

# Product data sheet

Specifications



## Soft starter, Altistart 480, 790A, 208 to 690V AC, control supply 110 to 230V AC

ATS480C79Y

**Product availability: Stock - Normally stocked in distribution facility**

**Price\*: 9,200.99 USD**

### Main

|                                       |   |
|---------------------------------------|---|
| <b>Range of Product</b>               | Altivar Soft Starter ATS480   |
| <b>Product or Component Type</b>      | Soft starter  |
| <b>product destination</b>            | Asynchronous motors   |
| <b>Product Specific Application</b>   | Process and infrastructures   |
| <b>Device short name</b>              | ATS480  |
| <b>Phase</b>                          | 3 phase   |
| <b>Utilisation category</b>           | AC-3A<br>AC-53A   |
| <b>Ue power supply voltage</b>        | 208...690 V - 15...10 %   |
| <b>power supply frequency</b>         | 50...60 Hz - 20...20 %  |
| <b>[Ie] rated operational current</b> | Normal duty 790.0 A 104 °F (40 °C))   |
| <b>rated current in heavy duty</b>    | 660.0 A at 104 °F (40 °C) heavy duty  |
| <b>Torque control</b>                 | True  |
| <b>IP Degree of Protection</b>        | IP00  |
| <b>Motor power kW</b>                 | 220.0 kW 230 V in the motor supply line normal duty<br>400.0 kW 400 V in the motor supply line normal duty<br>355.0 kW 400 V in the motor supply line heavy duty<br>500.0 kW 440 V in the motor supply line normal duty<br>400.0 kW 440 V in the motor supply line heavy duty<br>500.0 kW 500 V in the motor supply line normal duty<br>500.0 kW 525 V in the motor supply line normal duty<br>710.0 kW 660 V in the motor supply line normal duty<br>630.0 kW 660 V in the motor supply line heavy duty<br>710.0 kW 690 V in the motor supply line normal duty<br>630.0 kW 690 V in the motor supply line heavy duty<br>355.0 kW 230 V to the motor delta terminals normal duty<br>315.0 kW 230 V to the motor delta terminals heavy duty<br>630.0 kW 400 V to the motor delta terminals normal duty<br>500.0 kW 400 V to the motor delta terminals heavy duty |
| <b>Maximum Horse Power Rating</b>     | 250.0 hp 208 V normal duty<br>200.0 hp 208 V heavy duty<br>300.0 hp 230 V normal duty<br>250.0 hp 230 V heavy duty<br>600.0 hp 460 V normal duty<br>500.0 hp 460 V heavy duty<br>800.0 hp 575 V normal duty<br>600.0 hp 575 V heavy duty  |
| <b>Option card</b>                    | Communication module Profibus DP V1<br>Communication module PROFINET<br>Communication module Modbus TCP/EtherNet/IP<br>Communication module CANopen daisy chain<br>Communication module CANopen Sub-D<br>Communication module CANopen open style  |

Price is "List Price" and may be subject to a trade discount – check with your local distributor or retailer for actual price.

