



Sample image

## Datasheet

**Article number:** 70004833

**Designation:** CA11.A401.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                                          |              |            |                          |
| 20                                        | 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                                |                                                                  | 6            |            |                          |
| AC-15                                     |                          | 380 - 440                                |                                                                  | 4            |            |                          |
| Rated operational power                   |                          |                                          |                                                                  |              |            |                          |
| Utilization category                      | Voltage (V)              | No. of phases                            | No. of poles                                                     | Power (kW)   |            |                          |
| AC-3                                      | 220 - 240                | 3                                        | 3                                                                | 3            |            |                          |
| AC-3                                      | 380 - 440                | 3                                        | 3                                                                | 5,50         |            |                          |
| AC-3                                      | 660 - 690                | 3                                        | 3                                                                | 5,50         |            |                          |
| AC-3                                      | 220 - 240                | 1                                        | 2                                                                | 2,20         |            |                          |
| AC-3                                      | 380 - 440                | 1                                        | 2                                                                | 3            |            |                          |
| AC-23A                                    | 220 - 240                | 3                                        | 3                                                                | 3,70         |            |                          |
| AC-23A                                    | 380 - 440                | 3                                        | 3                                                                | 7,50         |            |                          |
| AC-23A                                    | 660 - 690                | 3                                        | 3                                                                | 7,50         |            |                          |
| AC-23A                                    | 220 - 240                | 1                                        | 2                                                                | 2,50         |            |                          |
| AC-23A                                    | 380 - 440                | 1                                        | 2                                                                | 3,70         |            |                          |
| Max Fuse Rating IEC                       |                          |                                          |                                                                  |              |            |                          |
| Fuse characteristic                       |                          | No. of Fuses                             |                                                                  | Current (A)  |            |                          |
| gG                                        |                          | 1                                        |                                                                  | 25           |            |                          |
| 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 |                                                                  |              |            |                          |
| 20                                        |                          | 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            | 0,17       | 40                       |
| Reversing                                 |                          | 220 - 240                                | 1                                                                | 2            | 0,50       | 40                       |
| Reversing                                 |                          | 277 - 277                                | 1                                                                | 2            | 0,60       | 40                       |
| Reversing                                 |                          | 415 - 415                                | 1                                                                | 2            | 1          | 40                       |
| Reversing                                 |                          | 440 - 480                                | 1                                                                | 2            | 1,50       | 40                       |
| Reversing                                 |                          | 550 - 600                                | 1                                                                | 2            | 1,50       | 40                       |
| Reversing                                 |                          | 110 - 120                                | 3                                                                | 3            | 0,50       | 40                       |
| Reversing                                 |                          | 220 - 240                                | 3                                                                | 3            | 1          | 40                       |
| Reversing                                 |                          | 415 - 415                                | 3                                                                | 3            | 2          | 40                       |
| Reversing                                 |                          | 440 - 480                                | 3                                                                | 3            | 3          | 40                       |
| Reversing                                 |                          | 550 - 600                                | 3                                                                | 3            | 3          | 40                       |
| DOL                                       |                          | 110 - 120                                | 1                                                                | 2            | 0,50       | 40                       |
| DOL                                       |                          | 220 - 240                                | 1                                                                | 2            | 1          | 40                       |
| DOL                                       |                          | 277 - 277                                | 1                                                                | 2            | 2          | 40                       |
| DOL                                       |                          | 440 - 480                                | 1                                                                | 2            | 2          | 40                       |
| DOL                                       |                          | 550 - 600                                | 1                                                                | 2            | 2          | 40                       |
| DOL                                       |                          | 110 - 120                                | 3                                                                | 3            | 1,50       | 40                       |
| DOL                                       |                          | 220 - 240                                | 3                                                                | 3            | 3          | 40                       |
| DOL                                       |                          | 415 - 415                                | 3                                                                | 3            | 5          | 40                       |
| DOL                                       |                          | 440 - 480                                | 3                                                                | 3            | 5          | 40                       |
| DOL                                       |                          | 550 - 600                                | 3                                                                | 3            | 5          | 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 disconnecter 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         |                                    |                           |                                                                                       |
| 60 - 75                                                                                                                                                                                                                                                                                                                                                                                                  |                   |                               | -- Use copper wire only  |                                    |                           |                                                                                       |
| Connecting instructions                                                                                                                                                                                                                                                                                                                                                                                  |                   |                               |                          |                                    |                           |                                                                                       |
| Markings                                                                                                                                                                                                                                                                                                                                                                                                 |                   |                               |                          |                                    |                           |                                                                                       |
| When intended for use as a motor disconnecter 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               | 20                            | 1                        | 2                                  | 1                         |                                                                                       |
| AC                                                                                                                                                                                                                                                                                                                                                                                                       | 600               | 20                            | 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           |                                                                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                          |                   | 20                            | 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                                  | 0,50                      | 40                                                                                    |
| DOL                                                                                                                                                                                                                                                                                                                                                                                                      |                   | 220 - 240                     | 1                        | 2                                  | 1                         | 40                                                                                    |
| DOL                                                                                                                                                                                                                                                                                                                                                                                                      |                   | 277 - 277                     | 1                        | 2                                  | 2                         | 40                                                                                    |
| DOL                                                                                                                                                                                                                                                                                                                                                                                                      |                   | 415 - 415                     | 1                        | 2                                  | 2                         | 40                                                                                    |
| DOL                                                                                                                                                                                                                                                                                                                                                                                                      |                   | 440 - 480                     | 1                        | 2                                  | 2                         | 40                                                                                    |
