

Enclosed Non-Reversing Combination Controller, AC Operation - Type 1/12K/IP66 ⑥⑦

| Amp / Horsepower Rating | | | | | Non-Metallic Type 1/12K/IP66 Enclosure (KS7-COC4R) | | | Dimension Code |
|------------------------------------------------|-------|-------|------|------------------------|----------------------------------------------------|---------|---------------------------|----------------|
| Max. Horsepower ①②③ | | | | O/L Relay Ampere Range | Magnetic Response Current | Index ⑤ | Catalog Number ④⑥⑦⑧ | |
| Three Phase | | | | | | | | |
| 200V | 230V | 460V | 575V | | | | | |
| KTA7-25S Standard Interrupting Capacity | | | | | | | | |
| ~ | ~ | ~ | ~ | 0.10...0.16 | 2.1 | 1 | CX7-9-10-*AS0.16A-A10-PG▼ | Q4 |
| ~ | ~ | ~ | ~ | 0.16...0.25 | 3.3 | 2 | CX7-9-10-*AS0.25A-A10-PG▼ | Q4 |
| ~ | ~ | ~ | ~ | 0.25...0.40 | 5.2 | 3 | CX7-9-10-*AS0.4A-A10-PG▼ | Q4 |
| ~ | ~ | ~ | ~ | 0.40...0.63 | 8.2 | 4 | CX7-9-10-*AS0.63A-A10-PG▼ | Q4 |
| ~ | ~ | 1/2 | 3/4 | 0.63...1.0 | 13 | 5 | CX7-9-10-*AS1A-A10-PG▼ | Q4 |
| ~ | ~ | 1 | 1 | 1.0...1.6 | 21 | 6 | CX7-9-10-*AS1.6A-A10-PG▼ | Q4 |
| 1/2 | 3/4 | 1-1/2 | 2 | 1.6...2.5 | 33 | 7 | CX7-9-10-*AS2.5A-A10-PG▼ | Q4 |
| 1 | 1 | 3 | 3 | 2.5...4 | 52 | 8 | CX7-9-10-*AS4A-A10-PG▼ | Q4 |
| 1-1/2 | 2 | 5 | ~ | 4...6.3 | 82 | 9 | CX7-9-10-*AS6.3A-A10-PG▼ | Q4 |
| 3 | 3 | 7-1/2 | ~ | 6.3...10 | 130 | 11 | CX7-12-10-*AS10A-A10-PG▼ | Q4 |
| 5 | 5 | 10 | ~ | 10...16 | 208 | 12 | CX7-16-10-*AS16A-A10-PG▼ | Q4 |
| 5 | 7-1/2 | 15 | ~ | 14.5...20 | 260 | 13 | CX7-23-10-*AS20A-A10-PG▼ | Q4 |
| KTA7-25H High Interrupting Capacity | | | | | | | | |
| 1/2 | 3/4 | 1-1/2 | 2 | 1.6...2.5 | 33 | 17 | CX7-9-10-*AH2.5A-A10-PG▼ | Q4 |
| 1 | 1 | 3 | 3 | 2.5...4 | 52 | 19 | CX7-9-10-*AH4A-A10-PG▼ | Q4 |
| 1-1/2 | 2 | 5 | 5 | 4...6.3 | 82 | 21 | CX7-9-10-*AH6.3A-A10-PG▼ | Q4 |
| 3 | 3 | 7-1/2 | 10 | 6.3...10 | 130 | 23 | CX7-12-10-*AH10A-A10-PG▼ | Q4 |
| 5 | 5 | 10 | 15 | 10...16 | 208 | 28 | CX7-16-10-*AH16A-A10-PG▼ | Q4 |
| 5 | 7-1/2 | 15 | ~ | 14.5...20 | 260 | 31 | CX7-23-10-*AH20A-A10-PG▼ | Q4 |
| 5 | 7-1/2 | 15 | ~ | 18...25 | 325 | 33 | CX7-23-10-*AH25A-A10-PG▼ | Q4 |

Includes:

- Type 1/12K Non-metallic enclosure (KS7-COC4R)
- KTA7 "Type E/F" Self-protected Combination Motor Controller with 1 NO front mount Auxiliary Contact (Cat #: KT7-PE1-10)
- Terminal Adaptor for Type E Applications (Cat.# KT7-25-TE1)
- CA7 contactor (for remote operation), AC coil
- Gray and black Type 1/12K; IP66 handle (KT7-SHB + KT7-KN1) ⑧
- Power wiring
- Factory installed Pilot device option ⑥

Replace ▼ with option code. See page F103 for factory installed modifications

Contactor

AC Coil Codes (*) ④

| AC Coil Code | Voltage Range | |
|--------------|---------------|----------|
| | 50 Hz | 60 Hz |
| 24Z | 24V | 24V |
| 120 | 110V | 120V |
| 220W | 200-220V | 208-240V |
| 415 | 400-415V | ~ |
| 480 ⑨ | 440V | 480V |
| 600 ⑨ | 550V | 600V |

KWIKstarter coils are wired standard from the factory to terminals "L1" and "L2" (for line voltage control). This means the coil voltage must match the line voltage. When a coil is specified for 120V or less, it will be wired for a separate control source (not wired to L1 and L2).

