

Quotation Bill of Material

| Item | Qty | Product Information |
|------|-----|--|
| 1 | 1 | ACS880-07-0503A-5+B054+C129+C196 <i>ACS880 Drive Cabinet Drive (07). Input Voltage 480 VAC. 483A LD, 361A HD. IP42 - UL type 1 +B054. Frame Size -R10</i> |

Terms:

- *FOB ABB Factory*
- *Proposal valid for 30 days from quotation date*
- *ABB Inc. Standard Terms and Conditions of Sale apply*
- *Proposal based upon acceptance of Clarifications and Exceptions to Specifications and Terms provide later in this quotation*

Submittal Schedule

This schedule includes the products supplied as part of this submittal.

| Schedule | | | Motor Data ¹ | | | Drive Data | | | |
|--|-----|-----|-------------------------|-----|------------|--------------------------------------|-----|---------------------------|------------|
| Item | Qty | Tag | HP | FLA | Volts | Product ID | HP | Amps | Volts |
| 1 | 1 | | 400 | 503 | 460 VAC | ACS880-07-0503A- 5+B054+C129+C196 | 400 | 483A LD, 361A HD | 480 VAC |
| Notes: <ol style="list-style-type: none"> AC motor data is per National Electrical Code Table 430.250 for typical motors used in most applications. It is provided as typical data only. DC motor data is per typical industry standards. Actual motor data may vary | | | | | | | | | |

Submittal Schedule Details for

| Item | Tag / Equipment ID | Product ID |
|------|--------------------|----------------------------------|
| 1 | | ACS880-07-0503A-5+B054+C129+C196 |

| Item Description |
|--|
| <p>Input Voltage: 480 VAC Rated Output Current: 483A LD, 361A HD AMPS Enclosure: IP42 - UL type 1 +B054 Nominal Horsepower: 400 Frame Size: R10 Input Disconnecting Means: Main switch Bypass: None Input Impedance:</p> <p>3% Nominal Impedance, R1-R9, DC Bus Choke; R10 and greater, AC Reactor Short Circuit Current Rating: 100 kA symmetrical amperes (rms) at 600 V max when protected with T-class fuses Communication Protocols: FieldBus Communication Options:</p> <p>Other Options: Construction Options:</p> <ul style="list-style-type: none"> • UL-listed [Includes US type main switch fuse, top cable entry (H351), top cable exit (H353) and US cable conduit entry (H358). All components are UL-listed/ recognized, maximum supply voltage is 600 V] +C129 • Empty 400 mm cabinet on right side +C196 <p>Cabling Options:</p> <ul style="list-style-type: none"> • Top cable entry [Included with UL-listed (C129) option] (+H351) • Top cable exit [Included with UL-listed (C129) option] +H353 <p>Software Options:</p> <ul style="list-style-type: none"> • Primary Control Program <p>Documentation Options:</p> <ul style="list-style-type: none"> • USB Stick (std) |

| Drive Input Fuse Ratings | |
|--------------------------|--------------|
| Fuse Class | Amps (600 V) |
| 170M6412 Class 3 | 800 |

| Wire Size Capacities of Power Terminals | | |
|---|---|--|
| Input Wiring | Output Wiring | Ground Wiring |
| Busbar for use with 2 hole lugs (7/16" bolt x 1.75" spacing) 37...55 lb-ft | Busbar for use with 2 hole lugs (7/16" bolt x 1.75" spacing) 37...55 lb-ft | Busbar for use with 1 hole lugs (3/8" bolt) 22...32 lb-ft |

| Dimensions and Weights | | | |
|------------------------------------|-----------------------------------|-----------------------------------|-------------------------------------|
| Height <i>in</i> <i>(mm)</i> | Width <i>in</i> <i>(mm)</i> | Depth <i>in</i> <i>(mm)</i> | Weight <i>lbs</i> <i>(kg)</i> |
| 84.5 (2145) | 48.5 (1230) | 27.5 (698) | 1520 (690) |

| Heat Dissipation & Airflow Requirements | |
|---|---------|
| Power Losses | Airflow |
| | |

| BTU/Hr | Watts | CFM | CM/Hr |
|---------------|--------------|------------|--------------|
| 20821 | 6102 | 1837 | 2950 |

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ACS880-07 Product Overview

Description

Cabinet-built single drives, ACS880-07

Our cabinet-built single drives are built to order, meeting customer needs despite any technical challenges. Designed on ABB's common drives architecture, this compact drive comes in twelve different sizes (R6 to R11, nxD8T+nxR8i) for easy installation and commissioning.

These single drives are customized to the precise needs of industries such as oil and gas, mining, metals, chemicals, cement, power plants, material handling, pulp and paper, woodworking and marine. Typical applications include cranes, extruders, winches, conveyors, mixers, compressors, pumps and fans. The drive configuration contains a rectifier, DC link and an inverter, all built into a compact cabinet.

At the heart of the drive is direct torque control (DTC), ABB's premier motor control technology. The drive can control the motors in either open loop or closed loop. Induction motors, synchronous motors and induction servo motors are all supported as standard without the need for additional software.

Drive Module Main features include

- Incoming air temperature measurement for protecting the drive from different temperature related failure mechanisms
- Integrated safety including safe torque-off (STO) as standard (TÜV Nord certificate)
- Supports various motor types including: Asynchronous induction and synchronous PM motors,
- Removable memory unit for easy maintenance
- Primary control program - common software used throughout the ACS880 drive series
- Control unit supporting a wide range of fieldbuses, feedback devices and input/output options
- Coated boards as standard
- Controllable cooling fan
- Built-in DC choke

Standard Main Cabinet features include (with +C129 UL Option)

- Compact design for easy cabinet assembly and maintenance
- Intuitive and easy to operate control panel with USB connection
- Cabling : top entry and exit cabling
- Enclosure class UL Type1 (IP22)
- Solid removable 3mm cable conduit plate
- Disconnect Switch with rotary through the door handle
- Fast acting UL fuses



Applications:

- Constant Torque, Variable Torque or Constant Horsepower applications.
- New installation, replacement and original equipment manufacturer (OEM) use.

Features:

- DTC or Scalar (V/Hz) control with peak overload of 150% for performance applications. Flexible enclosure drive options, built to order with 2 enclosure classes. ABB's all compatible keypad, programming structure and drive options. Designed for demanding applications with: high starting torque, speed and torque accuracy, flexible programming and certified safety options.

