

Automotive Relays High Current Devices

Battery Disconnect Switch BDS-A (Latching)

- Limiting continuous current 190A at 85°C
- Electrically settable and resettable ON/OFF bistable device
- Suitable for voltage levels up to 42VDC
- High peak current carrying capability up to 1500A¹⁾

Typical applications

Preheating systems (e.g. for diesel engines, catalytic converters), battery disconnection to prevent fire caused by short circuits during an accident, dual battery applications provide the start reliability by a separate starter battery, keeps the power net in balance and to control and secure the health of the energy storage systems, seasonal, service and transport deactivation, high current switching, energy management, battery coupling.

Contact Data	12VDC	24VDC
Contact arrangement	1 form X, 1 N	-
Rated voltage	12VDC	24VDC
Max. switching voltage	depends on loa	
Rated current		
load current from Terminal B to	A cable 50mm^2 26	ΩA
Limiting continuous current		67 (
23°C, load cable 50mm ²	26	ΩA
85° C, load cable 50 mm ²	19	
125° C, load cable 50mm ²	88	
Limiting making current,	00	<i>"</i> (
resistive load, cable 50mm ² , 23	°C	
ton/toff=0.5s/10min	1500A, >	>5 ops 1)
Limiting breaking current,	1000/1, 2	o opo.
resistive load, cable 50mm ² , 23	°C	
ton/toff=0.5s/10min	1500A, >	>5 ops 1)
Limiting short-time current,	1000/1, 2	o opo.
overload current at 23°C, cable	50mm ²	
1000A,1s - 0A, 9s	50x10 ³	³ ops. ³⁾
Contact material	AgS	
Contact style	bridge of	-
Initial voltage drop	at 100A<40mV p	
Operate/release time typ.	5ms at 14VDC	
Electrical endurance		
inductance 0.1mH, temperature	e change	
(-40/25/120°C) 2h each; cable 3	35mm ²	
180A, ton/off	>13x10 ³ ops., 1.5/5	S.
	>50x103 ops., 1.5/5	
150A, ton/off	. >	25x10 ³ ops., 0.5/5s
100A, ton/off	>	70x10 ³ ops., 0.5/5s
Mechanical endurance	>150x1	0 ³ ops.
1) Important: please pay attention to load	current direction.	

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2) Please contact TE relay application engineer.

 Values are influenced by system temperature and load current. For further details please consult TE relay application engineers.

Coil Data	
Magnetic system	bistable (two coil system)
Rated coil voltage	12/24VDC
Max. coil power	approx. 7W at 20°C for Uon/Uoff
Max. coil temperature	155°C

Coil versions, bistable 2 coils

Coil	Rated	Set	Reset	Coil	Impulse	
code	voltage	voltage	voltage	resistance	length	
	VDC	VDC	VDC	Ω±10%	ms	
2021	12	6	6	4.7	15 to 100	
2421	24	12	12	19.9	15 to 100	
A 11 C					0000	

All figures are given for coil without preenergization, at ambient temperature +23°C.



Insulation Data

Initial dielectric strength		
between open contacts	500V _{rms}	
between contact and coil	500V _{rms}	
		_

Other Data

-40°C to +120°C
IP54 (IEC 60529), RT I (IEC 61810)
22 to 500Hz, min. 10g.
11ms, min. 40g ⁴⁾
connector and screw
approx. 210g (7.4oz)
24 pcs.

 Bistable relays are delivered in the reset position (open contacts). Due to mechanical impacts during transportation, we advise to check the contact status on receipt. Latching (delivery status "ex works").

Terminal Assignment

X2D2C 1 form X, 1 NO DM (bridge),

with 2 coils and 2 diodes



Terminal	Function
4	Set Coil (+)
3	Reset Coil (-)
2	Set Coil (-)
1	Reset Coil (+)
A	Load Terminal
B	Load Terminal

Set = A and B get connected

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Datasheets and product specification according to IEC 61810-1 and to be used only together with the 'Definitions' section. Datasheets and product data is subject to the terms of the disclaimer and all chapters of the 'Definitions' section, available at http://relays.te.com/definitions

Datasheets, product data, 'Definitions' section, application notes and all specifications are subject to change. 1



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Battery Disconnect Switch BDS-A (Latching) (Continued)

Produ	ict co	de structure			Typical product code	V23130	-C	2021	-A	4	00
Туре	V2313	0 Battery Disconnect Switch BDS	-A								
		ngement									
	С	1 form X, 1 NO DM									
Coil											
	2021	12VDC (bistable)	2421	24VDC (bistable)							
Protec	tion cl	ass									
	Α	IP54									
Contac	ct mat	erial								·	
	4	AgSnO2									
Standa	rd ver	sion									
	00	Standard									

Product code	Arrangement	Coil	Circuit	Coil suppr.	Protection	Terminals	Feature	Part number
V23130-C2021-A412	1 form X,	12VDC	X2D2C	Diode	IP54	Screw +	Bracket	1-1414939-4
V23130-C2421-A431	1 NO DM (bridge)	24VDC				connector		7-1414778-3
This list represents the most common types and does not show all variants covered by this datasheet.								

This list represents the most common types and does not show all variants covered by this datashee Other types on request.

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