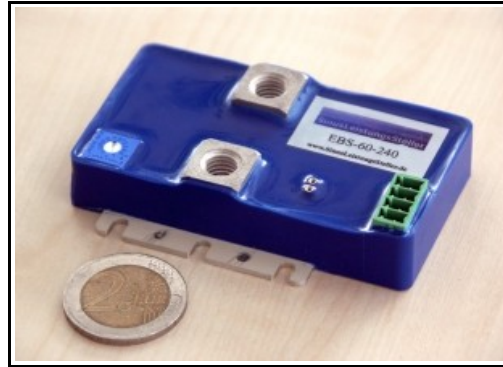


EBS-60-240 EBSi-60-240
EBS-60-400 EBSi-60-400

Electronic Battery Switch

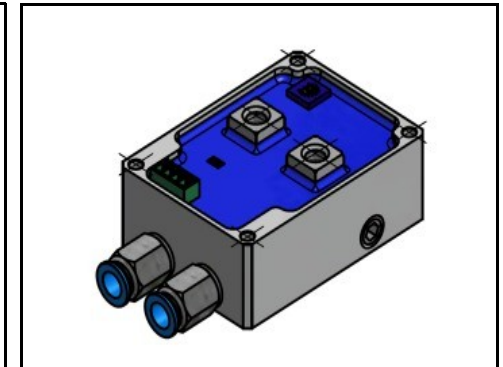
- MOSFET switch
- adjustable current limit
- precharge unit
- insulated control
- water cooled (option)



EBS-60-240



EBSi-60-240



EBSi-60-400-WK

	EBS-60-240 and EBSi-60-240			EBS-60-400 and EBSi-60-400		
	min	typ	max	min	typ	max
Power stage						
DC-voltage range	0Vdc		60Vdc	0Vdc		60Vdc
DC-current range	0A dc		240A dc (Note 1)	0A dc		400A dc (Note 1)
DC-current limit range (Note 3)	20A dc		240A dc	40A dc		400A dc
DC-current limit trigger delay time		10µs			10µs	
R _{ds_on} (25°C, Terminal-to-Terminal)		0.002 Ohm			0.001 Ohm	
Energy, active clamped at switch-OFF			1 Joule			1 Joule
Precharge current (25°C/80°C Note 2)		250mA/40mA			250mA/40mA	
Main switch leakage current (OFF)			100µA			100µA
ON-signal (INPUT) (Note 4)						
Turn-On threshold, 20mA	8Vdc		60Vdc	8Vdc		60Vdc
Turn-Off threshold, 20mA			7Vdc			7Vdc
Input current (8V..60V), internal limited		20mA	28mA		20mA	28mA
ERROR-signal (OUTPUT) (Note 4)						
Input current (3V..60V), internal limited	1mA	20mA	28mA	1mA	20mA	28mA
LOW-Level, 1mA			3Vdc			3Vdc

	EBS-60-240 and EBSi-60-240			EBS-60-400 and EBSi-60-400		
Miscellaneous	min	typ	max	min	typ	max
Insulation voltage (signal-to-power)	1.500Vdc			1.500Vdc		
Insulation voltage (signal-to-base/case)	1.500Vdc			1.500Vdc		
Operation temperature range	-10°C		80°C	-10°C		80°C
Weight (EBS / EBSi / EBSi-WK)		100g/270g/320g			100g/270g/320g	
Material EBSi/EBSi-WK pot case	AlMgSi1					
Screw torque (M8-terminals)			9Nm			9Nm

Note 1: External heat sink required for continuous operation at high currents.

