Kraus & Naimer

Sample image

# Datasheet

**Article number:** 70005788
**Designation:** CA20.A410.PF1
**Description:** Switch

## IEC 60947-3 EN 60947-3, VDE 0660 Teil 107

**Rated insulation voltage Ui**

| Voltage (V) | AC / DC |
|---|---|
| 690 | AC / DC |

**Rated uninterrupted current Iu/Ith**

| Current (A) | Ambient temperature (°C) | Peak temperature (°C) | additional requirements |
|---|---|---|---|
| 25 | 55 | 60 | Ambient temperature +55°C during 24 hours with peaks up to +60°C |

**Rated operational current Ie**

| Utilization category | Voltage (V) | Current (A) |
|---|---|---|
| AC-15 | 220 - 240 | 8 |
| AC-15 | 380 - 440 | 5 |

**Rated operational power**

| Utilization category | Voltage (V) | No. of phases | No. of poles | Power (kW) |
|---|---|---|---|---|
| AC-3 | 220 - 240 | 3 | 3 | 4 |
| AC-3 | 380 - 440 | 3 | 3 | 7,50 |
| AC-3 | 660 - 690 | 3 | 3 | 7,50 |
| AC-3 | 220 - 240 | 1 | 2 | 3 |
| AC-3 | 380 - 440 | 1 | 2 | 3,70 |
| AC-23A | 220 - 240 | 3 | 3 | 5,50 |
| AC-23A | 380 - 440 | 3 | 3 | 11 |
| AC-23A | 660 - 690 | 3 | 3 | 11 |
| AC-23A | 220 - 240 | 1 | 2 | 3 |
| AC-23A | 380 - 440 | 1 | 2 | 5,50 |

**Max Fuse Rating IEC**

| Fuse characteristic | No. of Fuses | Current (A) |
|---|---|---|
| gG | 1 | 35 |

## UL60947-4-1 , UL508

**Nominal Voltage**

| Voltage (V) | AC / DC |
|---|---|
| 600 | AC |

**Rated insulation voltage Ui**

| Voltage (V) | AC / DC |
|---|---|
| 600 | AC |

**Rated thermal current**

| Current (A) | Ambient temperature (°C) | Additional Text |
|---|---|---|
| 30 | 0 - 40 | -- |

**Horsepower rating**

| Across-the-Line Motor Starting | Voltage (V) | No. of phases | No. of poles | Power (HP) | Ambient temperature [°C] |
|---|---|---|---|---|---|
| Reversing | 110 - 120 | 1 | 2 | 0,33 | 40 |
| Reversing | 220 - 240 | 1 | 2 | 0,75 | 40 |
| Reversing | 277 - 277 | 1 | 2 | 1 | 40 |
| Reversing | 415 - 415 | 1 | 2 | 1,50 | 40 |
| Reversing | 440 - 480 | 1 | 2 | 2 | 40 |
| Reversing | 550 - 600 | 1 | 2 | 2 | 40 |
| Reversing | 110 - 120 | 3 | 3 | 1 | 40 |
| Reversing | 220 - 240 | 3 | 3 | 2 | 40 |
| Reversing | 415 - 415 | 3 | 3 | 3 | 40 |
| Reversing | 440 - 480 | 3 | 3 | 5 | 40 |
| Reversing | 550 - 600 | 3 | 3 | 5 | 40 |
| DOL | 110 - 120 | 1 | 2 | 1,50 | 40 |
| DOL | 220 - 240 | 1 | 2 | 3 | 40 |
| DOL | 277 - 277 | 1 | 2 | 3 | 40 |
| DOL | 415 - 415 | 1 | 2 | 3 | 40 |
| DOL | 440 - 480 | 1 | 2 | 5 | 40 |
| DOL | 550 - 600 | 1 | 2 | 5 | 40 |
| DOL | 110 - 120 | 3 | 3 | 3 | 40 |
| DOL | 220 - 240 | 3 | 3 | 7,50 | 40 |
| DOL | 415 - 415 | 3 | 3 | 7,50 | 40 |
| DOL | 440 - 480 | 3 | 3 | 10 | 40 |

