

# DIGITAL ECU TUNER<sup>3</sup>

## Schematy Montażowe



**ECU**  
**MASTER**

[www.ecumaster.com](http://www.ecumaster.com)

**Informacja**

Podane schematy są tylko niewielkim wycinkiem możliwych aplikacji urządzenia Ecumaster DET 3. Dokument ten będzie rozwijany o kolejne modele pojazdów i ich silników.

**Uwaga !**

Zamieszczone w poniższym dokumencie schematy mogą różnić się od rzeczywistych w związku z dużą ilością wersji silników i ich elektronicznego osprzętu występujących w danym modelu samochodu. W związku z tym należy przed podłączeniem urządzenia zweryfikować multimetrem i/lub oscyloskopem sygnały ECU.

**Informacja**

Jeżeli potrzebujesz schematu podłączenia do swojego auta i nie występuje on w niniejszym dokumencie prosimy o wysłanie wiadomości email ze schematem elektrycznym samochodu na adres: [schematy@ecumaster.com](mailto:schematy@ecumaster.com)

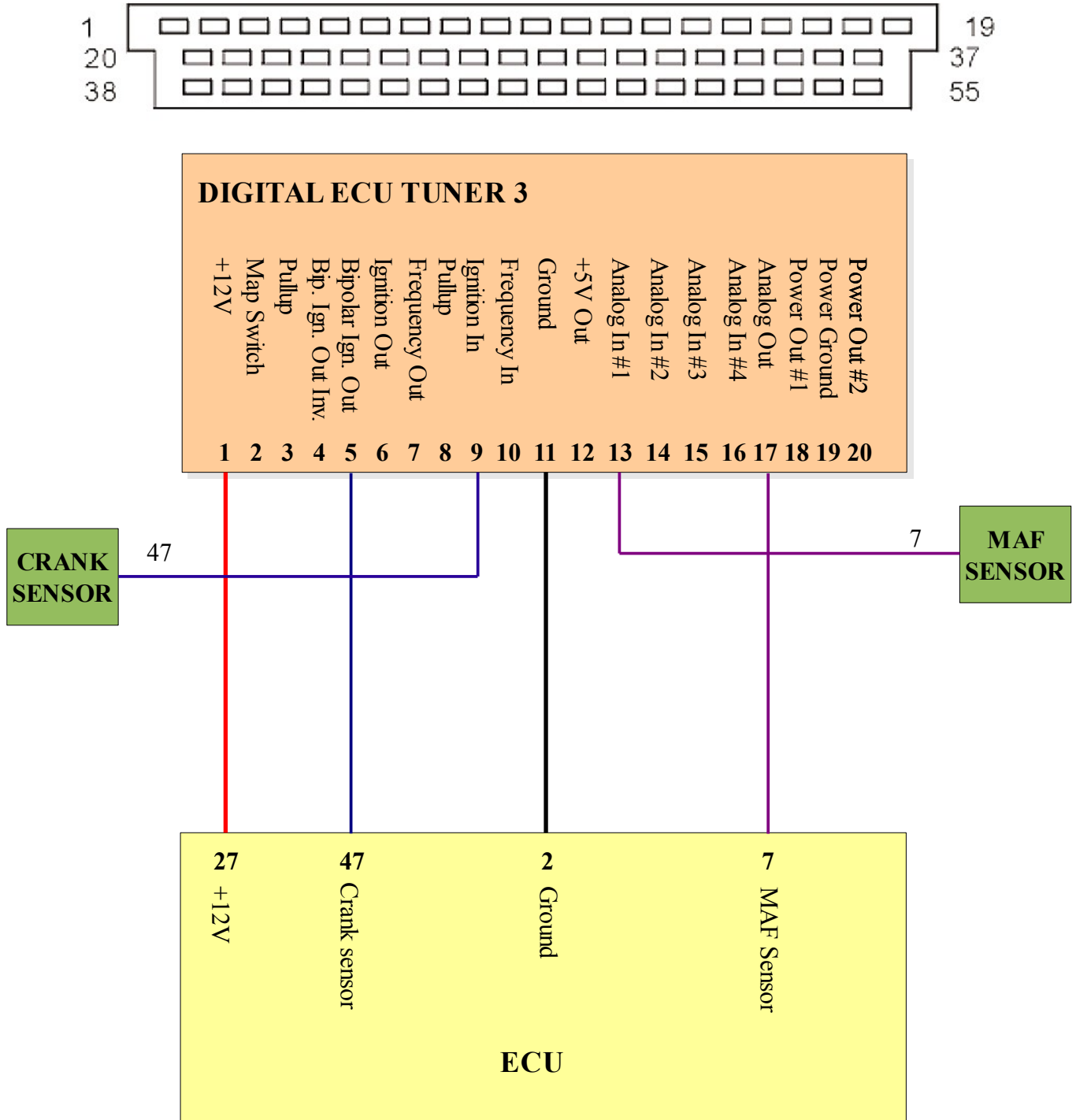
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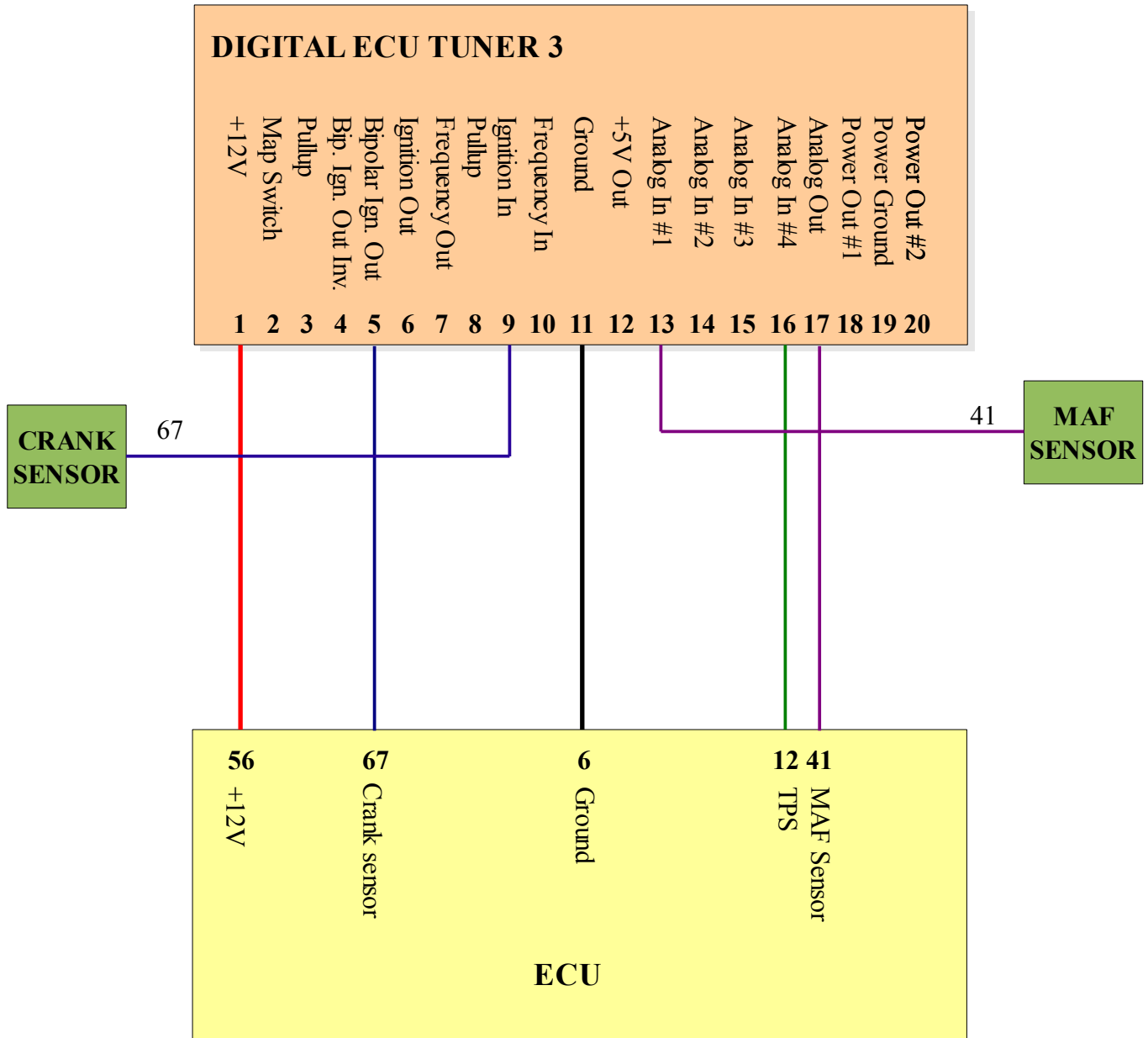
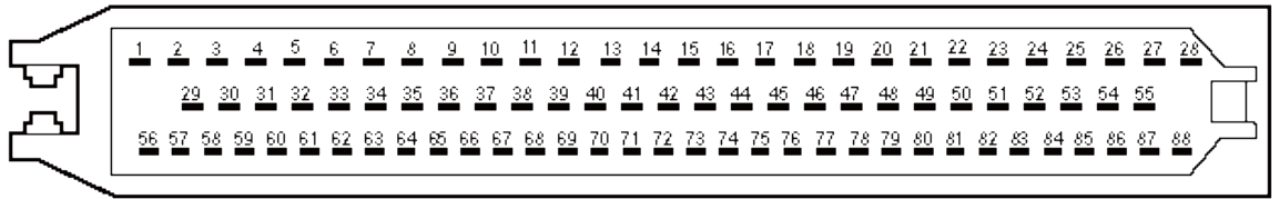
**BMW E30 325i, Bosch Motronic 1.1/1.3**

