

Alco Controls

CSS-25U / CSS-32U Compressor Soft Starter

Technical Bulletin

The first VDE certified **Compressor Soft Starter** for safety of household. It is used for switching, protection and starting current limitation of single phase compressors in heat pumps, refrigeration and air conditioning applications.

Features

- For motors with maximum operating current up to 25A / 32A
- Limitation of starting current to less than 30A / 45A
- Self adjusting for use in 50 Hz or 60 Hz supply
- Self adjusting to motor current - no manual adjustment or calibration necessary
- Alarm relay output
- Start capacitor for improved motor acceleration is switched off after start
- Motor protection functions:
 - Low voltage shutdown
 - Locked rotor recognition and shutdown
 - Delay function to limit number of motor starts per hour
 - Thyristor protected contactor for long life
 - No extra motor contactor needed
 - Self diagnostics
- Mounting clip for easy installation allows DIN rail mounting in two directions
- Easy wiring by cage type screw terminals



CSS-32U Soft Starter

Selection table

| Type | Part No. | Description | Nom. Current |
|------|----------|-------------|--------------|
|------|----------|-------------|--------------|

Versions with VDE approval per EN 60 355-2-40

| | | | |
|---------|----------|---|----------------|
| CSS-32U | 805 204 | Soft Starter incl. mounting clip and operating manual; VDE released version | 32A max |
| CSS-32U | 805 204M | Box with 20 pieces CSS-32U with VDE, mounting clips and one operating manual | 32A max |
| CSS-25U | 805 205 | Soft Starter incl. mounting clip and operating manual; VDE released version | 25A max |
| CSS-25U | 805 205M | Box with 20 pieces CSS-25U with VDE, mounting clips and one operating manual | 25A max |

Non approved versions

| | | | |
|---------|----------|---|----------------|
| CSS-32U | 805 200 | Soft Starter incl. mounting clip and operating manual | 32A max |
| CSS-32U | 805 200M | Box with 20 pieces CSS-32U , mounting clips and one operating manual | 32A max |
| CSS-25U | 805 201 | Soft Starter incl. mounting clip and operating manual | 25A max |
| CSS-25U | 805 201M | Box with 20 pieces CSS-25U , mounting clips and one operating manual | 25A max |

Accessory

| | | |
|---------|---------|---|
| K00-003 | 807 663 | 3-pol Screw connector to alarm output for wires up to 2.5mm ² ; bag with 50 pieces |
|---------|---------|---|

CSS-25U / CSS-32U Compressor Soft Starter

Technical Data

| | |
|--------------------------------------|--|
| Operating voltage | 230V 50 / 60 Hz nominal |
| Maximum compressor operating current | CSS-32U : 32A CSS-25U : 25A |
| Compressor starting current | CSS-32U: max. 45A CSS-25U: max. 30A |
| Operating temperature | -20 to +55°C non condensing |
| Storage temperature | -20 to +65°C non condensing |
| Start capacitor | 200 to 240 uF |
| Time delay after stop | 0,5 to 5 Min |

| | |
|--|------------------------------|
| Alarm relay, AgNi (SPDT) | |
| Resistive (AC1) max. | 250V~ / 3A 30V= / 3A |
| Flexible cable cross section (power lines) | 0.25 ... 4 mm ² |
| Flexible cable cross section (alarm outp.) | 0.25 ... 2.5 mm ² |
| Max. vibration | 4 g (at 10 to 1000 Hz) |
| Weight | 430g |
| Protection acc. IEC 529 | IP20 |

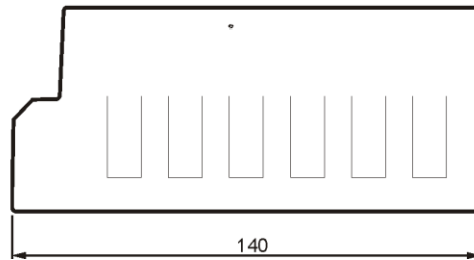
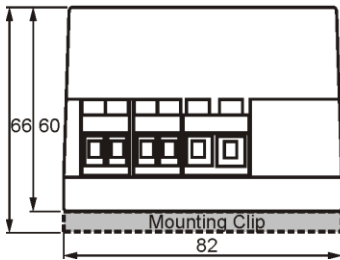
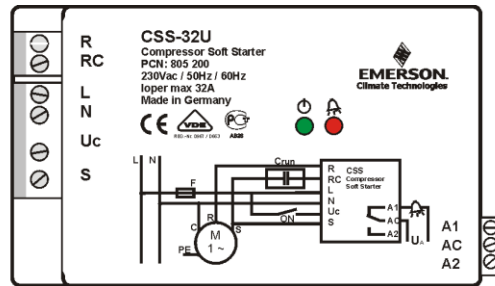
Standards

| | |
|-----------------|---|
| EN 60947-1 | Low voltage switchgear and controlgear |
| EN 60947-4-2 | Contactors and motor-starters - AC semiconductor motor controllers and starters |
| EMC 2004/108/EC | Electromagnetic Compatibility (EMC) Directive |
| LVD 2006/95/EC | Low Voltage Directive |

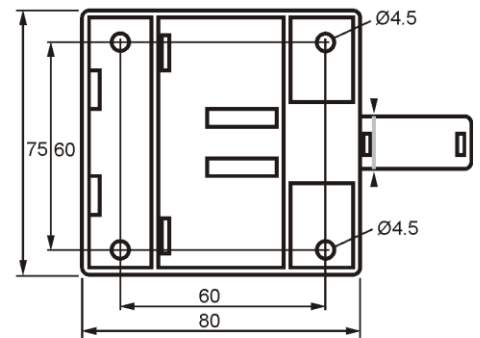
| | |
|-----------------|---|
| EN 60335-1 | Safety of household and similar electrical appliances - |
| EN 60335-2-40 | Part 2-40 Particular requirements for electrical heat pumps, air conditioners and dehumidifiers |
| ROHS 2002/95/EC | Restriction of Hazardous Substances Directive |

Dimensions (mm)

Compressor Soft Starter



DIN-Rail Mounting Clip



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