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**Horsepower rating**

| *Across-the-Line Motor Starting* | *Voltage (V)* | *No. of phases* | *No. of poles* | *Power (HP)* | *Ambient temperature [°C]* |
|---|---|---|---|---|---|
| DOL | 550 - 600 | 3 | 3 | 10 | 40 |

**Pilot duty rating code**

| *Duty Code* |
|---|
| A600 |

**SCCR / Max. fuse rating**

| *Conditions of acceptability* |
|---|
| These devices are suitable for use on circuits capable of delivering not more than 5000 rms symmetrical amperes, 600V ac max. when protected by Class RK1 fuses. Manual Motor Controllers when intended for use as a motor disconnector are suitable for use on a circuit capable of delivering not more than 5000 rms symmetrical amperes, 600V ac max. when protected by 30A Class J time delay fuses. |

**Temp. rating of wire**

| *Temperature rating (°C)* | *Current (A)* | *Text* |
|---|---|---|
| 75 | -- | Use copper wire only |

**Connecting instructions**

| *Markings* |
|---|
| When intended for use as a motor disconnector the device shall be provided with a method of being locked in the OFF-position. |

**General Use**

| *AC / DC* | *Voltage (V)* | *Current (A)* | *No. of phases* | *No. of poles* | *No. of contacts in series* |
|---|---|---|---|---|---|
| AC | 600 | 30 | 1 | 2 | 1 |
| AC | 600 | 30 | 3 | 3 | 1 |

## CSA

**Nominal Voltage**

| *Voltage (V)* | *AC / DC* |
|---|---|
| 600 | AC |

**Rated insulation voltage Ui**

| *Voltage (V)* | *AC / DC* |
|---|---|
| 600 | AC |

**Rated thermal current**

| *Current (A)* | *Ambient temperature (°C)* | *Additional Text* |
|---|---|---|
| 30 | 0 - 40 | -- |

**Horsepower rating**

| *Across-the-Line Motor Starting* | *Voltage (V)* | *No. of phases* | *No. of poles* | *Power (HP)* | *Ambient temperature [°C]* |
|---|---|---|---|---|---|
| DOL | 110 - 120 | 1 | 2 | 1,50 | 40 |
| DOL | 220 - 240 | 1 | 2 | 3 | 40 |
| DOL | 277 - 277 | 1 | 2 | 3 | 40 |
| DOL | 415 - 415 | 1 | 2 | 5 | 40 |
| DOL | 440 - 480 | 1 | 2 | 5 | 40 |
| DOL | 550 - 600 | 1 | 2 | 5 | 40 |
| DOL | 110 - 120 | 3 | 3 | 3 | 40 |
| DOL | 220 - 240 | 3 | 3 | 7,50 | 40 |
| DOL | 415 - 415 | 3 | 3 | 10 | 40 |
| DOL | 440 - 480 | 3 | 3 | 10 | 40 |
| DOL | 550 - 600 | 3 | 3 | 10 | 40 |

**Pilot duty rating code**

| *Duty Code* |
|---|
| A600 |

**Temp. rating of wire**

| *Temperature rating (°C)* | *Current (A)* | *Text* |
|---|---|---|
| 75 | -- | only |

**General Use**

| *AC / DC* | *Voltage (V)* | *Current (A)* | *No. of phases* | *No. of poles* | *No. of contacts in series* |
|---|---|---|---|---|---|
| AC | 600 | 30 | 1 | 1 | 1 |