## Complementary

|  |  |
|--|--|
| <b>Device connection</b>                       | In the motor supply line<br>To the motor delta terminals   |
| <b>[Us] control circuit voltage</b>            | 110...230 V AC 50/60 Hz - 15...10 %  |
| <b>Apparent power</b>                          | 0.2 kVA  |
| <b>Integrated motor overload protection</b>    | True   |
| <b>motor thermal protection class</b>          | Class 10E  |
| <b>Protection type</b>                         | Phase failure line<br>Integrated thermal protection motor<br>Thermal protection starter<br>Current overload motor<br>Underload motor<br>Excessive starting time, locked rotor motor<br>Motor phase loss motor<br>Line supply phase loss line<br>Line supply phase loss motor<br>Thermal protection motor |
| <b>current limiting %In (5 x Ie maximum)</b>   | 150...700 %  |
| <b>[In] Rated current pwr loss specifctn</b>   | 790.0 A  |
| <b>Power loss static current independent</b>   | 25.0 W   |
| <b>Power loss per device current dependent</b> | 2517.0 W   |
| <b>Standards</b>                               | IEC 60947-4-2<br>UL 60947-4-2<br>IEC 60664-1   |
| <b>Product Certifications</b>                  | CE<br>cULus<br>CCC<br>UKCA<br>RCM<br>EAC<br>DNV<br>ABS<br>BV<br>CCS  |
| <b>marking</b>                                 | CE<br>CCC<br>UKCA<br>EAC<br>RCM<br>CULus   |
| <b>[Uc] control circuit voltage</b>            | 24 V DC  |
| <b>Discrete input number</b>                   | 4  |
| <b>Discrete input type</b>                     | STOP) logic inputs, 3500 Ohm<br>RUN) logic inputs, 3500 Ohm<br>DI3) programmable as logic input, 3500 Ohm<br>DI4) programmable as logic input, 3500 Ohm  |
| <b>Input compatibility</b>                     | STOP discrete input level 1 PLC IEC 61131-2<br>RUN discrete input level 1 PLC IEC 61131-2<br>DI3 discrete input level 1 PLC IEC 61131-2<br>DI4 discrete input level 1 PLC IEC 61131-2  |
| <b>Discrete input logic</b>                    | Programmable digital input < 5 V   |
| <b>Relay output number</b>                     | 3  |
| <b>Relay output type</b>                       | Relay outputs R1A 1 NO<br>Relay outputs R1B 1 NO<br>Relay outputs RIC NO/NC programmable   |
| <b>Minimum switching current</b>               | 100 mA 12 V DC relay outputs   |

|                                    |   |
|------------------------------------|---|
| <b>Maximum switching current</b>   | Relay outputs 2 A 250 V AC<br>Relay outputs 2 A 30 V DC<br>Relay outputs  |
| <b>Discrete output number</b>      | 2   |
| <b>Discrete output type</b>        | DQ1) programmable digital output <= 30 V<br>DQ2) programmable digital output <= 30 V  |
| <b>Output compatibility</b>        | Open collector level 1 PLC IEC 65A-68   |
| <b>Analogue input number</b>       | 1   |
| <b>Analogue input type</b>         | A11/PTC PTC/Pt 100 temperature probe<br>PTC2 PTC/Pt 100 temperature probe<br>PTC3 PTC/Pt 100 temperature probe  |
| <b>Analogue output number</b>      | 1   |
| <b>Analogue output type</b>        | Current output AQ1 0...20 mA or 0...10 V 500 Ohm  |
| <b>Communication Port Protocol</b> | Modbus serial   |
| <b>Connector Type</b>              | 1 RJ45  |
| <b>Communication data link</b>     | Serial  |
| <b>Physical interface</b>          | 2-wire RS 485   |
| <b>Transmission Rate</b>           | 1200...256000 bit/s   |
| <b>Transmission frame</b>          | RTU   |
| <b>Data format</b>                 | 8 bits, configurable odd, even or no parity   |
| <b>Type of polarization</b>        | No impedance Modbus serial  |
| <b>Number of addresses</b>         | 0...227 Modbus serial   |
| <b>Method of access</b>            | Slave Modbus serial   |
| <b>Function Available</b>          | External bypass control<br>Pre-heating<br>Smoke extraction<br>Multi-motor cascade<br>Second motor set<br>User management<br>Ports and services hardening<br>Security event logging<br>Cybersecure firmware update<br>Single direction |
| <b>Display screen available</b>    | True  |
| <b>Operating position</b>          | Vertical +/- 10 degree  |
| <b>Height</b>                      | 35.04 in (890.0 mm)   |
| <b>Width</b>                       | 30.3 in (770.0 mm)  |
| <b>Depth</b>                       | 13.0 in (329.0 mm)  |
| <b>Net Weight</b>                  | 253.5 lb(US) (115.0 kg)   |

