

Solid state DC Motor reverser

- Reverser relay DC with integrated free wheel diode
- Control by switch ON/OFF, by direction turn control Forward and reverse
- Built-in overvoltage protections and fast transients burst.
- Built-in protection against shorts-circuits of the load.
- Delivered with pluggable connections by spring terminals without tool
- Interlocking simultaneous control protection.

SGRD01006



**Reverser DC
8-36VDC
10A DC**

This product was designed with an evolutionary spirit, other possibilities on request :

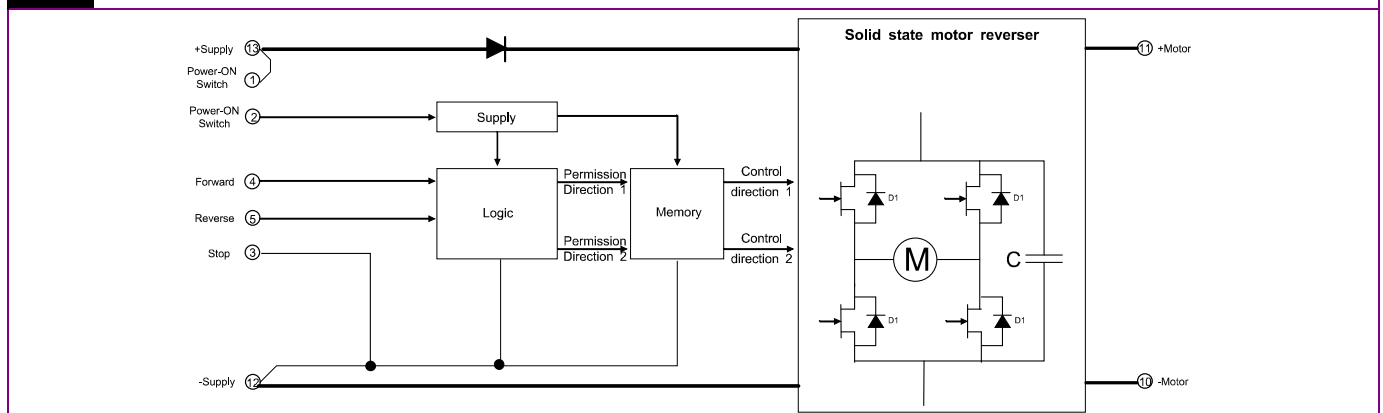
- ⇒ Mains voltage 48VDC
- ⇒ Higher rated current
- ⇒ PWM Control for speed variation or Soft-start
- ⇒ Level detection of batteries
- ⇒ Adjustment of threshold by potentiometer
- ⇒ Visualization by LEDs
- ⇒ Diagnostic Output etc....

Do not hesitate to consult us

Main Voltage	Main Frequency	Current DC3 DC5 max	Control	Protections	Insulation I/O	Connections	Dimensions (LxWxD)	Weight
8 to 36VDC	DC	10A	Switch	Overvoltage Short-circuit	No insulation	Spring 2,5mm ²	100*73.5*37.5	295 g

