

# ITM8 MODULE

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## REFERENCE MANUAL

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# 1 Introduction

ITM8 is an 8 channel ignition power transistor module with optically isolated inputs.

Its design use is connecting passive ignition coils (those without internal igniters) to an engine control unit which has low current outputs (logic level).

The inputs are internally current limited so they may be paralleled without external resistors if pairing coils in waste spark configuration or for twin-plug engines.

Outputs are rated for 15A max intermittent draw (15s max) and continuous operation at 8A coil charge and 40% duty cycle (4ms dwell at 6000RPM in waste spark operation, 8ms in sequential operation as long as coil current limits are not exceeded). As a rule, start with short dwell and only increase if there is an indication of more ignition energy being necessary.

The output devices are of IGBT type designed specifically for ignition usage and flyback voltage is limited to 390V.

The inputs are triggered by a positive voltage, applying a positive voltage of 3-5V to an input will make the associated output stage conduct current. Maximum voltage allowed on control signal inputs is 10V.

## 2 Wiring

### 2.1 Pin-outs and description

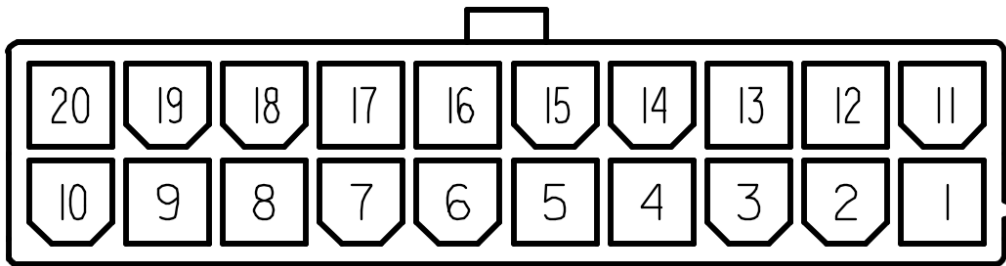


Figure 2.1: Mini fit jr 20 pin connector and pin numbering layout

Pin	I/O	Function	Note
1	IN	Control signal 1	
2	IN	Control signal 2	
3	IN	Control signal 3	
4	IN	Control signal 4	
5	IN	Control signal 5	
6	IN	Control signal 6	
7	IN	Control signal 7	
8	IN	Control signal 8	
9	IN	Signal return	Connect to ground at ECU
10	IN	+12V feed	20mA maximum consumption
11	OUT	Coil 1	
12	OUT	Coil 2	
13	OUT	Coil 3	
14	OUT	Coil 4	
15	OUT	Coil 5	
16	OUT	Coil 6	
17	OUT	Coil 7	
18	OUT	Coil 8	
19	IN	Power ground	Connect to engine or battery negative.
20	IN	Power ground	Connect to engine or battery negative.

### 2.2 Wiring diagram

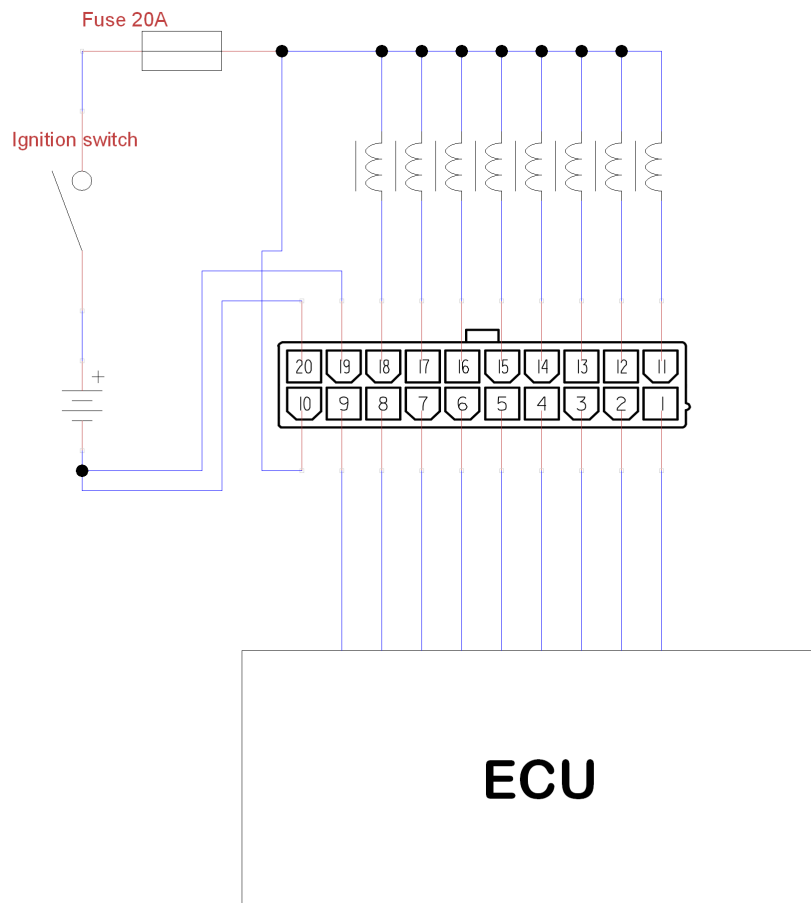


Figure 2.2: Typical wiring diagram