

- ▶ 3-phase control
- ▶ Reduced mechanical stress on drives
- ▶ Reduced starting current compared with direct start
- ▶ Prepared for W3C-connection



▶ Technical data

▶ 1. Functions

Reducing mechanical stress on drives during the acceleration and the retardation phase of motors
Temperature monitoring of device

▶ 2. Time ranges

	Adjustment range	
Acceleration time:	0s	45s
Retardation time:	0s	45s

▶ 3. Indicators

Green LED "Betrieb" ON: indication of control voltage
Green LED "Start" ON: indication of activation
Green LED "U_{Motor}" ON: indication of max. output voltage

▶ 4. Mechanical design

Metal housing, IP rating IP20
Mounting on mountingplate
Distance to other devices: min. 100mm
Mounting position: cooling fins vertical
Shockproof terminal connections according to VBG4
Initial torque: max. 2.4Nm
Terminal capacity: see table (page 2)

▶ 5. Input circuit

Control voltage:	230V AC	terminals L1-N
Tolerance:	±15%	
Rated frequency:	48 to 63Hz	
Duration of operation:	1.5 to 15kW:	100%
	>18.5kW:	80s resp. 100% using impulse series relay or optional feature "permanent operation"

▶ 6. Control contact 1-2

Function: activation of softstart
Connection: potential free
Loadable: no
Line length: max. 10m, twisted pair
Control pulse length: min. 0.2s

▶ 7. Signaling contact 6-7-8

1 potential free change over contact
Function: indication of max. output voltage
(e.g. for triggering an impulse series relay)
Switching capacity: 1500VA (6A / 250V AC)
Fusing: 6A

▶ 8. Power circuit

Supply voltage:	3~ 110V to 500V AC	terminals L1-L2-L3
Tolerance:	±20%	
Rated frequency:	48 to 63Hz	
Starting torque:	0% to 100%	
Stopping torque:	0% to 100%	
Start-up cycles:	max. 60/h at medium load	
Impulse series relay:	external (not included)	

▶ 9. Power classes

See table (page 2)

▶ 10. Ambient conditions

Ambient temperature:	-25 to +45°C (according to IEC 68-1)
Storage temperature:	-25 to +75°C
Transport temperature:	-25 to +75°C
Relative humidity:	5% to 95% not condensing
Pollution degree:	2 (according to IEC 664-1)

9. Power classes

Type	Max. motor power at 3x400V (kW) ^{1) 2) 3)}	Max. permissible start-up current (A)	Recommended semiconductor fuse (optional) (A)	Line fuse (A)	Recommended line cross section (mm ²)	Weight (kg)	Size	Permanent operation
Eurostart 1,5	1.5	12	10	8	1.5	1.2	A	■
Eurostart 2,2	2.2	15	12	10	1.5	1.2	A	■
Eurostart 3	3.0	24	16	10	1.5	1.2	A	■
Eurostart 4	4.0	32	30	16	2.5	1.2	A	■
Eurostart 5,5	5.5	48	35	16	2.5	1.2	A	■
Eurostart 7,5	7.5	65	50	20	4.0	2.2	B	■
Eurostart 11	11.0	85	63	25	4.0	2.2	B	■
Eurostart 15	15.0	110	80	35	6.0	2.2	B	■
Eurostart 18,5	18.5	135	80	35	10.0	2.2	B	□
Eurostart 22	22.0	175	100	63	10.0	2.2	B	□
Eurostart 30	30.0	210	125	63	16.0	4.5	C	□
Eurostart 37	37.0	265	160	80	16.0	4.5	C	□
Eurostart 45	45.0	325	200	100	25.0	4.5	C	□
Eurostart 55	55.0	400	250	125	35.0	4.5	C	□
Eurostart 75	75.0	575	350	160	50.0	4.5	C	□