## Environment

|   |   |
|---|---|
| <b>Electromagnetic compatibility</b>          | Conducted and radiated emissions level A IEC 60947-4-2<br>Conducted and radiated emissions with bypass level B IEC 60947-4-2<br>Damped oscillating waves level 3 IEC 61000-4-12<br>Electrostatic discharge level 3 IEC 61000-4-11<br>Immunity to electrical transients level 4 IEC 61000-4-4<br>Immunity to radiated radio-electrical interference level 3 IEC 61000-4-3<br>Voltage/current impulse level 3 IEC 61000-4-5 |
| <b>Pollution degree</b>                       | Level 3   |
| <b>[Uimp] rated impulse withstand voltage</b> | 6 kV  |

|   |  |
|---|--|
| <b>[Ui] Rated Insulation Voltage</b>                                    | 690 V  |
| <b>Environmental class (during operation)</b>                           | Class 3C3 according to IEC 60721-3-3<br>Class 3S2 according to IEC 60721-3-3   |
| <b>Relative humidity</b>  | 0...95 % without condensation or dripping water IEC 60068-2-3  |
| <b>Ambient air temperature for operation</b>                            | 104...140 °F (40...60 °C) with current derating of 2 % per °C)<br>5...104 °F (-15...40 °C) without derating)             |
| <b>Ambient Air Temperature for Storage</b>                              | -13...158 °F (-25...70 °C)   |
| <b>Operating altitude</b>   | <= 3280.84 ft (1000 m) without derating<br>> 3280.84...13123.36 ft (> 1000...4000 m) with current derating 1 % per 100 m |
| <b>Maximum deflection under vibratory load (during operation)</b>       | 1.5 mm at 2...13 Hz  |
| <b>Maximum deflection under vibratory load (during storage)</b>         | 1.75 mm at 2...9 Hz  |
| <b>Maximum deflection under vibratory load (during transport)</b>       | 1.75 mm at 2...9 Hz  |
| <b>Maximum acceleration under vibrational stress (during operation)</b> | 10 m/s <sup>2</sup> at 13...200 Hz   |
| <b>Maximum acceleration under vibratory load (during storage)</b>       | 15 m/s <sup>2</sup> at 200...500 Hz<br>10 m/s <sup>2</sup> at 9...200 Hz   |
| <b>Maximum acceleration under vibratory load (during transport)</b>     | 15 m/s <sup>2</sup> at 200...500 Hz<br>10 m/s <sup>2</sup> at 9...200 Hz   |
| <b>Maximum acceleration under shock impact (during operation)</b>       | 150 m/s <sup>2</sup> at 11 ms  |
| <b>Maximum acceleration under shock load (during storage)</b>           | 100 m/s <sup>2</sup> at 11 ms  |
| <b>Maximum acceleration under shock load (during transport)</b>         | 100 m/s <sup>2</sup> at 11 ms  |

## Ordering and shipping details

|                          |               |
|--------------------------|---------------|
| <b>Category</b>          | US1CP1G22588  |
| <b>Discount Schedule</b> | CP1G          |
| <b>GTIN</b>              | 3606481089175 |
| <b>Returnability</b>     | Yes           |
| <b>Country of origin</b> | FR            |

## Packing Units

|                                     |                         |
|-------------------------------------|-------------------------|
| <b>Unit Type of Package 1</b>       | PCE                     |
| <b>Number of Units in Package 1</b> | 1                       |
| <b>Package 1 Height</b>             | 23.2 in (59.0 cm)       |
| <b>Package 1 Width</b>              | 37.4 in (95.0 cm)       |
| <b>Package 1 Length</b>             | 40.6 in (103.0 cm)      |
| <b>Package 1 Weight</b>             | 297.6 lb(US) (135.0 kg) |

## Sustainability

**Green Premium™ label** is Schneider Electric's commitment to delivering products with best-in-class environmental performance. Green Premium promises compliance with the latest regulations, transparency on environmental impacts, as well as circular and low-CO<sub>2</sub> products.

**Guide to assessing product sustainability** is a white paper that clarifies global eco-label standards and how to interpret environmental declarations.


