ARGUS

SD08
Battery Fail Monitor

018-546-B2

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Power

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Argus Technologies Ltd.

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SD08
Battery Fail Monitor

018-546-B2

The following documents and drawings are included in this manual to provide the necessary information required for installation, routine operation and fault diagnosis of the unit:

• **Specifications:**	018-546-B1 Rev C
• **Warranty Policy:**	048-507-10
• **Important Safety Instructions**	
• **Installation and Operation Instructions:**	018-546-C0 Rev C
• **Spare Parts List:**	018-546-G0
• **Outline Drawing:**	018-546-06
• **Customer Connections:**	018-546-08
• **Factory Service Information:**	048-527-10

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Specifications for Argus Technologies' Battery Fail Monitor SD08

Electrical/Mechanical

Input Voltage:	± 20 to 60Vdc
Dimensions:	38mm H x 114mm W x 25mm D (1.5" H x 4.5" W x 1" D)
Mounting:	1 RU; 19" flush rack mounting (fits 4 modules) 1 RU; 23" flush rack mounting (fits 5 modules) Wall mount; stand-alone (fits 1 module)
Weight:	225 g (0.5 lb.)

Environmental

Operating Temperature:	-40 to +50°C (-40 to +122°F)
Humidity:	0 to 95% (non-condensing)

Hardware

Front Panel Keypad:	Reset button
LEDs:	Battery Condition OK (green) Battery Condition Fail (red)
Front Panel Switch:	Rotary switch, 16 detents (0.1V increments); sets the maximum voltage deviation to 1.6V
Rear Terminal Inputs:	7 screw terminals for customer connection: 1 Battery – 1 Battery + 2 Battery Midstring 1 Alarm NC 1 Alarm NO 1 Alarm Common
Rear Relay Output:	1 Form C; Battery Fail

Recommended Connection Wire Sizes (as per CSA/UL)

Input/Output:	Temperature Range	Minimum Wire Size
	0 to +50°C (32 to +122°F)	2.5 to 0.34mm^2 (#14 to #22 AWG)

The above information is valid at the time of publication. Consult factory for up-to-date ordering information.
Specifications are subject to change without notice.

WARRANTY AND REPAIR INFORMATION

Warranty Policy

Argus Technologies Ltd. warrants all equipment manufactured by it to be free from defects in parts and labor, excluding third party OEM materials (example: air conditioners, batteries), for a period of two years from the date of shipment from the factory. For third party products the OEM's warranty shall apply. The liability of Argus applies solely to repairing, replacing or issuing credit (at Argus' sole discretion) for any equipment manufactured by it and returned by the customer during the warranty period. The terms of the warranty are Ex Works (EXW) from Argus' factory service location.

Argus reserves the right to void the warranty if:

(1) identification marks or serial numbers are removed or altered in any way,
(2) invoice is unpaid, or
(3) defect is the result of misuse, neglect, improper installation, environmental conditions, non-authorized repair, alteration or accident.

Argus shall not be liable to the customer or other parties for any loss of profits, loss of use, costs for removal or installation of defective equipment, damages or consequential damages based upon equipment failure during or after the warranty period. There shall be no other obligations either expressed or implied. Argus will not honor warranties for batteries and other third party products without prior written Argus authorization.

Freight Policy

Customer is responsible for all shipping and handling charges (COD and freight collect will not be accepted without prior approval from Argus Technologies).

Terms of Payment (North America)

Payment terms are net 30 days subject to prior credit approval. All other orders require payment before shipping.

Terms of Payment (International)

Payment terms are subject to prior approval and are typically through Tele-Transfer.

Return Material Policy

Our RMA policy is designed to ensure prompt, efficient and high quality factory service. A Return Material Authorization (RMA) number must be obtained before products can be accepted for servicing by the Argus factory. For returns to an authorized service center (refer to "Authorized Service Centers" for locations), please consult the individual service center for specific return policies and instructions.

To obtain a RMA number for a factory return, customers must call the appropriate location with the product serial and model number, as well as a brief description of the problem, shipment instructions and billing details.

The original packing container should be used whenever possible. Both the shipping documents and the outside of the box must have the RMA # clearly marked and the product shipped prepaid to the Argus factory service center. Argus will endeavor to repair products within five working days of receipt. Repairs to the returned product are warranted for a period of six months. A service charge may be applied if no fault is found in the returned product. Argus will not accept products without an RMA number.

Business Hours

Argus North American office hours are 7:30 am to 5:00 pm (Pacific Standard Time) Monday to Friday.

Factory Service Centers

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048-507-10-I1 Rev S (09/2007)

IMPORTANT SAFETY INSTRUCTIONS

SAVE THESE INSTRUCTIONS

1. Please read this manual prior to use to become familiar with the product's numerous features and operating procedures. To obtain a maximum degree of safety, follow the sequences as outlined.

2. Before using the product, read all instructions and cautionary markings on the product and any equipment connected to the product.

3. This manual provides warnings and special notes for the user:
    a. Points that are vital to the proper operation of the product or the safety of the operator are indicated by the heading: **WARNING**.

    b. A notation that is in ***Bold Italic*** typeface covers points that are important to the performance or ease of use of the product.

4. **WARNING** – Use care working around battery systems. Before unpacking and handling batteries, thoroughly read and follow the documentation from the battery manufacturer with special regard to safety precautions.

5. **WARNING** – Under abnormal operating conditions, or as a result of damage and/or misuse of a battery, potentially hazardous conditions could occur including burns from sulphuric acid or injury from explosive gases.

6. **WARNING** – Whenever working with batteries there is a short-circuit current hazard. Extreme caution must be taken to prevent electrical arcing, electrical burns or shock.

7. Do not expose the product to rain or snow; install only in a clean, dry environment.

8. **CAUTION** – Unless otherwise noted, use of an attachment not recommended or sold by the product manufacturer may result in a risk of fire, electric shock, or injury to persons.

9. **CAUTION** – Do not operate the product if it has received a sharp blow, it has been dropped, or otherwise damaged in any way – return it to a qualified service center for repair.

10. **CAUTION** – Do not disassemble the product – call our qualified service centers for servicing. Incorrect reassembling may result in a risk of electrical shock or fire.

TABLE OF CONTENTS

1 Introduction

1.1 Scope of the Manual

This instruction manual explains the features, installation and operation of the SD08 Battery Fail Monitor from Argus Technologies.

NOTE: *To aid the user with installation, frequent reference is made to drawings located at the rear of this manual.*

1.2 Product Overview

The SD08 Battery Fail Monitor module (see Figure 1) is designed to monitor the status of a single battery string. The method used is 'battery midpoint voltage monitoring.' The SD08 connection to the battery string splits the battery string voltage in half at the midpoint. The string voltage halves are compared and if the difference between the two exceeds the programmed value (set by front panel rotary switch) then an alarm is sent to the Argus system controller or directly to the customer's office monitoring system via the contacts on a Form "C" relay. The local alarm indication (red LED) is latching and requires manual intervention to reset (front panel push button).

Figure 1–Front view of SD08, List 80 (approximate size)

A complete battery monitoring system consists of one or more SD08 modules installed in a 19" or 23" panel or cabinet (see Figure 2). Additional SD08 modules can be added at a later time after the system has been installed; e.g. when additional battery strings are added.