Uwagi: Proszę zastosować ustawienia *Konfiguracja #2*.



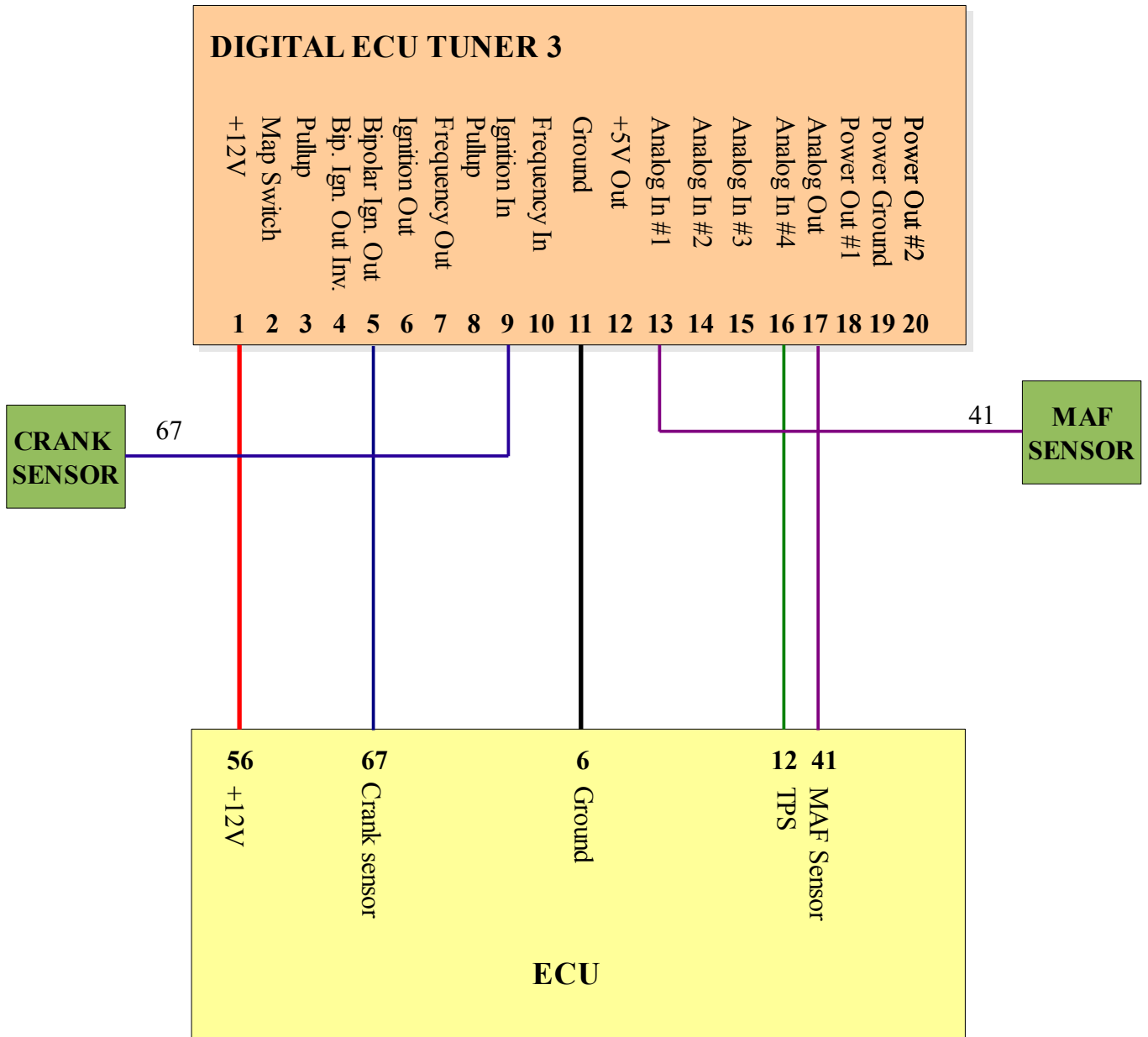
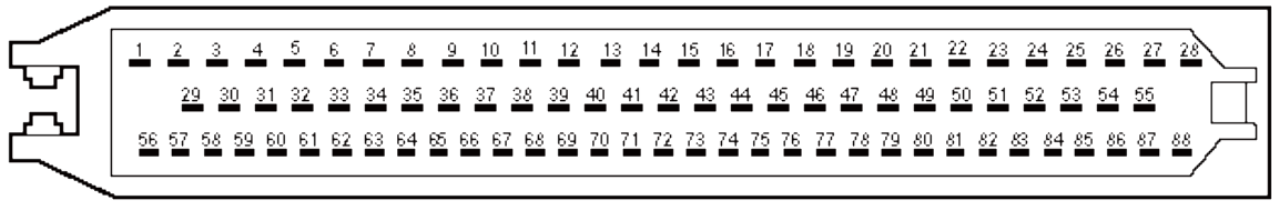
**BMW E36 325i, Bosch Motronic 3.1**