| DOL                                                                                                                                                                                                                                                                                                                                                                                                      |                   | 550 - 600                     | 1                        | 2                                  | 2                         | 40                                                                                    |
| DOL                                                                                                                                                                                                                                                                                                                                                                                                      |                   | 110 - 120                     | 3                        | 3                                  | 1,50                      | 40                                                                                    |
| DOL                                                                                                                                                                                                                                                                                                                                                                                                      |                   | 220 - 240                     | 3                        | 3                                  | 3                         | 40                                                                                    |
| DOL                                                                                                                                                                                                                                                                                                                                                                                                      |                   | 415 - 415                     | 3                        | 3                                  | 5                         | 40                                                                                    |
| DOL                                                                                                                                                                                                                                                                                                                                                                                                      |                   | 440 - 480                     | 3                        | 3                                  | 5                         | 40                                                                                    |
| DOL                                                                                                                                                                                                                                                                                                                                                                                                      |                   | 550 - 600                     | 3                        | 3                                  | 5                         | 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               | 20                            | 1                        | 1                                  | 1                         |                                                                                       |
| GENERAL TECHNICAL INFORMATION                                                                                                                                                                                                                                                                                                                                                                            |                   |                               |                          |                                    |                           |                                                                                       |
| Tightening torque of screws                                                                                                                                                                                                                                                                                                                                                                              |                   |                               |                          |                                    |                           |                                                                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                               | tightening torque (Nm)   |                                    | tightening torque (lb-in) |                                                                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                               | 0,60                     |                                    | 5                         |                                                                                       |
| Stripping length                                                                                                                                                                                                                                                                                                                                                                                         |                   |                               |                          |                                    |                           |                                                                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                               | Length (mm) --           |                                    |                           |                                                                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                               | 8 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                             |                          | 0.5mm²                             |                           | Copper                                                                                |
| solid wire                                                                                                                                                                                                                                                                                                                                                                                               | Min.              | 2                             |                          | 0.5mm²                             |                           | Copper                                                                                |
| flexible wire                                                                                                                                                                                                                                                                                                                                                                                            | Min.              | 1                             |                          | 0.75mm²                            |                           | Copper                                                                                |
| flexible wire                                                                                                                                                                                                                                                                                                                                                                                            | Min.              | 2                             |                          | 0.75mm²                            |                           | Copper                                                                                |
| flexible wire                                                                                                                                                                                                                                                                                                                                                                                            | Max.              | 2                             |                          | 2.5mm²                             |                           | Copper                                                                                |
| flexible wire                                                                                                                                                                                                                                                                                                                                                                                            | Max.              | 2                             |                          | AWG 14                             |                           | Copper                                                                                |
| Single-core or stranded wire                                                                                                                                                                                                                                                                                                                                                                             | Max.              | 2                             |                          | AWG 12                             |                           | Copper                                                                                |
| Single-core or stranded wire                                                                                                                                                                                                                                                                                                                                                                             | Max.              | 2                             |                          | 2.5mm²                             |                           | Copper                                                                                |
| flexible wire with ferrule according to DIN 46228                                                                                                                                                                                                                                                                                                                                                        | Min.              | 1                             |                          | 0.5mm²                             |                           | Copper                                                                                |
| flexible wire with ferrule according to DIN 46228                                                                                                                                                                                                                                                                                                                                                        | Max.              | 2                             |                          | 2.5mm²                             |                           | Copper                                                                                |
| flexible wire with ferrule according to DIN 46228                                                                                                                                                                                                                                                                                                                                                        | Min.              | 2                             |                          | 0.5mm²                             |                           | Copper                                                                                |
| Approbations                                                                                                                                                                                                                                                                                                                                                                                             |                   |                               |                          |                                    |                           |                                                                                       |
| Specification                                                                                                                                                                                                                                                                                                                                                                                            |                   |                               |                          |                                    |                           | Marking                                                                               |
| EAC                                                                                                                                                                                                                                                                                                                                                                                                      |                   |                               |                          |                                    |                           |  |
| CE marking                                                                                                                                                                                                                                                                                                                                                                                               |                   |                               |                          |                                    |                           |  |