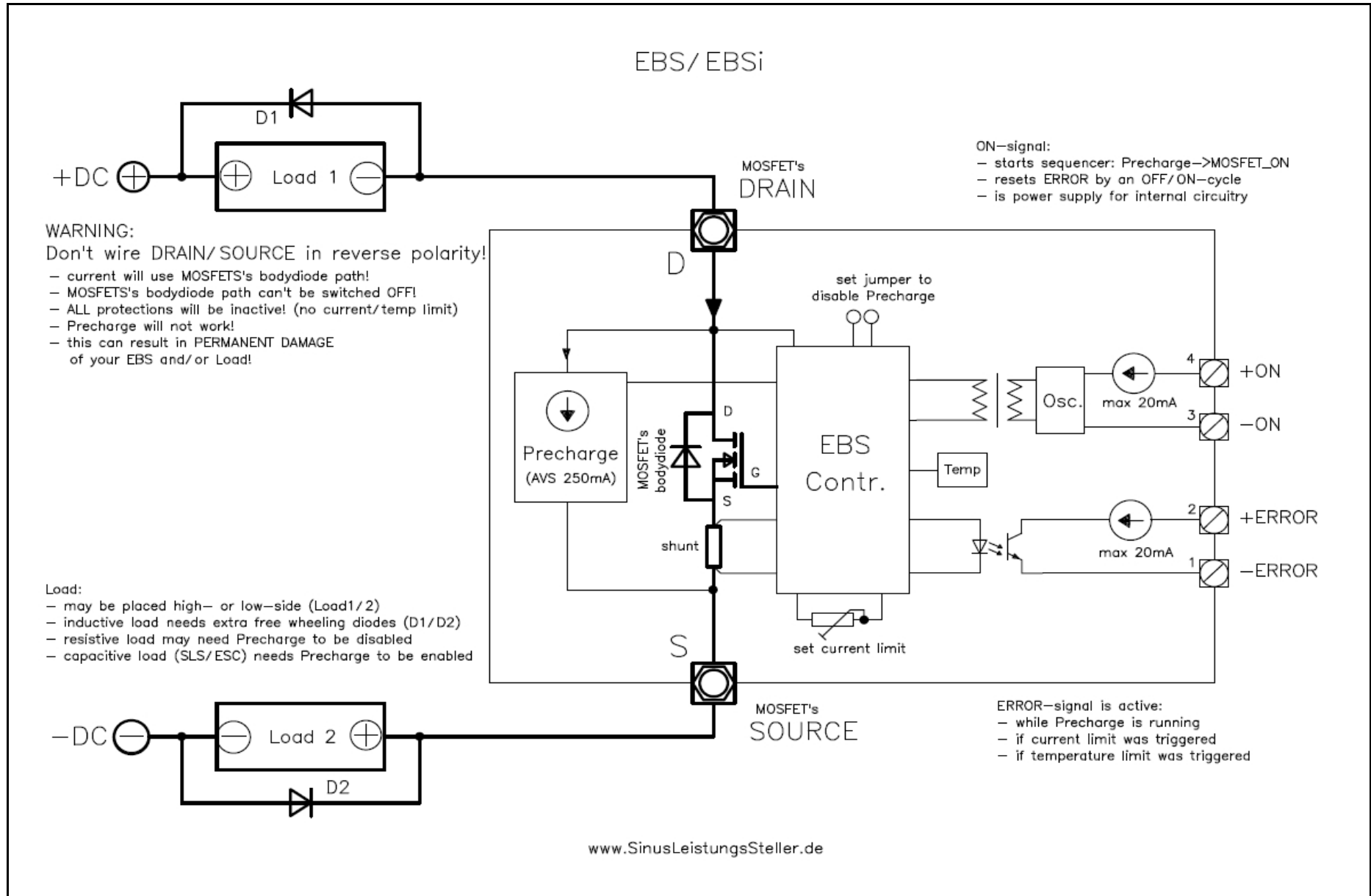
Note 2: Precharge unit derates current at high temperature for protection → cool down EBS, if precharge fails caused by low precharge current.

Don't connect additional loads that could lower precharge current for main load (SLS/ESC).

