



DAL Series

Alarm Relay Unit with LVD



- *Designed to meet the criteria of the NFPA 72 and NFPA 1221 Fire Safety Codes for alarming*
- *Low voltage battery disconnect, charger fail alarm, low battery alarm, and AC fail alarm in one unit*
- *Dry contact form C alarm outputs*

Model	DAL-12	DAL-24	DAL-48
Power Supply / Battery Input Range	10 - 15 VDC	20 - 30 VDC	40 - 60 VDC
AC Alarm Input Range	100 - 264 VAC, Auto-Ranging		
Max Battery Output Current	40 Amps		
Holding Current	100 mA		
Battery Low Alarm	70 % Discharge (30 % Remaining Charge)		
Charger Fail Alarm / Recovery	12.5 / 13.0 VDC	25.0 / 26.0 VDC	50.0 / 52.0 VDC
Battery Low Alarm / Recovery	11.5 / 12.5 VDC	23.0 / 25.0 VDC	46.0 / 50.0 VDC
Load Disconnect / Reconnect	10.0 / 12.5 VDC	20.0 / 25.0 VDC	40.0 / 50.0 VDC
Product Dimensions	8 x 4 x 4 in		
Shipping Dimensions	11 x 9 x 7.5 in		
Shipping Weight	4 lbs.		

*NOTE: Specifications are subject to change without notice.

Section 1 | Important Safety Instructions

These instructions are intended for use by a technician familiar with electronic products.

The individual user should take care to determine prior to use or installation whether this device is suitable, adequate, and safe for the use intended. Since individual application is subject to numerous variations, DuraComm makes no representation or warranty as to the merchantability, suitability, or fitness of these units for any specific application.

In rare cases, voltage spikes, transients on the AC power line, or overheating, may cause a component failure inside the unit. In either case, the cause must be determined and corrected. Failures require investigation as to the cause and/or repair of the unit.

There are no user serviceable parts inside. Service must be referred to a qualified factory personnel.

Section 2 | Product Overview

The DAL Series is an alarm relay unit with low voltage disconnect (LVD) designed to meet the criteria of the NFPA 72 and NFPA 1221 Fire Safety Codes for alarming. It includes form C relay alarm outputs for AC fail, charger fail, and low battery. The “Battery Low” alarms at 30% remaining charge and recovers at 80% battery charge. Meanwhile, the LVD monitors battery voltage and disconnect the load when voltage drops below the disconnect voltage to prevent equipment damage.

See www.duracomm.com for more information.

Section 3 | Installation

The outputs are NOT referenced to the chassis.

Conductor Pretreatment

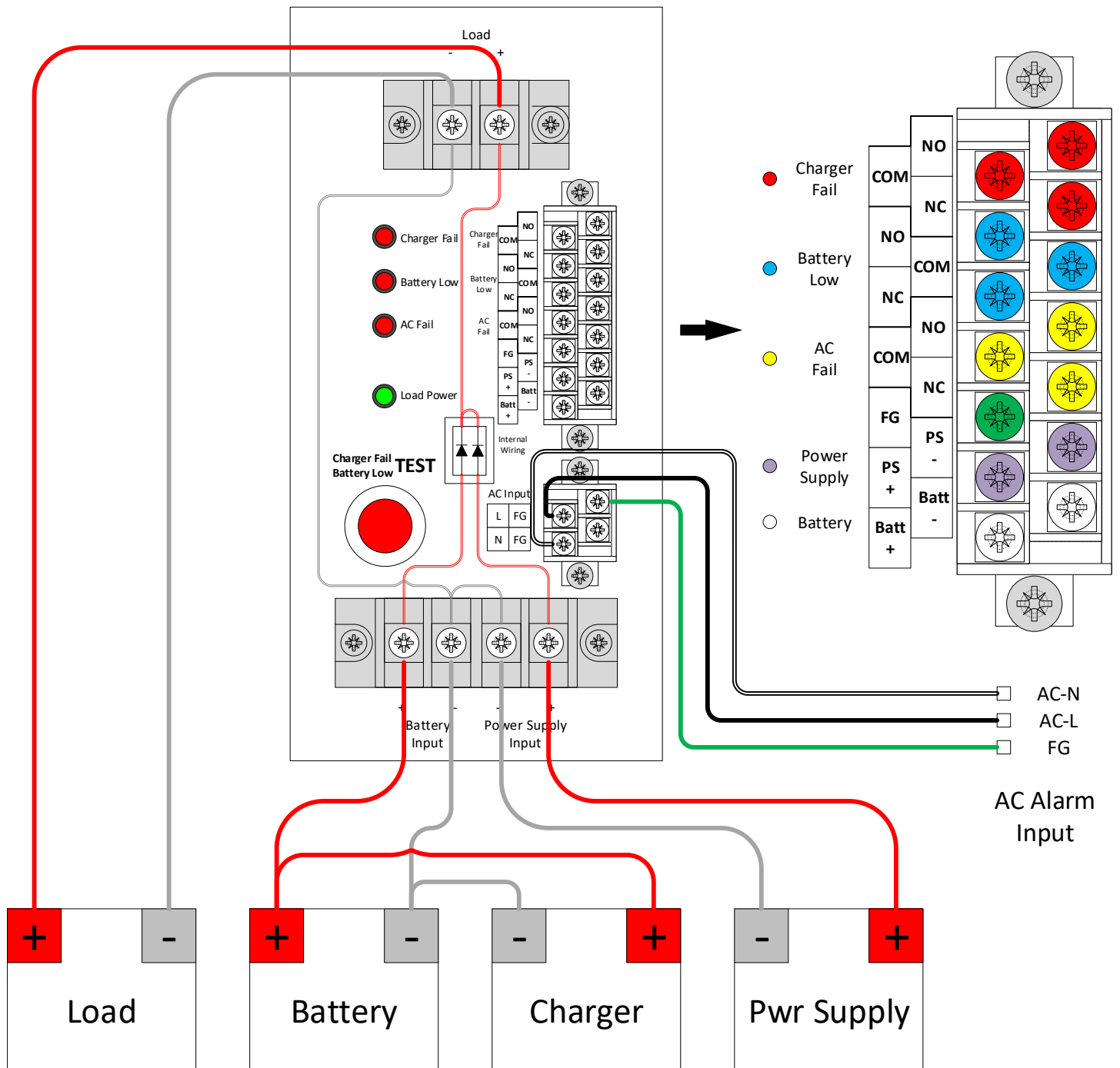
All kinds of copper conductors can be clamped without treatment. DO NOT solder tin stranded conductors. The solder yields and fractures under high pressure. The result is increased contact resistance and excessive temperature rise. Additionally, corrosion has been observed due to the fluxes. Notch fractures at the transition from the rigid tinned part to the flexible conductors are also possible. Ferrules can be used as a protection when wiring stranded conductors. Copper ferrules prevent the current transfer from being influenced by dissimilar metals and remove the risk of corrosion. Always use the correct tool to crimp the ferrule.