| Approbations  |         |
|---------------|---------|
| Specification | Marking |

UK Directives

UK  
CA

CSA C.22.2 No.14

CSA

#### Recommended screw driver

| Type of screw driver                   | Value |
|----------------------------------------|-------|
| Cross Screwdriver                      | PH1   |
| Slot screwdriver according to DIN 5264 | 0,8x4 |

#### 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 <a href="http://www.krausnaimer.com">www.krausnaimer.com</a> |

#### Proposition 65

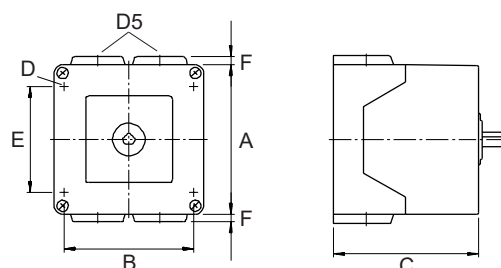
| Picture name                                                                     | Description                                                                                                                                                                                                                             |
|----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | 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 <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a> . |

Classification Contact: Rigid contact bridge

Classification Contact Mat: Silver

Classification Terminal: Screw terminal

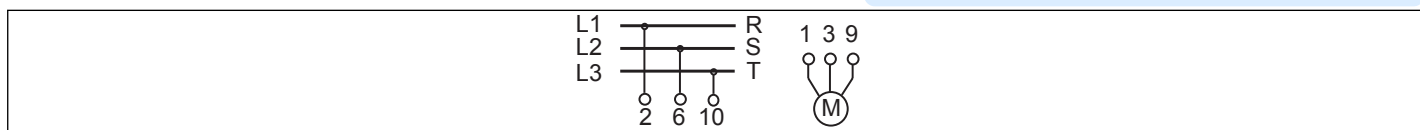
#### Mounting-PF1



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

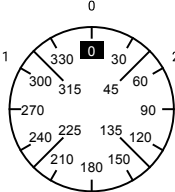
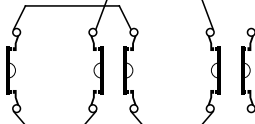
## Wiring diagram