1.3 Part Numbers and List Options

This product is available to order under the following Argus part numbers and list options:

Description	Part Number/List Option
SD08 Battery Fail Monitor	018-546-20
Basic Unit	*List 0
19" Rack Mount	List 19
23" Rack Mount	List 23
Wall Mount (chassis for stand-alone unit)	List 25
Gray Finish	*List 55
SD08 Battery Fail Monitor Module	List 80
Blanking Plate	List 90

* Default option, consult factory for up-to-date ordering information.

2 Features, Alarms and Controls

The following chapter will cover the various features and options available on the SD08 Battery Fail Monitor.

2.1 Module Indicators

Two indicators are provided on the SD08 module to provide visual indication of its operational status (see Figure 1). The conditions and associated colors are:

- Module Power On (OK) .....Green
- Battery Condition Fail (FAIL) .....Red

The OK LED indicator illuminates when the SD08 module is getting power from the battery and the battery status is OK.

The FAIL LED indicator illuminates when the battery is in a fail condition and will latch (see Reset Button). The green LED will turn off.

2.2 Fail Alarm

The SD08 Battery Fail Monitor module is equipped with a fail alarm, which is extended to the alarm module (Argus system controller or customer's monitoring system) via the contacts on a Form C relay. The alarm may indicate one of the following conditions:

- If the battery cell is open,
- If there is a bad connection,
- If the cell is performing inefficiently,
- If the battery cell is shorted
- No power (neither LED illuminated).

The Fail Alarm contacts will change state when the voltage difference between the two halves monitored exceeds the programmed value set by the front panel control. ***The relay is jumper selectable for latching or no latching operation.*** See Figure 3.

The alarm contacts are also 'fail-safe' and therefore will present an alarm condition without a source of voltage being present, however, the Fail LED will not remain illuminated unless there is input power available. The alarm will be extended if the input voltage to the unit falls below factory set limits or if the internal reference fails. If the unit returns to normal operation (and the battery status is OK) then the alarm will clear.

The SD08 module has a terminal block (plug in cable connector) for the Form C relay alarm contacts located on the rear of the module PCB. Both normally closed (NC) and normally open (NO) contacts are available.

NOTE: *The Fail Alarm relay is de-energized during alarm conditions.*

NC will provide the user with open contacts when the power is on (and there are no alarm conditions) and closed contacts when the power is off or when an alarm condition is present. NO will act in a similar manner and give closed contacts under power-on and non-alarm conditions; open contacts under power-off or alarm conditions.

2.3 Reset Button

The local alarm indication (red LED) is latching. ***You must press the SD08 module front panel push button to reset.***

2.4 Mid-Point Alarm Setting Control

A front panel rotary switch (see Figure 1) with 16 indents allows the user to set the maximum allowable voltage deviation in battery string halves to 1.6 Volts in 0.1 Volt increments; i.e. 0.1, 0.2… 1.6V.

2.5 Battery Mid-Point Voltage Contacts

One plug in cable connector is provided for customer connections at the rear of the SD08 module (see also Fail Alarm Contacts). This is a two-piece design equipped with screw terminals for the battery terminations (in addition to the Fail Alarm contacts described above).

2.6 Universal Operation

The SD08 module obtains power directly from the battery for universal 24 or 48 Volt operation.

NOTE: *The module is internally fused and diode protected from damage in the event that reverse polarity connection is made.*

2.7 Battery Identification

A space on the front of the SD08 module is provided for battery number identification. See Figure 1.

2.8 Mounting

A variety of mounting options for the SD08 module allow for adjustments and indicators to be visible from the front of the panel.

2.8.1 19" Rack Mount

Up to 4 SD08 modules may be flush mounted in a 19" single R.U. panel. See Figure 2 and drawing 018-546-06, sheet 1.

2.8.2 23" Rack Mount

Up to 5 SD08 modules may be flush mounted in a 23" single R.U. panel. See Figure 2 and drawing 018-546-06, sheet 2.

2.8.3 Wall Mounting

A chassis for an individual SD08 module is available for wall or cabinet mounting. See Figure 1 and drawing 018-546-06, sheet 3.

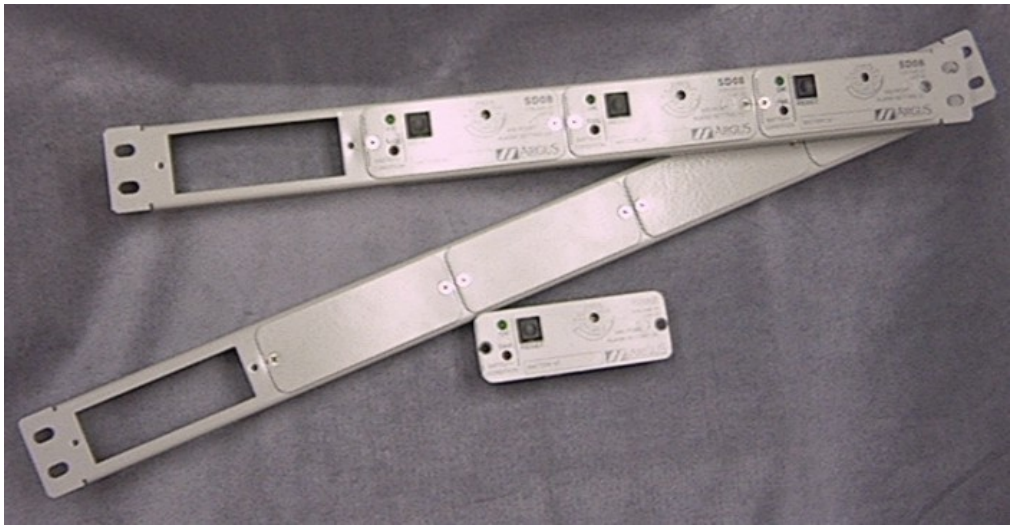


Figure 2–Front view of SD08 rack mount options

3 Inspection

3.1 Packing Materials

All Argus products are shipped in rugged, double walled boxes and suspended via solid inserts to minimize shock that may occur during transportation. Packaging assemblies and methods are tested to National Safe Transit Association standards.

Products are also packaged with Cortex. This plastic wrap contains a corrosive-inhibitor that protects the product from corrosion for up to two years.

3.1.1 Returns for Service

Save the original shipping container. If the product needs to be returned for service, it should be packaged in its original shipping container. If the original container is unavailable, make sure the product is packed with at least three inches of shock-absorbing material to prevent shipping damage.

NOTE: *Argus Technologies is not responsible for damage caused by the improper packaging of returned products.*

3.2 Check for Damage

Prior to unpacking the product, note any damage to the shipping container. Unpack the product and inspect the exterior for damage. If any damage is observed contact the carrier immediately.

Continue the inspection for any internal damage. In the unlikely event of internal damage, please inform the carrier and contact Argus Technologies for advice on the impact of any damage.

Verify that you have all the necessary parts per your order for proper assembly.

4 Installation

This chapter is provided for qualified personnel to install the product, which shall be mounted in a clean and dry environment.

