16		7.5	7.5	7.5	3	3	7 1/2	10	32	30
CA7-16-10-*	CEP7-1EEE	5.7	27	5.5				5	5	10	15	35	45
CA7-23-10-*	CEP7-1EEE	5.7	27	7.5	10...11	10...13	10	5	7 1/2	15	15	40	45
CA7-9-10-*	CT7N-23-A16	0.10	0.16				0.06	--	--	--	--	2	1
CA7-9-10-*	CT7N-23-A25	0.16	0.25		0.06	0.06	0.09	--	--	--	--	2	1
CA7-9-10-*	CT7N-23-A40	0.25	0.40		0.09	0.09...0.12	0.12...0.18	--	--	--	--	2	1
CA7-9-10-*	CT7N-23-A50	0.35	0.50	0.06	0.12			--	--	--	--	4	2
CA7-9-10-*	CT7N-23-A63	0.45	0.63	0.09		0.18	0.25	--	--	--	1/4	4	3
CA7-9-10-*	CT7N-23-A80	0.55	0.80	0.12	0.18	0.25	0.37	--	--	1/4...1/3	1/3	4	3
CA7-9-10-*	CT7N-23-B10	0.75	1.00		0.25	0.37	0.55	--	--	1/3	1/2	6	4
CA7-9-10-*	CT7N-23-B13	0.90	1.30	0.18	0.37		0.75	--	1/4	1/2		6	4
CA7-9-10-*	CT7N-23-B16	1.10	1.6	0.25		0.55		1/4	1/3	3/4	3/4	6	4
CA7-9-10-*	CT7N-23-B20	1.40	2.0		0.75	0.75	1.1	1/3	1/3	3/4...1	1	6	4
CA7-9-10-*	CT7N-23-B25	1.80	2.5	0.37		1.1	1.5		1/2		1 1/2	10	6
CA7-9-10-*	CT7N-23-B32	2.3	3.2	0.55	1.1	1.5	2.2	1/2	3/4	1 1/2	2	10	6
CA7-9-10-*	CT7N-23-B40	2.9	4.0	0.75	1.5			3/4	3/4	2	3	10	10
CA7-9-10-*	CT7N-23-B48	3.5	4.8			2.2	3	1	1	3	3	10	10
CA7-9-10-*	CT7N-23-B63	4.5	6.3	1.1	2.2	3	4	1 1/2	1 1/2		5	16	12
CA7-9-10-*	CT7N-23-B75	5.5	7.5	1.5	3	4		1 1/2...2	2	5	5	16	15
CA7-9-10-*	CT7N-23-C10	7.2	10.0	2.2	4			2			7 1/2	20	20
CA7-9-10-*	CT7N-23-C12	9.00	12.5	3								25	20
CA7-12-10-*	CT7N-23-B75	5.5	7.5				5.5					16	15
CA7-12-10-*	CT7N-23-C10	7.2	10.0			5.5						20	20
CA7-12-10-*	CT7N-23-C12	9.00	12.5		5.5			3	3	7 1/2	10	25	20
CA7-16-10-*	CT7N-23-C10	7.2	10.0				7.5					20	20
CA7-16-10-*	CT7N-23-C12	9.00	12.5			7.5						25	20
CA7-16-10-*	CT7N-23-C16	11.3	16.0	4	7.5	7.5			5	10		32	30
CA7-16-10-*	CT7N-23-C20	15.0	20.0					5			15	32	30
CA7-23-10-*	CT7N-23-C16	11.3	16.0				10					32	30
CA7-23-10-*	CT7N-23-C20	15.0	20.0			11						40	35
CA7-23-10-*	CT7N-23-C21	17.50	21.5	5.5		13				15		40	35
CA7-23-10-*	CT7N-23-C25	21.00	25.0		11				7 1/2			40	40