**Uwagi:** Proszę zastosować ustawienia *Konfiguracja #1*.



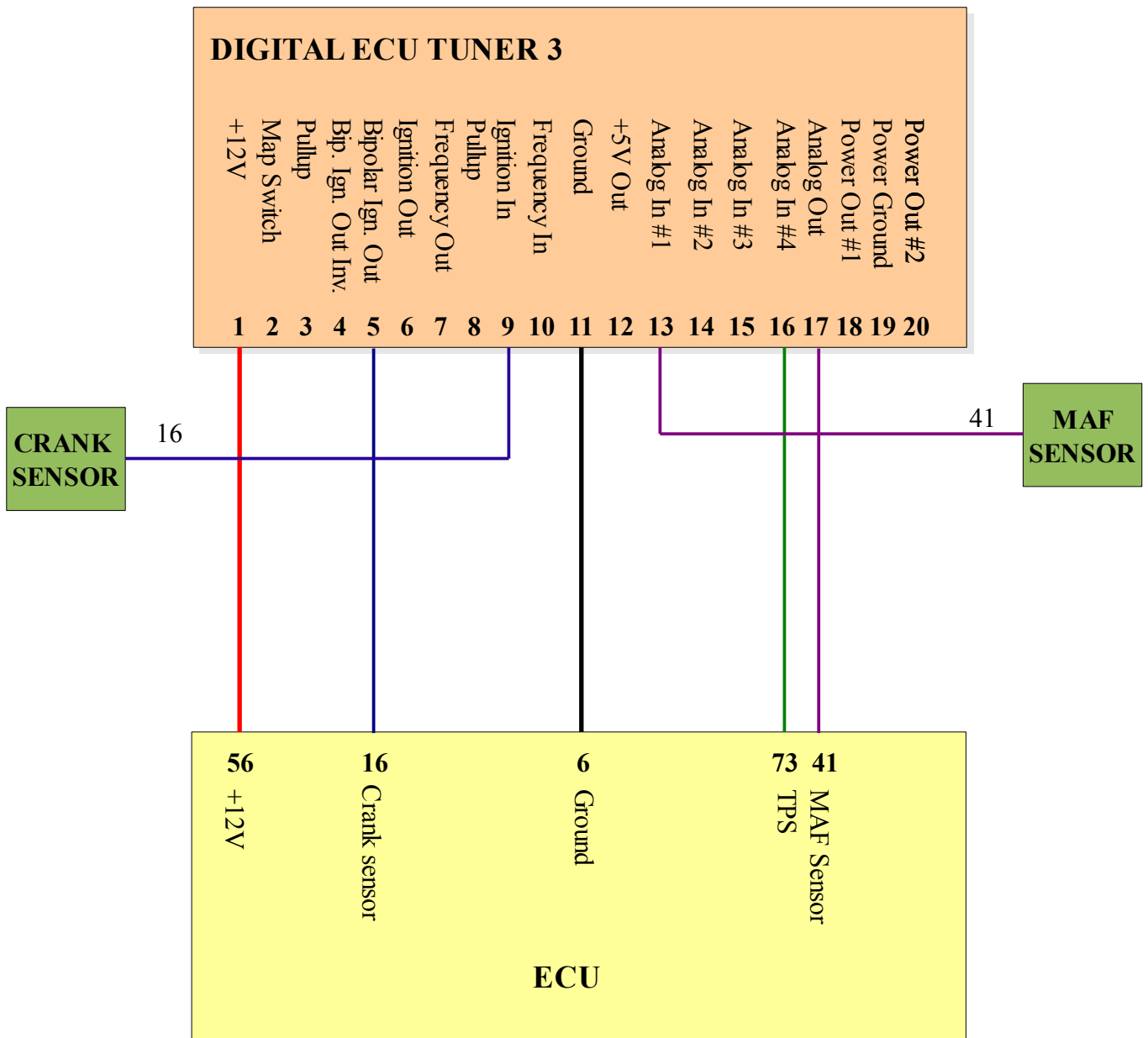
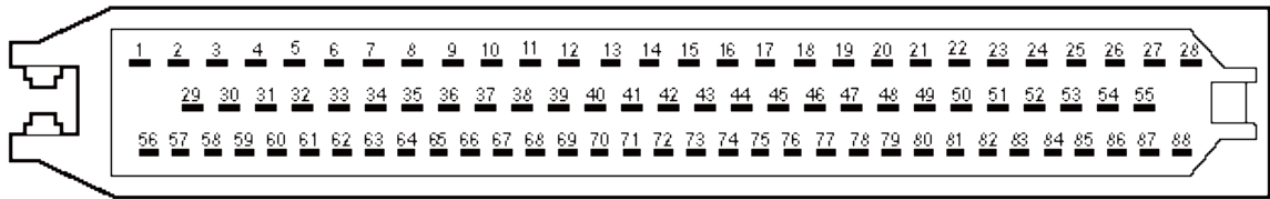
**BMW E36 318is, Bosch Motronic 1.7**