NOTE: *To aid the user with installation, frequent reference is made to drawings located at the rear of this manual.*

4.1 Safety Precautions

WARNING
Hazardous voltages are present at both the input and the output of power systems. The DC output from the rectifiers and the battery system is at a lethal potential and has a high short circuit current capacity that may cause electrocution, severe burns and electrical arcing.

Before working with any live battery or power system/distribution center, the following precautions should be followed:

- Remove all metallic jewelry; e.g., watches, rings, metal rimmed glasses, necklaces.
- Wear safety glasses with side shields (and prescription lenses if necessary) at all times during installation.

Insulated metallic tools shall be used.

The installer should follow all applicable local rules and regulations for electrical and battery installations; e.g., CSA, UL, CEC, NEC, OSHA, and local fire codes.

4.2 Tools Required

Various insulated tools are essential for product installation. Use this list as a guide:

- Slot head screwdriver (blade size 1/8")
- Philips head screwdriver, #2 (tip size 3/16")
- Philips head screwdriver, #1
- Anti-static wrist strap
- Safety glasses
- Cutters and wire strippers 2.5 to 0.34mm^2 (#14 to #22 AWG)
- Digital voltmeter equipped with test leads.

4.3 Preparation/Mounting

NOTE: *The SD08 must be mounted in a clean and dry environment.*

4.3.1 Rack Mount

The SD08 Battery Fail Monitor has been designed for flush mounting in an EIA standard single RU relay rack panel.

The SD08, 19" or 23" unit, should be mounted to the rack using two #12 – 24 x 1/2" screws in each bracket. Philips-type screws and screwdriver should be used to eliminate the possibility of slippage and scratching of the unit's exterior. Washers (such as internal tooth) or special screws that are designed to cut through the painted surface should be used to ensure a good chassis ground.

4.3.2 Wall Mount

The stand-alone battery fail monitor module can be mounted with the wall mounting holes in the rear of the chassis. To use these holes, remove the front plate (two screws on the front of the panel). See drawing 018-546-06, sheet 3.

Consult the drawings located at the rear of this manual and proceed to the next chapter for wiring connections.

5 Wiring and Connections

This chapter provides cabling details and notes on cable sizing for DC applications with respect to the product.

NOTE: *Refer also to drawings located at the rear of this manual.*

5.1 Safety Precautions

WARNING
Hazardous voltages are present at both the input and the output of power systems. Ensure that input power and output power is removed before attempting work on the CXC's connections. Use a voltmeter to verify the absence of voltage. Clearly mark the correct polarity of the battery leads before commencing work on DC connections.

Refer to the previous (Installation) chapter for additional safety precautions.

5.2 Grounding

WARNING
For safety reasons, ensure the SD08 is properly bonded to the building's ground grid.

5.3 Alarm Connections

Alarm cables should be bundled and routed through the rear of the module or rack; through the side in the case of the stand-alone or wall mount unit. See drawing 018-546-08. Insert each wire into the appropriate terminal on the termination block (see Figure 3) and secure the wires by tightening the terminal screw. See Specifications document at the front of this manual for recommended wire sizes.

WARNING
Do not over tighten the terminal screws. This may result in damage to the input connectors.

The Fail Alarm terminals are connected to relay contacts in the SD08 module and both normally open or normally closed contacts are provided. ***Latching is jumper selectable.***

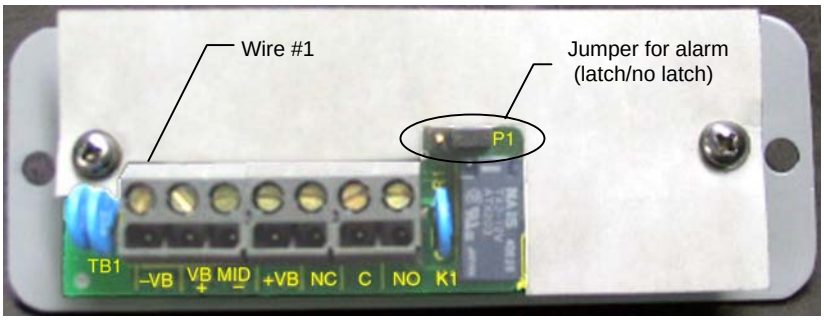


Figure 3–Rear view of SD08 module showing termination block

NOTE: *The Fail Alarm relay is de-energized during alarm conditions.*

5.3.1 Latch

Set the jumper (P1) to pins 1 and 2 for alarm "latch" (requires manual reset).

5.3.2 No Latch (default)

Set the jumper (P1) to pins 2 and 3 for alarm "no latch" (clears automatically).

5.4 Module Installation and Removal

WARNING: HIGH VOLTAGE AND SHOCK HAZARD.

Only qualified personnel familiar with line and battery voltage should attempt to change modules while the SD08 Battery Fail Monitor cabinet is energized. Remove rings, watches and other jewelry before performing this procedure. Keep fingers clear of live electric parts while unit is energized.

Leave cables disconnected at battery and verify polarity using a voltmeter. Make battery connections only after all other wiring is completed.

5.4.1 Installing Module

Battery sense leads should be bundled and routed through the rear of the module or rack per drawing 018-546-08. Route through the side of the SD08 in the case of the stand-alone or wall mount unit. Insert each wire into the appropriate terminal on the termination block and secure the wires by tightening the terminal screw. See Specifications document located at the front of this manual for recommended wire sizes.

WARNING
Do not over tighten the terminal screws. This may result in damage to the input connectors.

The termination block can then be plugged into the SD08 module (cable routed through corresponding slot). Attach the module to the panel with the screws provided (see Figure 4).

5.4.2 Removing Module

Remove the two screws from the face of the module. Detach the module from the panel and unplug the cable connector from the terminal block.