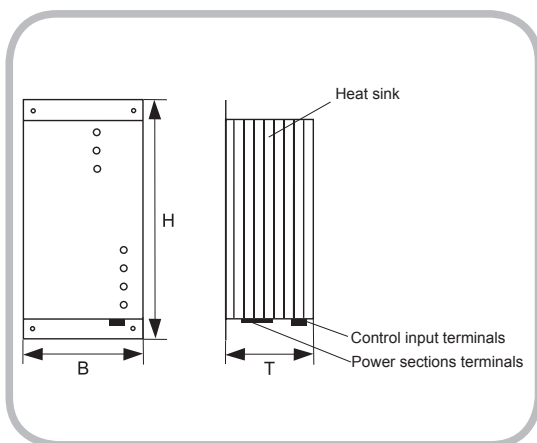
■ = standard □ = optional (additional charge)

- 1) All values refer to standardized motors according to IEC 72 und UNE 20106
 2) At variant motor voltages max. motor output changes similar
 3) If used with W3C-connection the maximum connectable motor power is 1.73-times higher

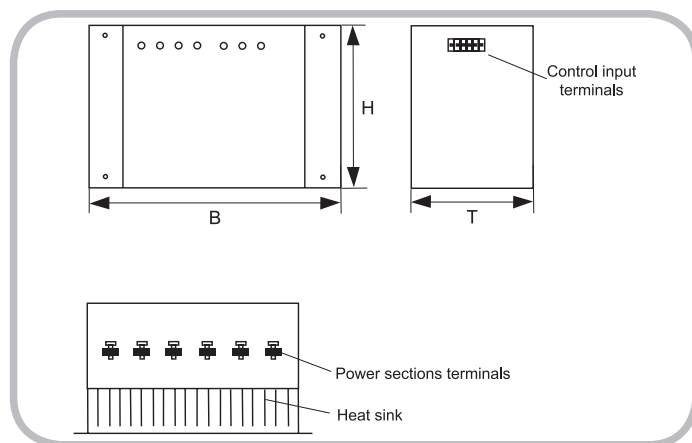
Dimensions

Size	Dimensions H x B x T (mm)
A	200 x 75 x 106
B	200 x 93 x 132
C	200 x 360 x 140

Size A, B



Size C



Functions

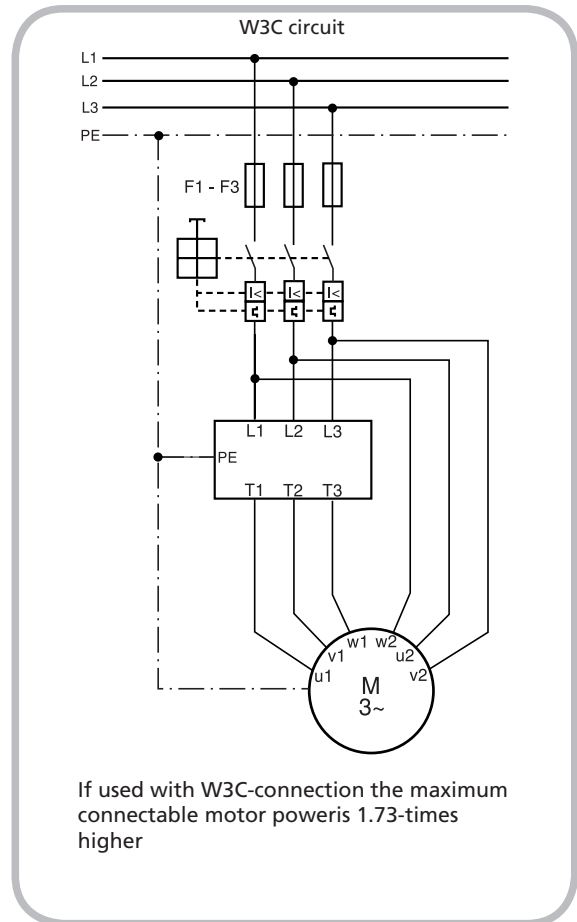
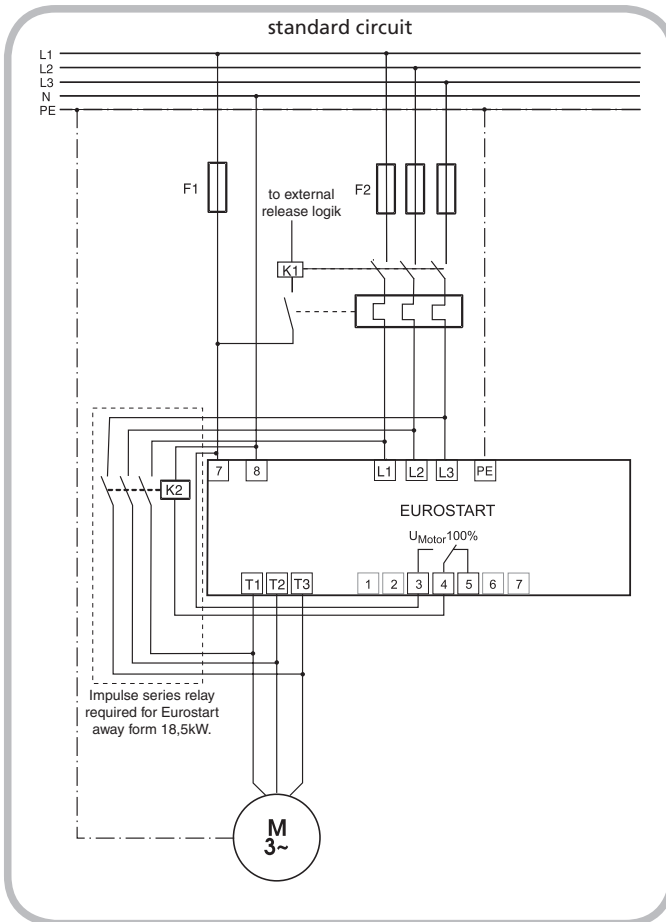
Controllable softstart of a motor

