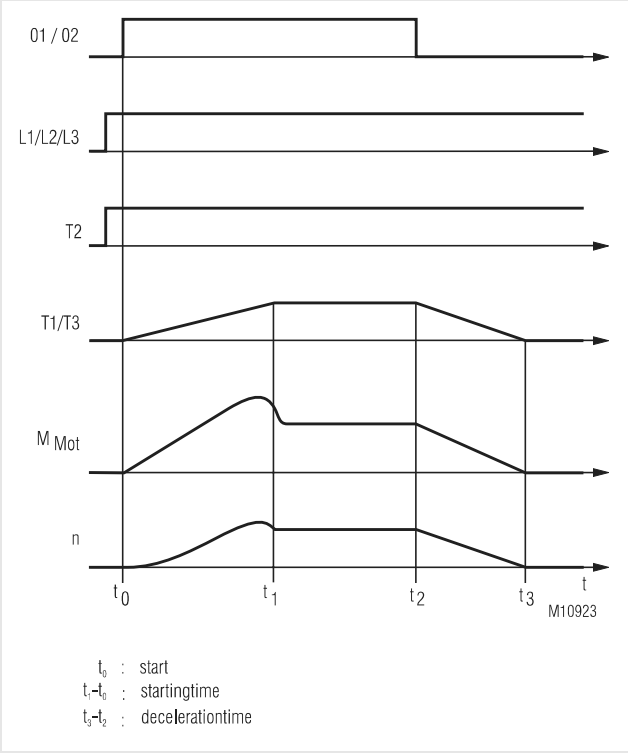
MINISTART
Softstart- / Softstop Device
GI 9014

0269454

GI 9014

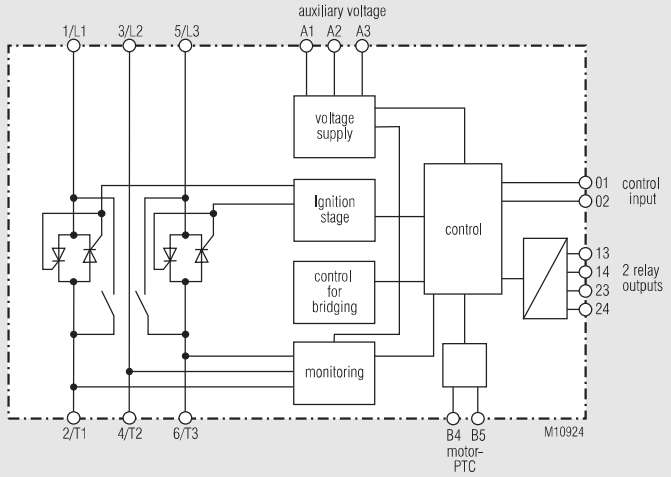
GI 9014 with DeviceNet-module

Function Diagram



t_0 : start
t_1-t_0 : startingtime
t_3-t_2 : decelerationtime

Block Diagram



Your Advantages

- Protection of the drive unit
- Space and cost saving because of integrated motor protection:
  - motor overload, phase failure and exceed acceleration time
- Integrated bridging contactor
- Limiting of starting current prevents against mains and equipment overload
- Productivity by shortened stating times on heavy duty stating and high permissible switching frequency
- Individual configuration for every application
- Easy operation
- Comprehensive diagnostic via LED-flashing codes possible

Features

- 2-phase softstarter for asynchronous motors up to 110 kW (400 V)
- Integrated current control time
- Integrated motor protector
- Integrated bridging contactor
- Volt free coltrol input for softstart / -stop
- Connection for motor thermistor
- With two monitoring outputs, one is programmable
- DIN rail mounting with devices up to 30 kW
- Communication interfaces for Profibus, DeviceNet, Modbus and pump controls (optional)
- Start and stop via seperate push buttons or control switch
- Motor voltage range 3 AC 200 ... 440V or 3 AC 200 ... 575V

Adjustable functions:

- Starting time monitoring
- Nominal motor current
- Current ramp
- Current limit
- Softstopp - ramp time
- Motor protection class
- Phase sequence
- Programmable relay output for indicators

Approval and Marking

CE

Application

- Escalator
- Pumps
- Fans and ventilation systems
- Conveyor systems and elevators
- Compresseors
- Mills, crushers, presses
- ... and for all applicattions with ambitious start-up and deceleration

Indication

LED "On": Indicate the device state
LED "Bypass": Indicate the motor state
flashes with same frequency at error
Failure codes see in operating manual GI 9014

Technical Data

Nominal voltage: 3 AC 200 ... 440 V (+10 % / -15 %)
3 AC 200 ... 575 V (+10 % / -15 %)
Nominal frequency: (at start): 45 ... 66 Hz

