



Christian P-4.0 ADVANCED

22,5mm compact motor starter including full motor protection



Today's drive solutions require powerful and flexible instruments. The new motor starter Christian P-4.0 from TELE is designed for motors up to 4.0kW @ 400V, and includes 5 functions in one compact unit, requiring only 22,5mm width. This intelligent instrument offers a soft start, soft stop, forward/reverse, overload protection and an integrated 3 ph motor contactor.

Offering integrated motor protection, the use of an external MCB is obsolete. A simple circuit breaker protects the installation against short circuit and faulty wiring. The soft start and stop function is performed by reliable semiconductors (thyristors) and the reversing function by an internal relay. After performing the start process, the semiconductors are bypassed by integrated relays to minimize power dissipation. The intelligent combination of semiconductors and relays increases the lifetime and efficiency of the unit significantly. The overall combination of the above-mentioned features protects motors, shafts, and industrial plants from mechanical stress and reduces maintenance and standstill times.

Your advantages at a glance

- ▶ Up to 5 functions in one instrument:
 - Soft start, soft stop, motor thermal protection,
 - 3 ph motor isolation contactor, Forward/Reverse
- ▶ **Minimized space consumption, only 22.5mm width**
- ▶ **Only line protection is necessary, no motor circuit breaker needed**
- ▶ Robust semiconductors with 1500V max. isolation voltage
- ▶ Increased system availability by the motor protection function
- ▶ Increased lifetime by hybrid design compared to traditional contactor-relay solutions
- ▶ Energy saving by bumpless soft start/stop function



Conventional



Advanced



Our experience helps you cut costs.

Advanced motor starter Christian P-4.0

Technical features

- ▶ Integrated full motor thermal protection
- ▶ Integrated 3 ph motor isolating contactor
- ▶ Forward/Reverse integrated with full control logic
- ▶ 2 ph control for soft start and soft stop
- ▶ Integrated bypass relays
- ▶ 3 pots for adjustment of torque, time and current limit
- ▶ 4 LEDs indicate status and error
- ▶ Reset button on the front and external reset available

Dimension in mm (W x H x D)
22,5 x 105 x 120,3

Order Code

New advanced version:
Christian P-4.0/RL/TP/IC
(3x400VAC,4kW, 50/60Hz 9.0 A)
Partnumber #490801

Applications

- ▶ Soft start and soft stop function for any standard squirrel cage motors
 - ▶ Transport belts and rollers with overload protection
 - ▶ Fans in ventilation systems
 - ▶ Pumps for water supply and building automation
 - ▶ Tracking control systems for PV panels
- ... and a lot of other applications with sophisticated drive requirements.
Please do not hesitate to contact us for further information.

Functions

„5 in 1“

Integrated motor protection eliminates MCB

Is an electronic replacement of a bimetal switch as used in MCB and motor thermal protection relays. The setting of the nominal motor current is captured by simply adjusting the potentiometer at the front panel.

3 phase motor isolation contactor

In case of stop or error status the motor is fully disconnected from the mains supply, so you do not have to install an external motor isolation contactor.

Soft start / Soft stop

The drive is started and stopped without mechanical stress to save wear on gearboxes and drive belts. Even the mains supply will be protected and high inrush currents are totally removed.

Reversing direction (forward / return)

The soft start and stop are done with 2 ph thyristor control. Internal complete logic is available, so you do not need to take care of any external interlock circuits. Two separate digital inputs for F (forward) and R (reverse) start the command. Reversing is achieved with an internal relay in the standstill phase of the motor without current flow.

Phase failure and phase rotation monitoring

For the start phase, an integrated phase failure monitoring and phase rotation monitoring is integrated. In case of failure, the error is indicated by a flashing error LED and a relay output.



The advantage of power control with semiconductors

- ▶ Switching without any wear
- ▶ Extended lifetime
- ▶ Frequent start / stop events
- ▶ Little space occupation
- ▶ Fast and reliable switching
- ▶ Usable in harsh environments