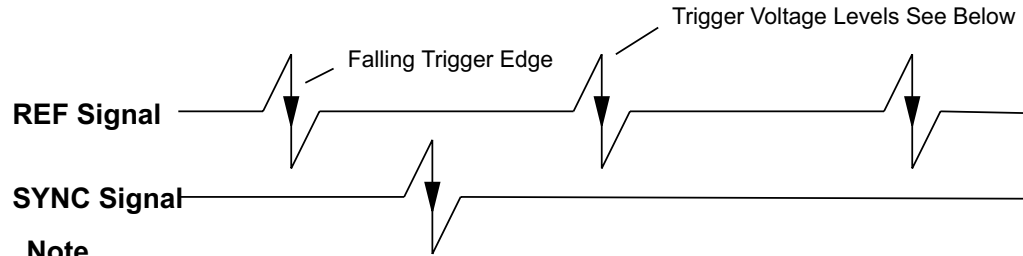
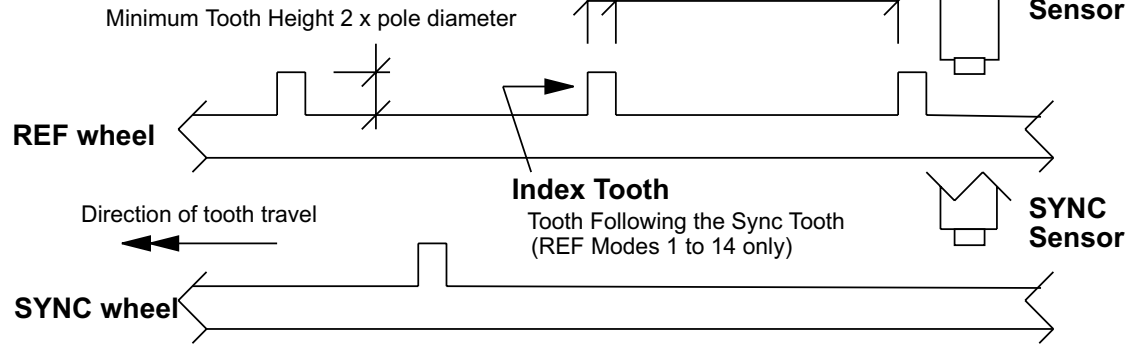