ACS880 Standard Features

Standard Features

- UL and cUL (requires +C129 option selection)
- Graphical Multilingual Display
- Graphical Metering and Trending on Display
- Intelligent Start-Up Assistant
- Motor ID Run
- Motor Control
 - Direct Torque Control (DTC)
 - Scalar Control
- Input Fuses and Disconnect
- Two (2) Programmable Analog Inputs
- Six (6) Programmable Digital inputs
- Two (2) Programmable Digital Inputs/Outputs
- One (1) Digital Input InterLock (DIIL)
- Two (2) programmable Analog Outputs
- Three (3) Programmable Form C Relay Outputs
- Dual Input Safe Torque Off (STO)
- Three (3) Expansion Slots for Fieldbus (communication), I/O and Motor Feedback Modules
- Adjustable Filters on Analog Inputs and Outputs
- Input Speed Signals
 - Two (2) Voltage +/- 0(2)-10 Vdc / Current 0(4)-20 mA
 - Increase/Decrease Reference Contacts
 - Fieldbus Adapters (communication modules)
- Start/Stop
 - 2-wire Control (dry contact closure)
 - 3-wire Control (momentary dry contacts)
- Adjustable Current Limit
- Adjustable Torque Limit
- Three (3) Supervision Functions
- Electronic Reverse
- Power Loss Ride-Through
- DC Magnetizing Start (provides max starting torque)
- DC Hold
- Flux Braking
- Energy (flux) Optimization
- Seven (7) Preset Constant Speeds
- Three (3) Critical Speed Lockout Bands
- Automatic Reset Customer Selectable
- Two (2) Independently Adjustable Accel and Decel Ramps
- Linear or Adjustable "S" Curve Accel/Decel Ramps
- Ramp to Stop or Coast to a Stop
- Maximum Output Frequency Programmable up to 500 Hz
- Two (2) Integral Programmable PID Setpoint Controller
- Mathematical Functions on Analog Reference Signals
- Reactor with ~3% impedance - DC (R6-R9)
- Optional Integral Brake Chopper (R6-R11)
- Reference Trim
- Programmable Mechanical Brake Control
- Master/Follower
- Load Analyzer
- Two (2) Jogging functions

Programmable Fault Functions

- AI<Min
- Panel Loss
- Four (4) External Fault
- Motor Thermal Protection
- Motor Stall
- Under Load
- Motor Phase Loss
- Ground Fault
- Communications Fault
- Supervision of Optional I/O
- Cross Connection (Input/Output Power Wiring)
- External Temperature Measurement
- Preprogrammed Protections:
 - Over current
 - Short Circuit
 - Over Voltage (Intermediate Circuit)
 - Under Voltage (Intermediate Circuit)
 - Input Phase Loss
 - Ambient Temperature
 - Drive Over Temperature
 - Internal Fault
 - Over Speed
 - Brake Resistor

Available options

- I/O Option Modules
 - DDCS Communications
 - Analog I/O Extension
 - Digital I/O Extension
 - HTL Pulse Encoder Interface
 - TTL Pulse Encoder Interface
 - Resolver Interface
 - Absolute Encoder Interface
- Fieldbus Adapter Modules
 - DeviceNet™
 - ProfiBus-DP™
 - ModBus™
 - ControlNet™
 - Ethernet (EIP,PROFINET,MB/TCP)
 - EtherCat®
 - CANOpen
- Dynamic Braking Choppers (R6 Frame and Up)
- CE EMC Filters (1st and 2nd Environments)
- Drive Composer PC Tool (available for download)
- Drive Composer Pro PC Tool

Application Software options

- Primary Control Program

ACS880 Specifications

Input Connection

| | |
|---|---|
| Input Voltage | 380-690 Vac 3-phase, +10%...-15% (R6-R11) or +/-10% (nxR8i) |
| Input Frequency | 47 to 63 Hz, maximum rate of change 17 %/s |
| Line Imbalance | Max +/-3% of nominal phase to phase input voltage |
| Fundamental Power Factor (cosphi _i) | 0.98 (at nominal load) |
| Connection | U1, V1, W1 |

Output Connection

| | |
|--------------------------------|--|
| Output Voltage | 0 to U ₁ , 3-phase symmetrical, U _{max} at the field weakening point |
| Output Frequency | 0 ..500 Hz |
| Continuous Current | I _{2Ld} (light duty use) I _{2hd} (heavy-duty use) |
| Short Term Overload Capacity | I _{2Ldmax} = 1.1 * I _{2Ld} (1 min / 5 minutes @ 40°C), typical I _{hdmax} = 1.5 * I _{2hd} (at least 1 min / 5 min @ 40°C) |
| Peak Overload Capacity | I _{max} (400 Vac and 500 Vac) (at least 10 seconds at start) |
| Field Weakening Point | 8 to 500 Hz |
| Switching Frequency | DTC dynamically varies from 1 to 12 kHz 2.7 kHz (typical) for R6-R9 3 kHz (typical) for R10-R11 2 kHz (typical) for nxR8i |
| Efficiency | 98% at nominal power level |
| Short circuit withstand rating | 100,000 AIC (UL) when protected by fuses given in the hardware manual |
| Connection | U2, V2, W2 |

Ambient Conditions, Operation

| | |
|----------------------------|--|
| Air Temperature | 0° to 40°C (104°F), above 40°C the rated output current is de-rated 1% for every additional 1°C [up to 50°C (122°F)] |
| Relative Humidity | 5 to 95%, no condensation allowed, maximum relative humidity is 60% in the presence of corrosive gasses |
| Contamination Levels | |
| IEC | 60721-3-1, 60721-3-2 and 60721-3-3 |
| Chemical Gasses | Class 3C2 |
| Solid Particles | Class 3S2 |
| Installation Site Altitude | 0 to 1000 m (3281 ft) above sea level. At sites over 1000 m (3281 ft) above sea level, the maximum power is de-rated 1% for every additional 100 m (330 ft). Maximum altitude 4000 m (13123 ft) above sea level. |
| Vibration Max | 1 mm (0.04 in) @ 5 to 13.2 Hz, 7 m/s ² (23 ft/s ²) @ 13.2 to 100 Hz for R6-R11 0.075 mm (0.003 in) @ 10 to 57 Hz, 1 g @ 57 to 150 Hz for nxR8i |