CA11.A401.PF1



## Switch program

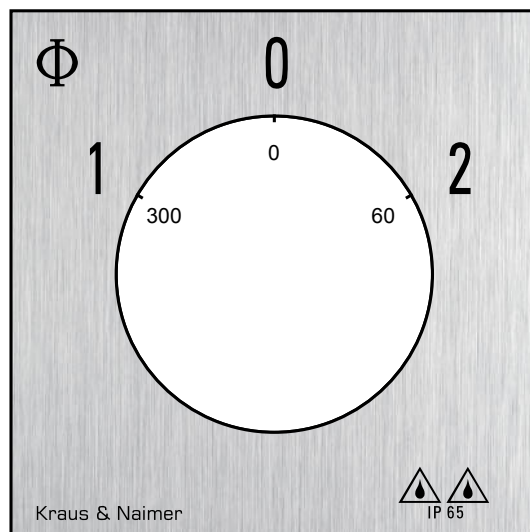
CA11.A401.PF1

|  Kraus & Naimer          |  | CA11 |   | A401 |   | Page 1 of 1 |    |    |    |    |    |    |    |
|-----------------------------------------------------------------------------------------------------------|--|------|---|------|---|-------------|----|----|----|----|----|----|----|
|                                                                                                           |  |      |   |      |   |             |    |    |    |    |    |    |    |
| <b>Face Plate</b>                                                                                         |  |      |   |      |   |             |    |    |    |    |    |    |    |
|                          |  | 1    | 3 | 5    | 7 | 9           | 11 | 13 | 15 | 17 | 19 | 21 | 23 |
|                          |  |      |   |      |   |             |    |    |    |    |    |    |    |
| Switching Angle <input type="text" value="60"/><br>Total switching Angle <input type="text" value="120"/> |  | 2    | 4 | 6    | 8 | 10          | 12 | 14 | 16 | 18 | 20 | 22 | 24 |
| 1                                                                                                         |  |      |   |      |   |             |    |    |    |    |    |    |    |
| 300                                                                                                       |  |      |   |      |   |             |    |    |    |    |    |    |    |
| 315                                                                                                       |  |      |   |      |   |             |    |    |    |    |    |    |    |
| 330                                                                                                       |  |      |   |      |   |             |    |    |    |    |    |    |    |
| 345                                                                                                       |  |      |   |      |   |             |    |    |    |    |    |    |    |
| 0                                                                                                         |  |      |   |      |   |             |    |    |    |    |    |    |    |
| 15                                                                                                        |  |      |   |      |   |             |    |    |    |    |    |    |    |
| 30                                                                                                        |  |      |   |      |   |             |    |    |    |    |    |    |    |
| 45                                                                                                        |  |      |   |      |   |             |    |    |    |    |    |    |    |
| 2                                                                                                         |  |      |   |      |   |             |    |    |    |    |    |    |    |
| 60                                                                                                        |  |      |   |      |   |             |    |    |    |    |    |    |    |
| 75                                                                                                        |  |      |   |      |   |             |    |    |    |    |    |    |    |
| 90                                                                                                        |  |      |   |      |   |             |    |    |    |    |    |    |    |
| 105                                                                                                       |  |      |   |      |   |             |    |    |    |    |    |    |    |
| 120                                                                                                       |  |      |   |      |   |             |    |    |    |    |    |    |    |
| 135                                                                                                       |  |      |   |      |   |             |    |    |    |    |    |    |    |
| 150                                                                                                       |  |      |   |      |   |             |    |    |    |    |    |    |    |
| 165                                                                                                       |  |      |   |      |   |             |    |    |    |    |    |    |    |
| 180                                                                                                       |  |      |   |      |   |             |    |    |    |    |    |    |    |
| 195                                                                                                       |  |      |   |      |   |             |    |    |    |    |    |    |    |
| 210                                                                                                       |  |      |   |      |   |             |    |    |    |    |    |    |    |
| 225                                                                                                       |  |      |   |      |   |             |    |    |    |    |    |    |    |
| 240                                                                                                       |  |      |   |      |   |             |    |    |    |    |    |    |    |
| 255                                                                                                       |  |      |   |      |   |             |    |    |    |    |    |    |    |
| 270                                                                                                       |  |      |   |      |   |             |    |    |    |    |    |    |    |
| 285                                                                                                       |  |      |   |      |   |             |    |    |    |    |    |    |    |

Version: 60

## Face plate

S1.F071/A10.PFL



## HANDLES

**Designation:** S1B.G257

**Handle colour:** "7" electro grey

