

## Installation Manual

# DC Power Distribution Panel



Reliable and  
Cost-Effective Power



LED  
Status



Secure  
Lock



Different  
Wire Types

AUTOMATE® | DC Power Distribution Panel provides power for up to 18 separate ARC DC motors. Higher 15 V output allows for greater cable lengths from motor to power panel, freeing up routing options within an installation.

Removes the need for multiple individual power adaptors for each DC motor in an installation, combining each power source into a single location. Channels may also be wired in parallel to provide additional power to larger motors. Additional information and updates are available at <https://www.rolleaseacmeda.com>

### Features:

- Capacity for up to 18 ARC DC motors (25 mm and 28 mm motors).
- Ability to parallel connect motor supplies for higher current motors up to six 35 mm and 45 mm motors.
- LED status indication for checking whether power is being applied to panel.
- LED status indication for each individual motor supply.

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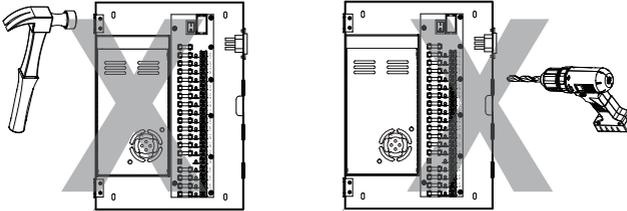
# 1. Safety Instructions

## **WARNING: Important safety instructions to be read before installation.**

Incorrect installation can lead to serious injury and will void manufacturer's liability and warranty.

## **AVERTISSEMENT: Consignes de sécurité importantes à lire avant l'installation.**

Une installation incorrecte peut entraîner des blessures graves, voire mortelles, et annule la



### **CAUTION:**

- Do not expose to moisture or extreme environments.
- Do not allow children to play with this device.
- Use or modification outside the scope of this instruction manual will void warranty.
- Installation and setup to be performed by a suitably qualified installer.
- For use with DC powered motorized shading devices.
- Frequently inspect for improper operation. Do not use if repair or adjustment is necessary.
- Keep clear when in operation.
- For use with DC motors only (NOT suitable for charging Li-ion Battery powered motors).
- Do not cut power cables.
- Do not drill into motor body or distribution panel.
- The routing of cable through walls shall be protected by isolating bushing or grommets.
- Ensure motor power cable and aerial is clear and protected from moving parts.
- If cable or power connector is damaged do not use.

### **MISE EN GARDE:**

- Ne pas exposer à l'humidité ou à des environnements extrêmes.
- Ne laissez pas les enfants jouer avec cet appareil.
- Toute utilisation ou modification en dehors de ce manuel d'instructions annulera la garantie.
- L'installation et la configuration doivent être effectuées par un installateur qualifié.
- À utiliser avec les dispositifs d'ombrage motorisés alimentés en courant continu.
- Inspectez fréquemment l'utilisation non conforme. Ne pas utiliser si une réparation ou un réglage est nécessaire.
- Restez à l'écart lors de l'exploitation.
- À utiliser uniquement avec des moteurs à courant continu (NE convient PAS pour charger des moteurs alimentés par batterie Li-ion).
- Ne pas couper les câbles d'alimentation.
- Ne percez pas dans le corps du moteur ou le panneau de distribution.
- Le passage des câbles à travers les murs doit être protégé en isolant les traversées ou les passe-câbles.
- Assurez-vous que le câble d'alimentation du moteur et l'antenne sont dégagés et protégés des pièces mobiles.
- Si le câble ou le connecteur d'alimentation est endommagé, ne l'utilisez pas.

# 1. Safety Instructions (Continued)

## **Important safety instructions to be read prior to operation.**

- It is important for the safety of persons to follow the enclosed instructions.
- Persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge should not be allowed to use this product.
- Frequently inspect for improper operation. Do not use if repair or adjustment is necessary.