Ambient Conditions, Storage & Transportation (in Protective Shipping Package)

| | |
|------------------------|---|
| Air Temperature | -40° to 70°C (-40° to 158°F) |
| Relative Humidity | 5 to 95%, no condensation allowed |
| Atmospheric Pressure | 70 to 106 kPa (10.2 to 15.4 PSI) |
| Vibration Max | 3.5 mm (0.14 in) @ 2 to 9 Hz, 15 m/s ² (49 ft/s ²) 9 to 200 Hz for R6-R11 3.5 mm (0.14 in) @ 2 to 9 Hz, 10 m/s ² (32.8 ft/s ²) 9 to 200 Hz for nxR8i |
| Shock (IEC 60068-2-29) | Max 100 m/s ² (328 ft/s ²) 11 ms |
| Free Fall | 100 mm (4 in) for weight greater than 100 Kg (220 lb) |

Cooling Information

| | |
|----------------|---------------------------------|
| Cooling Method | Internal Fan |
| Power Loss | Approximately 2% of rated power |

Auxiliary Power Supply (XD 24:2 and XD 24:4)

| | |
|-----------------|--|
| Voltage | 24 Vdc, +/-10% |
| Maximum Current | 200 mA – minus load taken by DIO1 and DIO2 |
| Protection | Short Circuit Protection |

Control Terminal Blocks

Size 0.5...2.5 mm² (24...12 AWG) - All control terminal blocks
Tightening torques: 0.5 N•m (5 lbf•in) for both stranded and solid wiring

Analog Inputs

| | |
|--|---|
| Two (2) Programmable Differential Inputs | 0(4) to 20 mA, Input Resistance R _I => 100 ohms or |
| Two (2) Current or Voltage Signals | -10 Vdc / 0(2) to +10 Vdc, Input Resistance R _I =>200 kohm |
| Common Mode Voltage | +/-15 Vdc, max. |
| Common Mode Rejection Ratio | > 60 dB at 50 Hz |
| Resolution | 0.025% (12 bit) (11 bit + Sign bit) |
| Accuracy | +/-0.5% of Full Scale Range |
| Input Updating Time | 1 ms (Primary Control Program) |
| Optional Isolation | Available through optional external module |

ACS880 Specifications (cont.)

Reference Power Supply

| | |
|--------------------------|--|
| Voltage | +10 Vdc, 0 Vdc, -10Vdc +/- 0.5% at 25°C (77°F) |
| Maximum Load | 10 mA |
| Applicable Potentiometer | 1 kohm to 10 kohm |

Analog Outputs

| | |
|--------------------------------------|-----------------------------------|
| Two (2) Programmable Current Outputs | |
| Signal Level | 0(4) to 20 mA |
| Resolution | 0.025% (12 bit) (11bit +Sign Bit) |
| Accuracy | +/-1% Full Scale Range |
| Maximum Load Impedance | 500 ohm |
| Output Updating Time | 1 ms (Primary Control Program) |
| Frequency Range | 0 ... 300 Hz |

Digital Inputs

| | |
|---|--|
| Six (6) Programmable Digital Inputs (Common Ground), plus One (1) Start Interlock | |
| Isolation | Isolated |
| Isolation Test Voltage | 500 Vac, 1 minute |
| Input Type | NPN/PNP (DI1...DI5), NPN (DI6) |
| Signal Level | 24Vdc |
| Rin | 2.0 kohm |
| Logical switch thresholds | <5 Vdc at "0", >15 Vdc at "1" |
| Input Current | 15 mA (DI1...DI5), 5 mA (DI6) |
| Filtering Time Constant | Hardware Filter 0.04 ms |
| Input Updating Time | Digital Filtering up to 8 ms (Primary Control Program) |
| Frequency Range | 0 ... 300 Hz |

Digital Inputs/Output

| | |
|---|--|
| Two (2) Programmable Digital Inputs/Outputs | |
| Isolation | Isolated |
| Input Configuration | DIO1 frequency input (0...16 KHz with 4 microsecond hardware filtering) |
| Output Configuration | DIO2 frequency output (0...16 KHz with 4 microsecond hardware filtering) |
| Signal Level | 24 Vdc |
| Rin | 2.0 kohm |
| Logical input switch thresholds | <5 Vdc at "0", >15 Vdc at "1" |
| Filtering Time Constant | 0.25 ms |
| As output | Total output current from +24Vdc is limited to 200 mA |

Safe Torque Off Connection

| | |
|---------------------------------|---|
| Input Voltage Range | -3...30 Vdc |
| Logical input switch thresholds | <5 Vdc at "0", >17Vdc at "1" |
| | Both input connection must be closed for the drive to start |
| Current Consumption | 55 mA (continuous) |
| EMC Immunity | according to IEC 61326-3-1 |

Internal 24 Vdc Supply for Digital Inputs

| | |
|--|---------------------|
| Voltage | 24 Vdc |
| Maximum Current | 200 mA |
| Connector | XD24:2 and XD24:4 |
| Protection | Short Circuit Proof |
| An external 24 Vdc supply may be used instead of the internal supply | |

Relay Outputs

| | |
|--------------------------------------|--------------------------------|
| Three (3) Programmable Relay Outputs | |
| Switching Capacity | 2 A at 30 Vdc or 250 Vac |
| Protection | Varistors (250 V) |
| Maximum Continuous Current | IC = 2 A _{rms} |
| Output Updating Time | 1 ms (Primary Control Program) |

