



Pro-10_{EAL}

(High Speed)

ELECTRICAL WIRING & OPERATING INSTRUCTIONS

Applicable
S/No's 42xxxx

**FAILURE TO FOLLOW INSTRUCTIONS
WILL VOID WARRANTY**

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2. Installation notes
5. Connections and specifications
6. Single coil distributor ignition
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current instructions



INSTALLATION NOTES

(Pro-10 Series 3 High Speed)

MOUNTING

Mount the unit in a dry location away from intense heat and ensure bottom condensation slots are unobstructed and oriented to permit gravity drain.

Failure to use supplied rubber mounts will void warranty!

IGNITION LEADS

Use inductively suppressed spiral wound metal conductor ignition leads.

Do not use carbon core or unsuppressed metal leads!

SPARK PLUGS

Non resistor spark plugs will greatly enhance ignition performance however some installations will require the use of resistor spark plugs for correct ECU operation.

When using resistor spark plugs it is imperative to check internal resistance as part of regular maintenance!

Open circuit or high resistance may cause damage to spark plug wires, ignition coils and CDI.

Fixed gap surface discharge and semi surface discharge spark plugs are only suitable for naturally aspirated applications.

Keep spark plug gap ≤ 0.025 " (0.6mm) for boosted motors to prevent coil and CDI damage!

INSULATION PRECAUTIONS

Degrease sparkplug insulators, sparkplug boots, ignition coil boots and installation tooling to prevent insulation breakdown.

Use of dielectric grease on sparkplug insulators and inside sparkplug and ignition coil boots will aid installation/removal and help prevent high voltage flashover.

POWER SUPPLY

Do not use voltage boosters, if the vehicle contains a PDM use it only to control CDI switch wire.

Connect ignition supply wires directly to battery!

When using a total loss electrical system install a 16V battery to ensure adequate voltage and isolate when charging.

WIRING

Only install recommended fast blow fuse or circuit breaker in power supply wiring.

M&W CDI systems will open circuit the external fuse if over voltage conditions are experienced.

If required power/ground wire length exceeds recommendations use paired battery cable (power and ground) to make up distance. Do not rely on vehicle chassis to provide ground path.

Use twisted pair wire for all power and coil connections. For improved noise suppression or to comply with EMC requirements use twisted shielded wire similar to M27500 series.

Main connector pins are designed for roll crimping. Squeeze crimping or soldering will distort pins resulting in misfiring or incorrect CDI operation.

Keep coil primary wires well separated from HT leads, coil HV outlet, coil body and any ECU wiring!

TRIGGERING

M&W CDI systems default to the preferred falling (negative) edge trigger. To select rising edge (positive) trigger link 'Trigger Edge' (#9) and 'Edge Ground' (#10).

If uncertain lock Ecu timing and monitor engine with timing light while varying RPM. Timing should appear stationary when correct trigger edge selected.

TUNING

CDI performance is not affected by changes in dwell settings!

M&W CDI systems may reduce ignition delay requiring a reduction in timing. The resulting changes in combustion characteristics may also require alterations to fuel flow.

Always set ECU ignition delay to zero and re-tune both fuel and timing curves after installation!

TACHO OUTPUT

Standard tacho output provides 50% duty cycle square wave signal at supply voltage. This will work with most aftermarket digital tacho's however some earlier types and those designed for coil negative triggering may require the alternate fixed length pulse signal.

LED INDICATOR

After applying power to input switch wire the LED will illuminate for approximately 1 second then extinguish. It will then flash briefly with each consecutive trigger event received.

A repeated double flash of the LED may indicate a possible faulty ignition coil, faulty wiring, low supply voltage or damage to the CDI.

TESTING

The CDI may be tested by momentarily grounding the trigger inputs which will cause the LED to flash and corresponding ignition coil to spark.

Do not conduct this test without grounded spark plugs installed!

IGNITION COIL SELECTION

For peak ignition energy use a coil specifically designed for CDI use. Coils with alternate use specifications may overheat during high speed operation.