- ① Horsepower ratings shown in the table above are for reference. The final selection of the controller depends on the actual motor full load current and service factor. For motor with service factor less than 1.15. Use motor nameplate full load current times 0.9 and choose the motor starter with the appropriate current range. Example: Motor FLC = 4.2A; S.F. = 1.0. 4.2A x 0.9 = 3.78A. Select catalog number KTA7-25S-4A.
- ② Magnetic trip is fixed at 13x the maximum value of the current adjustment range.
- ③ CX7 may be applied to single phase loads. Contact factory for these specifications.
- ④ Other voltages available, see Section A in this catalog.
- ⑤ KAIC Assembly Rating Index. See pages F73-F76 for Application Rating Guide.
- ⑥ One Pilot Device option must be selected. Plastic Bezel is standard. Pilot Device options include D7-BX Base Mounted contact blocks. Pilot Light option must match coil voltage 24V AC or DC, 120V AC or 240V AC only. See Section H for more information.

- ⑦ CPT not possible with KS7-COC4R. Refer to page F118 for wiring diagram and F119 for dimensional information.
- ⑧ A red and yellow handle may be selected instead of the standard gray and black handle. Change "PG" suffix to "PJ". Ex: Change CX7-9-10-*AS0.16A-A10-PG▼ to CX7-9-10-*AS0.16A-A10-PJ▼.
- ⑨ Catalog number (-A10) includes front-mounted auxiliary KT7-PE1-10 with 300 VAC maximum control circuit matching line voltage, or provided from separate source, used to de-energize contactor coil under fault condition (auxiliary not available for customer use). For control circuits greater than 300 VAC, which is common with line voltage, the auxiliary will not be wired into the control circuit since the contactor coil will be de-energized when KTA7 is tripped due to overload or short circuit; therefore, the KT7-PE1-10 auxiliary is available for customer use.

Enclosed Motor Circuit Controllers

Section Obsolete
See pages F1.56 - F1.88

Enclosed Non-Reversing Combination Controller, Electronic DC Operation - Type 1/12K/IP66 ④⑥⑦

| Amp / Horsepower Rating | | | | | Non-Metallic Type 1/12K/IP66 Enclosure (KS7-COC4R) | | | | Dimension Code |
|-------------------------|-------|-------|------|-----------------------------------------|----------------------------------------------------|---------|------------------------------------------|----|----------------|
| Max. Horsepower ①②③ | | | | O/L Relay Ampere Range | Magnetic Response Current | Index ⑤ | Catalog Number ④⑥⑧ | | |
| Three Phase | | | | | | | | | |
| 200V | 230V | 460V | 575V | KTA7-25S Standard Interrupting Capacity | | | | | |
| ~ | ~ | ~ | ~ | 0.10...0.16 | 2.1 | 1 | CX7-9E-10- * -AS0.16A-A10-PG▼ | Q4 | |
| ~ | ~ | ~ | ~ | 0.16...0.25 | 3.3 | 2 | CX7-9E-10- * -AS0.25A-A10-PG▼ | Q4 | |
| ~ | ~ | ~ | ~ | 0.25...0.40 | 5.2 | 3 | CX7-9E-10- * -AS0.4A-A10-PG▼ | Q4 | |
| ~ | ~ | ~ | ~ | 0.40...0.63 | 8.2 | 4 | CX7-9E-10- * -AS0.63A-A10-PG▼ | Q4 | |
| ~ | ~ | 1/2 | 3/4 | 0.63...1.0 | 13 | 5 | CX7-9E-10- * -AS1A-A10-PG▼ | Q4 | |
| ~ | ~ | 1 | 1 | 1.0...1.6 | 21 | 6 | CX7-9E-10- * -AS1.6A-A10-PG▼ | Q4 | |
| 1/2 | 3/4 | 1-1/2 | 2 | 1.6...2.5 | 33 | 7 | CX7-9E-10- * -AS2.5A-A10-PG▼ | Q4 | |
| 1 | 1 | 3 | 3 | 2.5...4 | 52 | 8 | CX7-9E-10- * -AS4A-A10-PG▼ | Q4 | |
| 1-1/2 | 2 | 5 | ~ | 4...6.3 | 82 | 9 | CX7-9E-10- * -AS6.3A-A10-PG▼ | Q4 | |
| 3 | 3 | 7-1/2 | ~ | 6.3...10 | 130 | 11 | CX7-12E-10- * -AS10A-A10-PG▼ | Q4 | |
| 5 | 5 | 10 | ~ | 10...16 | 208 | 28 | CX7-16E-10- * -AS16A-A10-PG▼ | Q4 | |
| 5 | 7-1/2 | 15 | ~ | 14.5...20 | 260 | 31 | CX7-23E-10- * -AS20A-A10-PG▼ | Q4 | |
| 5 | 7-1/2 | 15 | ~ | 18...25 | 325 | 33 | CX7-23E-10- * -AH25A-A10-PG▼ | Q4 | |
| 1/2 | 3/4 | 1-1/2 | 2 | 1.6...2.5 | 33 | 17 | CX7-9E-10- * -AS2.5A-A10-PG▼ | Q4 | |
| 1 | 1 | 3 | 3 | 2.5...4 | 52 | 18 | CX7-9E-10- * -AH4A-A10-PG▼ | Q4 | |
| 1-1/2 | 2 | 5 | 5 | 4...6.3 | 82 | 12 | CX7-9E-10- * -AH6.3A-A10-PG▼ | Q4 | |
| 3 | 3 | 7-1/2 | 10 | 6.3...10 | 130 | 14 | CX7-12E-10- * -AH10A-A10-PG▼ | Q4 | |
| 5 | 5 | 10 | ~ | 10...16 | 208 | 28 | CX7-16E-10- * -AH16A-A10-PG▼ | Q4 | |
| 5 | 7-1/2 | 15 | ~ | 14.5...20 | 260 | 31 | CX7-23E-10- * -AH20A-A10-PG▼ | Q4 | |
| 5 | 7-1/2 | 15 | ~ | 18...25 | 325 | 33 | CX7-23E-10- * -AH25A-A10-PG▼ | Q4 | |