Protections

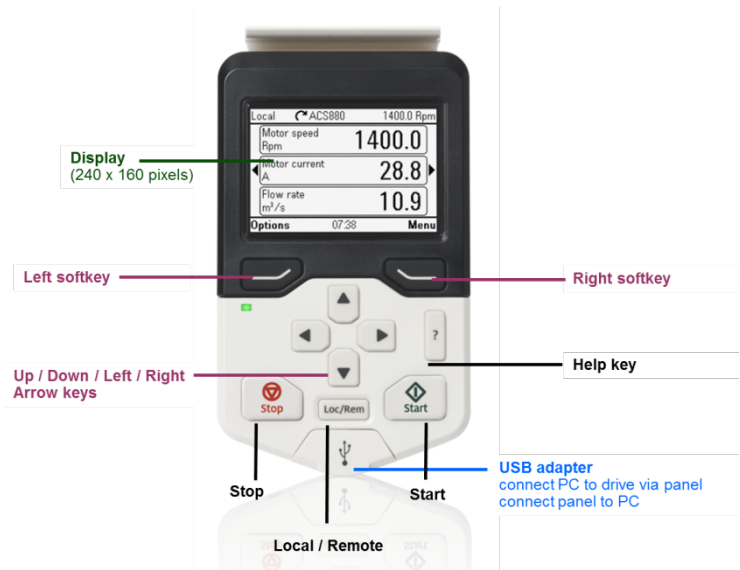
| | |
|--------------------------|----------------------------|
| Single Phase | Protected (input & output) |
| Over Voltage Trip Limit | 1.3 * U1max |
| Under Voltage Trip Limit | 0.65 * U1min |
| Over Temperature | Protected |
| Auxiliary Voltage | Short Circuit Protected |
| Ground Fault | Protected |
| Motor Stall Protection | Protected |
| Motor Over Temperature | Protected (I2t) |
| Cross Cable Connection | Protected |

ACS880 control Panel

The ACS880 assistant control panel features a graphical display for easy drive configuration. The LCD type display has a monochrome 240 x 160 pixel resolution with a white backlight. The language is selected at start-up (parameter 96.01).

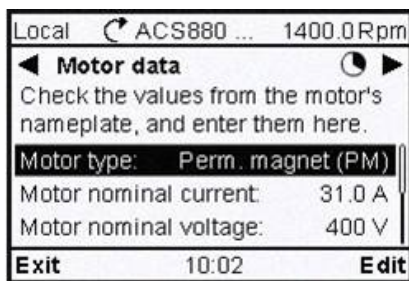
It is an ideal tool for users and service technicians that provides the following features:

- Large Graphical Display
- Easy navigation
- Familiar set of keys, including
 - Up, down, left, and right arrows
 - Start and Stop Keys
 - Two soft keys
 - Help key
 - Local/ Remote
- Graphical monitoring
- Parameter back up
- Real time clock
- USB Connector for PC connection

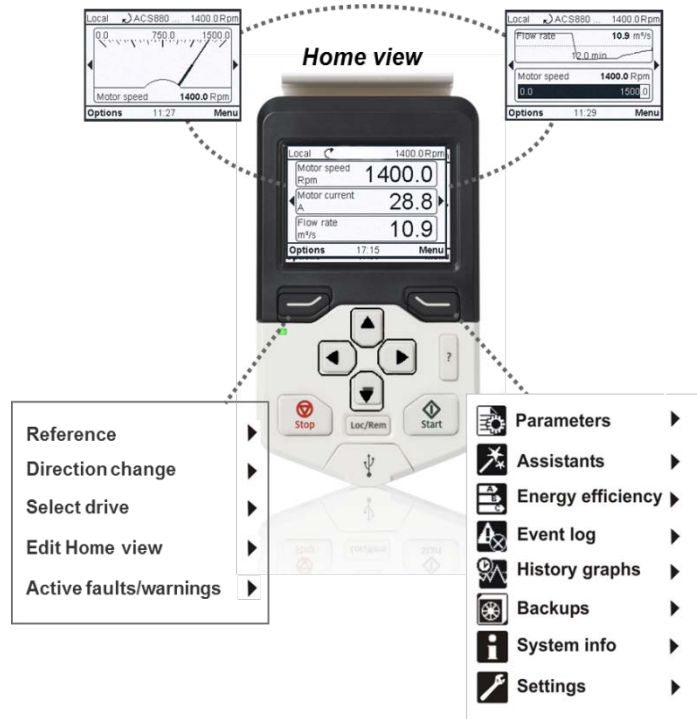


Ease of Navigation and Start Up

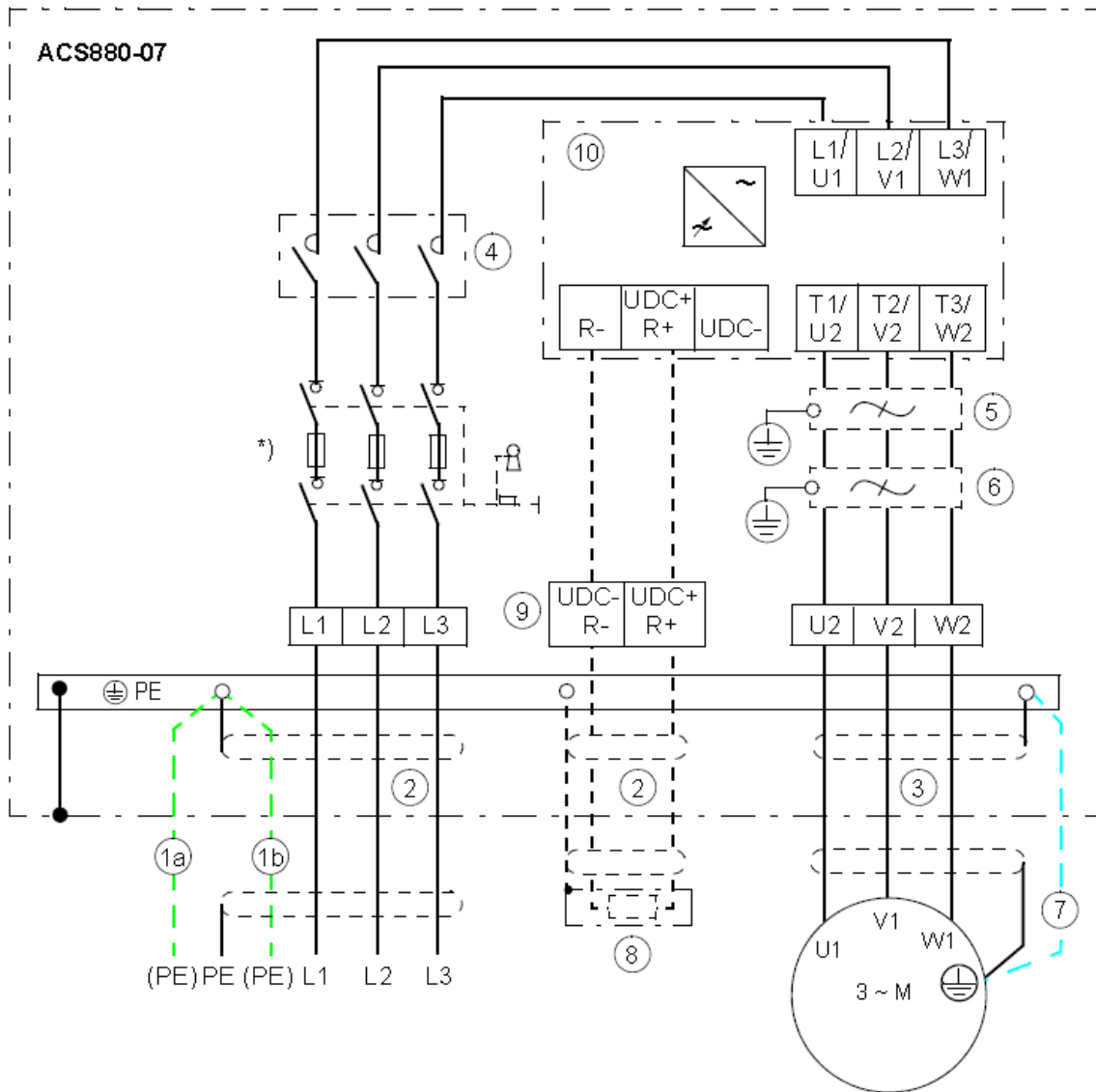
The control panel is intuitive to use and includes multiple home views with graphical displays for quick visual feedback of the motor and drive status. The soft keys allow for easy navigation through the drive's menu system.