## **Consignes de sécurité importantes à lire avant utilisation.**

- Pour la sécurité des personnes, il est important de suivre les instructions fournies.
- Les personnes (y compris les enfants) dont les capacités physiques, sensorielles ou mentales sont réduites ou qui manquent d'expérience et de connaissances ne devraient pas être autorisées à utiliser ce produit.
- Gardez les télécommandes hors de la portée des enfants.
- Inspectez fréquemment l'utilisation non conforme. Ne pas utiliser si une réparation ou un réglage est nécessaire.

## 2. Compliance Statement

This device complies with Part 15 of the FCC Rules / Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

- (1) l'appareil ne doit pas produire de brouillage, et
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

To satisfy FCC / IC RF exposure requirements, a separation distance of 20 cm or more should be maintained between the antenna of this device and persons during device operation.

To ensure compliance, operations closer than this distance are not recommended.

Les antennes installées doivent être situées de façon à ce que la population ne puisse y être exposée à une distance de moins de 20 cm. Installer les antennes de façon à ce que le personnel ne puisse approcher à 20 cm ou moins de la position centrale de l'antenne.

La FCC des états-unis stipule que cet appareil doit être en tout temps éloigné d'au moins 20 cm des personnes pendant son fonctionnement.



Do not dispose of in general waste.  
Please recycle batteries and damaged  
electrical products appropriately.



CAN ICES-3(B)/NMB-3(B)

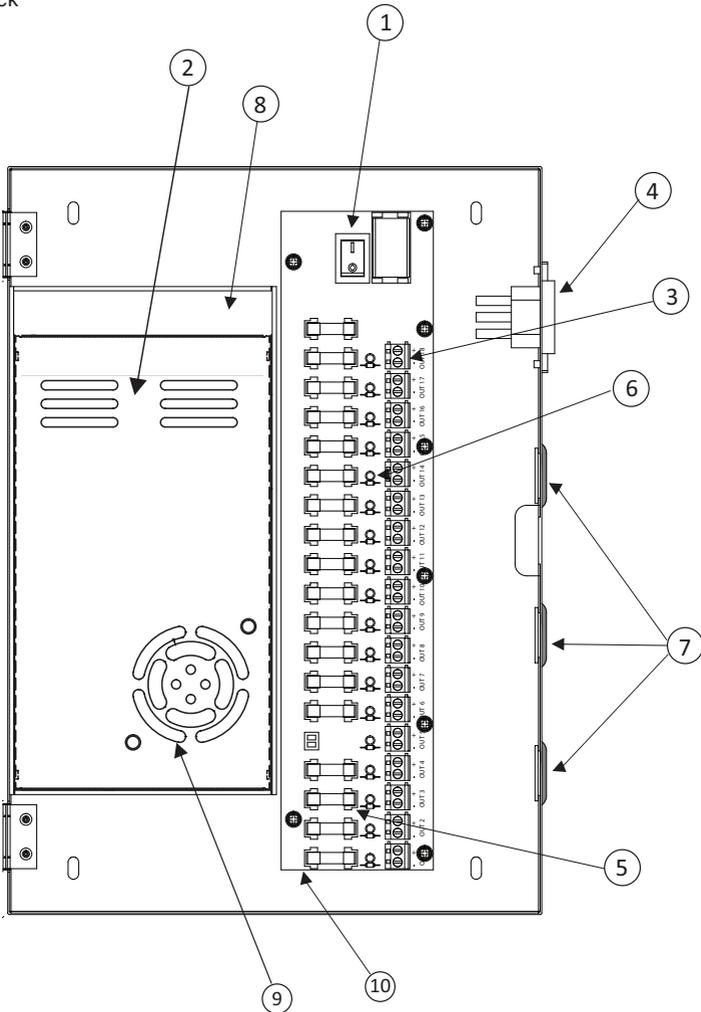
RECOGNIZED  
COMPONENT



Intertek  
5027356

### 3. Features

1. Internal Power Switch
2. Mains Power Supply (120 V/240 V)
3. 18 wire entries with clamp screws
4. IEC-C14 Connector for Mains Power Input
5. 18 individual fuses for channel protection (quick-blow fuse 3.15 A M205)
6. 18 Channel Status LEDs
7. Plastic Plugs (for Cable Routing)
8. Potentiometer for output voltage adjustment
9. Cooling Fan
10. Terminal Block



## 4. Installation

### 4.1 Cable Run Reference Table (Maximum Lengths)



#### IMPORTANT

**Motor power cable run lengths must not exceed the distances in the reference table below when voltage has been reduced for use with Automate Pulse PRO and App.**

Failure to do so will result in loss of voltage along the cable run, subsequently resulting in insufficient voltage at the motor input terminals.