[Learn more about Green Premium >](#)

[Guide to assess a product's sustainability >](#)




Transparency RoHS/REACH

## Resource performance

 Upgraded Components Available

## Well-being performance

 Mercury Free

 Rohs Exemption Information [Yes](#)

## Certifications & Standards

**Reach Regulation**

[REACH Declaration](#)

**Eu Rohs Directive**

Pro-active compliance (Product out of EU RoHS legal scope)

**China Rohs Regulation**

[China RoHS declaration](#)

**Environmental Disclosure**

[Product Environmental Profile](#)

**Weee**

The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.

**Circularity Profile**

[End of Life Information](#)

**California Proposition 65**

WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

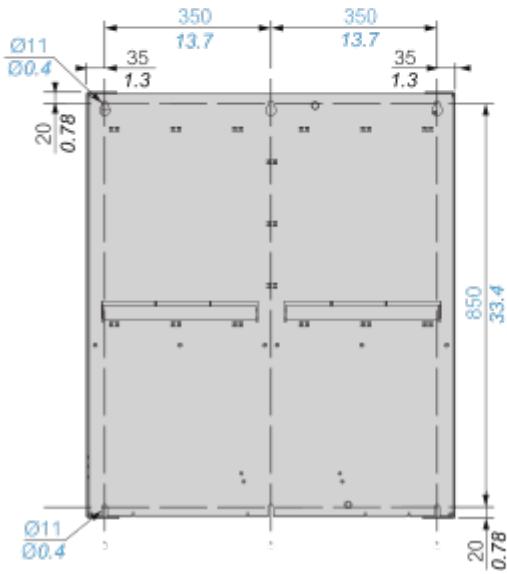
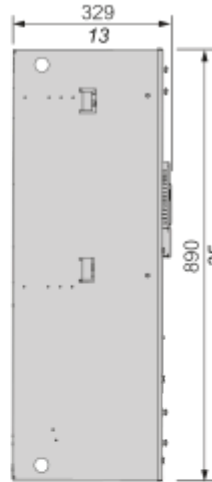
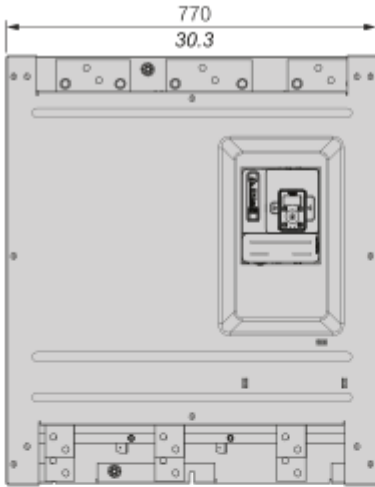
Dimensions Drawings

Dimensions

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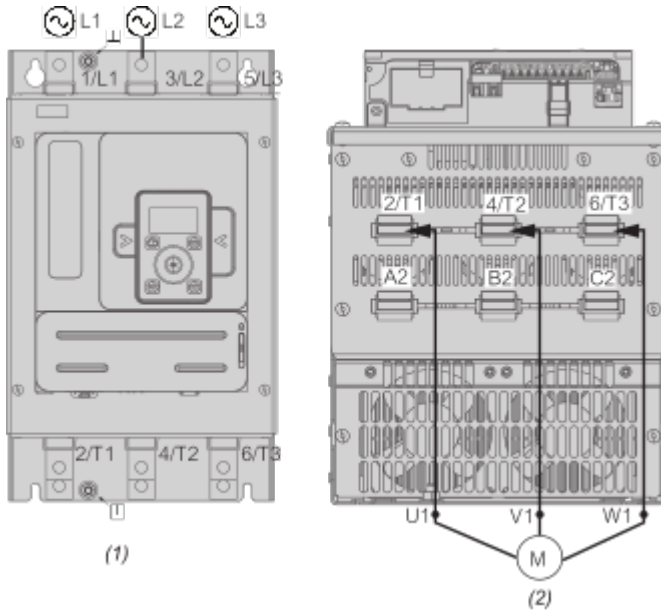
Front, Side and Rear View

mm  
in.



