

Electronic Separator/Switch for Battery Systems

EMT 2198

Features

- **Battery Separator**
- **Under Voltage Switch**
- **Starter Relay**
- **Electronic Fuse**
- **Any Current Direction**
- **Auto/Manual On/Off**
- **Adjustable Trigger Voltage**
- **Over-temperature Protection**
- **500A Current Protection**



Description

EMT 2198 is developed with the latest SMD technology and high frequency stabilizers. It is designed to operate as a Battery Separator or a High Current Switch, and can be used in a large number of applications with nearly no limits.

The unit uses only solid state devices and has no mechanical contacts, it will make no sparks or noise. This means, that the unit can be used even in critical environments.

By connecting two or more battery systems with this switch, it will allow you to charge all the batteries with almost no voltage drop.

The EMT 2198 can operate in Auto Mode, in Manual Mode or in a combination of both and is very easy to install.

With its capability of switching up to 500A, nearly any load can be connected.

Use it as a Electronic Separator, to separate two power systems. Using the EMT 2198 avoids the voltage drop problem known from diode separation, so your separated batteries will always stay charged to the maximum.

Used in cars, trucks, boats, emergency or military vehicles it can be connected to an emergency battery, in this way the emergency battery can supply the vehicles starter - useful when the vehicle can't start on its normal battery.

The EMT 2198 can act as an Under Voltage switch to protect the battery against deep discharge or as a power relay for heavy duty loads. It can also act as a 500A Fuse with auto reset.



Specifications for EMT 2198

Measured at 25°C.

General

Continuous Current	150 A
Current for 5 min.	250 A, then over-temp.
Max. Current	< 500 A, max. 30 s
Peak Current	2200 A, max. 10 ms
Current Limit	> 500 A
Current Limit Time	< 100 ms
Switch Impedance	< 0,001 Ohm (0,001 V/A)
Manual Turn On	< 0,005 A
Turn On Delay	< 0,030 s
Turn Off Delay	> 0,300 s
Max. Operating	33 V
Min. Operating	6,5 V
Connector Power	M6 x 16

Connector Battery	Faston 6,35
Connector Remote	Terminal Block
Standby Supply	> 0,005 A @ 12 V
Running Supply	> 0,080 A @ 12 V
Overtemperature	Protected > 85° C
Overtemperatur, reset	Auto (Delta 20° C)
MTBF	> 530.000 hours
Cooling	Convection
Housing	Aluminium, black
Outline	180 x 100 x 18 mm
Weight	390 g
Operating temperature	0 - 55° C
Storage temperature	-40 - 85° C

Turn On/Off

	12 V On	12 V Off	24 V On	24 V Off
Voltage Min.	10,20 V	9,70 V	19,50 V	18,35 V
Voltage Max.	14,85 V	14,35 V	30,15 V	29,00 V
Voltage, Factory set	13,50 V	13,00 V		

LED indicators

ON (Green)	Unit is on	TEMP (Red)	Temp. protection on
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Remote connections

ON	Manual on/off	AUX	Remote control
TEMP.	Remote control	-	Battery negative
6,5V	6,5V output	-	Battery negative

On/Off manual control connections

1 TO 3	On to 6,5V	Unit is turned On
NONE	Leave 1 open	Unit in Auto Mode, Table1
1 TO 5	On to Battery negative	Unit is turned Off

Table 1, On/Off

X = On					F On = 12 V		F Off = 24 V	
A	B	C	D	E	V On	V Off	V On	V Off
					10,20V	9,70V	19,50V	18,35V
X					10,35V	9,85V	19,85V	18,70V
	X				10,50V	10,00V	20,20V	19,05V
X	X				10,65V	10,15V	20,55V	19,40V
		X			10,80V	10,30V	20,90V	19,75V
X		X			10,95V	10,45V	21,25V	20,10V
	X	X			11,10V	10,60V	21,55V	20,45V
X	X	X			11,25V	10,75V	21,90V	20,75V
			X		11,40V	10,90V	22,25V	21,10V
X			X		11,55V	11,05V	22,60V	21,45V
	X		X		11,70V	11,20V	22,95V	21,80V
X	X		X		11,85V	11,35V	23,30V	22,15V
		X	X		12,00V	11,50V	23,65V	22,50V
X		X	X		12,15V	11,65V	23,95V	22,80V
	X	X	X		12,30V	11,80V	24,30V	23,15V
X	X	X	X		12,45V	11,95V	24,65V	23,50V

Bold = Factory setting

X = On					F On = 12 V		F Off = 24 V	
A	B	C	D	E	V On	V Off	V On	V Off
				X	12,60V	12,10V	25,00V	23,85V
X				X	12,75V	12,25V	25,35V	24,20V
	X			X	12,90V	12,40V	25,70V	24,55V
X	X			X	13,05V	12,55V	26,00V	24,90V
		X		X	13,20V	12,70V	26,40V	25,25V
X		X		X	13,35V	12,85V	26,75V	25,60V
	X	X		X	13,50V	13,00V	27,05V	25,90V
X	X	X		X	13,65V	13,15V	27,40V	26,25V
			X	X	13,80V	13,30V	27,75V	25,60V
X			X	X	13,95V	13,45V	28,10V	26,95V
	X		X	X	14,10V	13,60V	28,45V	27,30V
X	X		X	X	14,25V	13,75V	28,75V	27,60V
		X	X	X	14,40V	13,90V	29,10V	27,95V
X		X	X	X	14,55V	14,05V	29,45V	28,30V
	X	X	X	X	14,70V	14,20V	29,80V	28,65V
X	X	X	X	X	14,85V	14,35V	30,15V	29,00V