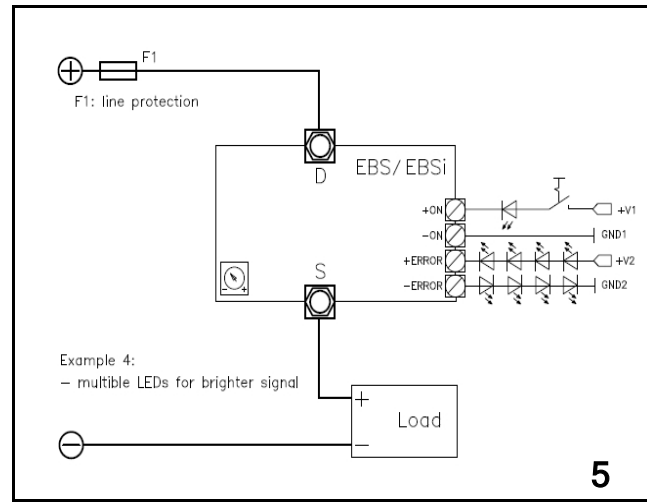
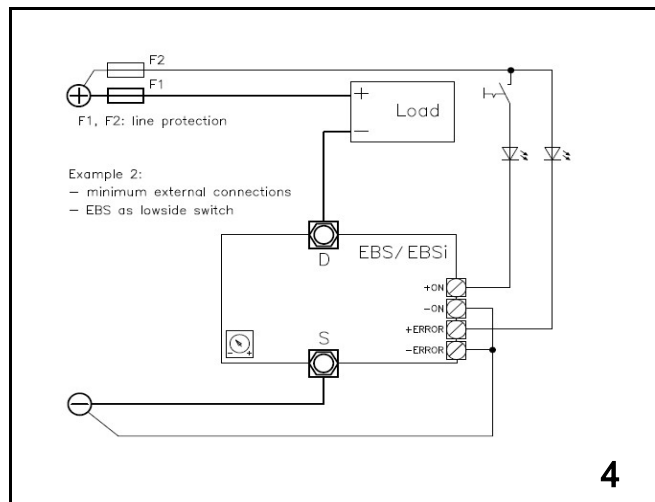
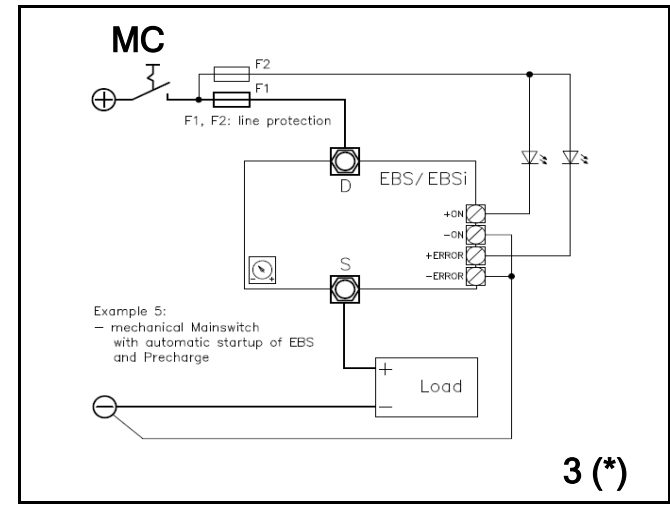
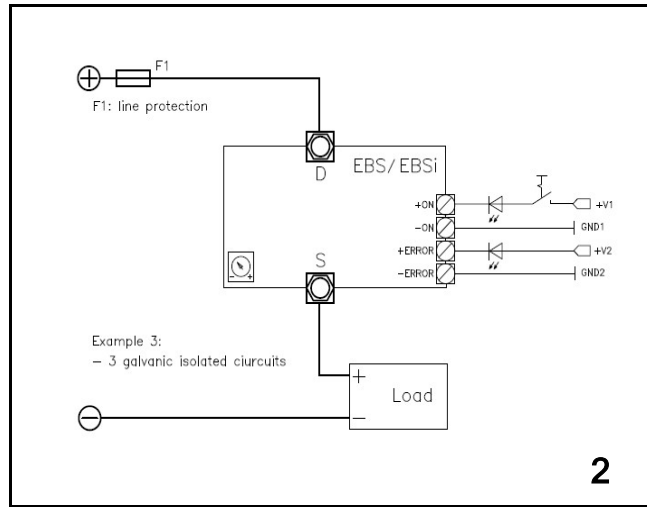
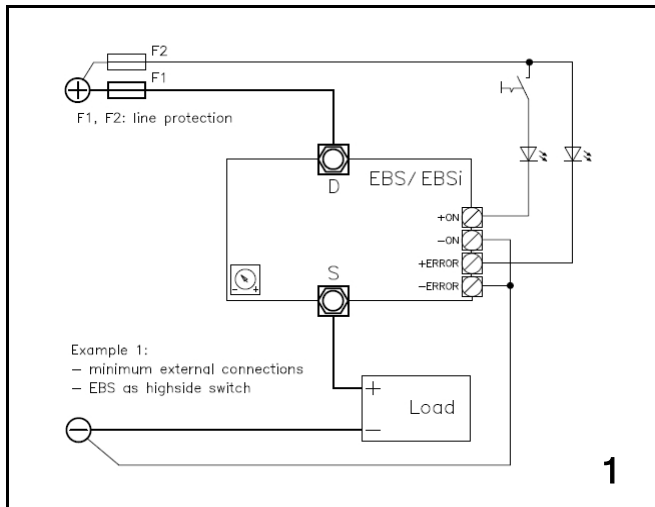
Note 3: Adjust current limit as low as possible in order to protect your load!

Note 4: Because current is limited there is no resistor needed for driving external LED





EBS/EBSi - Examples of usage



(*) **above example 3:**
PreCharge may fail if main contactor MC is not suitable debounced!

Workaround: add a R+C in serial from Drain (D) to Source (S) of the EBS/EBSi.
 (e.g. 47µF/100V electrolytic cap + 22R/5W)
 The Cap will hold Drain-Voltage above Source-Voltage until PreCharge is finished in case of dropouts caused by the MC.

If this workaround does not work, an additional switch at +ON is needed as shown in example 1.