The softstarters of the EUROSTART series have been designed for asynchronous machines with squirrel-cage rotors to counter the disadvantage of these units, namely the high initial current and the associated jerky startup of the motor.

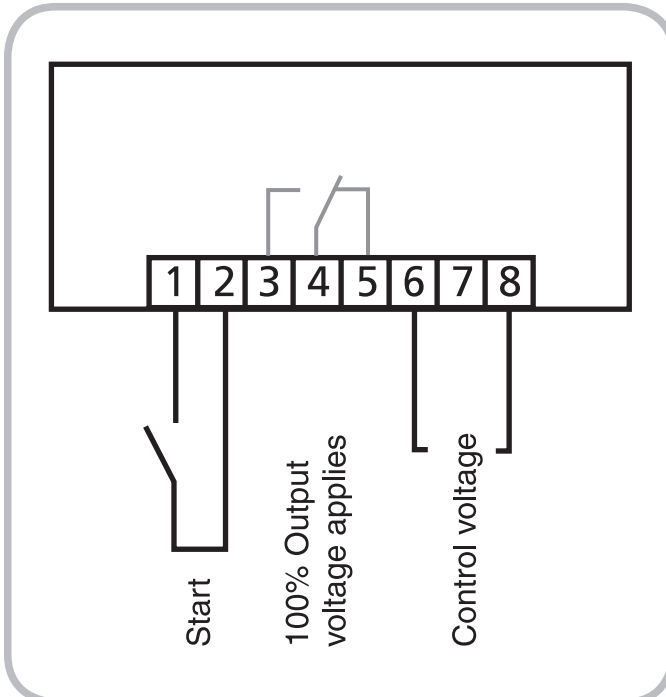
The ramped increase of the motor voltage is achieved by reducing the phase control in a three-phase thyristor bridge. Control over acceleration and retardation is performed by a special processor. When the softstarter is activated the stator voltage of the motor is increased linearly over the entire interval of the acceleration time (T_{ON}) to full control voltage. The time for this voltage ramp can be set on the T_{ON} controller to any value from 0 to 45 seconds. As the voltage increases, so too does the torque, just rising above the load moment. The motor therefore starts with slow acceleration. By specifying a motor-specific startup moment the voltage (torque) increases rapidly when the softstarter is activated, until the startup torque set on the M_{ON} controller is reached. Only then does the voltage start increasing slowly for the remaining acceleration time until full system voltage is reached. In this way, more effective use is made of the startup time and wear and tear is kept to a minimum.

Connections

Power circuit



Master control unit



 **Comments**