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.

CSS-32U Soft Starter

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

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

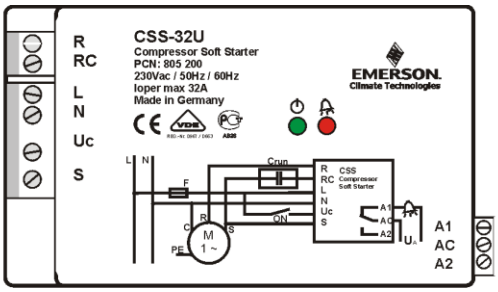
Standards

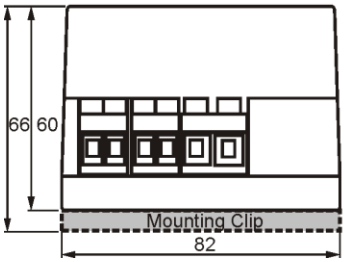
EN 60947-1	Low voltage switchgear and controlgear
EN 60947-4-2	Contactors and motor-starters - AC semiconductor motor controllers and starters
EMC 2004/108/EC	Electromagnetic Compatibility (EMC) Directive
LVD 2006/95/EC	Low Voltage Directive

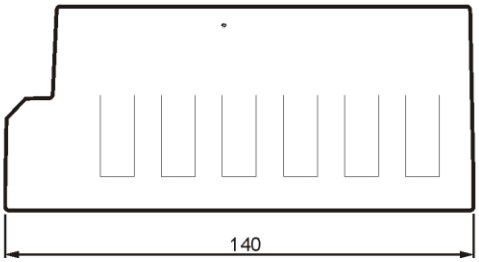
EN 60335-1	Safety of household and similar electrical appliances -
EN 60335-2-40	Part 2-40 Particular requirements for electrical heat pumps, air conditioners and dehumidifiers
ROHS 2002/95/EC	Restriction of Hazardous Substances Directive

Dimensions (mm)

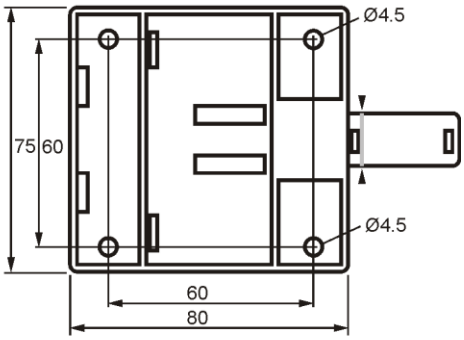
Compressor Soft Starter







DIN-Rail Mounting Clip



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