LVD SERIES
CONTROL RELAYS



Features

- Low voltage disconnect
- Output ratings from 40A to 100A @ 3-75 VDC
- Low on-state resistance FET output
- Six DC control ranges available for 12 & 24 VDC battery systems
- Compact encapsulated panel mount package

PRODUCT SELECTION

Control Voltage	40A	60A	80A	100A
11.0 - 11.5 VDC	LVD75A40	LVD75A60	LVD75A80	LVD75A100
11.5 - 12.0 VDC	LVD75B40	LVD75B60	LVD75B80	LVD75B100
12.0 - 12.5 VDC	LVD75C40	LVD75C60	LVD75C80	LVD75C100
23.0-24.0 VDC	LVD75D40	LVD75D60	LVD75D80	LVD75D100
24.0-25.0 VDC	LVD75E40	LVD75E60	LVD75E80	LVD75E100
25.6-26.6 VDC	LVD75F40	LVD75F60	LVD75F80	LVD75F100

SPECIFICATIONS

Output [A]

Description	40A	60A	80A	100A
Operating Voltage [Vdc]	3-75	3-75	3-75	3-75
Maximum Load Current [Adc] [B]	40	60	80	100
Minimum Load Current [mAdc]	5	5	5	5
Maximum Surge Current(10msec) [Adc]	120	180	220	250
Maximum On-State Voltage Drop @ Rated Current [Vdc]	0.6	0.6	0.64	0.5
Thermal Resistance Junction to Case (Rjc) [°C/W]	1.2	1.0	0.5	0.4
Max On-state Resistance @ rated current (Rds-on) [mOhms]	15	10	8	5
Maximum Off-State Leakage Current @ Rated Voltage [mA]	0.5	0.5	0.5	0.5

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Input [A]

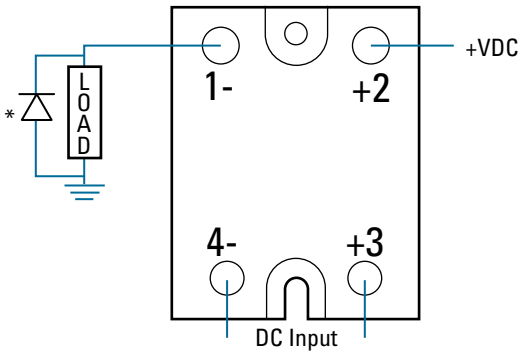
Description	LVD75Axx	LVD75Bxx	LVD75Cxx	LVD75Dxx	LVD75Exx	LVD75Fxx
Must Turn-On Voltage [Vdc] [C]	11.5	12	12.5	24	25	26.6
Must Turn-Off Voltage [Vdc] [C]	11	11.5	12	23	24	25.6
Maximum Allowed input Voltage [Vdc]	36	36	36	36	36	36
Maximum Input Current [mAdc]	12	12	12	12	12	12
Maximum Turn-On Time [msec]	150	150	150	150	150	150
Maximum Turn-Off Time [msec]	150	150	150	150	150	150

General [A]

Description	Parameters
Dielectric Strength, Input/Output to Baseplate (60Hz) [D]	2500 Vrms
Minimum Insulation Resistance (@ 500 VDC)	10 9 Ohms
Maximum Capacitance, Input/Output	50 pF
Ambient Operating Temperature Range	-30 to 80˚C
Ambient Storage Temperature Range	-40 to 125˚C
Weight (typical)	3.5 oz (100 g)
Terminals	Hardware Furnished, mounted
Input Terminal Screw Torque Range	8-10 in lb. (0.9-1.1Nm)
Output Terminal Screw Torque Range	18-20 in lb (2-2.2Nm)

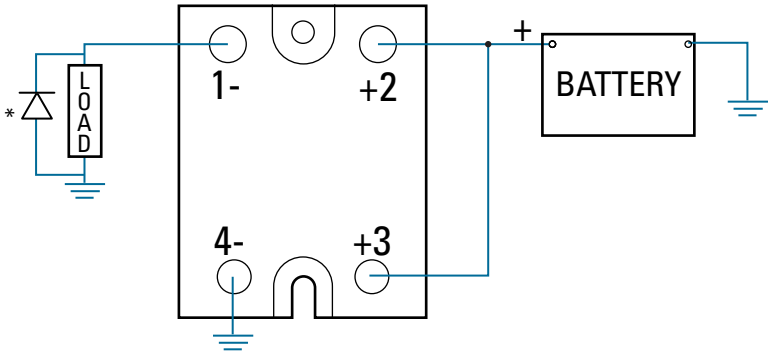
WIRING DIAGRAM

Basic Wiring Diagram



* Load should be diode suppressed to prevent damage to SSR

Typical LVD Connection Diagram

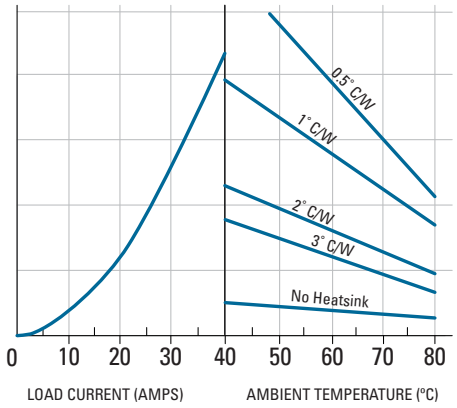


NOTE: When wired as above the maximum voltage is limited to 36 VDC.