## GENERAL TECHNICAL INFORMATION

**Tightening torque of screws**

| *tightening torque (Nm)* | *tightening torque (lb-in)* |
|---|---|
| 1 | 9 |

**Stripping length**

| *Length (mm)* | *--* |
|---|---|
| 9 | STRIPPINGLENGTH |

**Size of conductor**

| *composition of conductor* | *Min. / Max. value* | *No. of conductor per terminal* | *Cross section (mm²) or (AWG/kcmil)* | *Material of the wire* |
|---|---|---|---|---|
| solid wire | Min. | 1 | 0.75mm² | Copper |
| solid wire | Min. | 2 | 0.75mm² | Copper |
| flexible wire | Min. | 1 | 1.5mm² | Copper |
| flexible wire | Max. | 2 | AWG 12 | Copper |
| flexible wire | Max. | 2 | 4mm² | Copper |
| flexible wire | Min. | 2 | 1.5mm² | Copper |
| Single-core or stranded wire | Max. | 2 | AWG 10 | Copper |
| Single-core or stranded wire | Max. | 2 | 4mm² | Copper |
| flexible wire with ferrule according to DIN 46228 | Min. | 1 | 1mm² | Copper |
| flexible wire with ferrule according to DIN 46228 | Max. | 2 | 2.5mm² | Copper |
| flexible wire with ferrule according to DIN 46228 | Min. | 2 | 1mm² | Copper |

**Approbations**

| *Specification* | *Marking* |
|---|---|
| EAC | EAC |

| Approbations | |
|---|---|
| *Specification* | *Marking* |
| CE marking | |
| UK Directives | |
| CSA C.22.2 No.14 | |
| GB/T14048.3 | |

| Recommended screw driver | |
|---|---|
| *Type of screw driver* | *Value* |
| Cross Screwdriver | PH1 |
| Slot screwdriver according to DIN 5264 | 0,8x5,5 |

**General Information**

*Text*

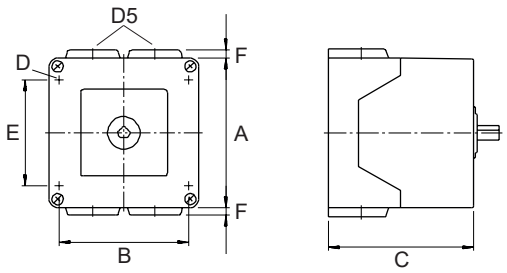
- Do not lubricate or treat contacts.
- Switches may only be mounted, connected and set into operation by qualified persons according to the accepted rules of technology.
- Use copper wire only. Do not coat the wire end with tin.
- Terminals with factory fitted jumper links are tightened during production. Take care during installation to ensure factory fitted links are not lost by undoing both sides of linked terminals. After wiring, all terminal screws must be tightened to recommended torque specifications.
- After installation of the switches the spacings between the terminals must be sufficient to fulfill the requirement of the applicable standards.

| Waste Electrical & Electronic Equipment (WEEE) | |
|---|---|
| *Picture name* | *Description* |
| | Do not throw in the trash as care must be taken to ensure environmentally sound disposal and recycling. Please either use an environmentally friendly waste disposal company; return to the supplier for disposal; or return direct to the manufacturer, Kraus & Naimer. You can find local Kraus & Naimer offices at www.krausnaimer.com |

| Proposition 65 | |
|---|---|
| *Picture name* | *Description* |
| | WARNING: This product can expose you to chemicals including nickel and lead, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov. |

| |
|---|
| Classification Contact: Rigid contact bridge |
| Classification Contact Mat: Silver |
| Classification Terminal: Screw terminal |

## Mounting-PF1




| | | |
|---|---|---|
| IP - Code front side | | IP65 |
| Stages | | 3,00 - 4,00 |
| A | □ | 82,00 mm |
| B | ⊢ | 68,00 mm |
| C | ⊢ | 90,10 mm |
| D | ⌀ | 4,40 mm |
| D5 | ⌀ | 4,00 x M20 |
| E | ⊢ | 52,00 mm |
| F | ⊢ | 5,00 mm |