### Single-phase Motors

Components		Current Range		230V 50Hz	115V 60Hz	200V 60Hz	230V 60Hz	100kA, 690V	100kA, 600V
Contactor <sup>1)</sup>	Overload Relay <sup>2)</sup>	Min A	Max A	kW	HP	HP	HP	DIN Fuses Type gL/gG	Max. Fuse Class CC, J
CA7-9-10-*	CEP7-1EFCEB	1.0	5.0	0.12...0.55	1/10...1/6	1/6...1/3	1/6...1/3	16	10
CA7-9-10-*	CEP7-1EFCEB	3.2	16	0.75...1.5	1/4...1/2	1/2...1 1/2	1/2...1 1/2	20	20
CA7-12-10-*	CEP7-1EFDB	3.2	16	2.2	1/2	2	2	25	25
CA7-16-10-*	CEP7-1EFDB	3.2	16	2.2	3/4	2	2	32	25
CA7-16-10-*	CEP7-1EFEB	5.4	27	3.0	1	2	3	35	30
CA7-23-10-*	CEP7-1EFEB	5.4	27	4.0	1 1/2...2	3	3	40	40
CA7-9-10-*	CT7N-23-A16	0.10	0.16	--	--	--	--	2	1
CA7-9-10-*	CT7N-23-A25	0.16	0.25	--	--	--	--	2	1
CA7-9-10-*	CT7N-23-A40	0.25	0.40	--	--	--	--	2	1
CA7-9-10-*	CT7N-23-A50	0.35	0.50	--	--	--	--	4	2
CA7-9-10-*	CT7N-23-A63	0.45	0.63	--	--	--	--	4	3
CA7-9-10-*	CT7N-23-A80	0.55	0.80	0.06	--	--	--	4	3
CA7-9-10-*	CT7N-23-B10	0.75	1.0	0.09	--	--	--	6	4
CA7-9-10-*	CT7N-23-B13	0.90	1.3	0.12	--	--	--	6	4
CA7-9-10-*	CT7N-23-B16	1.1	1.6	0.12	--	--	--	6	6
CA7-9-10-*	CT7N-23-B20	1.4	2.0	0.18	--	--	--	6	6
CA7-9-10-*	CT7N-23-B25	1.8	2.5	0.25	--	--	1/6	10	10
CA7-9-10-*	CT7N-23-B32	2.3	3.2	0.37	1/10	1/6	1/4	10	10
CA7-9-10-*	CT7N-23-B40	2.9	4.0	0.37	1/8	1/4	1/3	10	10
CA7-9-10-*	CT7N-23-B48	3.5	4.8	0.55	1/6	1/3	1/3	10	10
CA7-9-10-*	CT7N-23-B63	4.5	6.3	0.75	1/4	1/2	1/2	16	15
CA7-9-10-*	CT7N-23-B75	5.5	7.5	1.1	1/3		3/4	16	15
CA7-9-10-*	CT7N-23-C10	7.2	10.0	1.1	1/3	3/4...1	1	20	20
CA7-9-10-*	CT7N-23-C12	9.0	12.5	1.5	1/2	1 1/2	1 1/2	25	20
CA7-16-10-*	CT7N-23-C16	11.3	16.0	2.2	3/4	2	2	32	30
CA7-16-10-*	CT7N-23-C20	15.0		3	01 . 0 2		3	32	30
CA7-23-10-*	CT7N-23-C21	17.5	21.5	3	1 1/2	3		40	35
CA7-23-10-*	CT7N-23-C25	21.0	25.0		2			40	35

#### 1) Contactors

To complete the Catalog No., replace \* by the coil voltage code

#### 2) Overload Relays

**CEP7-1\***: Electronic overload relays  
**CEP7-ED1/EE\*** : Electronic overload relays

**CEP7S-EE\***: Electronic overload relays specially for single-phase motors Max. environmental temperature 40 °C (outside the enclosure)

**CT7N\***: Thermal overload relays. Max. environmental temperature 40 °C (outside the enclosure)