



Safety instructions

WARNING! Obey these instructions, if you ignore them, injury or death, or damage to the equipment can occur. If you are not a qualified electrical professional, do not do electrical installation or maintenance work.

- Keep the drive in its package until you install it. After unpacking, protect the drive from dust, debris and moisture.
- Use the required personal protection equipment, safety shoes with antistatic sole, safety glasses, protective gloves and long sleeves, etc.
- When the drive is connected to equipment, it energizes, do not do work on the drive, input cables, motor, control cables or control circuit.
- Do not do work on the drive when a rotating permanent magnet motor is connected to it. A rotating permanent magnet energizes the drive, including the input power supply terminals.

Electrical safety precautions

- Clearly identify the work location and equipment.
- Disconnect all possible voltage sources. Make sure that reconnection is not possible. Lock out and tag out.
 - Open the main disconnecting device of the drive.
 - If you have a permanent magnet motor connected to the drive, disconnect the motor from the drive.
 - Disconnect any dangerous external voltage from the control circuit.
 - After you disconnect power from the drive, always wait 5 minutes to let the intermediate circuit capacitors discharge before you continue.
- Protect any other energized parts in the work location against contact.

- Take special precautions when close to bare conductors.
- Measure the insulation resistance in the control circuit.
 - Use a multimeter with a minimum impedance of 1 M Ω .
 - Make sure that the voltage between the drive input power terminals (U1, U2, U3) and the ground (PE) is within the 0 V-12 V.
 - Make sure that the voltage between the drive output terminals (D1, D2, D3) and the ground (PE) is close to 0 V.
 - Make sure that the voltage between the drive DC terminals (D1+ and D1- or D2 and the ground (PE)) is close to 0 V.
- Install temporary grounding as required by the local regulations.
- Apply the process to control of the electrical installation work for a period to comply.

See the drive user's manual for the complete safety instructions.

1. Examine the installation area

The drive is intended for cabinet installation and has a degree of protection of IP20 (2 M, open type as standard).

- Make sure that in the installation area:
- There is sufficient space above and below the drive for cooling, and that air flows and circulates. Refer to the cooling air flow diagram in the user's manual.
 - The ambient conditions are suitable. Refer to ambient conditions.
 - The mounting surface is non-flammable and can hold the weight of the drive. Refer to the weight of the drive.
 - Mounting holes in the drive are non-flammable.
 - There are no sources of strong magnetic fields, such as high-current straight-line conductors or conductors with near the drive. A strong magnetic field can cause interference in the operation of the drive.

2. Install the drive

- Use the provided drive with screws or for a DIN rail (Type M4, M5 or M6 x 20 mm (2.4" x 0.8" long).
- Make sure that there is a minimum of 10 mm (3/8") of free space above and below the drive for ventilation.
- When gluing drives on top of each other in a panel or cabinet, make sure that the top of the drive below does not directly enter the drive above.

WARNING! Do not install the drive upside down. Make sure that the cooling air outlet is at the top in order to avoid the cooling air inlet at the bottom.

To install the drive with screws

- Cut out the mounting bracket from the enclosure and use it to mark the locations for the mounting holes.
- Mark the location for the mounting screws and install outside plugs or adapters.



1. Short to ground the terminals for the mounting holes.

2. Place the drive into the mounting screws.

3. Tighten the mounting screws securely.

4. To install the drive to a DIN rail

1. Place the top of the drive onto the DIN bracket with the DIN mounting holes.

2. Set the drive against the rail.

3. To remove the drive, reverse the above steps in reverse order of the drive.

3. Attach the clamping plates

1. Fasten the clamping plate to the bottom of the drive with the provided screws.

2. Fasten the top clamping plate to the top of the drive with the provided screws.

4. Measure the insulation resistance

Measuring the insulation resistance is typically not required in North America.

Notes: Do not do voltage tolerance or insulation resistance tests on the drive, because this can cause damage to the drive.

Input power cable: Before you connect the input power cable, measure the insulation resistance of the input power cable. Observe the local regulations.

Motor and output cables

1. Make sure that the motor cable is connected to the motor and disconnected from the drive output terminals (D1, D2 and D3).