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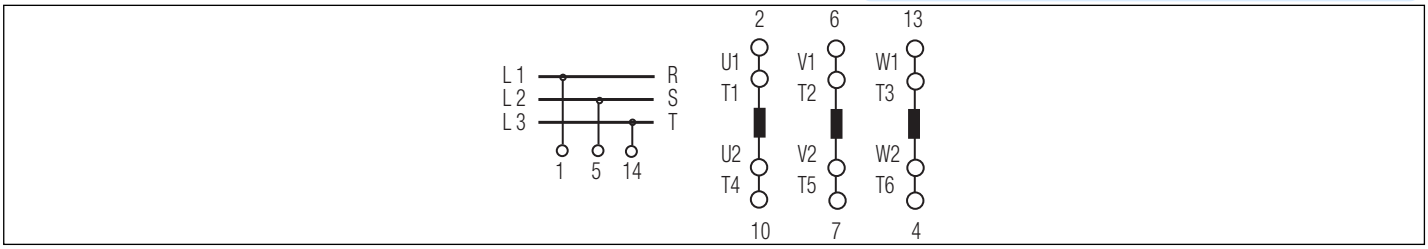
# Wiring diagram

CA20.A410.PF1



# Switch program

CA20.A410.PF1

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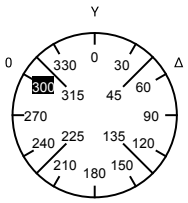
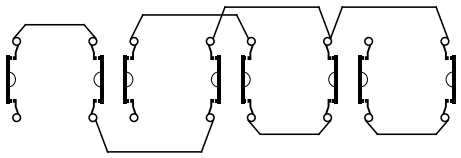
## Face Plate



| | 1 | 3 | 5 | 7 | 9 | 11 | 13 | 15 | 17 | 19 | 21 | 23 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 |

Switching Angle 60
Total switching Angle 120

| | | |
|---|---|---|
| | 300 | |
| 0 | 315 | |
| | 330 | |
| | 345 | |
| Y | 0 | ■ |
| | 15 | ■ |
| | 30 | ■ |
| | 45 | ■ ■ |
| Δ | 60 | ■ ■ ■ |
| | 75 | |
| | 90 | |
| | 105 | |
| | 120 | |
| | 135 | |
| | 150 | |
| | 165 | |
| | 180 | |
| | 195 | |
| | 210 | |
| | 225 | |
| | 240 | |
| | 255 | |
| | 270 | |
| | 285 | |

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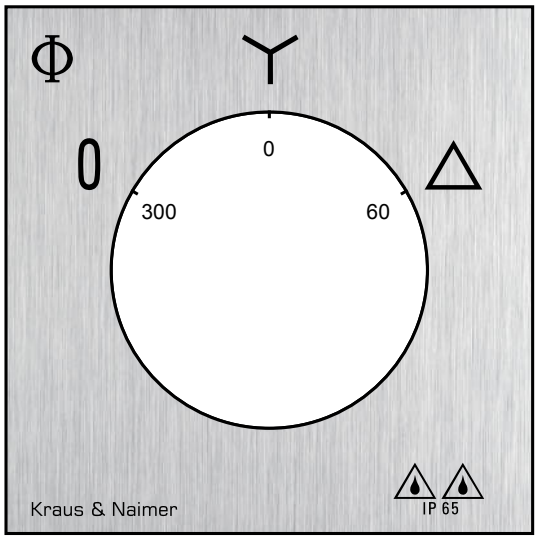
# Face plate

S1.F080/A10.PFL



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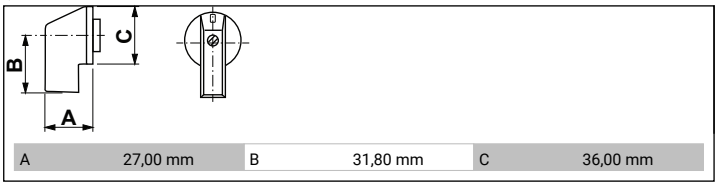
# HANDLES

**Designation:** S1B.G257
**Handle colour:** "7" electro grey




| | | | | | |
|---|---|---|---|---|---|
| A | 27,00 mm | B | 31,80 mm | C | 36,00 mm |