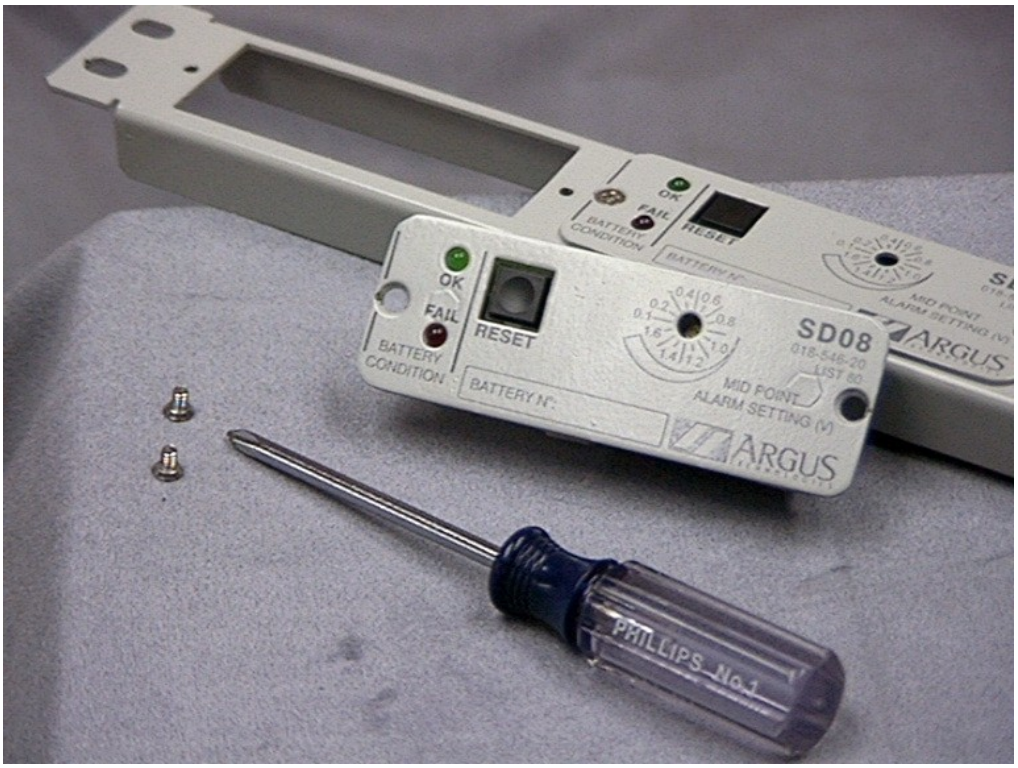


Figure 4–SD08 module, panel and mounting screws

6 Initial Startup

After completing the system wiring and installation, perform the following startup and test procedure to ensure proper operation.

1. Confirm that the battery sense leads and alarm cables are connected to the terminal of the correct polarity at the SD08 module. See TB (terminal block) in Figure 5.

WARNING
Check battery polarity. Failure to do so could damage the unit and or battery.

2. Verify the battery installation according to the instructions provided by the battery manufacturer.
3. Measure total battery string voltage and the midpoint voltage.
4. Set the midpoint monitor to the desired voltage deviation setting, which should be greater than the midpoint voltage differential under normal operating conditions. 0.5 to 1.0V is recommended.
5. Apply DC power by plugging the other end of the sense leads into the mating battery cell connector.
6. Plug in and test the remaining modules, following the steps above.

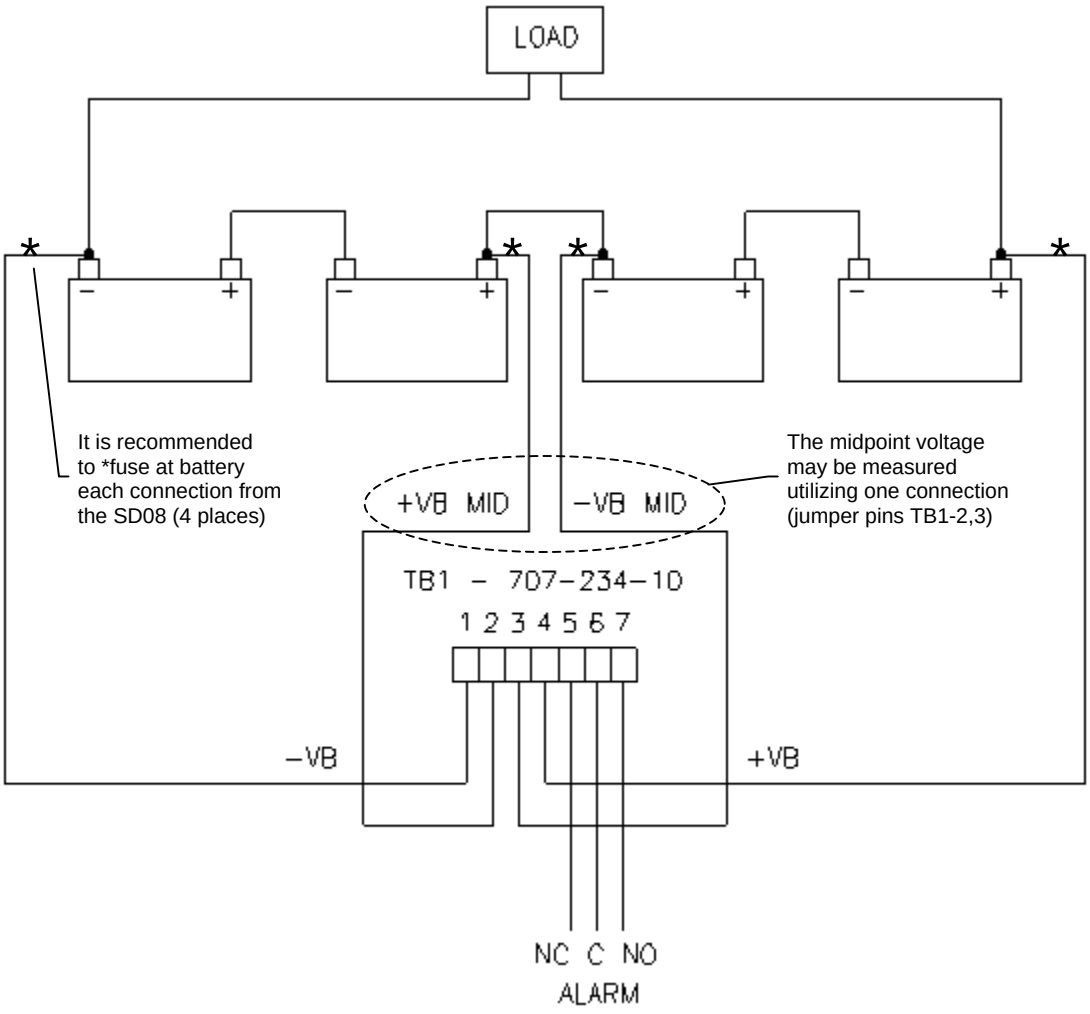


Figure 5–Showing SD08 terminal to battery connections

7 Operation

Normal operation of the battery fail monitor system will be indicated by the illumination of the BATTERY CONDITION OK LED indicators on each module and the absence of illumination of the FAIL LED indicators on each module.

An open cell, shorted cell or poor performing cell will cause the midpoint voltage deviation to shift exceeding the Midpoint Alarm Setting (V). This will result in a battery midpoint alarm (BATTERY FAIL).

NOTE: *Some fine-tuning may be required to obtain the ideal setting that is sensitive enough to detect a 'bad' cell and will not produce false alarms.*

The Midpoint Alarm Setting (V) will have to be adjusted within the functional range and is dependant upon many factors including the battery characteristics under float, charge and discharge conditions.

7.1 Factory Defaults

7.1.1 Midpoint Alarm Setting (V)

The Midpoint Alarm Setting (V) has a programmable range of 0.1 to 1.6V (in 0.1V increments).

The default setting for 24Vdc systems is 0.5V.

The default setting for 48Vdc systems is 0.5V.

7.1.2 Fail Alarm Contacts

The SD08 module has a terminal block (plug in cable connector) for the Form C relay alarm contacts located on the rear of the module PCB; both normally open and normally closed contacts are available. The Fail Alarm contacts will change state when the voltage difference between the two halves monitored exceeds the programmed value set by the front panel control. The relay is jumper selectable for latching or no latching operation.

The default setting is for no latching operation.

8 Maintenance

Although very little maintenance is required with Argus systems, routine checks and adjustments are recommended to ensure optimum system performance. Qualified service personnel should do repairs.

The following table lists a few maintenance procedures for this system. These procedures should be performed at least once a year.

