

Data sheet

CI-tronic™ Soft starters

Type MCI 12CH/15CH/25CH

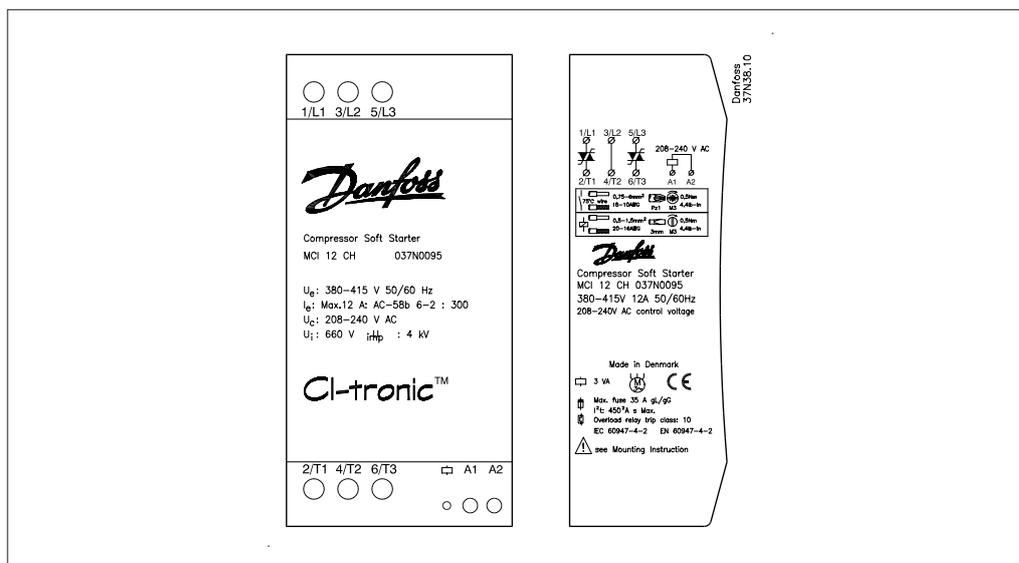


The MCI CH soft starters are designed for starting/stopping of hermetic compressors for residential pumps, refrigeration and A/C units.

The soft start ramp-up time is fixed to ensure lubrication and optimal start current reduction.

Features

- Control voltage 208-240 V AC
- Automatic detection of missing phases
- LED Status indication
- Automatic adaptation to 50/60 Hz
- Easy and quick installation
- Built in varistor protection
- IP 20 protection
- Compact modular design
- DIN rail mountable
- Ramp-up time max 0.2 s (factory set-up)
- EN 60947-4-2

Technical data

Output specifications

Features	MCI 12CH	MCI 15CH	MCI 25CH
Operational voltage V AC	380 – 415	380 – 415	380 – 415
Operational current (AC-58b) max.	12 A	15 A	25 A
Ramp up time (preset) max.	0.2 s	0.2 s	0.2 s
Leakage current max.	5 mA	5 mA	5 mA
Operational current min.	50 mA	50 mA	50 mA
Overload relay trip class	Class 10	Class 10	Class 10

Semiconductor protection fusing

Type 1 ¹⁾ co-ordination	35 A gL/gG	50 A gL/gG	63 A gL/gG
Type 2 ²⁾ co-ordination Pt (t=10 ms)	610 A2s	1800 A2s	6300 A2s

Rating index

AC-58b: Hermetic refrigerant compressor motor with bypass ³⁾	12 A: AC-58b: 6-2:300	15 A: AC-58b: 6-2:360	25 A: AC-58b: 6-2:600
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¹⁾ Type 1 co-ordination require that, under short-circuit conditions, the device shall cause no danger to persons or installation and may not be suitable for further use without repair and replacement of parts

²⁾ Type 2 co-ordination require that, under short-circuit conditions, the device shall cause no danger to persons or installation and shall be suitable for further use

³⁾ 12 A: AC-58b: 6-2:300 means max. load 6 x 12 A for 2 seconds: Min. 300 seconds between starts

Technical data
(continued)

Control circuit specifications

Control voltage range	208-240 V AC
Pick-up voltage (max.)	177 V AC
Drop-out voltage (min.)	50 V AC
Control current for no operation (max.)	1.5 mA AC
Control current / power (max.)	3 VA
Response time (max.)	100 ms
Fuse (max.)	10 A gL/gG
EMC immunity	Tested acc. to Art. 9.3.5 EN 60947-4-2

Insulation

Rated insulation voltage Ui	660 V AC
Rated impulse withstand voltage Uimp	4 kV
Installation category	III