Fig. 1

INTERNAL DIAGRAM



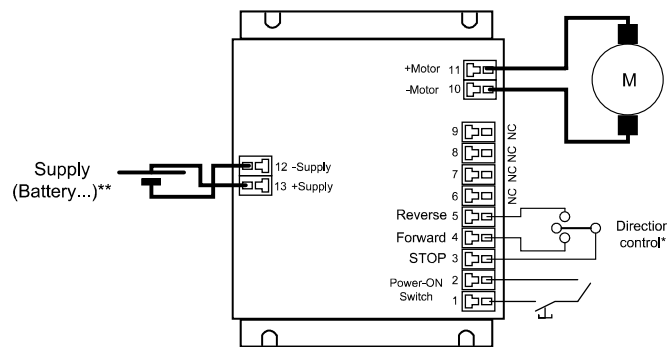
Proud to serve you

Data given at Tambient=40°C and subject to modification without previous notice

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Fig. 2

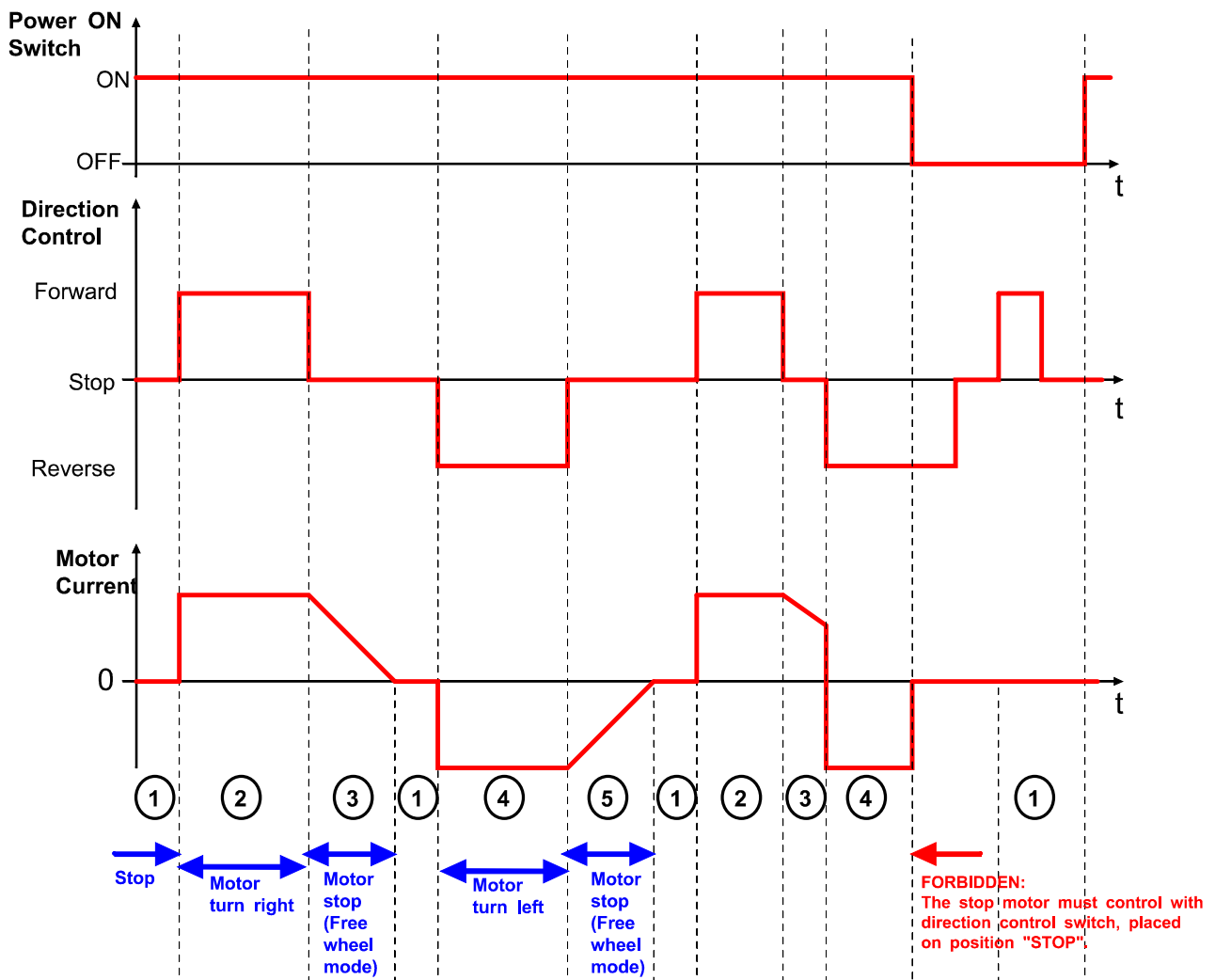
WIRING SCHEMATIC



*:Possible control by switch or electronic

**Possible second supply connector for connecting a battery charger

OPERATING CHRONOGRAMS

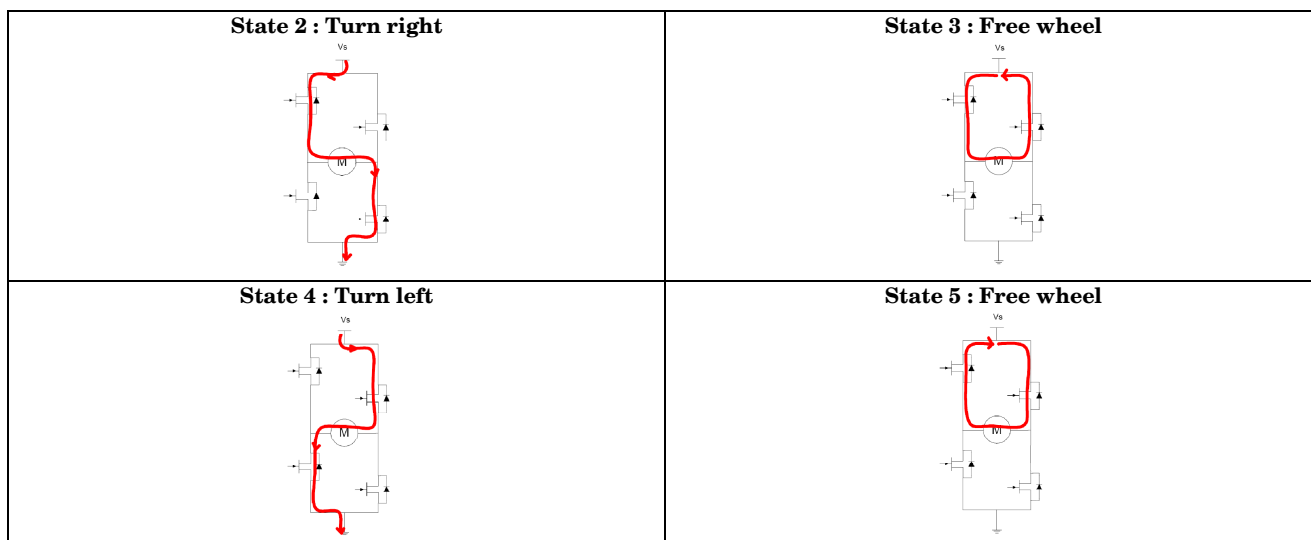


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CONTROL INPUTS CHARACTERISTICS

CONTROLS CIRCUIT	CHARACTERISTIC	LABEL	VALUE	INFO.
	Marking		Power-ON Switch, STOP, Forward and Reverse	
	Function		ON/OFF control and direction control	
	Signal type		Pulse current	
	Scrutation current		10mA DC	
	Max. scrutation Voltage		5V	
	Max. allowed drop out switch voltage		1V	
	Max. Length. between the terminals and switches		100m	
	Max. résistance of contacts		100 Ohms	

SUPPLY CHARACTERISTICS

CONTROLS CIRCUIT	CHARACTERISTIC	LABEL	VALUE	INFO.
	Marking		Main + and Main -	Term. 12 and 13
	Main voltage	Ue	8-36VAC	
	Maximum peak voltage	Uep	60V	
	Consumption	Is	20mA	@Ue=36VDC
	Overvoltage protection		Transient voltage suppressor	
	Reverse polarity protection		YES	



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POWER OUTPUT CHARACTERISTICS