WARNING: HIGH VOLTAGE AND SHOCK HAZARD.

Use extreme care when working inside the shelf while the system is energized. Do not make contact with live components or parts.

Circuit cards, including RAM chips, can be damaged by static electricity. Always wear a grounded wrist strap when handling or installing circuit cards.

Ensure redundant modules or batteries are used to eliminate the threat of service interruptions while performing maintenance on the system's alarms and control settings.

Procedure	Date Completed
Clean ventilation openings	
Inspect all system connections (re-torque as necessary)	
Verify alarm/control settings	
Verify alarm relay operation	

Table A–Sample maintenance log

Refer to the Spare Parts List document at the rear of this manual for replacement parts.

9 Argus Conventions

9.1 Numbering System

Argus Technologies uses an eight-digit drawing number system, which is broken into three blocks. The first three digits describe the category of the product; e.g., rectifier or fuse panel. The next three digits indicate the sequence in which the product number was allocated in a particular category. The last two digits indicate the type of drawing, for example:

"-06" Outline Drawing

"-08" Customer Connections

"-20" Main Assembly

Argus uses an eight-digit part numbering system for all components and sub assemblies. Each part is covered by its own unique number. Due to the quantity, categories will not be listed within this manual.

9.2 Acronyms and Definitions

AWG	American wire gauge
CEC	Canadian Electrical Code
CSA	Canadian Standards Association
DC	Direct current
EIA	Electronic Industry Alliance
LED	Light emitting diode
NC	Normally closed
NEC	National Electrical Code (USA)
NO	Normally open
OSHA	Occupational Safety & Health Administration
PCB	Printed circuit board
RAM	Random access memory
RU	Rack unit (1.75")
UL	Underwriters Laboratories

SPARE PARTS LIST
SD08, Battery Fail Monitor

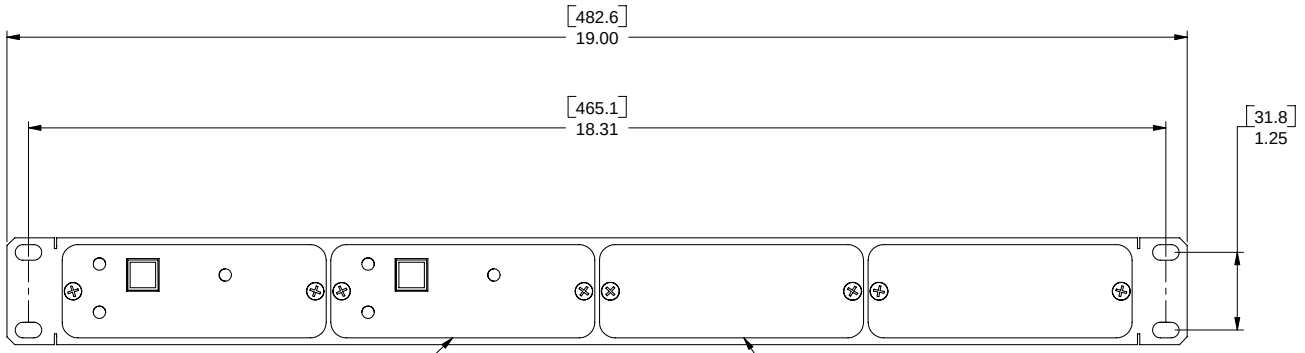
APPROVED: _____
ISSUED: _____

ITEM	QTY	PART NO.	REV	DESCRIPTION	CIRCUIT DESIGNATION OR REMARKS
List 0; On Site:					
1	2	460-196-10		Fu,0.1"x0.3",125mA 125V,Very Fast,Ax Ld	F1,2
List 1; On Site Optional:					
		NONE			
List 2; Depot Repair (Add To List 0):					
		NONE			

Revisions:

A 1999-05-06 First Release

REVISIONS			
LTR	DESCRIPTION	DATE	APPD
B	REDESIGNED		



LIST 19

LTR	DESCRIPTION	QTY
	FINISHED HOLE LEGEND	

ARGUS TECHNOLOGIES

DESIGN	CA	98/11	MATERIAL
DRAWN	JJ	98/11	
CHECKED	CA	98/11	
APPROVED	RD	98/11	FINISH

TOLERANCES
X.X ±0.04" |X| ±1mm
X.XX ±0.02" |X.X| ±0.5mm
X.XXX ±0.01" |X.XX| ±0.25mm

SCALE N.T.S.

TITLE
OUTLINE DRAWING,
19" RACK MOUNT, SD08

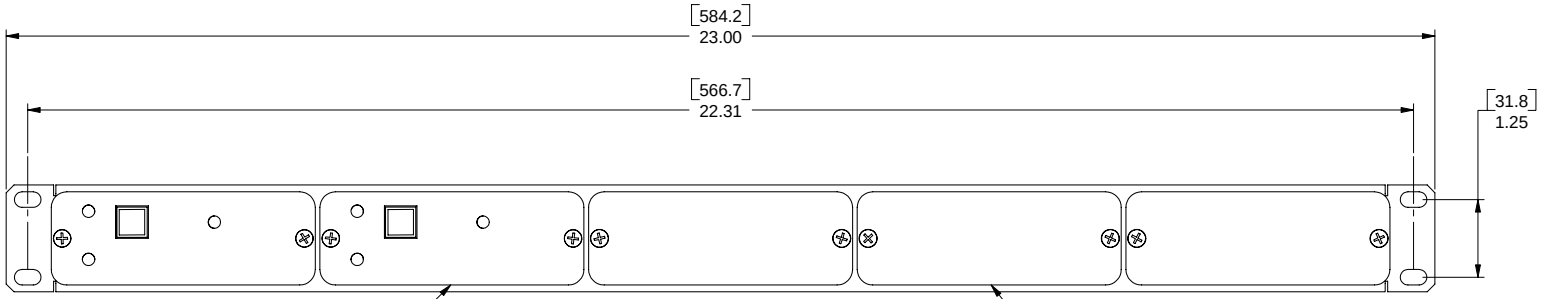
ISSUE DATE

SHEET 1 OF 3

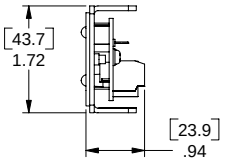
SIZE	TYPE	DWG NO.	REV
B	D1	018-546-06	B

DIMENSIONS ARE IN INCHES WITH METRIC [mm] IN BRACKETS: INCHES [mm]