Includes:

- Type 1/12K Non-metallic enclosure (KS7-COC4R)
- KTA7 "Type E/F" Self-protected Combination Motor Controller with 1 NO front mount Auxiliary Contact (Cat #: KT7-PE1-10)
- Terminal Adaptor for Type E Applications (Cat.# KT7-25-TE1)
- CA7 contactors (for remote operation), with Electronic DC Coil
- Gray and black Type 1/12K; IP66 handle (KT7-SHB) + KT7-KN1 ⑤
- Power wiring
- Factory installed Pilot device option ⑥

Replace ▼ with option code. See page F103 for factory installed modifications

Contactors Electronic DC Coil Codes (*) ④

| DC Coil Codes | Voltage |
|---------------|----------|
| 12E | 12V |
| 24E | 24V |
| 36E | 36-48V |
| 48E | 48-72V |
| 110E | 110-125V |
| 220E | 220-250V |

KWIKstarter coils are wired standard from the factory to terminals "L1" and "L2" (for line voltage control). This means the coil voltage must match the line voltage. When a coil is specified for 120V or less, it will be wired for a separate control source (not wired to L1 and L2).

Section Obsolete
See pages F1.56 - F1.88

- ① Horsepower ratings shown in the table above are for reference. The final selection of the controller depends on the actual motor full load current and service factor. For motor with service factor less than 1.15. Use motor nameplate full load current times 0.9 and choose the motor starter with the appropriate current range. Example: Motor FLC = 4.2A; S.F. = 1.0. 4.2A x 0.9 = 3.78A. Select catalog number KTA7-25S-4A.
- ② Magnetic trip is fixed at 13x the maximum value of the current adjustment range.
- ③ CX7 may be applied to single phase loads. Contact factory for these specifications.
- ④ CX7-9E...23E with electronic coils are not interchangeable with non-electronic DC or AC coils.
- ⑤ KAIC Assembly Rating Index. See pages F73-F76 for Application Rating Guide.

- ⑥ One Pilot Device option must be selected. Plastic Bezel is standard. Pilot Device options include D7-BX_ Base Mounted contact blocks. Pilot Light option must match coil voltage 24V AC or DC, 120V AC or 240V AC only. See Section H for more information.
- ⑦ CPT not possible with KS7-COC4R. Refer to page F118 for wiring diagram and F119 for dimensional information.
- ⑧ A red and yellow handle may be selected instead of the standard gray and black handle. Change "PG" suffix to "PJ". Ex: Change CX7-9-10-~~*~~-AS0.16A-A10-PG▼ to CX7-9-10-~~*~~-AS0.16A-A10-PJ▼.

Enclosed Non-Reversing Combination Controller with E-Stop, AC Operation - Type 1/12K/IP66 ①⑦⑧