**Note**  
The wheel must be made of magnetically "soft" material such as mild steel

Tooth width  
1.0 to 1.5 x Sensor pole diameter

Minimum Spacing  
2 x Sensor pole diameter

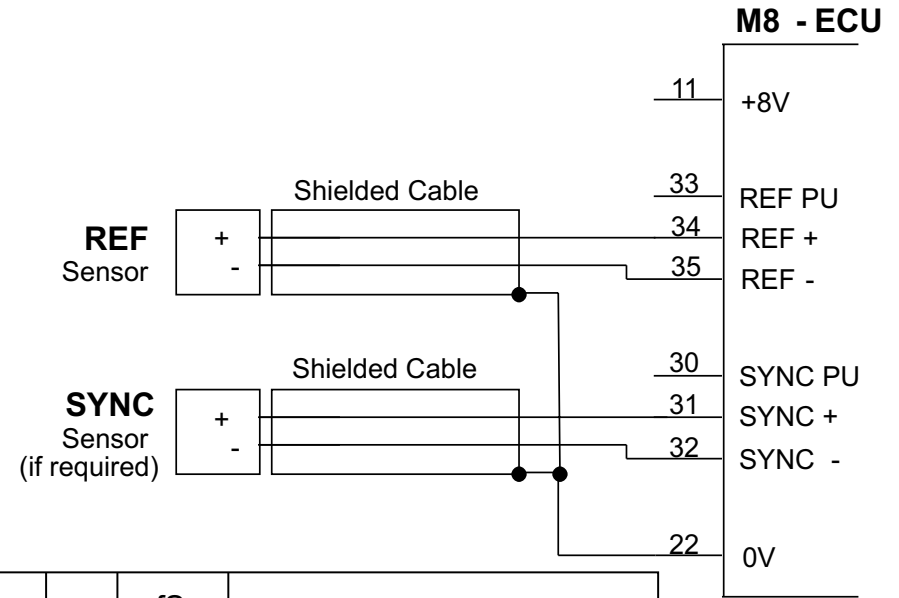
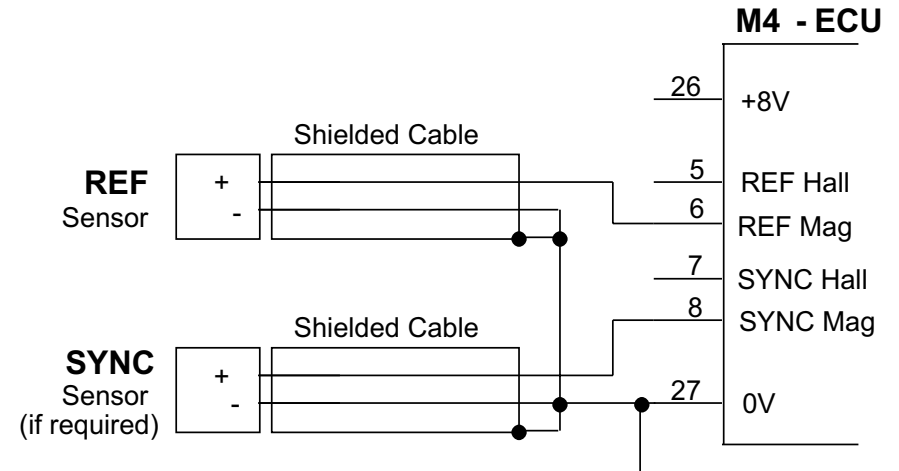


**Note**  
M4 Version A ECUs must be wired for a falling trigger for magnetic sensors

**Note 1**  
The rEF setup parameter may be any of the general types. This parameter also indicates if the active edges are rising or falling.  
Normally types 1 to 4 or 11 to 14 will be used.  
Modes 1 to 4 require one REF tooth per firing and may be used with or without a SYNC signal.  
Modes 11 to 14 require more than one REF tooth per firing and MUST have a SYNC signal.  
Note that the SYNC signal is required for sequential injection or multi coil operation.

**Note 2**  
The criP setup parameter must be set to indicate the position of the REF Index Tooth ( in degrees BTDC Cyl 1 )  
For REF modes 1 to 4 and 11 to 14 the Index Tooth is the REF Tooth following the SYNC Tooth

**Trigger Voltage Levels**  
**M4**  
0.3V min (for RPM < 500)  
2.0V min (for RPM > 500)  
**M8**  
0.25V min (for RPM < 500)  
1.40V min (for RPM > 500)



<b>Setup</b>	M4 Only	rFSn	2
		SYSn	2
		rEF	Note 1
		cr t	Number of REF teeth per Rev
		criP	Note 2



Title **Magnetic Sensor - General**

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**Note**

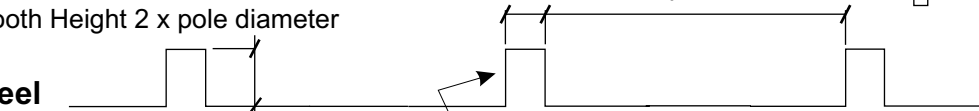
The wheel must be made of magnetically "soft" material such as mild steel

Minimum Tooth Height 2 x pole diameter

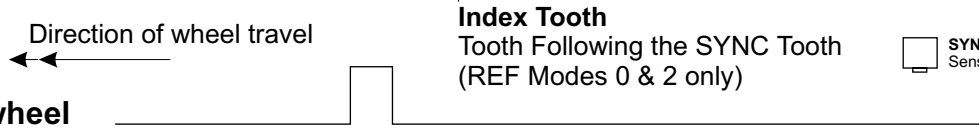
Tooth width  
1.0 to 1.5 x sensor  
pole diameter