Before connection of any motors to the power distribution panel, check cable lengths and wire gauge (AWG) against this table in order to ensure the system will operate to specification.

CABLE RUN LENGTH TOTAL (m)	ROLLEASE ACMEDA MOTORS							
	MT01-122.5 Series	MT01-122.8 Series	MTDCRF-35 Series	MTDCRFQ45 Series	MTDCRF45 Series	MTDCRF-CL Series	MT01-3001 Series	MTDCRF-TILT Series
	14V	14V	12V		12V	14V	12V	
≤15 m	24 AWG	24 AWG	22 AWG		20 AWG	20 AWG	18 AWG	
20 m	24 AWG	24 AWG	20 AWG		20 AWG	20 AWG	18 AWG	
25 m	24 AWG	22 AWG	20 AWG		20 AWG	20 AWG	18 AWG	
30 m	24 AWG	22 AWG	18 AWG		20 AWG	20 AWG	18 AWG	
35 m	22 AWG	20 AWG	18 AWG		20 AWG	20 AWG	18 AWG	
40 m	22 AWG	20 AWG	18 AWG		20 AWG	20 AWG	18 AWG	
45 m	22 AWG	20 AWG	18 AWG		20 AWG	20 AWG	18 AWG	
50 m-60 m	20 AWG	18 AWG	16 AWG		20 AWG	20 AWG	16 AWG	
65 m	20 AWG	18 AWG	16 AWG		18 AWG	20 AWG	16 AWG	
70 m	20 AWG	18 AWG	16 AWG		18 AWG	20 AWG	16 AWG	
75 m	20 AWG	18 AWG	N/A		18 AWG	20 AWG	N/A	
80 m	18 AWG	16 AWG	N/A		18 AWG	18 AWG	N/A	
85 m	18 AWG	16 AWG	N/A		18 AWG	18 AWG	N/A	
90 m	18 AWG	16 AWG	N/A		18 AWG	18 AWG	N/A	
95 m	18 AWG	16 AWG	N/A		18 AWG	18 AWG	N/A	
100 m	18 AWG	16 AWG	N/A		16 AWG	18 AWG	N/A	
105 m	18 AWG	16 AWG	N/A		16 AWG	18 AWG	N/A	
110 m	18 AWG	16 AWG	N/A		16 AWG	18 AWG	N/A	
115 m	18 AWG	16 AWG	N/A		16 AWG	18 AWG	N/A	
120 m-160 m	16 AWG	N/A	N/A		16 AWG	16 AWG	N/A	
165 m	16 AWG	N/A	N/A		N/A	16 AWG	N/A	
170 m	16 AWG	N/A	N/A		N/A	16 AWG	N/A	
175 m	16 AWG	N/A	N/A		N/A	16 AWG	N/A	
180 m	16 AWG	N/A	N/A		N/A	16 AWG	N/A	
185 m-210 m	N/A	N/A	N/A		N/A	16 AWG	N/A	
215 m	N/A	N/A	N/A		N/A	N/A	N/A	