| Amp / Horsepower Rating | | | | Non-Metallic Type 1/12K/IP66 Enclosure (KS7-C0C4R) | | | | |
|------------------------------------------------|-------|-------|------|----------------------------------------------------|---------------------------|---------|------------------------------|----------------|
| Max. Horsepower ②③④ | | | | O/L Relay Ampere Range | Magnetic Response Current | Index ⑥ | Catalog Number ⑤⑦⑨⑩ | Dimension Code |
| Three Phase | | | | | | | | |
| 200V | 230V | 460V | 575V | | | | | |
| KTA7-25S Standard Interrupting Capacity | | | | | | | | |
| ~ | ~ | ~ | ~ | 0.10...0.16 | 2.1 | 1 | CX7-9-10-*AS0.16A-A10-PG4U-9 | Q4 |
| ~ | ~ | ~ | ~ | 0.16...0.25 | 3.3 | 2 | CX7-9-10-*AS0.25A-A10-PG4U-9 | Q4 |
| ~ | ~ | ~ | ~ | 0.25...0.40 | 5.2 | 3 | CX7-9-10-*AS0.4A-A10-PG4U-9 | Q4 |
| ~ | ~ | ~ | ~ | 0.40...0.63 | 8.2 | 4 | CX7-9-10-*AS0.63A-A10-PG4U-9 | Q4 |
| ~ | ~ | 1/2 | 3/4 | 0.63...1.0 | 13 | 5 | CX7-9-10-*AS1A-A10-PG4U-9 | Q4 |
| ~ | ~ | 1 | 1 | 1.0...1.6 | 21 | 6 | CX7-9-10-*AS1.6A-A10-PG4U-9 | Q4 |
| 1/2 | 3/4 | 1-1/2 | 2 | 1.6...2.5 | 33 | 7 | CX7-9-10-*AS2.5A-A10-PG4U-9 | Q4 |
| 1 | 1 | 3 | 3 | 2.5...4 | 52 | 8 | CX7-9-10-*AS4A-A10-PG4U-9 | Q4 |
| 1-1/2 | 2 | 5 | ~ | 4...6.3 | 82 | 9 | CX7-9-10-*AS6.3A-A10-PG4U-9 | Q4 |
| 3 | 3 | 7-1/2 | ~ | 6.3...10 | 130 | 11 | CX7-9-10-*AS10A-A10-PG4U-9 | Q4 |
| 5 | 5 | 10 | ~ | 10...16 | 208 | 13 | CX7-9-10-*AS16A-A10-PG4U-9 | Q4 |
| 5 | 7-1/2 | 15 | ~ | 14.5...20 | 325 | 15 | CX7-23-10-*AS20A-A10-PG4U-9 | Q4 |
| 1/2 | 3/4 | 1-1/2 | 2 | 1.6...2.5 | 33 | 17 | CX7-9-10-*AH2.5A-A10-PG4U-9 | Q4 |
| 1 | 1 | 3 | 3 | 2.5...4 | 52 | 19 | CX7-9-10-*AH4A-A10-PG4U-9 | Q4 |
| 1-1/2 | 2 | 5 | 5 | 4...6.3 | 82 | 22 | CX7-9-10-*AH6.3A-A10-PG4U-9 | Q4 |
| 3 | 3 | 7-1/2 | 10 | 6.3...10 | 130 | 24 | CX7-12-10-*AH10A-A10-PG4U-9 | Q4 |
| 5 | 5 | 10 | 15 | 10...16 | 208 | 28 | CX7-16-10-*AH16A-A10-PG4U-9 | Q4 |
| 5 | 7-1/2 | 15 | ~ | 14.5...20 | 325 | 31 | CX7-23-10-*AH20A-A10-PG4U-9 | Q4 |
| 5 | 7-1/2 | 15 | ~ | 18...25 | 325 | 33 | CX7-23-10-*AH25A-A10-PG4U-9 | Q4 |



Includes:

- Type 1/12K Non-metallic enclosure (KS7-C0C4R) ①
- KTA7 "Type E/F" Self-protected Combination Motor Controller with 1 NO front mount Auxiliary Contact (Cat #: KT7-PE1-10)
- Terminal Adaptor for Type E Applications (Cat.# KT7-25-TE1)
- CA7 contactor (for remote operation), AC coil
- Multifunction 2-position Push Button and Emergency Stop ⑦
- Gray and black Type 1/12K; IP66 handle (KT7-SHB + KT7-KN1) ⑨
- Power wiring

This is a factory assembly. Optional factory modifications are not available on this device.

Contactor AC Coil Codes (*) ⑤

| AC Coil Code | Voltage Range | |
|--------------|---------------|----------|
| | 50 Hz | 60 Hz |
| 24Z | 24V | 24V |
| 120 | 110V | 120V |
| 220W | 200-220V | 208-240V |
| 415 | 400-415V | ~ |
| 480 ⑩ | 440V | 480V |
| 600 ⑩ | 550V | 600V |

KWIKstarter coils are wired standard from the factory to terminals "L1" and "L2" (for line voltage control). This means the coil voltage must match the line voltage. When a coil is specified for 120V or less, it will be wired for a separate control source (not wired to L1 and L2).

- ① This is a factory assembly. The KS7-C0C4R does not include knock-outs for field assembly of this starter.
- ② Horsepower ratings shown in the table above are for reference. The final selection of the controller depends on the actual motor full load current and service factor. For motor with service factor less than 1.15. Use motor nameplate full load current times 0.9 and choose the motor starter with the appropriate current range. Example: Motor FLC = 4.2A; S.F. = 1.0. 4.2A x 0.9 = 3.78A. Select catalog number KTA7-25S-4A.
- ③ Magnetic trip is fixed at 13x the maximum value of the current adjustment range.
- ④ CX7 may be applied to single phase loads. Contact factory for these specifications.
- ⑤ Other voltages available, see Section A in this catalog.
- ⑥ KAIC Assembly Rating Index. See pages F73-F76 for Application Rating Guide.
- ⑦ Uses D7P-U2EFFEPX11 Two-Position Multifunction push button with legend I/O and D7P-MT44PX01 Emergency Stop Push Button.

- ⑧ CPT not possible with KS7-C0C4R. Refer page F119 for dimensional information.
- ⑨ A red and yellow handle may be selected instead of the standard gray and black handle. Change "PG" suffix to "PJ". Ex: CX7-9-10-*AS0.16A-A10-PG4U-9 becomes CX7-9-10-*AS0.16A-A10-PJ4U-9.
- ⑩ Catalog number (-A10) includes front-mounted auxiliary KT7-PE1-10 with 300 VAC maximum control circuit matching line voltage, or provided from separate source, used to de-energize contactor coil under fault condition (auxiliary not available for customer use). For control circuits greater than 300 VAC, which is common with line voltage, the auxiliary will not be wired into the control circuit since the contactor coil will be de-energized when KTA7 is tripped due to overload or short circuit; therefore, the KT7-PE1-10 auxiliary is available for customer use.