Wire Specifications

POWER SUPPLY:

Use 14ga wire from battery bifurcated into 20ga wire <= 100mm from connector. Junction is best achieved using a Solistrand or similar butt splice / barrel crimp. Maximum recommended wire length is 2M

IGNITION COILS:

Use 20ga wire from cdi to coils and keep as one continuous length. Maximum recommended wire length is 2M

Read installation guide for important wiring details!

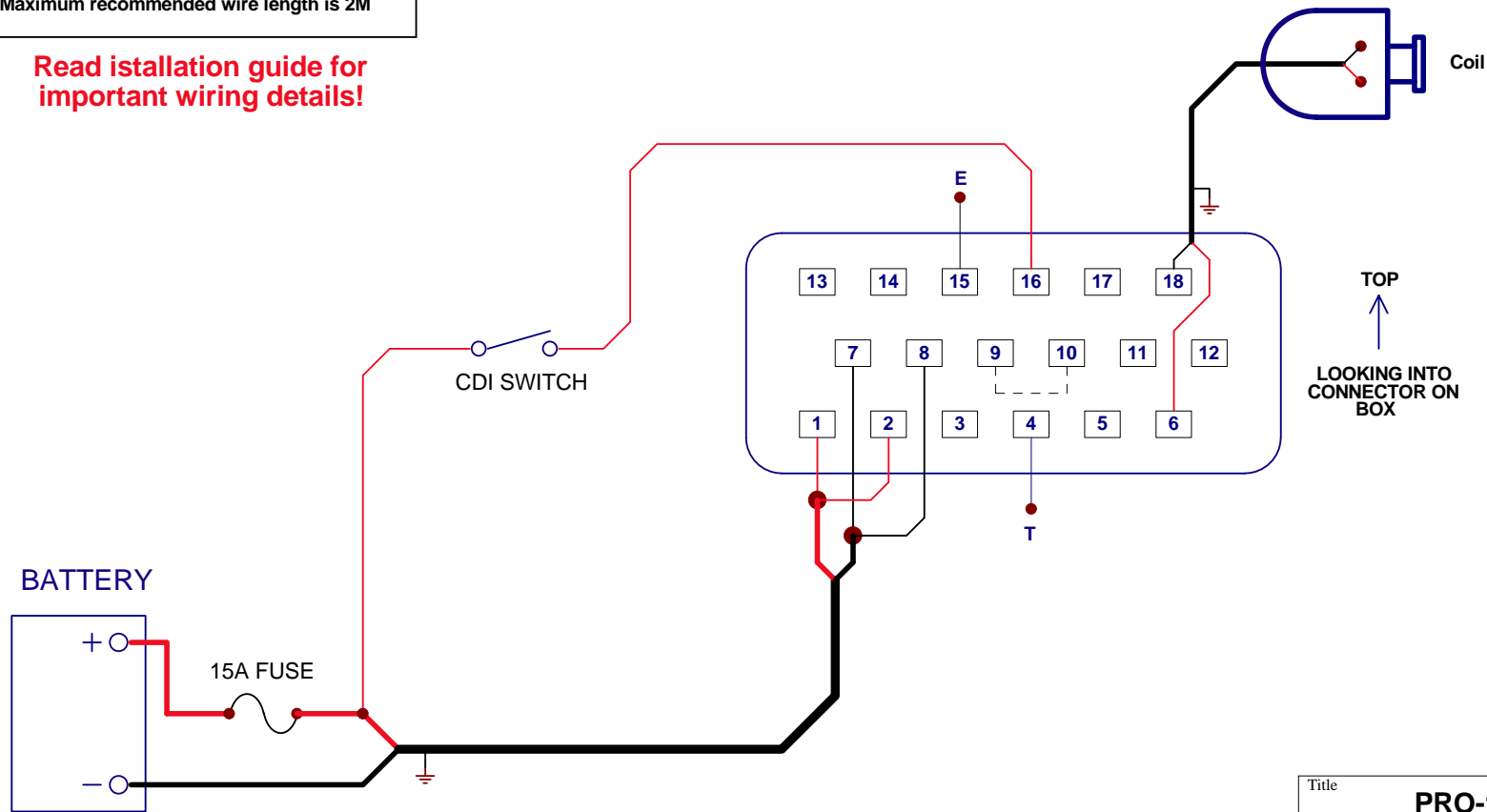
M & W IGNITIONS

Performance & Quality

**CAUTION!
HIGH VOLTAGE**



**DISCONNECT POWER BEFORE
WORKING ON UNIT**



Title			PRO-10EAL High Speed S3 CDI		
Size	Number	Revision			
A4	(C) M&W Ignitions	10.10.22.1			
Date:	20-Oct-2022	Sheet	1	of 1	
File:	D:\M&W\...\Pro10EAL HS S3 2.sch	Drawn By:	WAG		

M & W IGNITIONS

Performance & Quality

CYL SWITCH	# ENGINE CYLINDERS
0	
1	
2	
3	