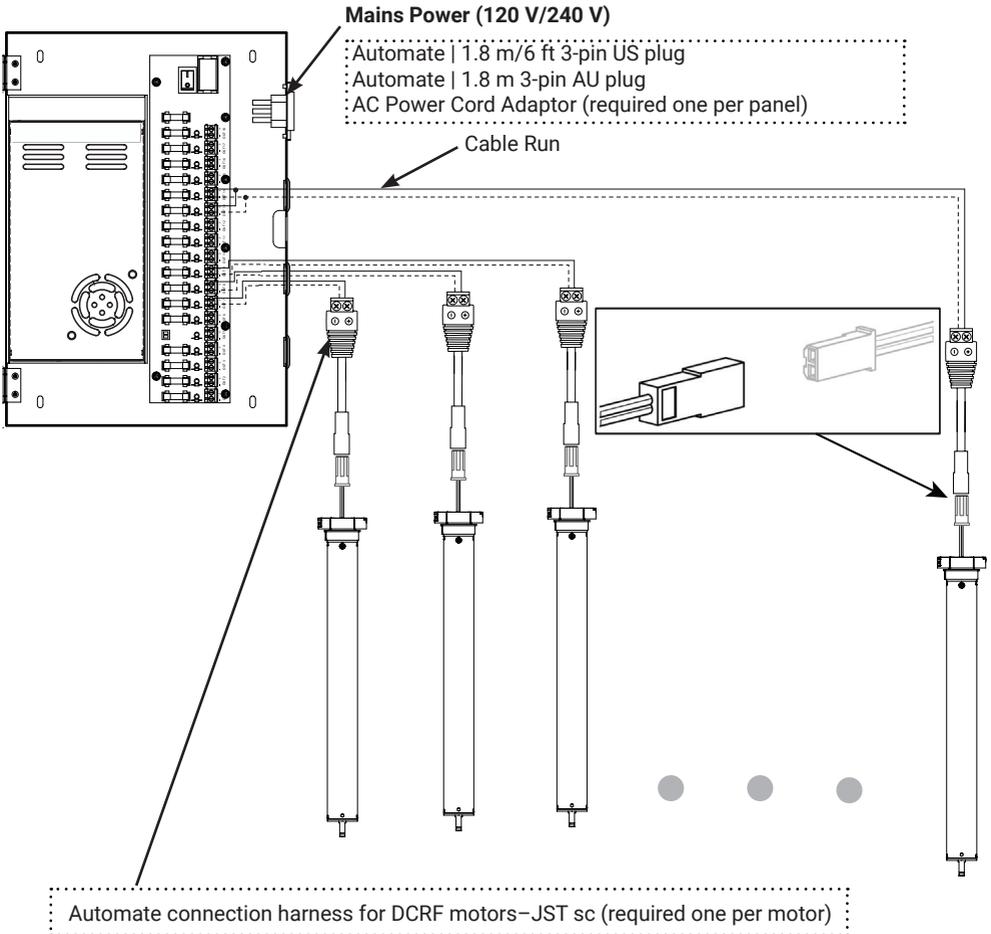
Note: Refer to Wire Gauge Dimensions section for detailed American Wire Gauge (AWG) dimensions.

## 4. Installation (Continued)

### 4.2 Motor Power Distribution Setup

#### Overview:

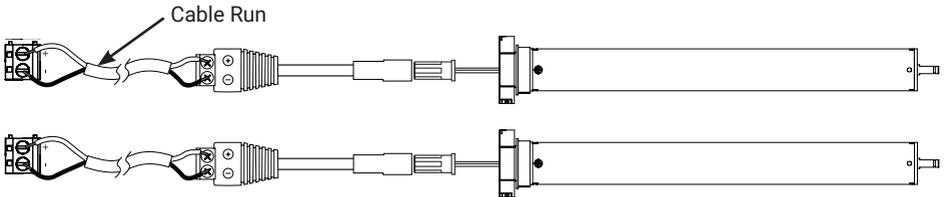
- One wire entry is connected to one of ZERO Head DC 25 mm and 28 mm motors.
- Two wire entries are connected to one of 35 mm and 45 mm motors.
- All motor connections must be made before power applies to the distribution panel.
- Use of two parallel connections ensures the power supply is not overloaded during larger motor operation.



## 4. Installation (Continued)

### 4.3 Wiring Diagram – Individual Connection (ZERO Head DC 25 mm & 28 mm)

Low power motors may be connected individually to one wire entry of the terminal block, with care being taken to ensure polarity is correct. Incorrect polarity will stop the motor from functioning.



This connection may only be used when wiring 28 mm and 25 mm motors to the distribution panel, as these motors do not exceed the 1.33 A current limit per channel.