2. Use a voltage of 500V or DC to measure the insulation resistance between each phase conductor and the protective earth conductor. The insulation resistance of an AC motor should be more than 500 M Ω (at 25 °C/77 °F). For the insulation resistance of other motors, refer to the manufacturer's documentation. Measure in the motor because the insulation resistance of any electrical device is higher at room temperature than at the measurement again.

5. Select the cables

Input power cable (AC/DC): IEC/UL 60309-2 requiring three protective earth (ground) conductors. Prefer a symmetrical shielded cable (S/SC) cable. For the best EMC performance and to meet the European EMC requirements.

Control cable: Use a shielded twisted-pair cable for analog signals. Use a shielded twisted-pair cable for digital, relay and I/O signals. Do not mix DC and AC/DC signals in the same cable.

6. Connect the power cables

Connection diagram (shielded cables)

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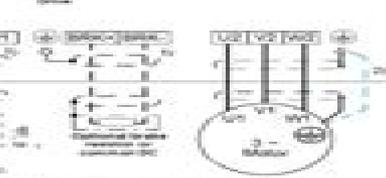
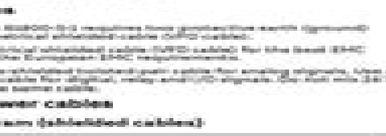
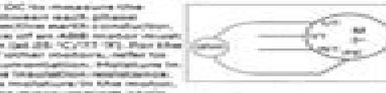
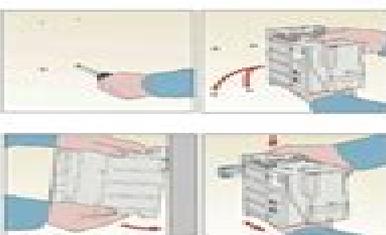
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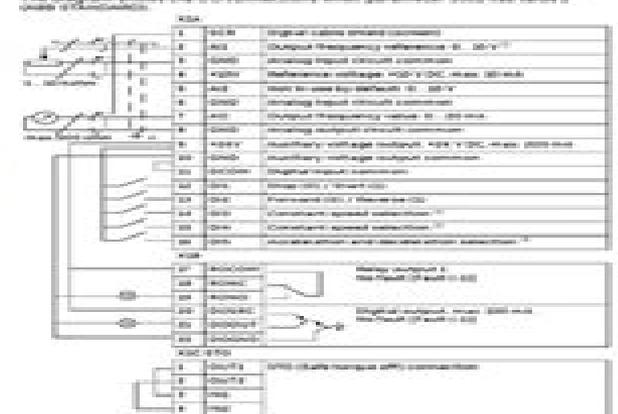


Power line	Rating	PE
U1, U2, U3	AC 380 V, 50 Hz	
D1, D2, D3	AC 380 V, 50 Hz	2.0 MVA (380V)
D1, D2, D3	AC 380 V, 50 Hz	2.0 MVA (380V)
D1, D2, D3	AC 380 V, 50 Hz	2.0 MVA (380V)

7. Connect the control cables

Default I/O connections

The diagram shows the I/O connections when parameter 2007 has value 0 (see 2.1.1.1.1).



1. Cable used as a speed reference (if motor 400V/50Hz) or as a speed feedback (if motor 230V/50Hz).
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 49. Cable used as a speed reference (if motor 400V/50Hz) or as a speed feedback (if motor 230V/50Hz).
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Doc User Manual Abb

Michael Rajnik



Doc User Manual Abb:

Doc User Manual Abb: Bestsellers in 2023 The year 2023 has witnessed a remarkable surge in literary brilliance, with numerous compelling novels enthralling the hearts of readers worldwide. Lets delve into the realm of top-selling books, exploring the captivating narratives that have captivated audiences this year. Doc User Manual Abb : Colleen Hoovers "It Ends with Us" This touching tale of love, loss, and resilience has gripped readers with its raw and emotional exploration of domestic abuse. Hoover skillfully weaves a story of hope and healing, reminding us that even in the darkest of times, the human spirit can prevail. Uncover the Best : Taylor Jenkins Reids "The Seven Husbands of Evelyn Hugo" This intriguing historical fiction novel unravels the life of Evelyn Hugo, a Hollywood icon who defies expectations and societal norms to pursue her dreams. Reids absorbing storytelling and compelling characters transport readers to a bygone era, immersing them in a world of glamour, ambition, and self-discovery. Doc User Manual Abb : Delia Owens "Where the Crawdads Sing" This captivating coming-of-age story follows Kya Clark, a young woman who grows up alone in the marshes of North Carolina. Owens crafts a tale of resilience, survival, and the transformative power of nature, captivating readers with its evocative prose and mesmerizing setting. These top-selling novels represent just a fraction of the literary treasures that have emerged in 2023. Whether you seek tales of romance, adventure, or personal growth, the world of literature offers an abundance of captivating stories waiting to be discovered. The novel begins with Richard Papen, a bright but troubled young man, arriving at Hampden College. Richard is immediately drawn to the group of students who call themselves the Classics Club. The club is led by Henry Winter, a brilliant and charismatic young man. Henry is obsessed with Greek mythology and philosophy, and he quickly draws Richard into his world. The other members of the Classics Club are equally as fascinating. Bunny Corcoran is a wealthy and spoiled young man who is always looking for a good time. Charles Tavis is a quiet and reserved young man who is deeply in love with Henry. Camilla Macaulay is a beautiful and intelligent young woman who is drawn to the power and danger of the Classics Club. The students are all deeply in love with Morrow, and they are willing to do anything to please him. Morrow is a complex and mysterious figure, and he seems to be manipulating the students for his own purposes. As the students become more involved with Morrow, they begin to commit increasingly dangerous acts. The Secret History is a masterful and thrilling novel that will keep you guessing until the very end. The novel is a warning tale about the dangers of obsession and the power of evil.

<https://matrix.jamesarcher.co/data/publication/fetch.php/hardcover%20goodreads%20choice%20finalist.pdf>

Table of Contents Doc User Manual Abb

1. Understanding the eBook Doc User Manual Abb
 - The Rise of Digital Reading Doc User Manual Abb
 - Advantages of eBooks Over Traditional Books
2. Identifying Doc User Manual Abb
 - Exploring Different Genres
 - Considering Fiction vs. Non-Fiction
 - Determining Your Reading Goals
3. Choosing the Right eBook Platform
 - Popular eBook Platforms
 - Features to Look for in an Doc User Manual Abb
 - User-Friendly Interface
4. Exploring eBook Recommendations from Doc User Manual Abb
 - Personalized Recommendations
 - Doc User Manual Abb User Reviews and Ratings
 - Doc User Manual Abb and Bestseller Lists
5. Accessing Doc User Manual Abb Free and Paid eBooks
 - Doc User Manual Abb Public Domain eBooks
 - Doc User Manual Abb eBook Subscription Services
 - Doc User Manual Abb Budget-Friendly Options
6. Navigating Doc User Manual Abb eBook Formats
 - ePub, PDF, MOBI, and More
 - Doc User Manual Abb Compatibility with Devices
 - Doc User Manual Abb Enhanced eBook Features
7. Enhancing Your Reading Experience
 - Adjustable Fonts and Text Sizes of Doc User Manual Abb
 - Highlighting and Note-Taking Doc User Manual Abb
 - Interactive Elements Doc User Manual Abb
8. Staying Engaged with Doc User Manual Abb

- Joining Online Reading Communities
 - Participating in Virtual Book Clubs
 - Following Authors and Publishers Doc User Manual Abb
9. Balancing eBooks and Physical Books Doc User Manual Abb
- Benefits of a Digital Library
 - Creating a Diverse Reading Collection Doc User Manual Abb
10. Overcoming Reading Challenges
- Dealing with Digital Eye Strain
 - Minimizing Distractions
 - Managing Screen Time
11. Cultivating a Reading Routine Doc User Manual Abb
- Setting Reading Goals Doc User Manual Abb
 - Carving Out Dedicated Reading Time
12. Sourcing Reliable Information of Doc User Manual Abb
- Fact-Checking eBook Content of Doc User Manual Abb
 - Distinguishing Credible Sources
13. Promoting Lifelong Learning
- Utilizing eBooks for Skill Development
 - Exploring Educational eBooks
14. Embracing eBook Trends
- Integration of Multimedia Elements
 - Interactive and Gamified eBooks

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