REVISIONS			
LTR	DESCRIPTION	DATE	APPD



FRONT VIEW



SIDE VIEW

LIST 80
SD08, BATTERY FAIL MONITOR

LIST 90
BLANKING PLATE, SD08 MODULE

LIST 23

LTR	DESCRIPTION	QTY
	FINISHED HOLE LEGEND	

DESIGN	CA	98/11	MATERIAL
DRAWN	JJ	98/11	
CHECKED	CA	98/11	
APPROVED	RD	98/11	FINISH

TOLERANCES
X.X ±0.04" |X| ±1mm
X.XX ±0.02" |X.X| ±0.5mm
X.XXX ±0.01" |X.XX| ±0.25mm

SCALE **N.T.S.**

TITLE
OUTLINE DRAWING,
23" RACK MOUNT, SD08

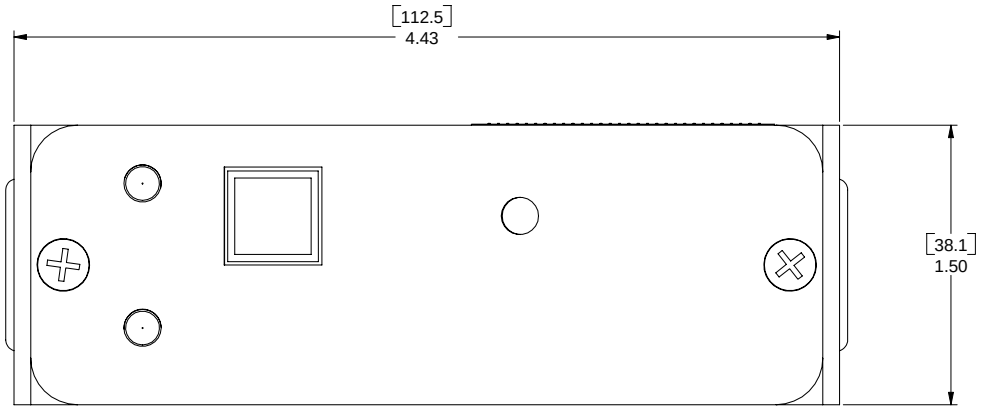
ISSUE DATE

SHEET 2 OF 3

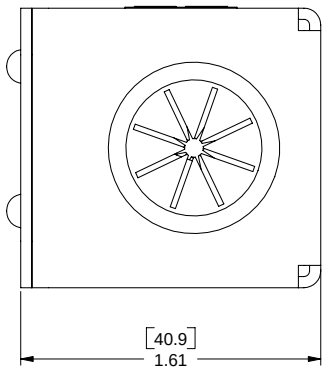
SIZE	TYPE	DWG NO.	REV
B	D1	018-546-06	B

DIMENSIONS ARE IN INCHES WITH METRIC [mm] IN BRACKETS: INCHES [mm]

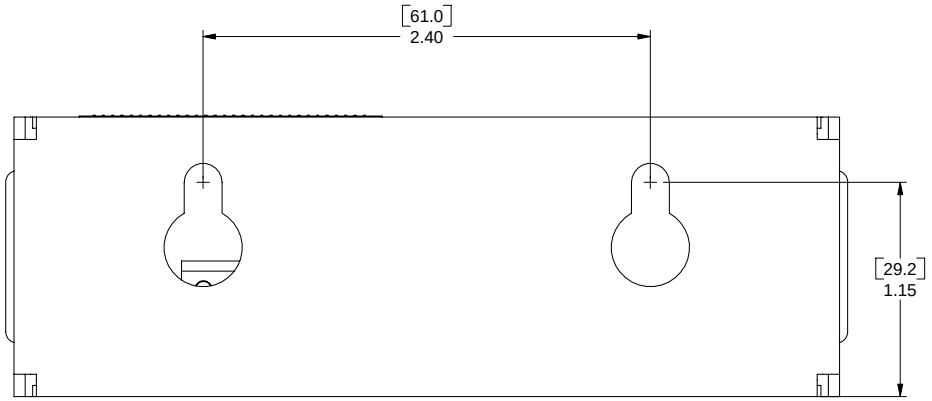
REVISIONS			
LTR	DESCRIPTION	DATE	APPD



FRONT VIEW



SIDE VIEW



REAR VIEW

LIST 25

LTR	DESCRIPTION	QTY
	FINISHED HOLE LEGEND	

ARGUS TECHNOLOGIES

DESIGN	CA	98/11	MATERIAL
DRAWN	JU	98/11	
CHECKED	CA	98/11	
APPROVED	RD	98/11	FINISH

TOLERANCES
X.X ±0.04" |X| ±1mm
X.XX ±0.02" |X.X| ±0.5mm
X.XXX ±0.01" |X.XX| ±0.25mm

SCALE N.T.S.