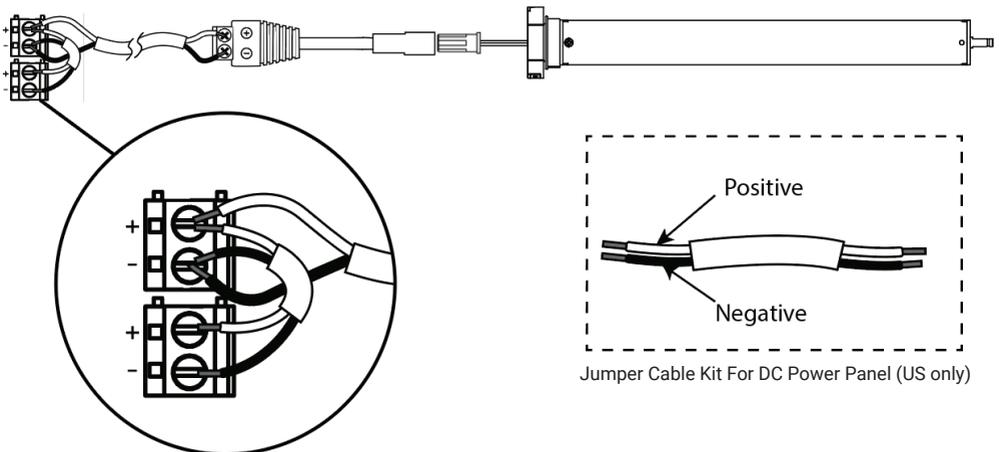
### 4.4 Wiring Diagram – Two Wire Entry Connections in Parallel (35 mm and 45 mm Motors)

**WARNING: Important instructions to read before commencing wiring of 35 mm and 45 mm motors.**

Due to higher power demands, up to six motors can be supported and must be wired in a parallel configuration (shown below), utilizing two wire entries in order to avoid overloading the power circuit and blowing the protection fuses.

**AVERTISSEMENT: Les instructions importantes à lire avant de commencer le câblage de 45 mm et Moteurs 35 mm.**

En raison de demandes de puissance plus élevées, ces moteurs doivent être câblés dans une configuration parallèle (illustrée ci-dessous) en utilisant deux canaux afin d'éviter de surcharger le circuit d'alimentation et d'endommager le tableau de distribution.



## 4. Installation (Continued)

Due to 1.33 A limit per channel, working current can be doubled to 2.66 A with parallel configuration as shown above, allowing connection of up to six 35 mm or 45 mm motors.

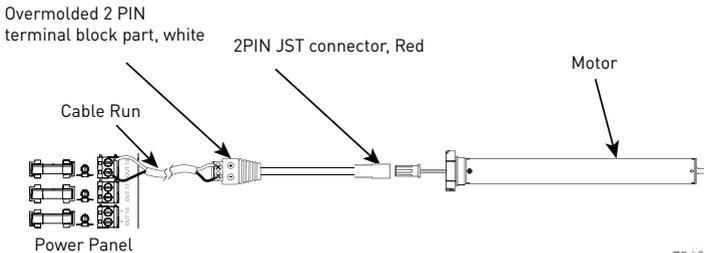
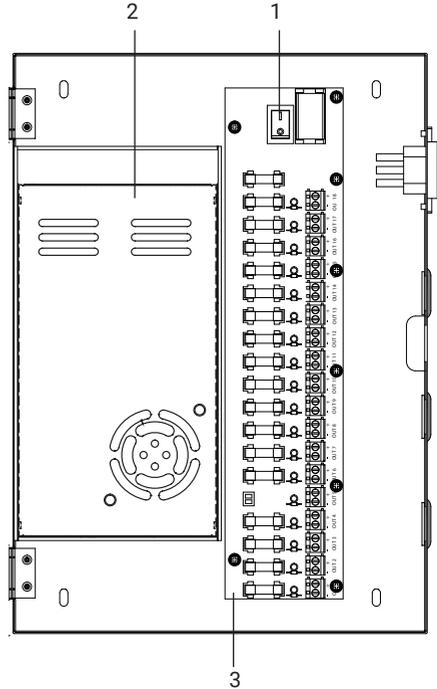
En raison de la limite de 1,33 A par canal, le courant de travail peut être doublé à 2,66 A avec une configuration en parallèle, comme indiqué ci-dessus, permettant la connexion de moteurs de 45 mm et 35 mm.