Thermal specification

Cooling method	Natural convection
Storage temperature range	-20°C – 80°C
Ambient temperature	-20°C – 40°C
Enclosure degree / pollution degree	IP 20/ 3
Power dissipation, continuous duty (max.)	4-5 W
power dissipation, intermittent duty (max.)	4-5 W x duty cycle

Materials

Housing self extinguishing	PC/ ABS
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MCI CH soft starter selection

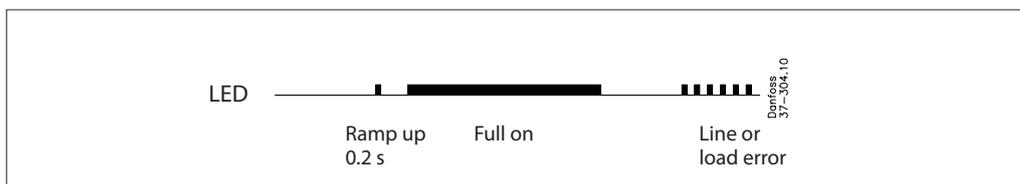
Type	Max. load Amp	I2t for fusing	Code no.
MCI 12 CH	12	610 A²s	037N0095
MCI 15 CH	15	1800 A²s	037N0096
MCI 25 CH	25	6300 A²s	037N0097

Functional description

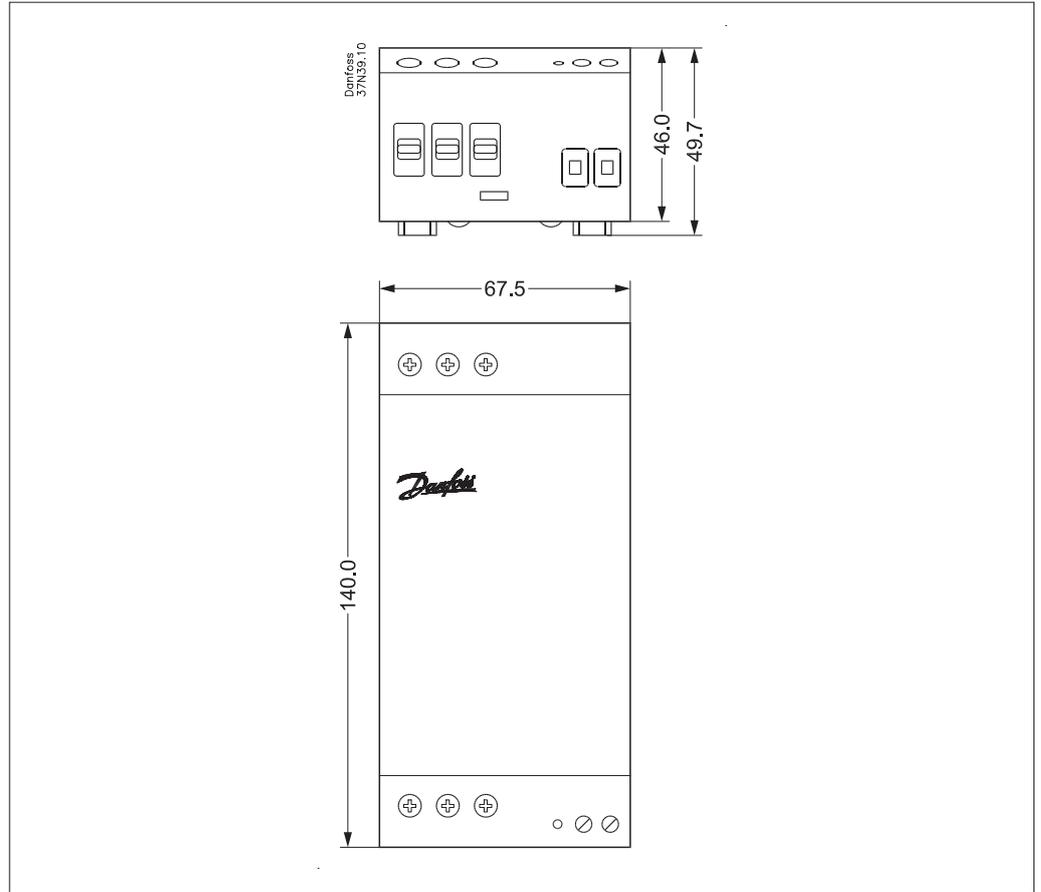
Start

During ramp-up the controller will gradually increase the voltage to the motor from the present initial torque value until it reaches full line voltage. The actual ramp time is digitally calculated and will not be influenced by net frequency or load variation.

LED status indication



Dimensions



Application examples

When the control voltage is applied to A1-A2, the soft starter will start the motor, according to the fixed ramp-up time. When the control voltage is switched OFF, the motor will switch OFF instantaneously.