TITLE
OUTLINE DRAWING,
SINGLE UNIT, SD08

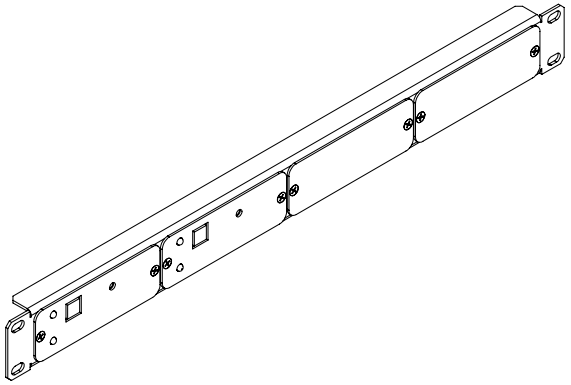
ISSUE DATE

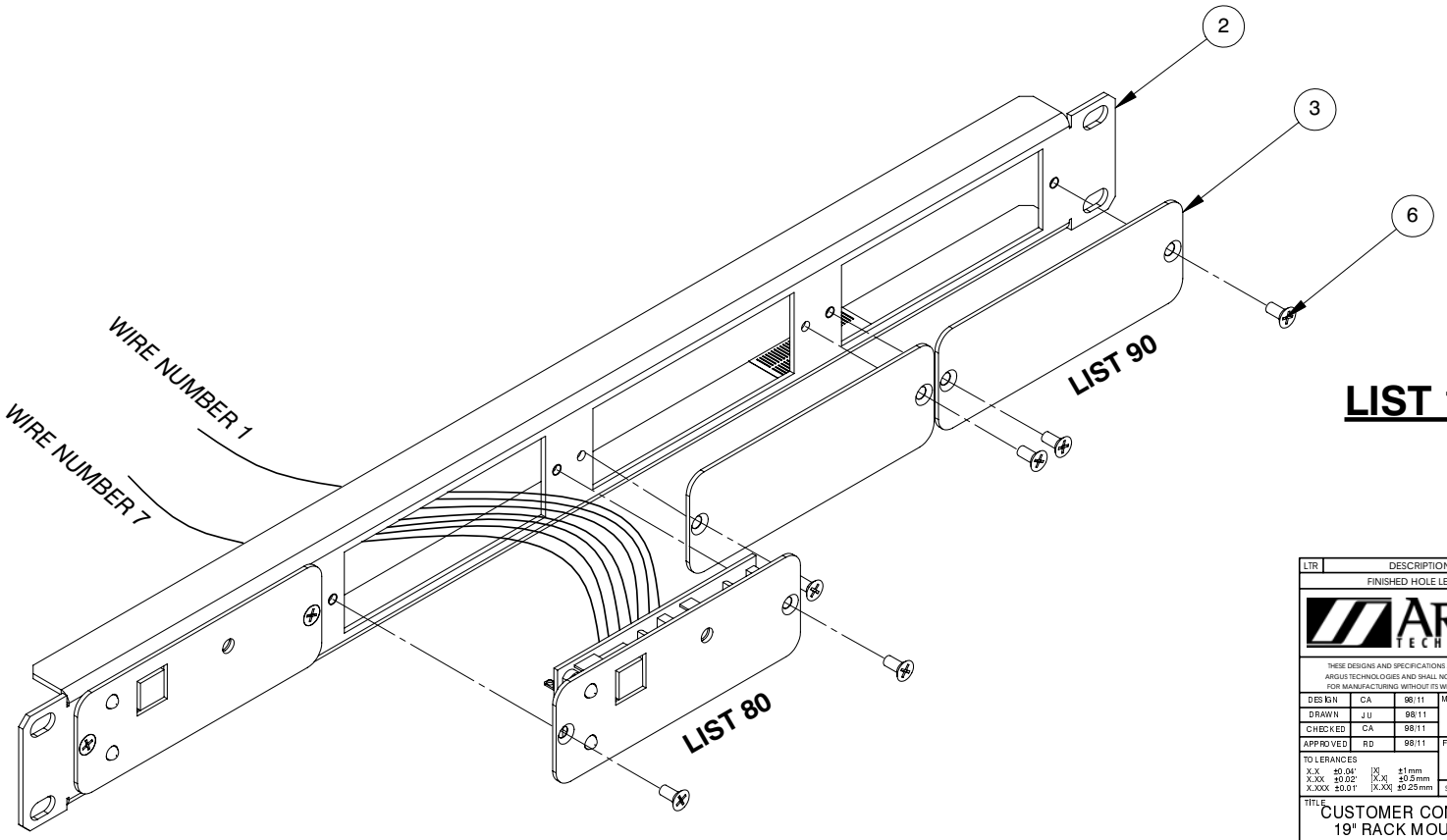
SHEET 3 OF 3

SIZE	TYPE	DWG NO.	REV
B	D1	018-546-06	B

DIMENSIONS ARE IN INCHES WITH METRIC [mm] IN BRACKETS: INCHES [mm]

REVISIONS			
LTR	DESCRIPTION	DATE	APPD
B	REDESIGNED		





WIRE CONNECTION

WIRE NUMBER 1 -VB
WIRE NUMBER 2 +VB MID
WIRE NUMBER 3 -VB MID
WIRE NUMBER 4 +VB
WIRE NUMBER 5 NC
WIRE NUMBER 6 C } ALARM
WIRE NUMBER 7 NO

LIST 19

LTR	DESCRIPTION	QTY
	FINISHED HOLE LEGEND	

ARGUS TECHNOLOGIES

DESIGN	CA	98/11	MATERIAL
DRAWN	JU	98/11	
CHECKED	CA	98/11	
APPROVED	RD	98/11	FINISH

TOLERANCES
X.X ±0.04" |X| ±1mm
X.XX ±0.02" |X.X| ±0.5mm
X.XXX ±0.01" |X.XX| ±0.25mm

SCALE N.T.S.

TITLE
CUSTOMER CONNECTION, 19" RACK MOUNT, SD08

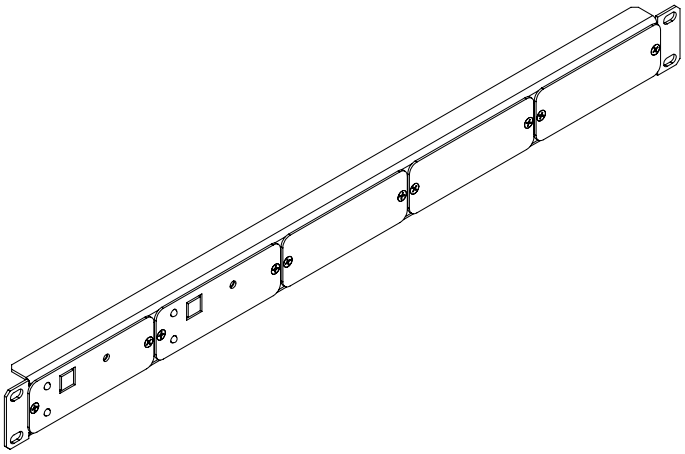
ISSUE DATE

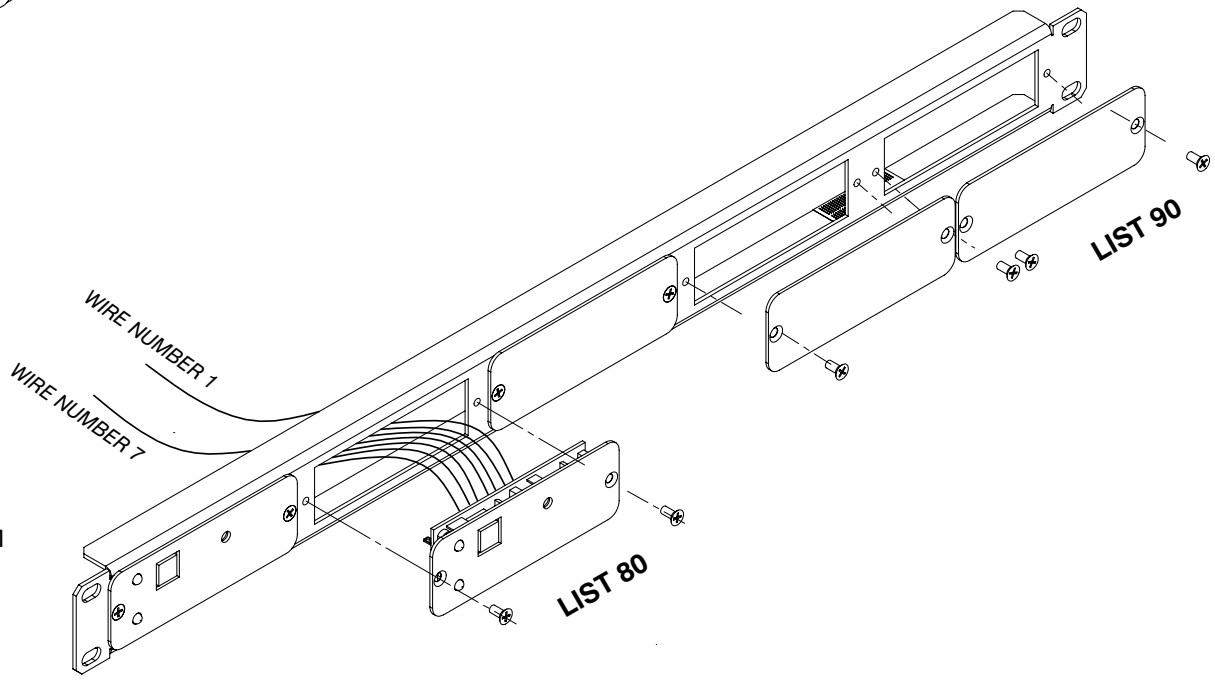
SHEET 1 OF 3

SIZE	TYPE	DWG NO.	REV
B	D1	018-546-08	B

DIMENSIONS ARE IN INCHES WITH METRIC [mm] IN BRACKETS: INCHES [mm]

REVISIONS			
LTR	DESCRIPTION	DATE	APPD





WIRE CONNECTION

WIRE NUMBER 1	-VB	
WIRE NUMBER 2	+VB MID	
WIRE NUMBER 3	-VB MID	
WIRE NUMBER 4	+VB	
WIRE NUMBER 5	NC	ALARM
WIRE NUMBER 6	C	
WIRE NUMBER 7	NO	

LIST 23

DIMENSIONS ARE IN INCHES WITH METRIC [mm] IN BRACKETS: INCHES [mm]

LTR	DESCRIPTION	QTY
	FINISHED HOLE LEGEND	

ARGUS TECHNOLOGIES

DESIGN	CA	98/11	MATERIAL
DRAWN	JU	98/11	
CHECKED	CA	98/11	
APPROVED	RD	98/11	FINISH

TOLERANCES
X.X ±0.04" |X| ±1mm
X.XX ±0.02" |X.X| ±0.5mm
X.XXX ±0.01" |X.XX| ±0.25mm

SCALE N.T.S.