**CAUTION: Before plugging in this equipment to mains power;**

- Ensure the internal power switch (1) is in the OFF position.
- Check the mains input DC output (2) for any loose wires, ensuring the plastic safety covers are covering the main power supply.
- Check motor connection terminal blocks (3) for loose wires, as well as polarity check each connection.

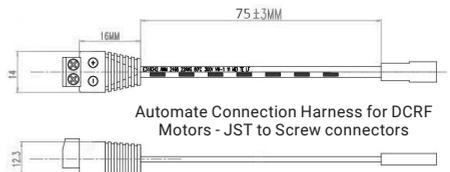
**ATTENTION: Avant de brancher cet équipement sur le secteur;**

- Assurez-vous que l'interrupteur d'alimentation interne (1) est en position OFF.
- Vérifiez que l'entrée secteur (2) ne comporte pas de fils desserrés à la sortie CC, en veillant à ce que les capots de protection en plastique soient en place, couvrant les borniers.
- Vérifiez que les borniers de connexion du moteur (3) ne présentent pas de fils desserrés, ainsi que la polarité. connexion.



### Wiring Polarity from Panel to Motor

<b>Female (Power Output)</b>	Grey dashes (positive)
<b>Male (Motor Input)</b>	Solid white (positive)



## 4. Installation (Continued)

### 4.5 JST Connector Recommendations for Custom Cable Adaptors

Rollease Acmeda recommends the following JST connectors for DC power connections:

#### Recommended JST Connectors

Description	Part No.	Manufacturer	Digikey.com Part No.
Male Connector (White)	SYR-02TV	JST SALES AMERICA INC.	455-2655-ND
Male Connector (Red)	SYR-02T	JST SALES AMERICA INC.	455-2653-ND
Male Pin Contact	SYM-001T-P0.6(N)	JST SALES AMERICA INC.	455-1909-1-ND

### 4.6 Status LED Indication

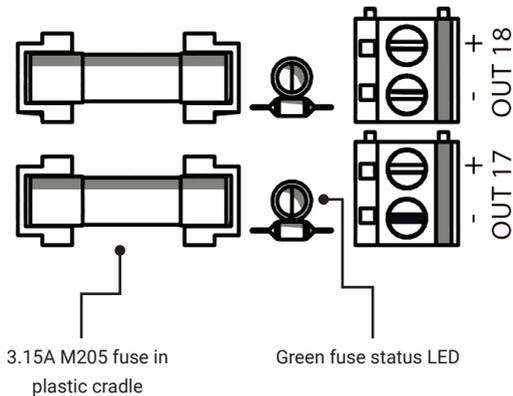


#### IMPORTANT

Status LEDs for each motor channel indicate the condition of the inline fuse. If the status LED is not lit up when power is supplied to the panel, then the inline fuse for that channel has blown.

Disconnect all power to the Panel and inspect the individual motor and supply cable to the motor in order to determine why the fault occurred.

Once the fault has been determined, make the appropriate repairs and replace the fuse with a 3.15 A M205 quick-blow fuse.



In order to replace the fuse, carefully pry the fuse out of the plastic cradle using a small tool (such as a small screwdriver or pen). To replace, gently press the new fuse into the cradle.

To test the LED, apply power to the distribution panel and observe whether the channel LED is glowing.

## 5. Specifications

### Technical Specifications

Parameters	Value
Input Voltage Range	100–240 V ac
Output Voltage Range	11.4–15 V dc
Maximum Output Current (all 18 channels)	24 A
Power Output Rating	360 W
Single Channel Absolute Maximum Current Output	1.33 A
Ingress Protection	IP20

## 6. Wire Gauge Dimensions

### American Wire Gauge Dimensions

Wire Gauge	Diameter	Cross-sectional Area
24 AWG	0.51054 mm (0.0201 in)	0.205 mm <sup>2</sup> (0.00032 in <sup>2</sup> )
22 AWG	0.64516 mm (0.0254 in)	0.326 mm <sup>2</sup> (0.00051 in <sup>2</sup> )
20 AWG	0.8128 mm (0.032 in)	0.518 mm <sup>2</sup> (0.00080 in <sup>2</sup> )
18 AWG	1.02362 mm (0.0403 in)	0.823 mm <sup>2</sup> (0.00128 in <sup>2</sup> )
16 AWG	1.29032 mm (0.0508 in)	1.31 mm <sup>2</sup> (0.00203 in <sup>2</sup> )

## 7. Troubleshooting

**WARNING:** Distribution panel is connected to (120–240 V ac) mains power. Do not attempt to troubleshoot the panel without first disconnecting all power and waiting a period of 5 minutes.

