celduc® relais

SOFTSTARTERS

Mastering Every Start



CONTROL

Control starting, stopping and torque.

PROTECT

Effectively protect the motor.

MONITOR

Detect process anomalies.

www.celduc-relais.com

More than just a softstarter

Everything you need to control the motor and the process. All as standard.

MASTER
True 3-phase torque control

Soft start and stop to reduce mechanical shocks and precisely control motor acceleration.

PROTECT
Integrated Motor Protection

I²t thermal protection, isolated PTC thermistor input and motor operation monitoring.



MONITOR
Built-in Load Monitor

Detect abnormal operating conditions such as dry running, stalling, jamming, belt breakage or loss of efficiency, depending on the application.

SIMPLIFY
Integrated Bypass

A compact design that reduces the need for external components and simplifies control cabinet integration.

Key technical features:

- **Compact, robust softstarter** covering a wide power range: up to 110 kW, 200–525 VAC, three-phase. Models from 16 to 170 A.
- **Integrated bypass** using proven contactor technology.
- **Torque-controlled starting and stopping** for smooth starts with low current and pump stops without water hammer.
- **IP20 protection**
- **UL/cUL approvals** and **DNV marine certification**

One solution, multiple functions: nothing you don't need.

Start, stop, protect and monitor: the SY delivers all the essential motor control functions in one compact solution



1 • Smart Starting with Integrated Bypass

Soft starting with torque control, current limiting and Torque Boost to adapt to different load requirements. Once the motor has started, the bypass automatically takes over to reduce heat losses.

2. Controlled Stopping

Smooth, controlled stopping to minimise mechanical stress and prevent water hammer in pumping applications.

3. Load monitoring

Detect abnormal operating conditions to help protect both the machine and the process.

4. Motor protection

Built-in I²t thermal protection and isolated PTC thermistor input as standard. Optional PT100 temperature monitoring available.

5. Braking

Braking functions for applications requiring rapid stopping, particularly those involving high-inertia loads.

6. Control functions

DOL (direct-on-line starting) and forward/reverse JOG operation for easy positioning, adjustment, testing and maintenance.

7. Communication

Seamless integration into automation systems through a range of communication options.

8. Built to last

- Conformally coated circuit boards
- Integrated bypass
- Designed for demanding industrial environments

A complete range from **16 to 170 A**

Overing power requirements up to **110 kW at 525 VAC**, the range offers two operating classes to suit different starting conditions: **Normal Duty** and **Heavy Duty**.



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Reference	Motor P_typ 400 VAC Normal Duty	Motor P_typ 400 VAC Heavy Duty	Motor P_typ 525 VAC Normal Duty	Motor P_typ 525 VAC Heavy Duty	Rated current AC3a (at 40°C) Normal Duty	Rated current AC3a (at 40°C) Heavy Duty	Dimensions (mm)	Fig.
SY1TS-1-61D9	7,5kW	4kW	11kW	5,5kW	16A	10A	246/340 x 126 x 188	1
SY1TS-1-63D9	18,5kW	7,5kW	22kW	11kW	36A	21A	246/340 x 126 x 188	1
SY1TS-1-65D9	30kW	15kW	37kW	22kW	56A	33A	246/340 x 126 x 188	1
SY1TS-2-67D9	45kW	22kW	55kW	30kW	85A	51A	246/340 x 126 x 188	1
SY2TS-2-69D9	90kW	55kW	110kW	75kW	170A	102A	285/380 x 196 x 235	2

General electrical specifications	Mains supply voltage	Mains frequency	Control	Operating temperature	Output current derating
At 40°C ambient	200-525 V, +10%/-15%, 3-phase	50/60 Hz, ±10%	100-240 V +10%/-15%, Single phase	0°C +40°C	-2%/°C to max +15°C (55°C)

Standard options available

Reference	Specifications
SYA-5406-00	**External control panel** Complete panel kit, panel included
SYA-3876-51	**I/O 2.0 option board** Chaque carte offre trois sorties relais supplémentaires et trois entrées numériques isolées supplémentaires (24 V). Cette option est décrite dans un autre mode d'emploi. Deux cartes optionnelles au maximum peuvent être installées (E/O ou PTC/PT100).
SYA-3876-58	**PTC/PT100 2.0 option board** Allows connection of motor thermistors and up to six PT100 sensors. This option is described in a separate instruction manual. A maximum of two option boards can be installed (I/O or PTC/PT100).
SYA-5385-54	SY **Isolated RS485 module**
SYA-5385-55	SY **Profibus module**
SYA-5385-56	SY **DeviceNet module**
SYA-5385-59	SY **Modbus/TCP module**
SYA-5385-60	SY **EtherCAT module**
SYA-5385-61	SY **Profinet IO 1-port module**
SYA-5385-62	SY **Profinet IO 2-port module**
SYA-5385-63	SY **Isolated USB module**
SYA-5385-64	SY **EtherNet IP 2-port module**
SYA-5385-66	SY **Industrial Ethernet for Profinet S2 - 2 ports**

A wide range of applications

The SY range is ideal for **fixed-speed applications** requiring **controlled starting, effective motor protection** and **advanced process monitoring.**



Pumps

- Soft starting and stopping
- Reduced hydraulic stress



Mills & crushers

- Demanding start-up management
- Load monitoring



Fans & blowers

- Gradual acceleration
- Controlled handling of high-inertia loads



Mixers & blenders

- Torque control
- Protection against overload conditions



Compressors

- Reduced starting current
- Reduced mechanical stress



Centrifuges

- Controlled starting of high-inertia loads



Conveyors

- Smooth acceleration
- Reduced shocks to the drivetrain and load



Industrial machinery

- Integrated starting, braking and protection



celduc® relais

Products

Solid State Relays



celduc® designs and manufactures a **wide range of solid state relays and contactors** for switching and controlling industrial loads. Our range includes **single phase and multi-channel solutions (two-phase, three-phase and four-legs relays), power controllers, DC-to-DC** relays, as well as solutions integrating **advanced diagnostic, control and communication** functions. Designed for demanding applications, our products provide AC switching up to **130 A / 690 Vac** and DC switching up to **25 A / 1700 Vdc** or **150 A / 100 Vdc**, with solutions suitable for both standard applications and the most advanced control systems.

Magnetic sensors



Safely detect or monitor a level, passage, movement, position or speed... The only limit to these sensors is the user's imagination. They are used in consumer applications as well as in major industries such as automotive, aerospace, telecommunications and industrial automation.

Reed relays & switches



Used as switching elements in magnetic proximity sensors and Reed relays, Reed switches have remained indispensable for more than 60 years. Every year, new applications use due to their simple operating principle, compact size and reliability.

Integrated power electronics solutions

Building on more than 30 years of experience in power electronics integration, celduc® is now expanding its expertise by offering **custom design and manufacturing services for power modules**. With state-of-the-art industrial equipment, 100% French production and comprehensive prototyping, industrialization and qualification capabilities, celduc® is positioned as a leading technology partner in the field of power semiconductors. We work alongside your engineering teams to provide a board that is manufactured, tested and ready to integrate into your industrial solution.

All technical characteristics are subject to change without previous notice // November 2026 - PLAQSOFTSTARTEREN photos Adobe Stock – celduc® relais // Xtreme Com 04 77 26 61 77

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