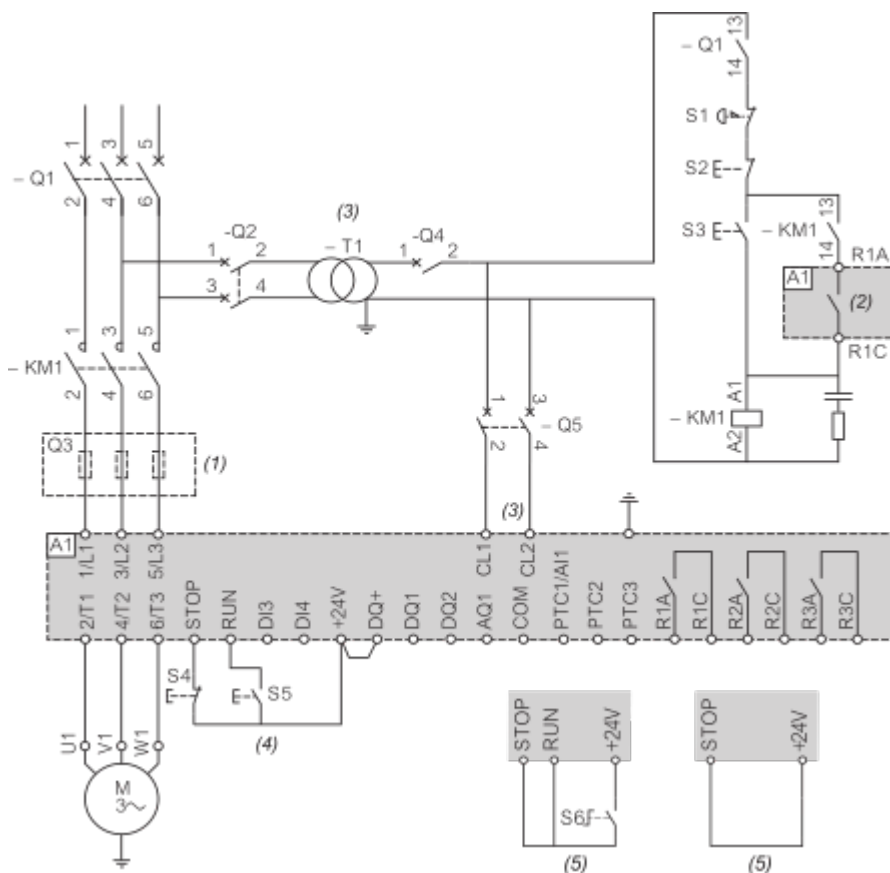
Connections and Schema

Power Connections



- (1) : Mains side
- (2) : Motor side
- 1/L1, 3/L2, 5/L3 : Mains supply inputs
- 2/T1, 4/T2, 6/T3 : Outputs to motor
- A2, B2, C2 : Soft starter bypass