Section Obsolete See pages F1.56 - F1.88

Enclosed Reversing Combination Controller, AC Operation - Type 1/12K/IP66 ⑥⑦

| Amp / Horsepower Rating | | | | | Non-Metallic Type 1/12K/IP66 Enclosure (KS7-COC4R) | | | Dimension Code |
|-------------------------------------|-------|-------|------|-----------------------------------------|----------------------------------------------------|---------|----------------------------|----------------|
| Max. Horsepower ①②③ | | | | O/L Relay Ampere Range | Magnetic Response Current | Index ⑤ | Catalog Number ④⑥⑧⑨ | |
| Three Phase | | | | | | | | |
| 200V | 230V | 460V | 575V | KTA7-25S Standard Interrupting Capacity | | | | |
| ~ | ~ | ~ | ~ | 0.10...0.16 | 2.1 | 1 | CXU7-9-22-*AS0.16A-A10-PG▼ | Q4 |
| ~ | ~ | ~ | ~ | 0.16...0.25 | 3.3 | 2 | CXU7-9-22-*AS0.25A-A10-PG▼ | Q4 |
| ~ | ~ | ~ | ~ | 0.25...0.40 | 5.2 | 3 | CXU7-9-22-*AS0.4A-A10-PG▼ | Q4 |
| ~ | ~ | ~ | ~ | 0.40...0.63 | 8.2 | 4 | CXU7-9-22-*AS0.63A-A10-PG▼ | Q4 |
| ~ | ~ | 1/2 | 3/4 | 0.63...1.0 | 13 | 5 | CXU7-9-22-*AS1A-A10-PG▼ | Q4 |
| ~ | ~ | 1 | 1 | 1.0...1.6 | 21 | 6 | CXU7-9-22-*AS1.6A-A10-PG▼ | Q4 |
| 1/2 | 3/4 | 1-1/2 | 2 | 1.6...2.5 | 33 | 7 | CXU7-9-22-*AS2.5A-A10-PG▼ | Q4 |
| 1 | 1 | 3 | 3 | 2.5...4 | 52 | 8 | CXU7-9-22-*AS4A-A10-PG▼ | Q4 |
| 1-1/2 | 2 | 5 | ~ | 4...6.3 | 82 | 9 | CXU7-9-22-*AS6.3A-A10-PG▼ | Q4 |
| 3 | 3 | 7-1/2 | ~ | 6.3...10 | 130 | 10 | CXU7-9-22-*AS10A-A10-PG▼ | Q4 |
| 5 | 5 | 10 | ~ | 10...16 | 208 | 28 | CXU7-16-22-*AH16A-A10-PG▼ | Q4 |
| 5 | 7-1/2 | 15 | ~ | 14.5...20 | 260 | 31 | CXU7-23-22-*AH20A-A10-PG▼ | Q4 |
| KTA7-40H High Interrupting Capacity | | | | | | | | |
| 1/2 | 3/4 | 1-1/2 | 2 | 1.6...2.5 | 33 | 17 | CXU7-9-22-*AS2.5A-A10-PG▼ | Q4 |
| 1 | 1 | 3 | 3 | 2.5...4 | 52 | 18 | CXU7-9-22-*AH4A-A10-PG▼ | Q4 |
| 1-1/2 | 2 | 5 | 5 | 4...6.3 | 82 | 19 | CXU7-9-22-*AH6.3A-A10-PG▼ | Q4 |
| 3 | 3 | 7-1/2 | 10 | 6.3...10 | 130 | 24 | CXU7-12-22-*AH10A-A10-PG▼ | Q4 |
| 5 | 5 | 10 | ~ | 10...16 | 208 | 28 | CXU7-16-22-*AH16A-A10-PG▼ | Q4 |
| 5 | 7-1/2 | 15 | ~ | 14.5...20 | 260 | 31 | CXU7-23-22-*AH20A-A10-PG▼ | Q4 |
| 5 | 7-1/2 | 15 | ~ | 18...25 | 325 | 33 | CXU7-23-22-*AH25A-A10-PG▼ | Q4 |

Includes:

- Type 1/12K Non-metallic enclosure (KS7-COC4R)
- KTA7 "Type E/F" Self-protected Combination Motor Controller with 1 NO front mount Auxiliary Contact (Cat #: KT7-PE1-10)
- Terminal Adaptor for Type E Applications (Cat.# KT7-25-TE1)
- CA7 contactor (for remote operation), AC coil
- Gray and black Type 1/12K; IP66 handle (KT7-SHB + KT7-KN1) ⑧
- Power wiring
- Factory installed Pilot device option ⑥

Replace ▼ with option code. See page F103 for factory installed modifications

Contactor

AC Coil Codes (*) ④

| AC Coil Code | Voltage Range | |
|--------------|---------------|-----------|
| | 50 Hz | 60 Hz |
| 24Z | 24V | 24V |
| 120 | 110V | 120V |
| 220W | 200V-220V | 208V-240V |
| 415 | 400-415V | ~ |
| 480 ⑨ | 440V | 480V |
| 600 ⑨ | 550V | 600V |

KWIKstarter coils are wired standard from the factory to terminals "L1" and "L2" (for line voltage control). This means the coil voltage must match the line voltage. When a coil is specified for 120V or less, it will be wired for a separate control source (not wired to L1 and L2).