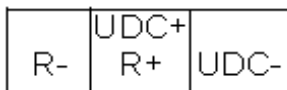
The ACS880 control panel features a set-up assistant that prompts the user through the commissioning process. It navigates through the parameters that pertain to initial set up and allows easy entry of motor and line settings. It then allows the selection of different ID run procedures, including normal rotation, reduced rotation, and without rotation, and to customize selections based on the existing conditions.



Cable Connections



1. Use a separate grounding PE cable (1a) or a cable with a separate PE conductor, follow local codes for cable size
2. 360-degree grounding is recommended if shielded cable is used. Ground the other end of the input cable shield or PE conductor at the distribution board.
3. 360-degree grounding is required using shielded cable or conduit.
4. Line contactor (option +F250)
5. Common mode filter (option +E208)
6. du/dt filter or sine filter (options +E205 and +E206)
7. Use a separate grounding cable if there is no symmetrically constructed grounding conductor in the cable.
8. External brake resistor
9. Terminals of frame R9 cabinet:

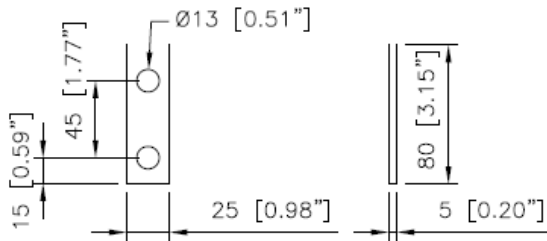


10. Drive module

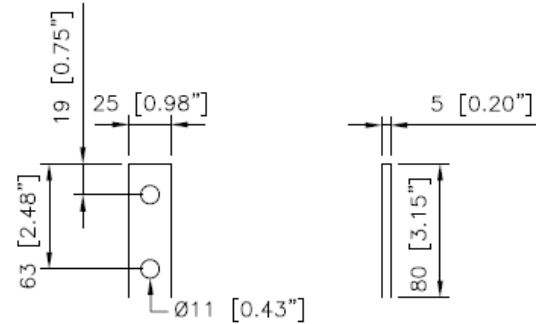
| Frame size | Terminals L1, L2, L3, U2, V2, W2, UDC+/R+, UDC- and R- | | | Grounding terminals | |
|------------|--|---------------------------------|-------------------|---------------------|-------------------|
| | Max. phase conductor size | Busbar bolt size – Hole spacing | Tightening torque | Bolt size | Tightening torque |
| | AWG/kcmil | | bf-ft | | bf-ft |
| R6 | 350 MCM | M10 (3/8") × 2 – 1.75" | 15...30 | M10 (3/8") | 22...32 |
| R7 | | | | | |
| R8 | 1×500 MCM or 2×350 MCM | M12 (7/16") × 2 – 1.75" | 37...55 | | |
| R9 | 2×500 MCM | | | | |
| R10 | 1×500 MCM or 4×350 MCM | M12 (7/16") × 4 – 1.75" | | | |
| R11 | 1×500 MCM or 4×350 MCM | | | | |

Input and motor cable terminal dimensions of frames R6 to R7

Bottom entry and exit:

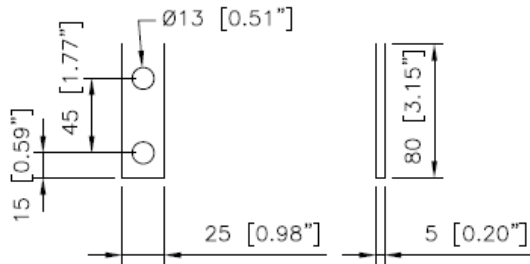


Top entry and exit:

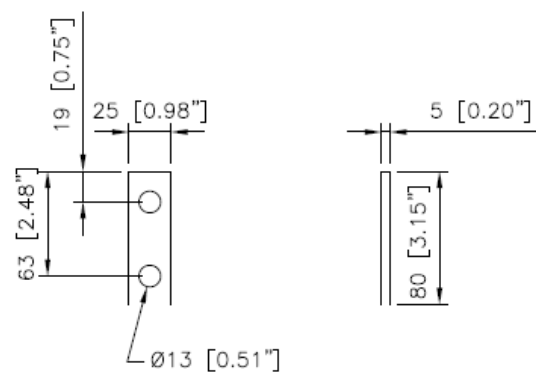


Input and motor cable terminal dimensions of frame R8

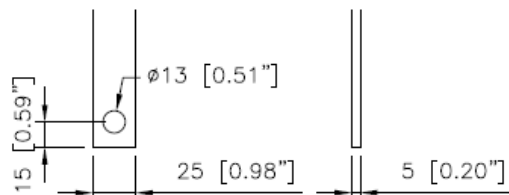
Bottom entry and exit:



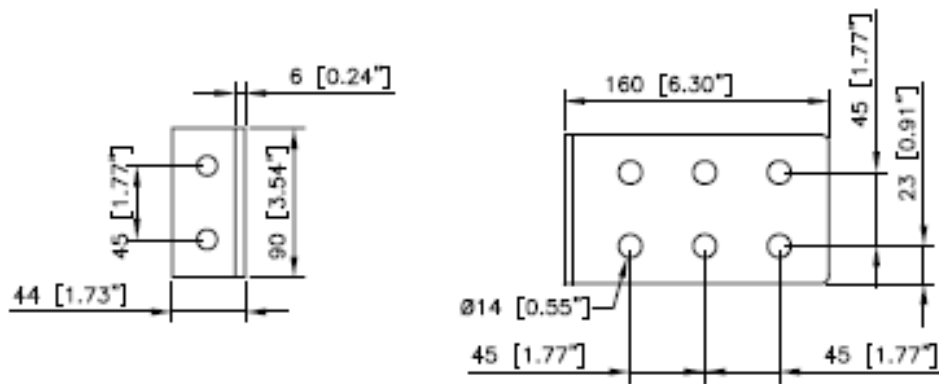
Top entry and exit:



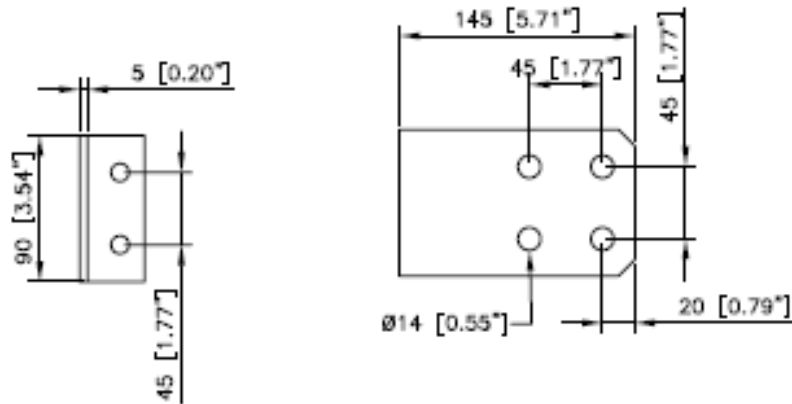
Resistor and DC cable terminal dimensions of frames R6 to R8



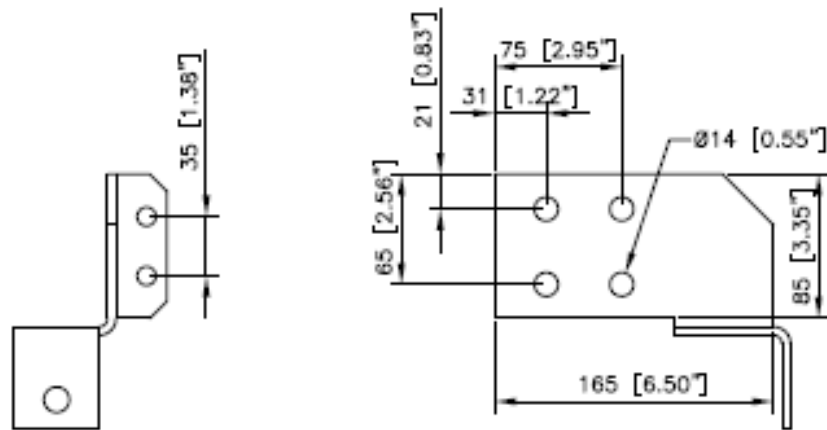
Motor cable terminal dimensions of frame R9 – Units with optional du/dt filter (+E205):



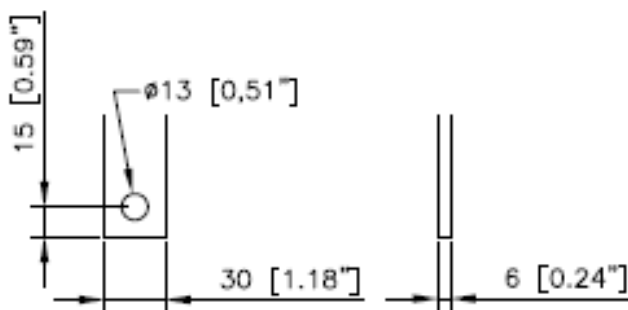
Motor cable terminal dimensions of frame R9 – Units without optional du/dt filter (+E205):



Input cable terminal dimensions of frame R9:

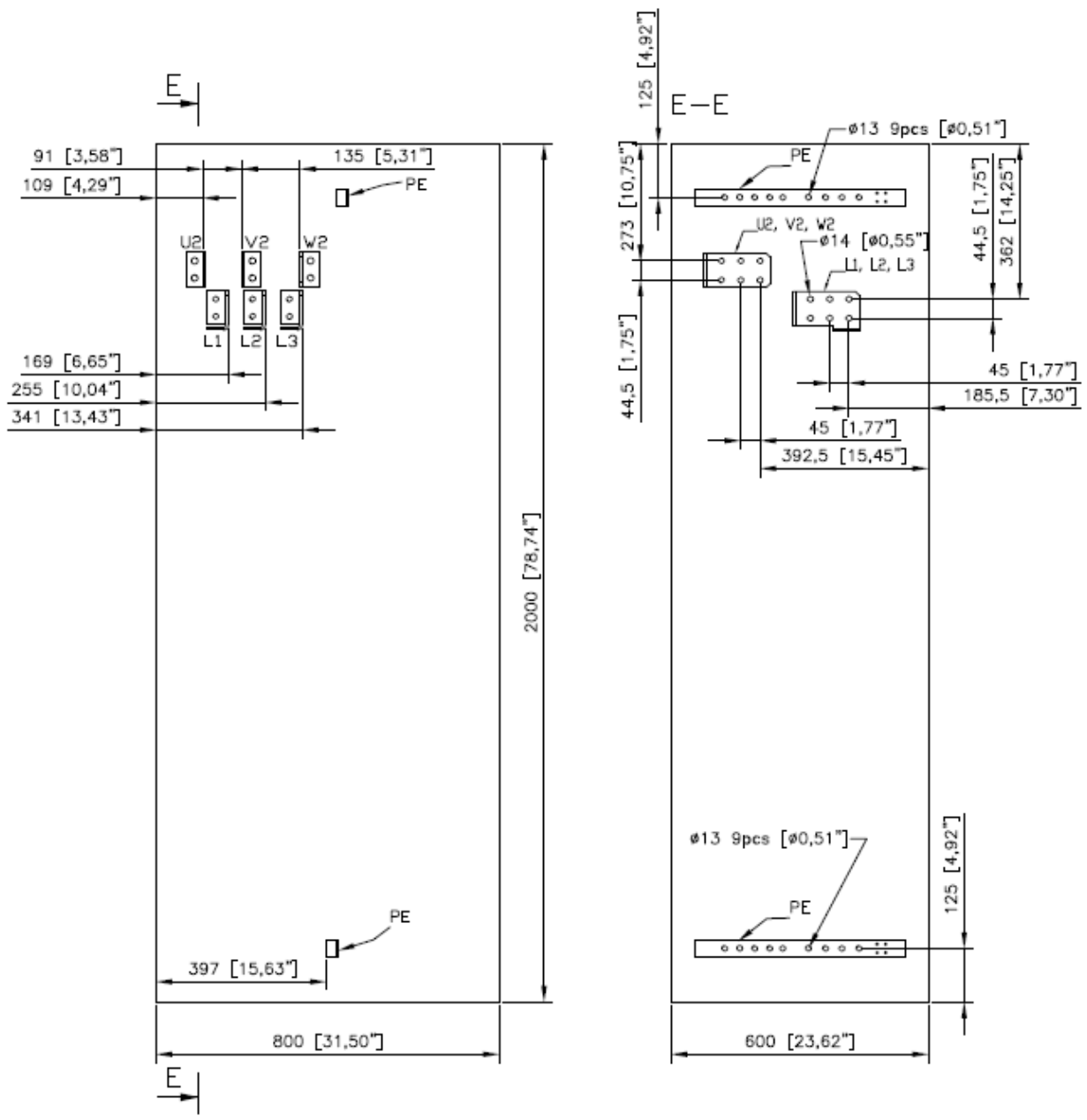


Resistor and DC cable terminal dimensions of frames R9



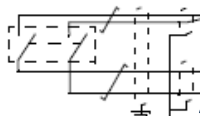
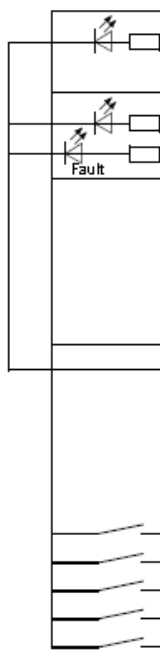
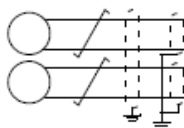
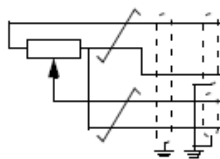
Input and motor cable terminal dimensions of frames R10 and R11

Top entry and exit (option +H351+H353):



Default I/O connection diagram (Factory Macro)

Typical External Devices
Not Included



XPOW External power input

| | | |
|---|-------|--------------|
| 1 | +24VI | 24 V DC, 2 A |
| 2 | GND | |

XAI Reference voltage and analog inputs

| | | |
|----|-------|--|
| 1 | +VREF | 10 V DC, R_L 1... 10 kohm |
| 2 | -VREF | -10 V DC, R_L 1... 10 kohm |
| 3 | AGND | Ground |
| 4 | AI1+ | Speed reference 0(2)... 10 V, $R_{in} > 200$ kohm ¹⁾ |
| 5 | AI1- | |
| 6 | AI2+ | By default not in use. 0(4)... 20 mA, $R_{in} > 100$ ohm ²⁾ |
| 7 | AI2- | |
| J1 | J1 | AI1 current/voltage selection jumper |
| J2 | J2 | AI2 current/voltage selection jumper |

XAO Analog outputs

| | | |
|---|------|--|
| 1 | AO1 | Motor speed rpm 0... 20 mA, $R_L < 500$ ohm |
| 2 | AGND | |
| 3 | AO2 | Motor current 0... 20 mA, $R_L < 500$ ohm |
| 4 | AGND | |

XD2D Drive-to-drive link

| | | |
|----|------|--|
| 1 | B | Drive-to-drive link |
| 2 | A | |
| 3 | BGND | |
| J3 | J3 | Drive-to-drive link termination switch |

XRO1, XRO2, XRO3 Relay outputs

| | | | |
|---|-----|--------------------|--------------------|
| 1 | NC | Ready | |
| 2 | COM | | 250 V AC / 30 V DC |
| 3 | NO | | 2 A |
| 1 | NC | Running | |
| 2 | COM | | 250 V AC / 30 V DC |
| 3 | NO | | 2 A |
| 1 | NC | Faulted(-1) | |
| 2 | COM | | 250 V AC / 30 V DC |
| 3 | NO | | 2 A |

XD24 Digital interlock

| | | |
|----|-------|-------------------------------|
| 1 | DIIL | Digital start interlock |
| 2 | +24VD | +24 V DC 200 mA ³⁾ |
| 3 | DICOM | Digital input ground |
| 4 | +24VD | +24 V DC 200 mA ³⁾ |
| 5 | DIOGN | Digital input/output ground |
| J6 | J6 | Ground selection switch |

XDIO Digital input/outputs

| | | |
|---|------|-----------------|
| 1 | DIO1 | Output: Ready |
| 2 | DIO2 | Output: Running |

XDI Digital inputs

| | | |
|---|-----|--|
| 1 | DI1 | Stop (0) / Start (1) |
| 2 | DI2 | Forward (0) / Reverse (1) |
| 3 | DI3 | Reset |
| 4 | DI4 | Acceleration & deceleration select ⁴⁾ |
| 5 | DI5 | Constant speed 1 (1 = On) ⁵⁾ |
| 6 | DI6 | By default not in use. |

XSTO Safe torque off

| | | |
|---|------|---|
| 1 | OUT1 | Safe torque off. Both circuits must be closed for the drive to start. |
| 2 | SGND | |
| 3 | IN1 | |
| 4 | IN2 | |

X12 Safety functions module connection

X13 Control panel connection

X205 Memory unit connection

Control unit terminal wire sizes: 0.5...2.5 mm² (24...12 AWG). Tightening torques: 0.5 N·m (5 lbf·in) for both stranded and solid wiring