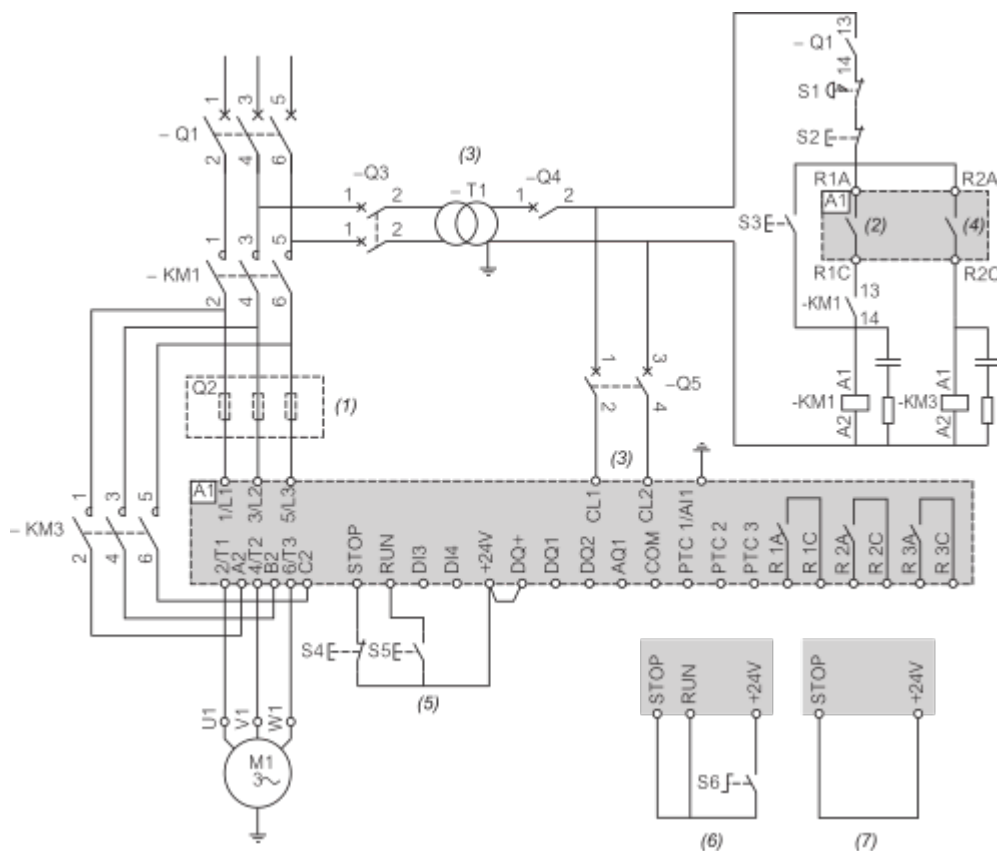
Connection in line, with line contactor, no bypass, type 1 or 2 coordination, non-reversing, 2-wire or 3-wire control



- (1) : Installation of additional fast-acting fuses to upgrade to type 2 coordination according to IEC 60947-4-2.
- (2) : Take into account the electrical characteristics of the relays (Control Terminal Characteristics).
- (3) : The transformer must supply 110...230 VAC +10% — 15%, 50/60Hz.
- (4) : RUN and STOP Management (3-wire control).
- (5) : RUN and STOP Management (2-wire control).

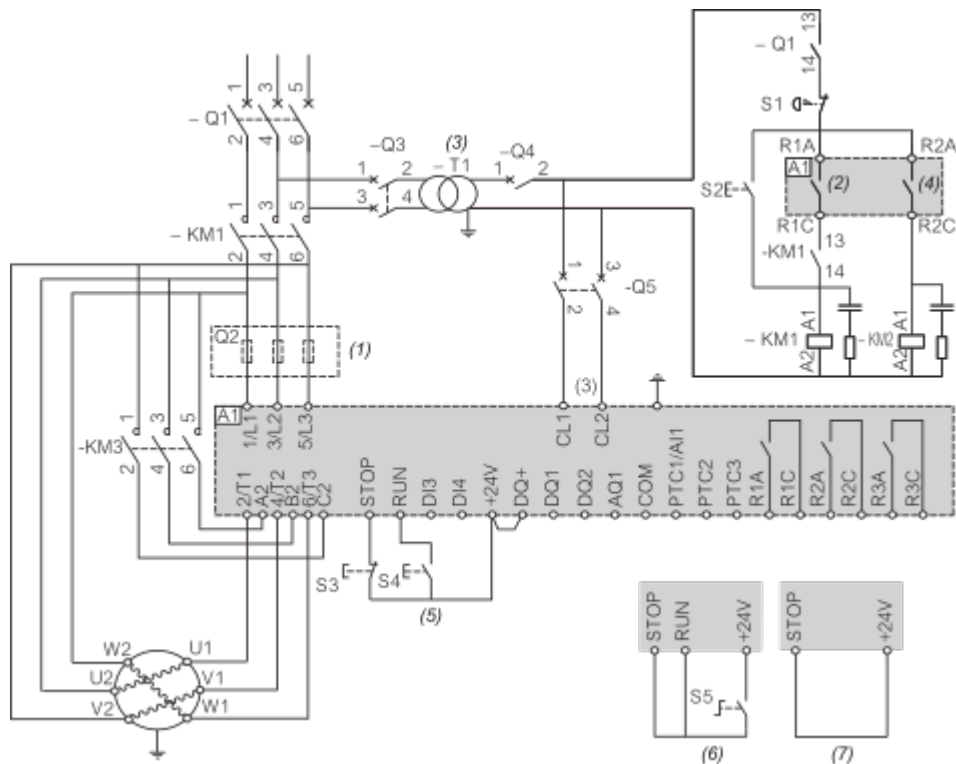


Connection in line, with line and bypass contactor, freewheel or controlled stop, type 1 or 2 coordination, non reversing, 2-wire or 3-wire