- ① Horsepower ratings shown in the table above are for reference. The final selection of the controller depends on the actual motor full load current and service factor. For motor with service factor less than 1.15. Use motor nameplate full load current times 0.9 and choose the motor starter with the appropriate current range. Example: Motor FLC = 4.2A; S.F. = 1.0. 4.2A x 0.9 = 3.78A. Select catalog number KTA7-25S-4A.
- ② Magnetic trip is fixed at 13x the maximum value of the current adjustment range.
- ③ CXU7 may be applied to single phase loads. Contact factory for specifications.
- ④ Other voltages available, see Section A in this catalog.
- ⑤ KAIC Assembly Rating Index. See pages F73-F76 for Application Rating Guide.
- ⑥ One Pilot Device option must be selected. Plastic Bezel is standard. Pilot Device options include D7-BX Base Mounted contact blocks. Pilot Light option must match coil voltage 24V AC or DC, 120V AC or 240V AC only. See Section H for more information.

- ⑦ CPT not possible with KS7-COC4R. Refer to page F118 for wiring diagram and F119 for dimensional information.
- ⑧ A red and yellow handle may be selected instead of the standard gray and black handle. Change "PG" suffix to "PJ". Ex: Change CXU7-9-10-*AS0.16A-A10-PG▼ to CXU7-9-10-*AS0.16A-A10-PJ▼.
- ⑨ Catalog number (-A10) includes front-mounted auxiliary KT7-PE1-10 with 300 VAC maximum control circuit matching line voltage, or provided from separate source, used to de-energize contactor coil under fault condition (auxiliary not available for customer use). For control circuits greater than 300 VAC, which is common with line voltage, the auxiliary will not be wired into the control circuit since the contactor coil will be de-energized when KTA7 is tripped due to overload or short circuit; therefore, the KT7-PE1-10 auxiliary is available for customer use.

Enclosed Reversing Combination Controller, Electronic DC Operation - Type 1/12K/IP66 ④⑥⑦

| Amp / Horsepower Rating | | | | Non-Metallic Type 1/12K/IP66 Enclosure (KS7-COC4R) | | | | Dimension Code |
|-------------------------|-------|-------|------|----------------------------------------------------|---------------------------|---------|-----------------------------|----------------|
| Max. Horsepower ①②③ | | | | O/L Relay Ampere Range | Magnetic Response Current | Index ⑤ | Catalog Number ④⑥⑧ | |
| Three Phase | | | | | | | | |
| 200V | 230V | 460V | 575V | KTA7-25S Standard Interrupting Capacity | | | | |
| ~ | ~ | ~ | ~ | 0.10...0.16 | 2.1 | 1 | CXU7-9E-22-*AS0.16A-A10-PG▼ | Q4 |
| ~ | ~ | ~ | ~ | 0.16...0.25 | 3.3 | 2 | CXU7-9E-22-*AS0.25A-A10-PG▼ | Q4 |
| ~ | ~ | ~ | ~ | 0.25...0.40 | 5.2 | 3 | CXU7-9E-22-*AS0.4A-A10-PG▼ | Q4 |
| ~ | ~ | ~ | ~ | 0.40...0.63 | 8.2 | 4 | CXU7-9E-22-*AS0.63A-A10-PG▼ | Q4 |
| ~ | ~ | 1/2 | 3/4 | 0.63...1.0 | 13 | 5 | CXU7-9E-22-*AS1A-A10-PG▼ | Q4 |
| ~ | ~ | 1 | 1 | 1.0...1.6 | 21 | 6 | CXU7-9E-22-*AS1.6A-A10-PG▼ | Q4 |
| 1/2 | 3/4 | 1-1/2 | 2 | 1.6...2.5 | 33 | 7 | CXU7-9E-22-*AS2.5A-A10-PG▼ | Q4 |
| 1 | 1 | 3 | 3 | 2.5...4 | 52 | 8 | CXU7-9E-22-*AS4A-A10-PG▼ | Q4 |
| 1-1/2 | 2 | 5 | ~ | 4...6.3 | 82 | 9 | CXU7-9E-22-*AS6.3A-A10-PG▼ | Q4 |
| 3 | 3 | 7-1/2 | ~ | 6.3...10 | 130 | 11 | CXU7-9E-22-*AS10A-A10-PG▼ | Q4 |
| 5 | 5 | 10 | ~ | 10...16 | 208 | 12 | CXU7-9E-22-*AS16A-A10-PG▼ | Q4 |
| 5 | 7-1/2 | 15 | ~ | 14.5...20 | 260 | 13 | CXU7-23E-22-*AS20A-A10-PG▼ | Q4 |
| 1/2 | 3/4 | 1-1/2 | 2 | 1.6...2.5 | 33 | 17 | CXU7-9E-22-*AH2.5A-A10-PG▼ | Q4 |
| 1 | 1 | 3 | 3 | 2.5...4 | 52 | 19 | CXU7-9E-22-*AH4A-A10-PG▼ | Q4 |
| 1-1/2 | 2 | 5 | 5 | 4...6.3 | 82 | 21 | CXU7-9E-22-*AH6.3A-A10-PG▼ | Q4 |
| 3 | 3 | 7-1/2 | 10 | 6.3...10 | 130 | 22 | CXU7-12E-22-*AH10A-A10-PG▼ | Q4 |
| 5 | 5 | 10 | 15 | 10...16 | 208 | 28 | CXU7-16E-22-*AH16A-A10-PG▼ | Q4 |
| 5 | 7-1/2 | 15 | ~ | 14.5...20 | 260 | 31 | CXU7-23E-22-*AH20A-A10-PG▼ | Q4 |
| 5 | 7-1/2 | 15 | ~ | 18...25 | 325 | 33 | CXU7-23E-22-*AH25A-A10-PG▼ | Q4 |