Rated current I_N (A):	18	34	42	48	60	75	85	100	140	170	200
Motor power at 400 V (kW):	7,5	15	18,5	22	30	37	45	55	75	90	110
Stromrampe:	2 s, 5 s, 15 s with 150 %; 200 % and 250 % I_N										
Stromgrenze:	250%, 275%, 300%, 325%, 350%, 375%, 400%, 425%, 450% I_N										
Motor protection class:	adjustable										
Deceleration time:	2 s ... 20 s										
operating frequency 4 x I_e and 6 s:	AC 53b 10/h					AC 53b 6/h					
Weight (kg):	2.4					4.3			6.8		

Auxiliary voltage (A1, A2, A3)
optionally: AC 380 to 440 V (+ 10% / - 15%)
and AC 110 to 240V (+ 10% / - 15%)
or AC/DC 24 V (± 20%)
Current consumption
(at operation): < 100 mA
Current consumption
(at starting)
at auxiliary voltage AC 110…440 V: 10 A for 10 ms
at auxiliary voltage AC/DC 24 V: 2 A for 10 ms

Inputs
Start (terminal 01)
NO contact: 150 kΩ at AC 300 V and
5.6 kΩ at DC 24 V
Stop (terminal 02)
NC contact: 150 kΩ at AC 300 V and
5.6 kΩ at DC 24 V

Outputs
Main contactor (terminals 13, 14)
NO contact: 6 A, DC 30 V resistive /
2 A, AC 400 V, AC11
programmable relay
(terminal 23, 24)
NO contact: 6 A, DC 30 V resistive /
2 A, AC 400 V, AC11

General Data

Degree of protection
at 7.5 ... 55 kW: IP 20 IEC/EN 60 529
at 75 ... 110 kW: IP 00 IEC/EN 60 529
IP 20 with additional finger guard kit
(see accessories)
Temperature range
operation: - 10 °C to + 60 °C
(over +40 °C see derating at Commisioning Instructions)
storage temperature: - 25 ... + 60°C
(to +70 °C for max . 24 h)
Humid: 5% ... 95% relative humid
Rated voltage of insulation: 600 V
Pollution degree: 3
Vibration resistance: Test according to IEC 60068
4 Hz ... 13.2 Hz ± 1 mm Amplitude
13.2 Hz ... 200 Hz: ± 0.7 g
EMC
Electrostatic discharge (ESD): 4 kV (contacts) IEC/EN 61 000-4-2
8 kV (air) IEC/EN 61 000-4-2
Conducted radio frequency
emission: 0.15 MHz to 1000 MHz: 140 dB (µV)

Technical Data

Surge voltage
between
wires for power supply: 1 kV IEC/EN 61 000-4-5
between wire and ground: 2 kV IEC/EN 61 000-4-5
Fast transients: 5/50 µs
Voltage dip and
short time interruption: 100 ms (at 40 % nominal voltage)
Harmonics and distortion: IEC 61000-2-4 (class 3), IEC/EN61800-3
Short circuit
Short circuit current
7.5 ... 37 kW: 5 kA
55 ... 110 kW: 10 kA
Heat dissipation:
during start: 3 W/A
during operation: 10 W

Dimensions

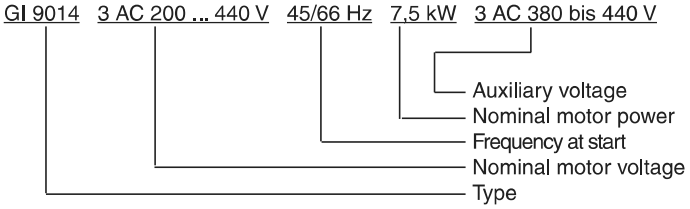
Width x height x depth
7.5 / 15 / 18.5 / 22 / 30 kW: 98 x 203 x 165mm
37 / 45 / 55 kW: 145 x 215 x 193 mm
75 / 90 / 110 kW: 202 x 240 x 214 mm

Standard type

GI 9014 3 AC 200 ... 440 V 45 ... 66 Hz 7.5 kW
- Article number: 0062420
- Nominal voltage: 3 AC 200 ... 440 V
- Auxiliary voltage: DC 24 V
- Nominal motor power: 7.5 kW
- Width: 98 mm

Ordering Example

GI 9014 | 3 AC 200 ... 440 V | 45/66 Hz | 7,5 kW | 3 AC 380 bis 440 V



Accessories

- GW 5310: Remote control
- GW 5311: Interface for remote control
- GW 5312: DeviceNet-Module
- GW 5313: Modbus-Module
- GW 5314: Profibus-Module
- GW 5316: Finger guard kit and touch protection

Connection Examples