Minimum spacing  
2 x sensor  
pole diameter

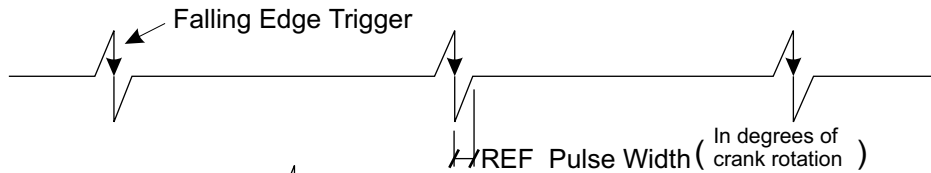
**REF wheel**



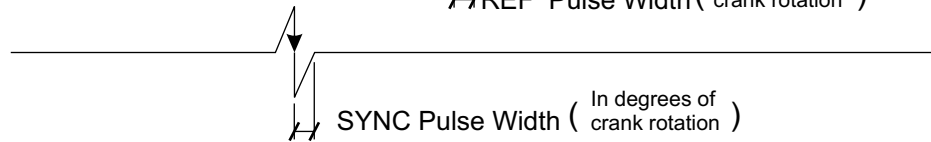
**SYNC wheel**



**REF signal**



**SYNC signal**



**NOTE** The trigger edge depends on sensor wiring polarity ( Reversing the wires will reverse the edge)

**NOTE 1.**

The REF/SYNC Mode parameter may be any of the general types. (Not Dual Edge mode)  
Normally types mode 0 (1 Tooth/TCD) and mode 2 (Multi Tooth) will be used.  
Mode 0 requires 1 tooth per firing and may be used without a SYNC sensor.  
Mode 2 may have up to 180 teeth per Crank rev and MUST have a SYNC sensor.  
The SYNC sensor is required for sequential injection or multi coil operation.

**NOTE 2.**

The "Crank Index Position" parameter must be set to indicate the position of the REF index tooth. (In degrees BTDC Cyl 1)  
The index tooth is the REF tooth following the SYNC tooth.

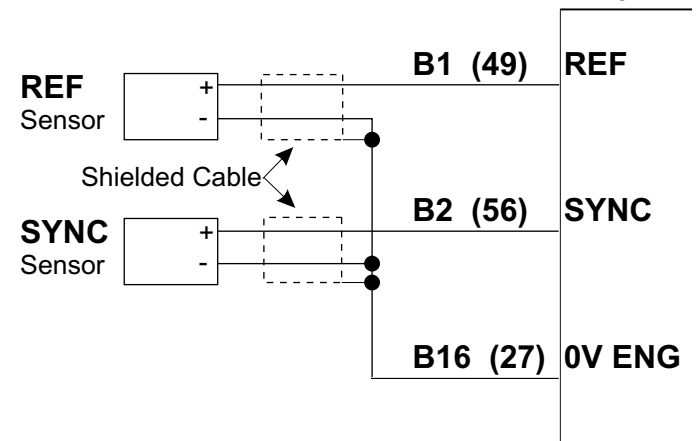
**Sensor Setup - REF/SYNC Sensor Setup**

REF Sensor Type	Magnetic
REF Sensor Edge	Fall or Rise
REF Sensor Filter	¼ REF Pulse width
SYNC Sensor Type	Magnetic
SYNC Sensor Edge	Fall or Rise
SYNC Sensor Filter	¼ Sync Pulse width

**General Setup - Main Setup**

REF / SYNC Mode	Note 1
Crank Ref Teeth	Number of teeth per rev
Crank Index Position	Note 2

**M800 (M880)**



**MoTeC**

Title **Magnetic Sensor - General**

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