Includes:

- Type 1/12K Non-metallic enclosure (KS7-COC4R)
- KTA7 "Type E/F" Self-protected Combination Motor Controller with 1 NO front mount Auxiliary Contact (Cat #: KT7-PE1-10)
- Terminal Adaptor for Type E Applications (Cat.# KT7-25-TE1)
- CA7 contactors (for remote operation), with Electronic DC coil
- Gray and black Type 1/12K; IP66 handle (KT7-SHB + KT7-KN1) ⑧
- Power wiring
- Factory installed Pilot device option ⑥

Replace ▼ with option code. See page F103 for factory installed modifications

Control Electronic DC Coil Codes (*) ④

| DC Coil Codes | Voltage |
|---------------|----------|
| 12E | 12V |
| 24E | 24V |
| 36E | 36-48V |
| 48E | 48-72V |
| 110E | 110-125V |
| 220E | 220-250V |

KWIKstarter coils are wired standard from the factory to terminals "L1" and "L2" (for line voltage control). This means the coil voltage must match the line voltage. When a coil is specified for 120V or less, it will be wired for a separate control source (not wired to L1 and L2).

- ① Horsepower ratings shown in the table above are for reference. The final selection of the controller depends on the actual motor full load current and service factor. For motor with service factor less than 1.15. Use motor nameplate full load current times 0.9 and choose the motor starter with the appropriate current range. Example: Motor FLC = 4.2A; S.F. = 1.0. 4.2A x 0.9 = 3.78A. Select catalog number KTA7-25S-4A.
- ② Magnetic trip is fixed at 13x the maximum value of the current adjustment range.
- ③ CXU7 may be applied to single phase loads. Contact factory for these specifications.
- ④ CXU7-9E...23E with electronic coils are not interchangeable with non-electronic DC or AC coils.
- ⑤ KAIC Assembly Rating Index. See pages F73-F76 for Application Rating Guide.

- ⑥ One Pilot Device option must be selected. Blanks are not available. Plastic Bezel is standard. Pilot Device options include D7-BX Base Mounted contact blocks. Pilot Light option must match coil voltage 24V AC or DC, 120V AC or 240V AC only. See Section H for more information.
- ⑦ CPT not possible with KS7-COC4R. Refer to page F118 for wiring diagram and F119 for dimensional information.
- ⑧ A red and yellow handle may be selected instead of the standard gray and black handle. Change "PG" suffix to "PJ". Ex: Change CXU7-9-10-*AS0.16A-A10-PG▼ to CXU7-9-10-*AS0.16A-A10-PJ▼.

Enclosed Motor Circuit Controllers

Section Obsolete
See pages F1.56 - F1.88

CX7 Non-Reversing Controller Modifications

| Pilot Device Options - required | |
|--------------------------------------------|----------------------------------|
| Select one option only ①②③ | Replace ▼ in catalog number with |
| START-STOP Multi-function | 3U |
| I-O Multi-function | 4U |
| OFF-ON 2-Position Selector switch | 6 |
| HAND-OFF-AUTO 3-Position Selector switch | 7 |
| Run Pilot Light Green | 1G |
| Run Pilot Light Red | 1R |
| Overload Alarm Pilot Light | 1Y |
| D7-N8 22mm Hole Plug | 0 |
| Additional KT7 Auxiliaries & Trip Contacts | |
| Front Mount 300V maximum | |
| 1 NO + 1 NC Auxiliary | -A11 |
| 2 NO Auxiliaries | -A20 |
| 1 NO SC+OL + 1 NC Auxiliary | -T10A01 |
| 1 NO SC+OL + 1 NO Auxiliary | -T10A10 |

CXU7 Reversing Controller Modifications

| Pilot Device Options - required | |
|--------------------------------------------|----------------------------------|
| Select one option only ①②③ | Replace ▼ in catalog number with |
| FOR-STOP-REV Multi-function | 3U |
| UP-STOP-DOWN Multi-function | 4U |
| OPEN-STOP-CLOSE Multi-function | 5U |
| FOR-STOP-REV 3-Position Selector switch | 6 |
| UP-OFF-DOWN 3-Position Selector switch | 7 |
| OPEN-OFF-CLOSE 3-Position Selector switch | 8 |
| Overload Alarm Pilot Light | 1Y |
| D7-N8 22mm Hole Plug | 0 |
| Additional KT7 Auxiliaries & Trip Contacts | |
| Front Mount 300V maximum | |
| 1 NO + 1 NC Auxiliary | -A11 |
| 2 NO Auxiliaries | -A20 |
| 1 NO SC+OL + 1 NC Auxiliary | -T10A01 |
| 1 NO SC+OL + 1 NO Auxiliary | -T10A10 |