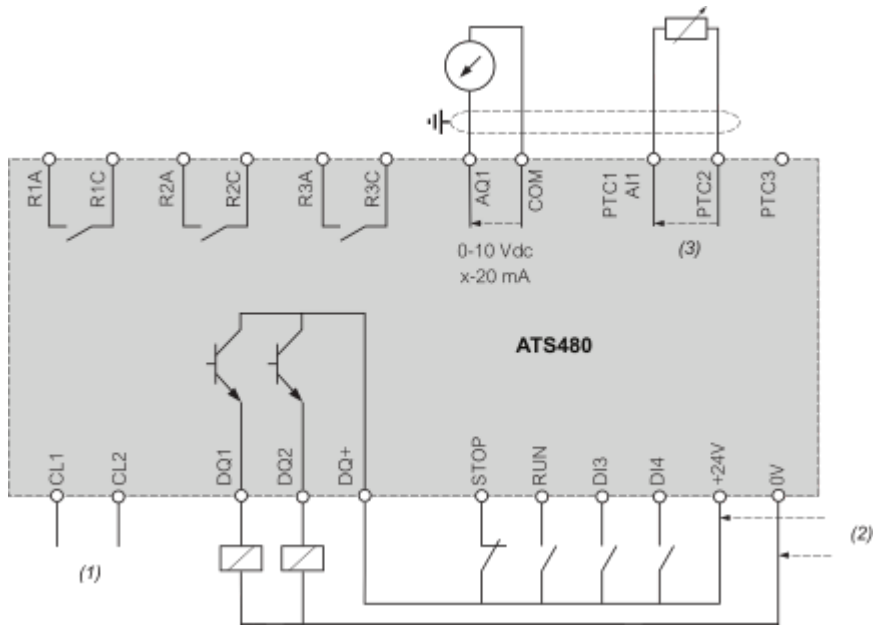
- (1) : Installation of additional fast-acting fuses to upgrade to type 2 coordination according to IEC 60947-4-2.
- (2) : Take into account the electrical characteristics of the relays (Control Terminal Characteristics).
- (3) : The transformer must supply 110...230 VAC +10% - 15%, 50/60Hz.
- (4) : Take into account the electrical characteristics of the relays, especially when connecting to high rating contactor (Control Terminal Characteristics).
- (5) : RUN and STOP Management (3-wire control).
- (6) : RUN and STOP Management (2-wire control).
- (7) : PC or PLC control

Connection inside the delta, with line and bypass contactor, type 1 and 2 coordination, non reversing, 2 wire or 3 wire



- (1) : Installation of additional fast-acting fuses to upgrade to type 2 coordination according to IEC 60947-4-2.
- (2) : Take into account the electrical characteristics of the relays (Control Terminal Characteristics).
- (3) : The transformer must supply 110...230 VAC +10% – 15%, 50/60Hz.
- (4) : Take into account the electrical characteristics of the relays, especially when connecting to high rating contactor (Control Terminal Characteristics).
- (5) : RUN and STOP Management (3-wire control).
- (6) : RUN and STOP Management (2-wire control).
- (7) : PC or PLC control

Control block wiring diagram



(1) : Control power supply 110-230 VAC

(2) : External supply 24 VDC

(3) : 2 Wires PTC/PT100

R1A, R1C, R3A, R3C : Sequence relay

R2A, R2C : End of start

STOP, RUN, DI3, DI4 : Digital inputs

AQ1 : Analogue output

PTC1/AI1, PTC2, PTC3 : PTC or PT100 connection

DQ1, DQ2, DQ+ : Digital outputs

Mounting and Clearance

Mounting Position

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mm  
in.