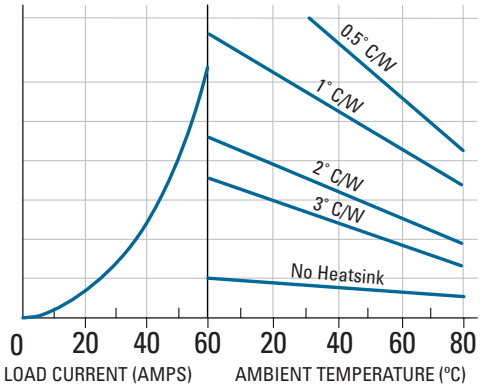
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THERMAL DERATE INFORMATION

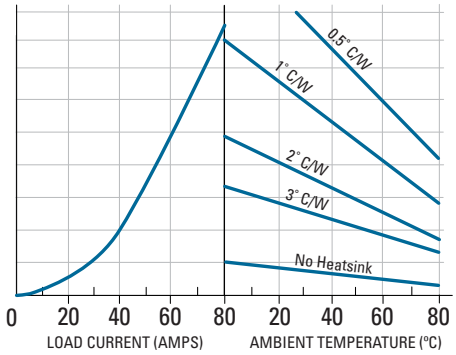
40 Amps



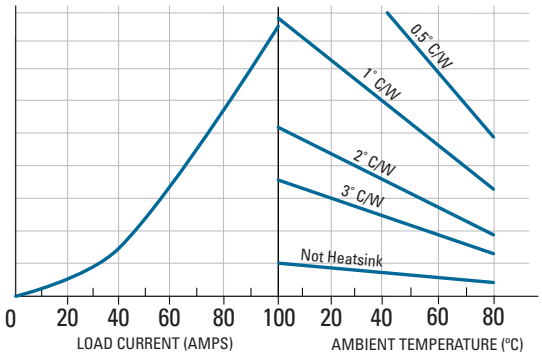
60 Amps



80 Amps

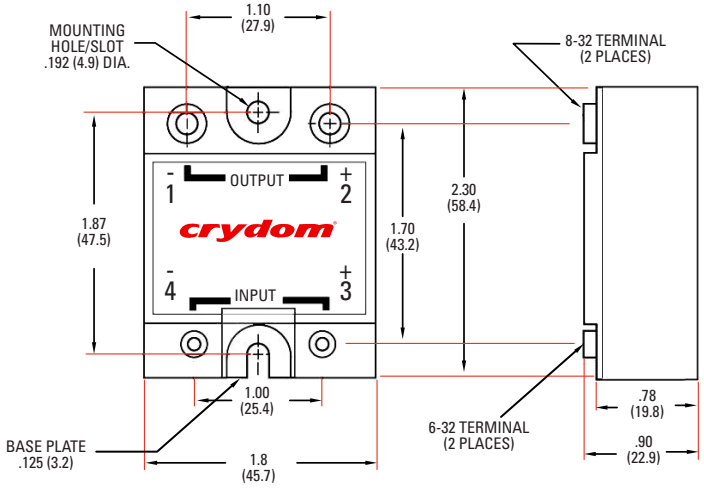


100 Amps



MECHANICAL SPECIFICATIONS

Tolerances: ±0.02 in / 0.5 mm
All dimensions are in: inches [millimeters]



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ORDERING OPTIONS

Example : LVD75A40H

LVD	75	A	40	H

Series

LVD

Max DC Output Voltage

75: 3-75 Vdc

Input Control Voltage Code

A: 11.0 - 11.5 Vdc Hysteresis
B: 11.5 - 12.0 Vdc Hysteresis
C: 12.0 - 12.5 Vdc Hysteresis
D: 23.0 - 24.0 Vdc Hysteresis
E: 24.0 - 25.0 Vdc Hysteresis
F: 25.6 - 26.6 Vdc Hysteresis

Output Current

40: 40 Amp
60: 60 Amp
80: 80 Amp
100: 100 Amp

Optional

H: Thermal Pad

— Required for valid part number
☐ For options only and not required for valid part number

GENERAL NOTES

(A) All parameters at 25 °C unless otherwise specified
(B) Heat sinking required, see derating curves
(C) Tolerance + 0.15Vdc
(D) All four terminals shorted together during test

AGENCY APPROVALS & CERTIFICATIONS

RoHS

Designed in accordance with the requirements of IEC 62314

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WARNINGS



RISK OF MATERIAL DAMAGE AND HOT ENCLOSURE

- The product's side panels may be hot, allow the product to cool before touching
- Follow proper mounting instructions including torque values
- Do not allow liquids or foreign objects to enter this product

Failure to follow these instructions can result in serious injury, or equipment damage.



HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH

- Disconnect all power before installing or working with this equipment
- Verify all connections and replace all covers before turning on power

Failure to follow these instructions will result in death or serious injury.

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Mailing Address: Sensata Technologies, Inc., 529 Pleasant Street, Attleboro, MA 02703, USA.

CONTACT US

Americas
+1 (800) 350 2727
sales.crydom@sensata.com
Europe, Middle East & Africa
+44 (1202) 416170
ssr-info.eu@sensata.com
Asia Pacific
sales.isasia@list.sensata.com
China +86 (21) 2306 1500
Japan +81 (45) 277 7117
Korea +82 (31) 601 2004
India +91 (80) 67920890
Rest of Asia +886 (2) 27602006 ext 2808

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