POWER CIRCUIT	CHARACTERISTIC	LABEL	VALUE	INFO.
	Main voltage	Ue	8-36VAC	
	Maximum peak voltage	Uep	60V	
	Overvoltage protection	C;D1	Capacitor + Transient voltage suppressor	
	Rated current	Ie	10A	See fig. 3
	Maximum motor power	Pn	240W @24VDC	
	No repetitive peak overload current	ITSM	215A	See fig. 4
	Maximum leakage current	Ielk	10µA	@36VDC
	Maximum voltage rise	dv/dt	20V/µs	
	Maximum current rise	di/dt	100A/µs	
	Maximum on-state resistance	Rds on	18.5mΩ	@25°C
			33mΩ	@125°C
	Maximum junction temperature	Tjmax	125°C	
	Junction/ambient thermal resistance per power element	Rthja	23°C/W	
	Heat sink thermal time constant	Tthra	18 minutes	
	Control inputs/Power outputs insulation voltage	Uimp	NO INSULATION	
	Inputs/case insulation voltage	Uimp	4kV	
	Outputs/case insulation voltage	Uimp	4kV	
	Insulation resistance	Rio	NO INSULATION	
	Storage ambient temperature	Tstg	-25->+100°C	
	Operating ambient temperature	Tamb	-25->+100°C	See fig. 3



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GENERALES INFORMATIONS

CONNECTIONS	Connections		Power	Control	
	Type		Cage spring manual lever plug		
	Tightening torque		Pending		
	Maximum conductors section		2,5mm ²		
MISC.	Case material		UL94V0		
	Mounting		4 screws (M4x12mm)		
	Noise level		0		
	Weight		295g		