4	4
5	
6	6
7	
8	8
9	
A	10
B	
C	12
D	
E	
F	



OPERATION

Limiting range - 2,000 to 19,900 in 100 rpm increments
 To disable rpm limiting select 'zero' for all 'RPM' switches
 CDI power switch must be cycled after making changes to 'CYL' switch
 Engine RPM switches may be changed at any time

WARNING!

**Engines respond differently to RPM limiting
 Set conservative limit at first then increase to desired
 maximum rpm after observing engine response**

Title			REV LIMITER		
Size	Number	Revision			
A4	(C) M&W Ignitions	16.09.18.1			
Date:	16-Sep-2018	Sheet	1	of	1
File:	D:\M&W\...\Pro10R S3 limiter.sch	Drawn By:	WAG		

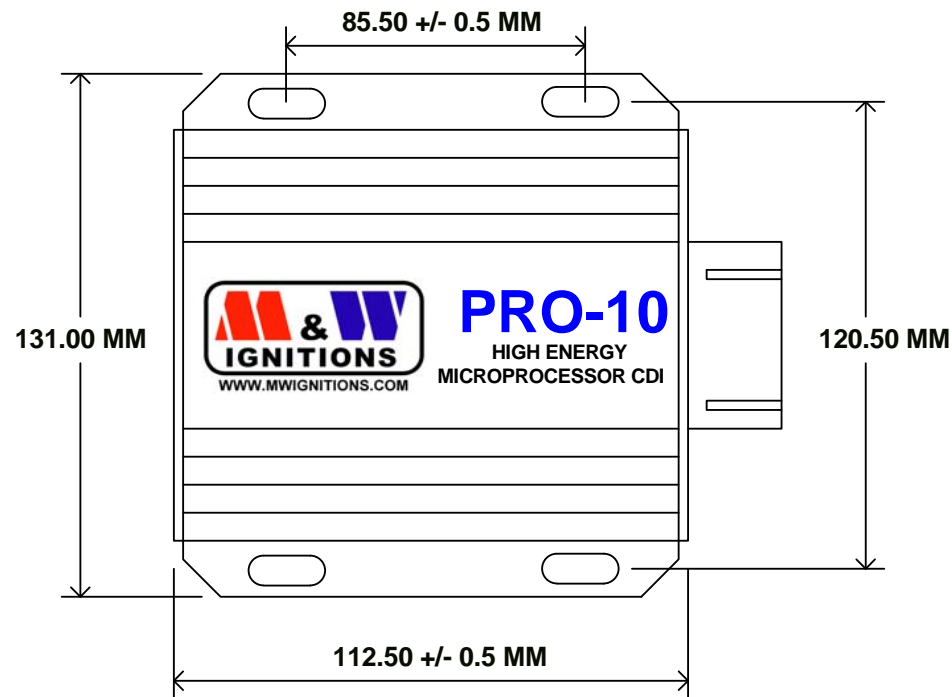
M & W IGNITIONS

Performance & Quality

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Slot dimensions - 5mm * 10mm

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