CX7 Non-Reversing Controller Additions

| Addition | Add to end of catalog number |
|----------------------------------------------------------|------------------------------|
| CA7 Contactor Accessories | |
| Electronic Interface ④ | -JE |
| Surge Suppressor RC | -R |
| Surge Suppressor Varistor | -V |
| CA7 Auxiliary Contacts ⑤⑥ | |
| 1 NO Auxiliary | -S10 |
| 1 NC Auxiliary | -S01 |
| 1 NO + 1 NC Auxiliary | -S1 |
| 2 NO Auxiliaries | -S20 |
| 2 NC Auxiliaries | -S02 |
| Alternate Aux. Contact Alternative Circuit (on CX7 only) | |
| 1 NC in lieu of standard 1 NO | -SX10 |
| 2 NC in lieu of standard 2 NO (on CXU7 only) | -SX2 |
| Unwired Terminal Blocks Specify quantity (▼) | -▼TB |

CXU7 Reversing Controller Additions

| Addition | Add to end of catalog number |
|---------------------------|------------------------------|
| CA7 Contactor Accessories | |
| Electronic Interface | -JE |
| Surge Suppressor RC | -R |
| Surge Suppressor Varistor | -V |


Section Obsolete
See pages F1.56 - F1.88

- ① KS7-C0C4R only has (1) 22mm hole to accommodate (1) pilot device.
- ② Currently supply D7 multi-function pushbuttons as standard which do not require protective boots to meet Type 4X. See Section H in this catalog for description (all suffix's ending in "U").
- ③ Pilot Lights may be applied with 24VAC/VDC, 120VAC or 240VAC Control Circuit. Pilot Lights with 380 VAC...575VAC require a control circuit



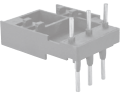
- transformer.
- ④ CRI7E-24 will be used. CRI7E-12 by special order only.
- ⑤ See page A47 for limitations on adding auxiliaries to Electronic DC Coil contactors.
- ⑥ Additional auxiliaries are per contactor. Number of auxiliaries is double for reversing applications.

F
Enclosed Motor Circuit Controllers





CX7 KWIKstarter Enclosures for use with KTA7 Type E Motor Controllers and CA7 Contactors ①③

| Component | Description | For Use With | | Environmental Approvals | Catalog Number |
|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------|----------------------|------------------------------------------------------------|----------------------------|------------------|
| | | Type E Controller | Contactors | | |
|  | Enclosure for Combo KWIKstarter ① CX7/CXU7-9...23 CX7/CXU7-9E...23E | KTA7-25S KTA7-25H | CA7-9...23 CA7-9E...23E CAU7-9...23 CAU7-9E...23E | cUL Type 1/12K IEC IP66 | KS7-C0C4R |

Handle Accessory for CX7/CXU7 KWIKstarters ①

| Accessory | Description | For Use With | Color | Catalog Number |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|------------|------------------------|
|  | Door Coupling Handle ① • Padlockable • NEMA Type 1/12K and IP66 • Includes handle coupling (shaft) • Requires KT7-KN1 Locking Knob | All KT7s | Gray/Black | KT7-SHB |
| | | | Red/Yellow | KT7-SHBY |
|  | Lockable Twist Knob • for use with KT7-SHB | All KT7s | Gray/Black | KT7-KN1 |
|  | Universal Connector for CX7/CXU7 • Provides electrical interconnection of KTA7 and CA7 (with AC or Electronic DC coil) • Applies to FVNR and FVR versions • Allows for mounting the CA7 on a single DIN rail | All KT7s | Black | KT7-25S-1-23A ② |

CX7 KWIKstarter Pilot Device Kits (for use with KS7-C0C4R Type 1/12K) ①②

| Kits | Description | Contact Blocks Included | | Catalog Number | |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|--------------|----------------------------------------------------------------------------------------|------------------|
| | | NO | NC | | |
|  | Multi-Function Pushbutton kit Non-illuminated START-STOP I-O | 1 | 1 | KS7-P3U KS7-P4U | See page C29 for |
| | FOR-STOP-REV UP-STOP-DOWN OPEN-STOP-CLOSE | 2 | 1 | KS7-P3U-REV KS7-P4U-REV KS7-P5U-REV | |
|  | Selector switch kits Non-illuminated, includes legend plate | | | | |
| | ON-OFF 2-Position | 1 | 0 | KS7-P6 | |
| | HAND-OFF-AUTO 3-Position | 2 | 0 | KS7-P7 | |
|  | Run Pilot Light or Overload Alarm Pilot Light Plastic operator with diffuser lens in Red, Green or Yellow, with integrated LED power module | | | Replace ⑤ with color choice R = Red G = Green Y = Yellow | |
| | | | | KS7-P1⑥24V ⑥ KS7-P1⑥120V KS7-P1⑥240V | |
|  | Hole Plug used to plug 22.5mm holes. | | Gray Plastic | D7-N8 | |

① KS7-C0C4R is supplied with the following holes:
• (1) one 22mm hole for a Pilot Device option, select one kit from this page.
• (1) one 22mm hole for KT7-SHB (or SHRY) Disconnect or Reset handle.

② Plastic bezel is standard. Pilot Device Kits include D7-BX_ Base Mounted contact blocks. See Section H for more information.

③ CPT not possible.

④ Standard KT7-25S-PEC23 does not work in CX7/CXU7 Kwikstarters.

⑤ KS7-P1⑥24V can be used with 24VAC or 24VDC.

F Enclosed Motor Circuit Controllers

Section Obsolete
See pages F1.56 - F1.88