**Uwagi:** Proszę zastosować ustawienia *Konfiguracja #1*.



**BMW E36 325i Vanos, Bosch Motronic 3.3.1**

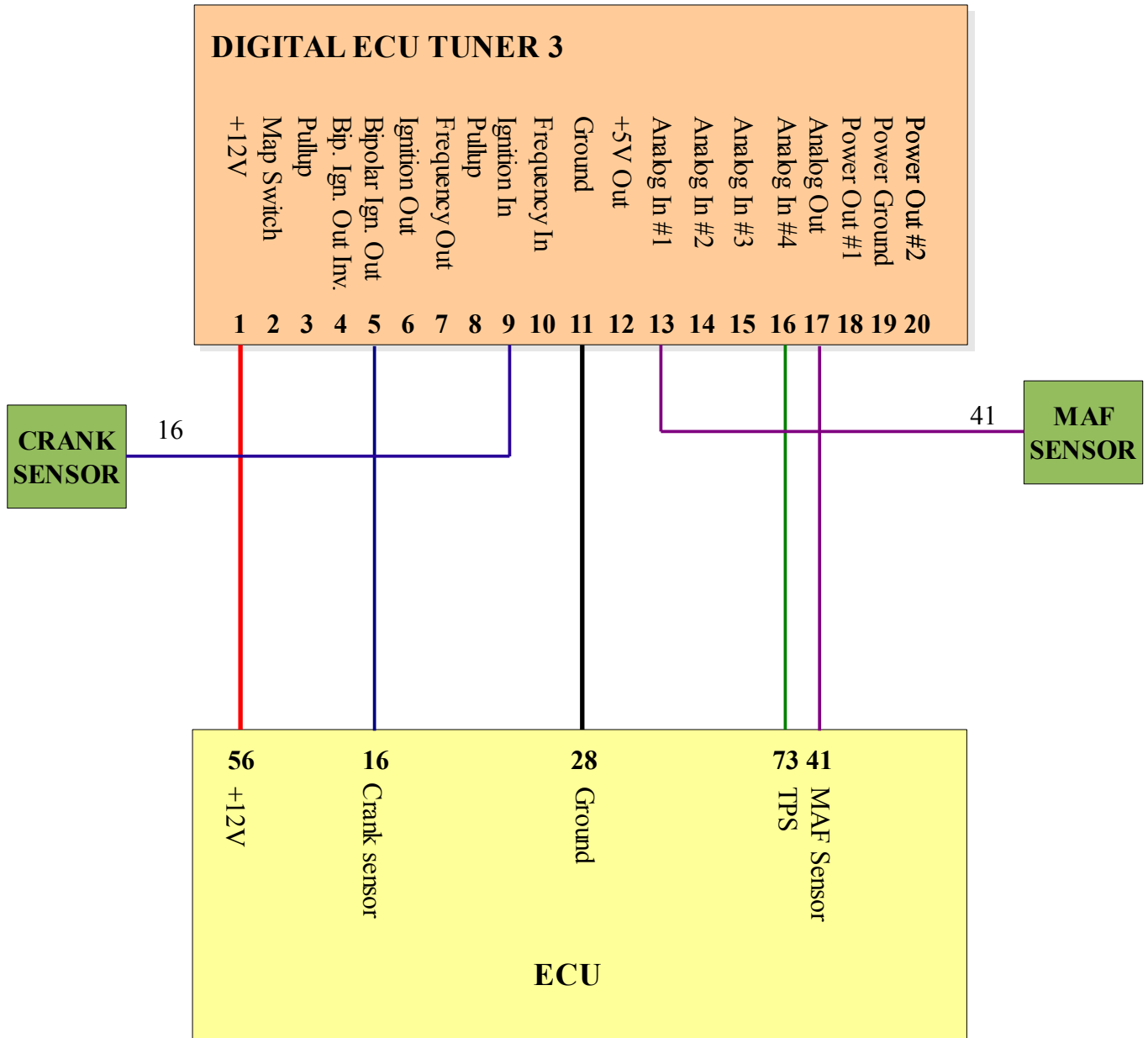
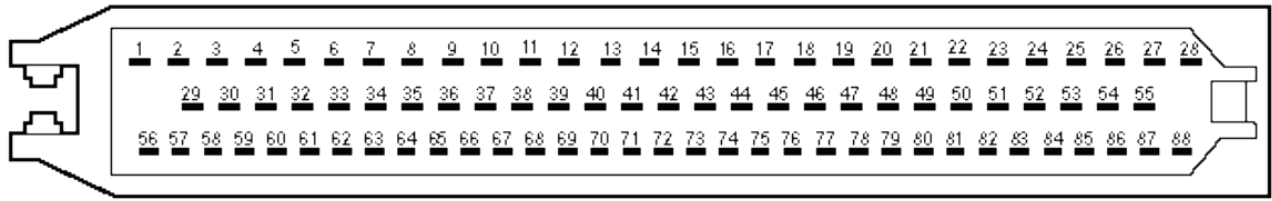
**Uwagi:** Proszę zastosować ustawienia *Konfiguracja #1*.