Recommended Copper Wire Size for Current Capacity

(Insulated Wire, Single Conductor in free air)

Current Level in Amperes	Wire Size Requirements According to MIL-W-5088B	
	Up to 5 feet	Up to 10 feet
<7 AMPERES	20 AWG	18 AWG
14 AMPERES	18 AWG	16 AWG
20 AMPERES	16 AWG	14 AWG
30 AMPERES	14 AWG	12 AWG
40 AMPERES	12 AWG	10 AWG
50 AMPERES	10 AWG	8 AWG
70 AMPERES	8 AWG	6 AWG
100 AMPERES	6 AWG	4 AWG

Wiring Diagram



Charger Fail / Battery Low Test Button

The "red" test button simulates the "Charger Fail" and "Battery Low" status by interrupting the battery connection of the voltage sensor that controls the alarm contact. Under normal operation inside a DuraComm PS Series Power Supply and Battery Backup System, pushing the "red" test button will turn on both red LEDs of "Charger Fail" and "Battery Low" and change the state of their respective alarm contacts.

Section 7 | Warranty

DuraComm warrants to the initial end user, each power supply manufactured by DuraComm to be free from defects in material and workmanship when in normal use and service for a period of three years from the date of purchase from an authorized DuraComm dealer.

Should a product manufactured by DuraComm fail or malfunction due to manufacturing defect, or faulty component, DuraComm, at its option, will repair or replace the faulty product or parts thereof, which, after examination by DuraComm, prove to be defective or not operational according to specifications in effect at the time of sale to the initial end user. The product that is replaced or repaired under the provisions of this warranty will be warranted for the remainder of the original warranty period, only, and will not extend into a new three-year warranty period.

The limited warranty does not extend to any DuraComm product which has been subject to misuse, accidental damage, neglect, incorrect wiring not associated with the manufacturer, improper charging voltages, or any product which has had the serial number removed, altered, defaced, or changed in any way.

DuraComm reserves the right to change, alter, or improve the specifications of its products at any time, and by so doing, incurs no obligation to install or retrofit any such changes or improvements in or on products manufactured prior to inclusion of such changes.

DuraComm requires any product needing in or out of warranty service to be returned to DuraComm. All requests for warranty service must be accompanied by proof of purchase, such as a bill of sale with purchase date identified. DuraComm is not responsible for any expenses or payments incurred for the removal of the product from its place of use, transportation or shipping expenses to the place of repair, or return expenses of a repaired or replacement product to its place of use.

The implied warranties that the law imposes on the sale of this product are expressly LIMITED, in duration, to the three (3) year time period specified herein. DuraComm will not be liable for damages, consequential or otherwise, resulting from the use and operation of this product, or from the breach of this LIMITED WARRANTY.

Some states do not allow limitations on the duration of the implied warranty or exclusions or limitations of incidental or consequential damages, so said limitations or exclusions may not apply to you. This warranty gives you specific legal rights which vary from state to state.

This warranty is given in lieu of all other warranties, whether expressed, implied, or by law. All other warranties, including WITHOUT LIMITATION, warranties of merchantability and fitness or suitability for a particular purpose, are specifically excluded. DuraComm reserves the right to change or modify its warranty and service programs without prior notice.

Section 8 | Contact Us

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