STANDARDS

GENERAL	Standards		IEC60947-4-1	
	Protection level		IP20	
	Protection against direct touch		YES	
	CE Marking		YES	
	UL, cUL US and VDE approvals		Pending	
E.M.C. IMMUNITY	TYPE DE TEST	STANDARD	LEVEL	EFFECT
	E.S.D. (Electrostatic discharges)	EN61000-4-2	Pending	
	Radiated electromagnetic fields	EN61000-4-3	Pending	
	Fast transients bursts	EN61000-4-4	Pending	
	Electric chocks	EN61000-4-5	Pending	
	Voltage drop	EN61000-4-11	Pending	
C.E.M. EMISSION	Radiated and conducted disturbances	NFEN55011	Pending	


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THERMAL CURVES

Fig. 3

LIMIT LOAD CURRENT VS TEMPERATURE

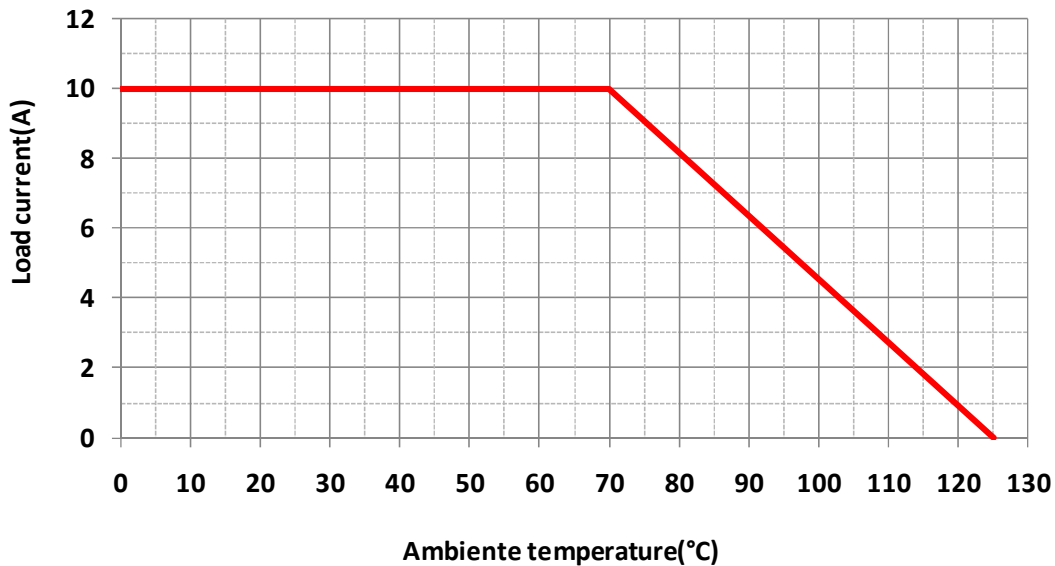
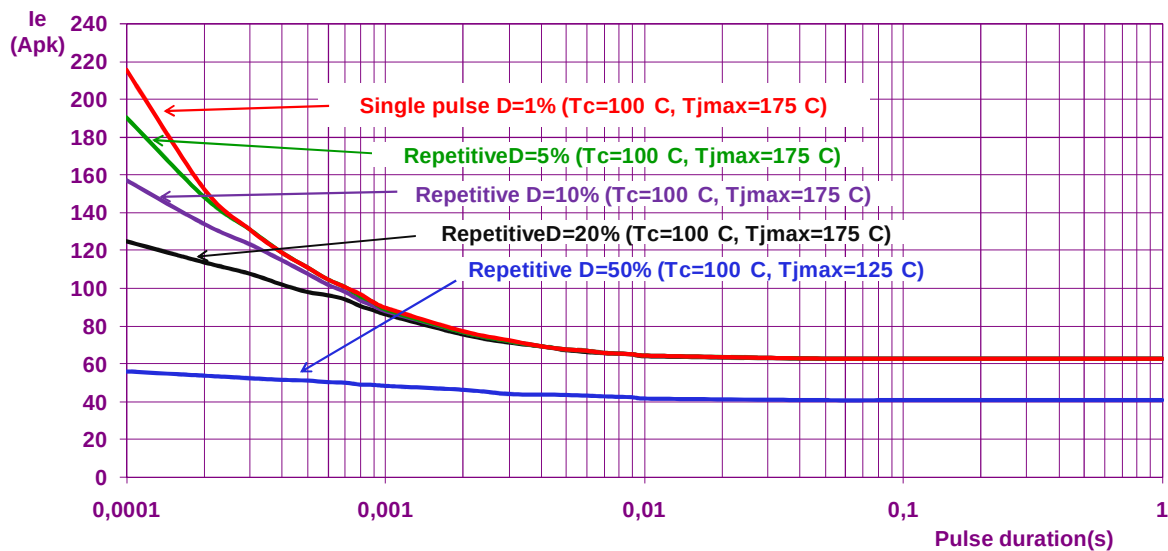