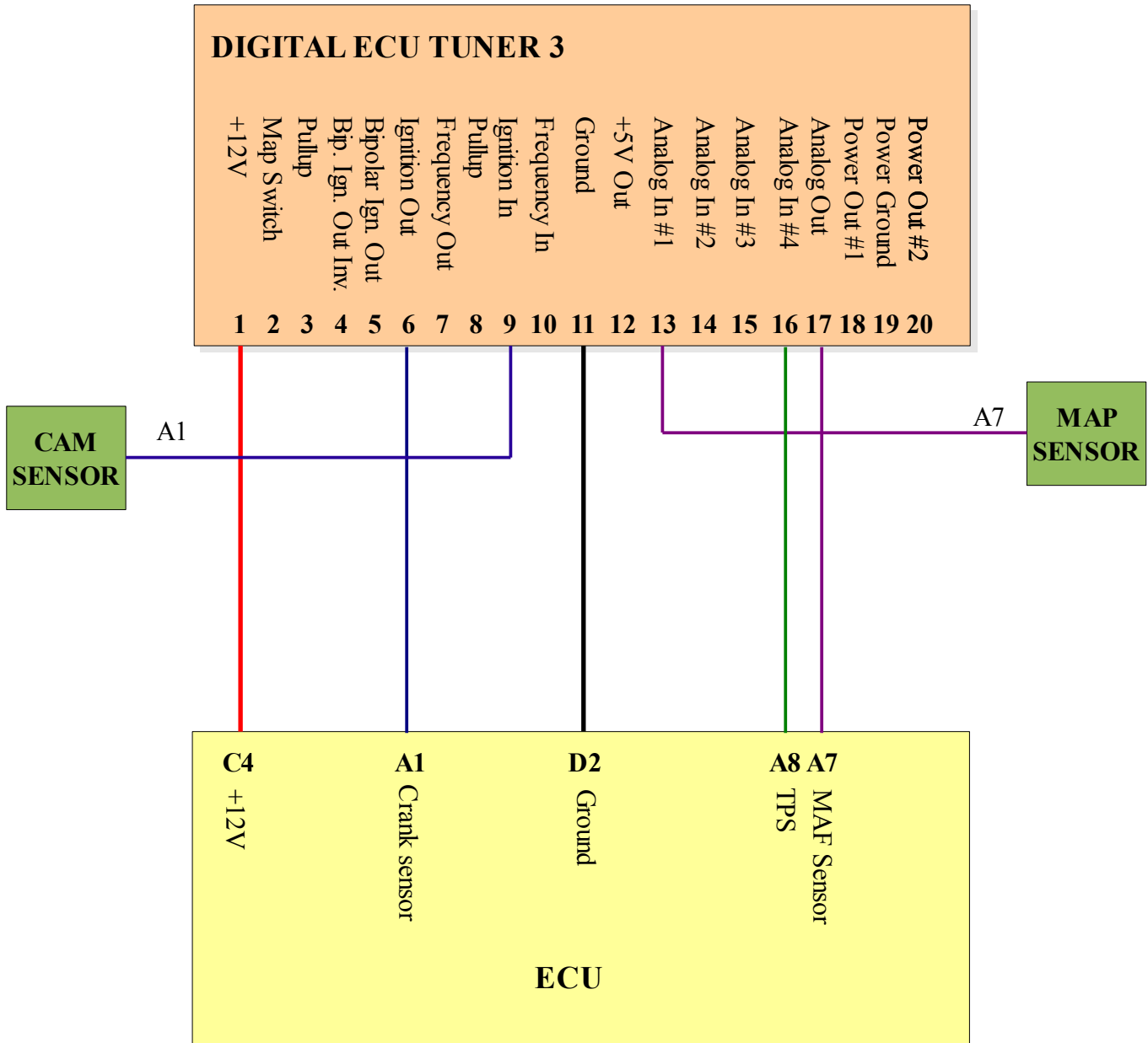
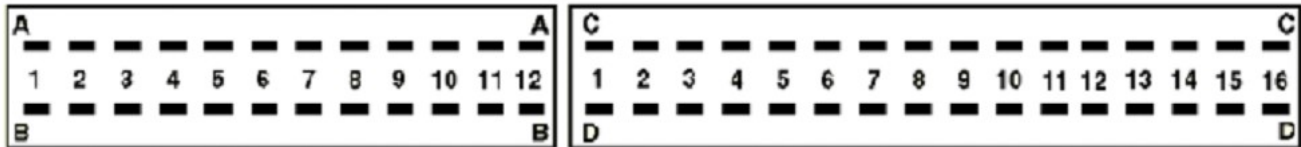
**BMW E36 M3 3.0L, Bosch Motronic 3.3**