**AVERTISSEMENT:** Le panneau de distribution est connecté au secteur (120–240 V ac). Ne pas tenter de dépanner le panneau sans d'abord couper l'alimentation et attendre un certain temps de 5 minutes.

Problem	Cause	Remedy
No motors are responding.	A/C power supply not plugged in.	Check exterior LED.
		Check panel to power connection and IEC connector and A/C plug.
	Internal power switch turned off.	Power is supplied to panel, but exterior LED is not lit. Open panel and switch internal power switch to ON position.
	A/C terminal block wiring is incorrect.	<b>CAUTION:</b> Do not attempt to rewire mains power terminal block. Only to be performed by a suitably qualified installer.
Individual motor is not responding.	Motor channel fuse has blown.	Check individual LEDs.
		Replace the fuse as necessary.
	Motor wiring is incorrect.	Refer to wiring diagram.
	Motor is in sleep mode.	Refer to motor's programming instructions in order to change motor sleep status.

## 8. Appendices

### Appendix A: DC Power Dist. Panel + Pulse Pro and App. Installation/Set Up



#### IMPORTANT

If motors powered by the DC Power Distribution Panel are to be used with the Automate Pulse Pro and application, the output voltage of the distribution panel must be adjusted to allow for proper communication between the hub and motor.

Output voltage (11.4–15 V dc) of the DC Power Distribution Panel can be adjusted via the trim-pot located on the converter within the distribution panel.

Note: Adjusted output voltage is applicable to all 18 channels.



#### IMPORTANT

If motors are connected to the Automate Pulse PRO, it is recommended the motors of the same type (Zero Head DC 25 mm, 28 mm, 35 mm, or 45 mm motors) are used in the installation. It is not recommended to power motors of differing types from one DC Power Distribution Panel.

### Appendix B: Adjustment Procedure

**WARNING: DANGEROUS LIVE VOLTAGE.**

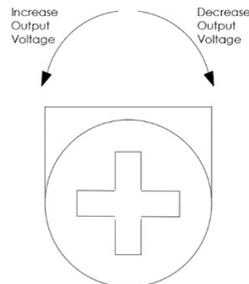
**DO NOT ATTEMPT UNLESS QUALIFIED TO OPERATE AC MAINS VOLTAGE DEVICES.**

Output voltage of the distribution panel must be monitored as it is adjusted. This involves probing the output of the panel while it is live.

Monitor output voltage using a multimeter and adjust the potentiometer using an appropriately sized Phillips-head screwdriver.

#### Applicable Motor Series

14 V	12 V
MT01-3001 Series MT01-1225 Series MT01-1228 Series	MTDCRF-CL Series MTDCRF35 Series MTDCRF45 Series MT01-1235 Series MT01-1245 Series MT01-3101 Series MT01-4001 Series



## Appendix C: Motor / App Troubleshooting

**WARNING:** Distribution panel is connected to (120–240 V ac) mains power. Do not attempt to troubleshoot the panel without first disconnecting all power and waiting a period of 5 minutes.

**AVERTISSEMENT:** Le panneau de distribution est connecté au secteur (120–240 V ac). Ne pas tenter de dépanner le panneau sans d'abord couper l'alimentation et attendre un certain temps de 5 minutes.

Problem	Cause	Remedy
Motor is not responding to the app/updating app animation and motor position.	A/C power supply not plugged in.	Adjust trim-pot to increase output voltage.
Motor showing as offline.	Voltage at motor terminal is too high or too low.	Adjust trim-pot to decrease or increase the output voltage.

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