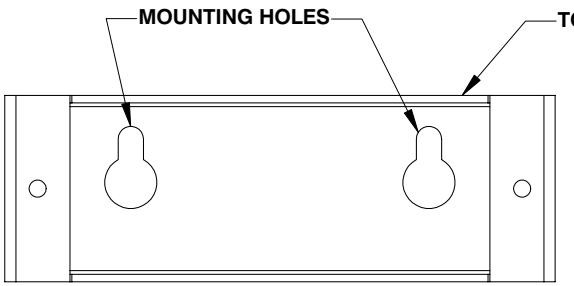
TITLE
CUSTOMER CONNECTION, 23" RACK MOUNT, SD08

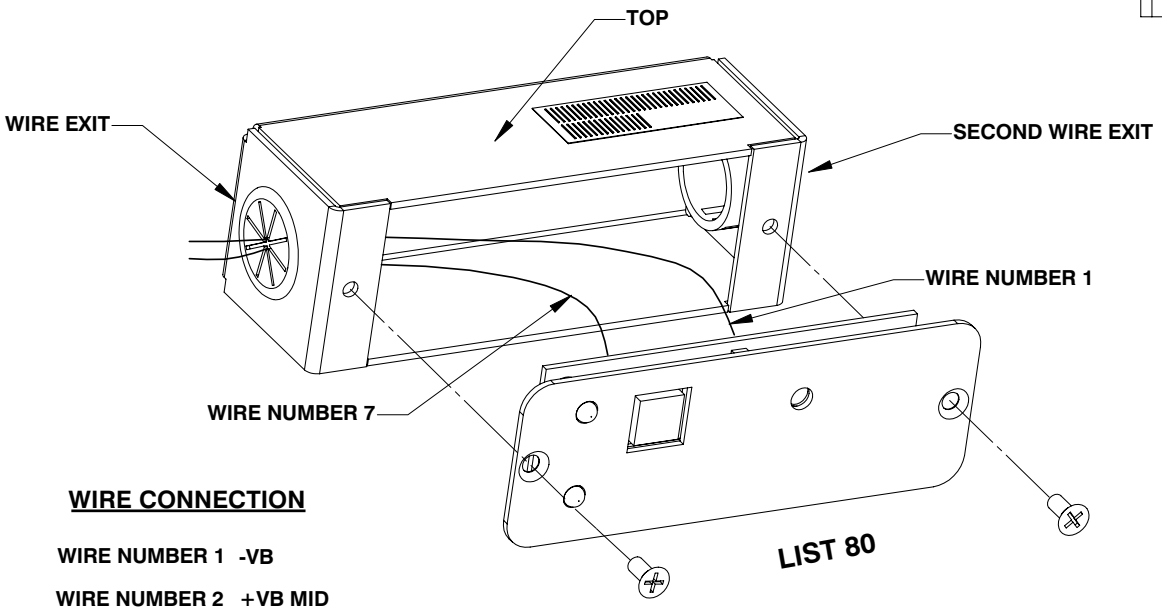
ISSUE DATE

SHEET 2 OF 3

SIZE	TYPE	DWG NO.	REV
B	D1	018-546-08	B

REVISIONS			
LTR	DESCRIPTION	DATE	APPD





LIST 25

WIRE CONNECTION

WIRE NUMBER 1	-VB	
WIRE NUMBER 2	+VB MID	
WIRE NUMBER 3	-VB MID	
WIRE NUMBER 4	+VB	
WIRE NUMBER 5	NC	ALARM
WIRE NUMBER 6	C	
WIRE NUMBER 7	NO	

LTR	DESCRIPTION	QTY
	FINISHED HOLE LEGEND	

ARGUS TECHNOLOGIES

DESIGN	CA	98/11	MATERIAL
DRAWN	JU	98/11	
CHECKED	CA	98/11	
APPROVED	RD	98/11	FINISH

TOLERANCES
X.X ±0.04" |X| ±1mm
X.XX ±0.02" |X.X| ±0.5mm
X.XXX ±0.01" |X.XX| ±0.25mm

SCALE N.T.S.

TITLE
CUSTOMER CONNECTION, WALL MNT., SINGLE UNIT, SD08

ISSUE DATE

SHEET 3 OF 3

SIZE	TYPE	DWG NO.	REV
B	D1	018-546-08	B

DIMENSIONS ARE IN INCHES WITH METRIC [mm] IN BRACKETS: INCHES [mm]

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FACTORY SERVICE INFORMATION

Technical Support

Technical support staff are available for answering general questions related to installation, operation and maintenance of Argus products. In Canada and the USA, call Argus toll free 7:30 am to 5:00 pm Pacific Standard Time at:

+1-888 GO ARGUS

(+1-888-462-7487)

For emergencies, call +1-888-GO-ARGUS 24 hours a day, seven days a week.
Customers outside Canada and the USA, call +1-604-436-5547 for technical support.

Training

Argus offers various levels of product and technical training. These workshops provide a mix of theory and hands on application for qualified customers. Please consult your sales representative for course schedules, locations and costs, or visit our website at ***www.argusdcpower.com***.

Factory Repair and Servicing

All service, beyond initial adjustments, should be carried out by qualified factory service personnel. For these procedures, please contact Argus Technologies at the locations listed to the right.

Product Returns

Before returning any product for service, please obtain a Return Material Authorization (RMA) number from an Argus factory service representative. The representative will require the model and serial number, as well as a brief description of the problem prior to issuing the RMA number. All material must be pre-authorized before being returned.
See document 048-507-10 "Warranty and Repair Information" for more details.

Moving and Storage

Units must be suitably packed in the original shipping container (or equivalent) prior to re-shipping. The box should be completely enclosed and constructed of wood or double-wall, corrugated cardboard. At least 3" of foam or shock absorbing packing material must surround the unit.

Factory Service Centers

Canada and International
Argus Technologies Ltd.
ATTN: RMA Returns
7033 Antrim Avenue
Burnaby, BC, V5J 4M5 Canada
Tel: +1 604 436 5900
Fax: +1 604 436 1233
Email: returns@argusdcpower.com

USA
Argus Technologies Inc.
ATTN: RMA Returns
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Bellingham, WA, 98225 USA
Tel: +1-360 756 4904
Fax: +1-360 647 0498
Email: returns-usa@argusdcpower.com

Asia-Pacific
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Dongguan City, Guangdong Province,
523400 China
Tel: +86 755 8895 3310
Fax: +86 755 8895 3307

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New Zealand Sales & Service
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Fax: +64 9 978 6677

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