Fig. 4

PEAK OVERLOAD CURRENT VS PULSE DURATION



DIMENSIONS AND ACCESSORIES



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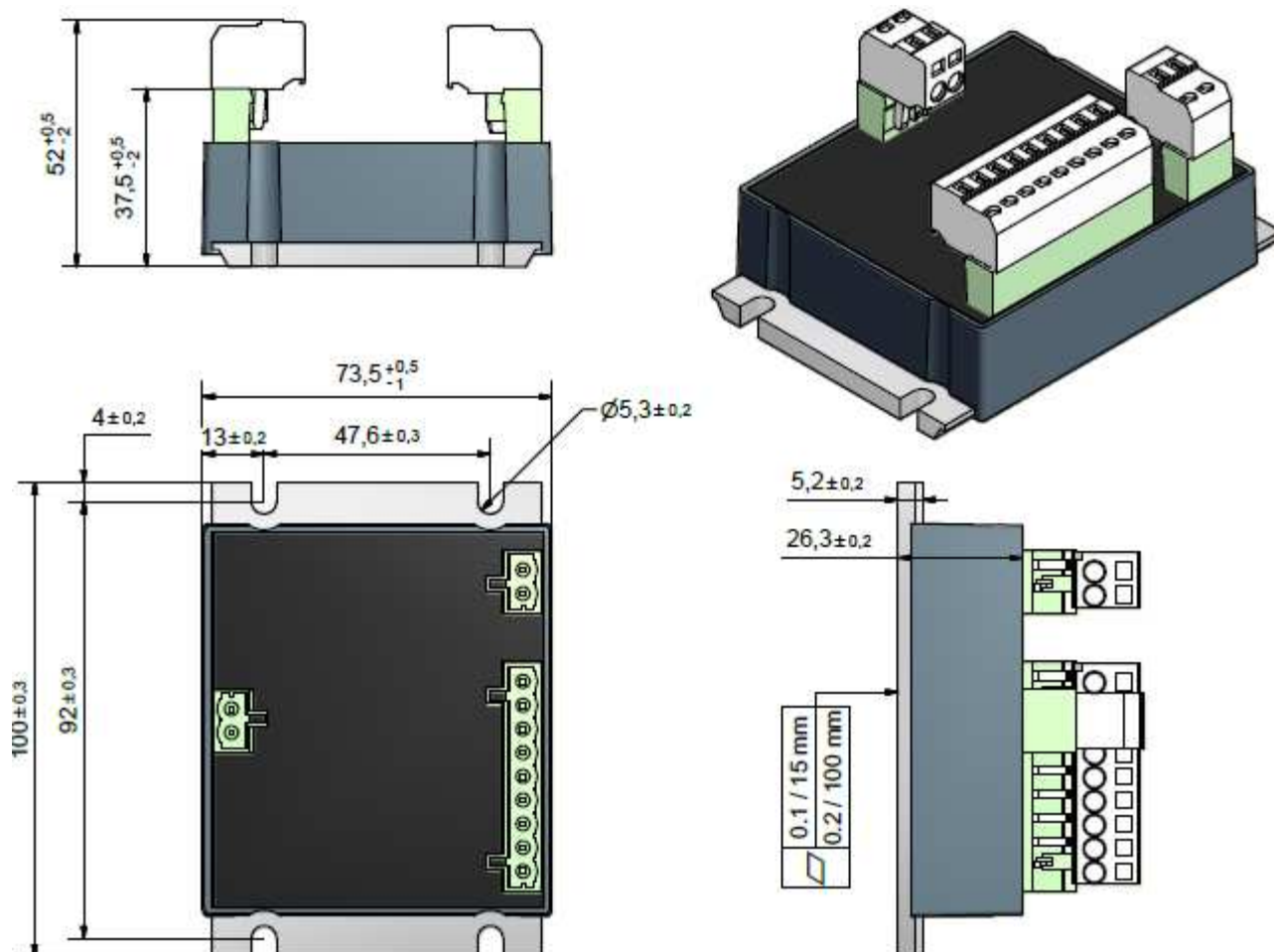
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Fig. 7

DIMENSIONS



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