Engineering Data Summary

Replacement Fuses

Drive input fuses are recommended to disconnect the drive from power in the event that a component fails in the drive's power circuitry. Recommended drive input fuse specifications are listed in the *Submittal Schedule Details* and in the *Fuse Ratings Table*. Fuse rating information is provided for customer reference.

| Item | Catalog Number | Drive Input Fuse Ratings | |
|------|----------------------------------|--------------------------|------------------|
| | | Amps (600V) | Bussmann Type |
| 1 | ACS880-07-0503A-5+B054+C129+C196 | 800 | 170M6412 Class 3 |

Terminal Sizes / Cable Connection Requirements

Power and motor cable terminal sizes and connection requirements are shown in the *Submittal Schedule Details* and in the *Terminal Sizes / Cable Connection Requirements Table*. The information provided below is for connections to input power and motor cables. These connections may be made to an input circuit breaker or disconnect switch, a motor terminal block, overload relay, and/or directly to bus bars and ground lugs. The table also lists torque that should be applied when tightening terminals and spacing requirements where multiple mounting holes are provided in the bus bar.

| Item | Catalog Number | Input Wiring | Output Wiring | Ground Wiring |
|------|----------------------------------|--|--|---|
| 1 | ACS880-07-0503A-5+B054+C129+C196 | Busbar for use with 2 hole lugs (7/16" bolt x 1.75" spacing) 37...55 lb-ft | Busbar for use with 2 hole lugs (7/16" bolt x 1.75" spacing) 37...55 lb-ft | Busbar for use with 1 hole lugs (3/8" bolt) 22...32 lb-ft |

Heat Dissipation Requirements

The cooling air entering the drive must be clean and free from corrosive materials. The *Submittal Schedule Details* and the *Heat Dissipation Requirements table* below give the heat dissipated into the hot air exhausted from the drives. If the drives are installed in a confined space, the heat must be removed from the area by ventilation or air conditioning equipment.

| Item | Catalog Number | Watts | BTU/Hr |
|------|----------------------------------|-------|--------|
| 1 | ACS880-07-0503A-5+B054+C129+C196 | 6102 | 20821 |

Dimensions and Weights

Dimensions and weights of the drives provided are given in the *Submittal Schedule Details* and in the *Dimensions and Weights Table*. The table also lists the applicable dimension drawings that include additional detail. Dimension drawings may be provided in the back of this submittal.

| Item | Catalog Number | Height mm (in) | Width mm (in) | Depth mm (in) | Weight kg (lbs) |
|------|----------------------------------|----------------------|---------------------|---------------------|-----------------------|
| 1 | ACS880-07-0503A-5+B054+C129+C196 | 2145 (84.5) | 1230 (48.5) | 698 (27.5) | 690 (1520) |

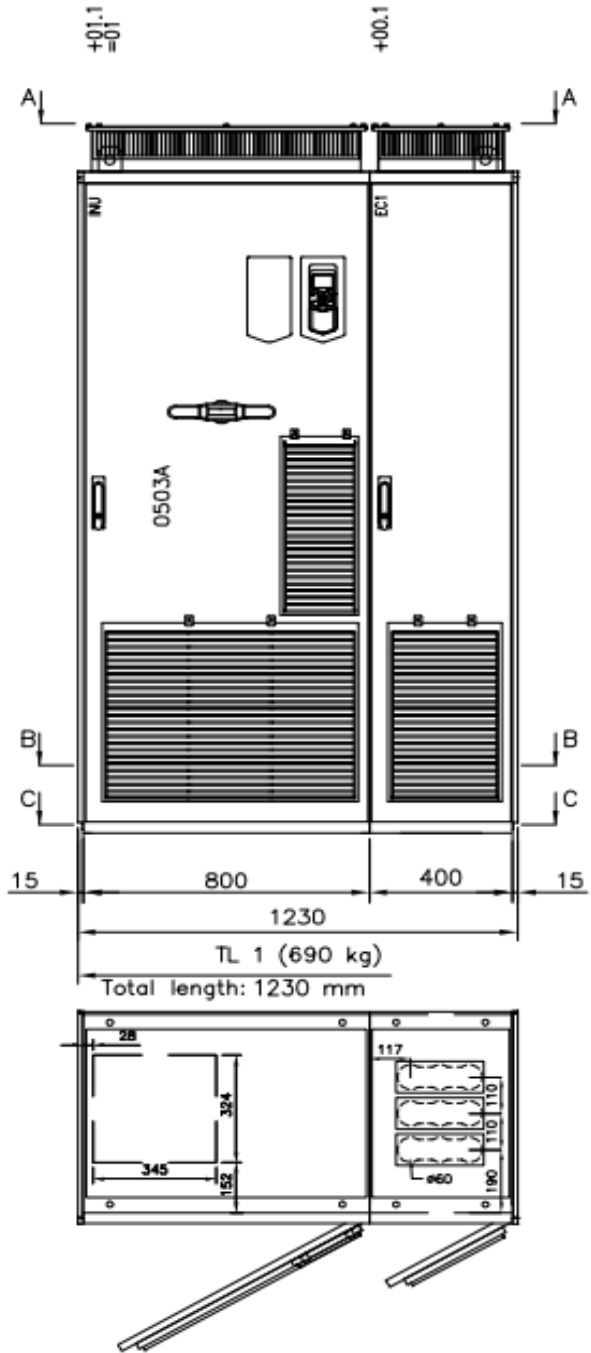
Product Short Circuit Current Rating

Short circuit ratings shown below are as show on the device rating label.

| Item | Catalog Number | Short Circuit Current Rating |
|------|----------------|------------------------------|
|------|----------------|------------------------------|

| Item | Catalog Number | Short Circuit Current Rating |
|------|----------------------------------|---|
| 1 | ACS880-07-0503A-5+B054+C129+C196 | 100 kA symmetrical amperes (rms) at 600 V max when protected with T-class fuses |

Type code: ACS880-07-0503A-5+B054+C129+C196
 Colour: RAL 7035/RAL 9017
 Dimensions: millimeters (100mm=3.937")
 Weight: 690 kg
 Degree of protection: IP42
 Cable entry type: Steel 3mm, undrilled



A - A