**Uwagi:** Proszę zastosować ustawienia *Konfiguracja #1*.



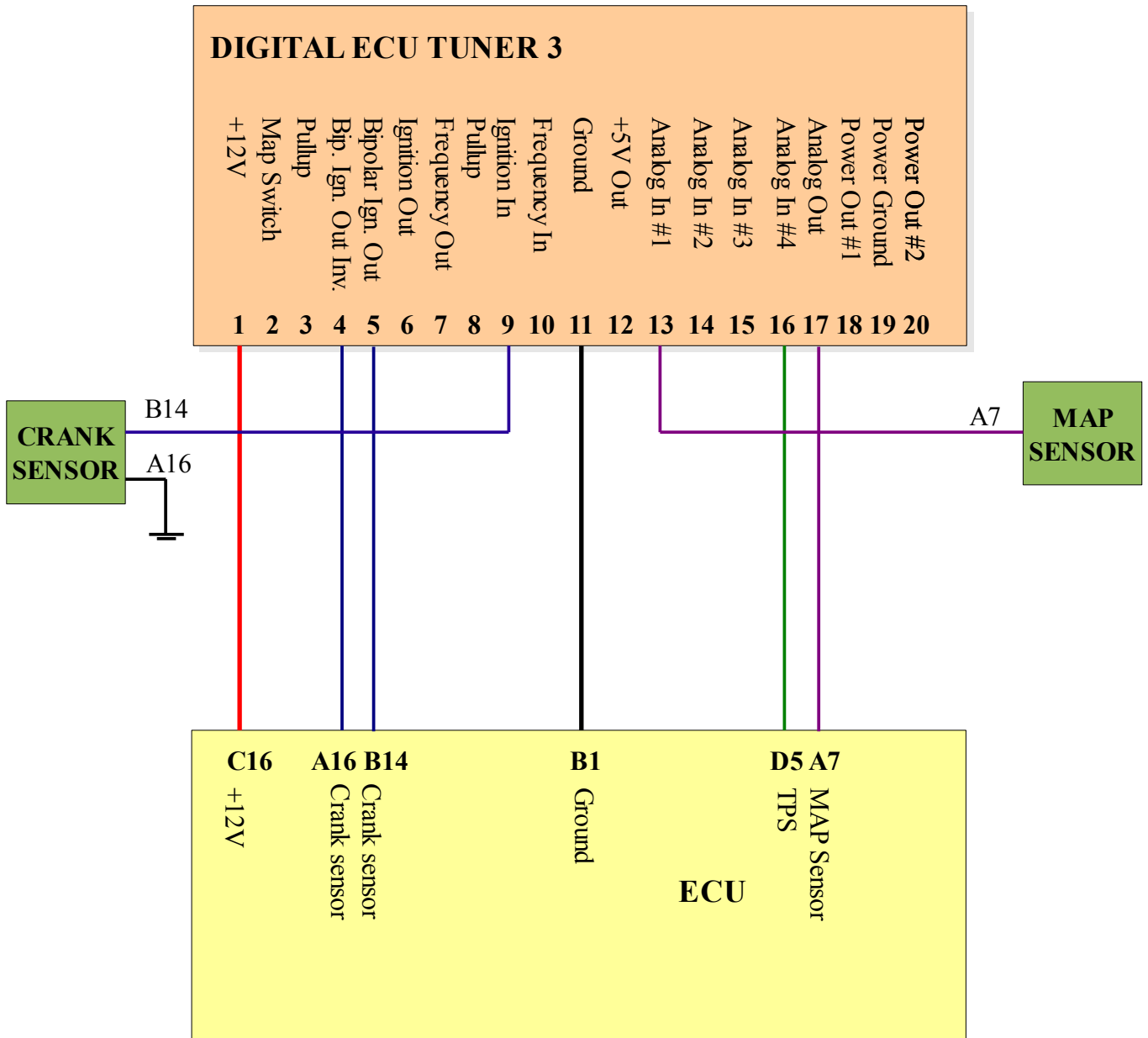
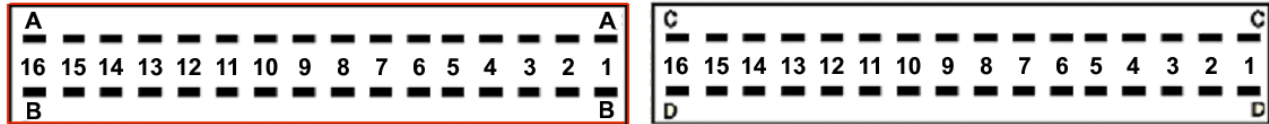
**Daewoo Espero 1.8, 2.0 Delco IEFI-6**

**Uwagi:** Proszę zastosować ustawienia *Konfiguracja #4*. Num signals per 720 powinno wynosić 4



**Daewoo Lanos 1.6 16V Delco**

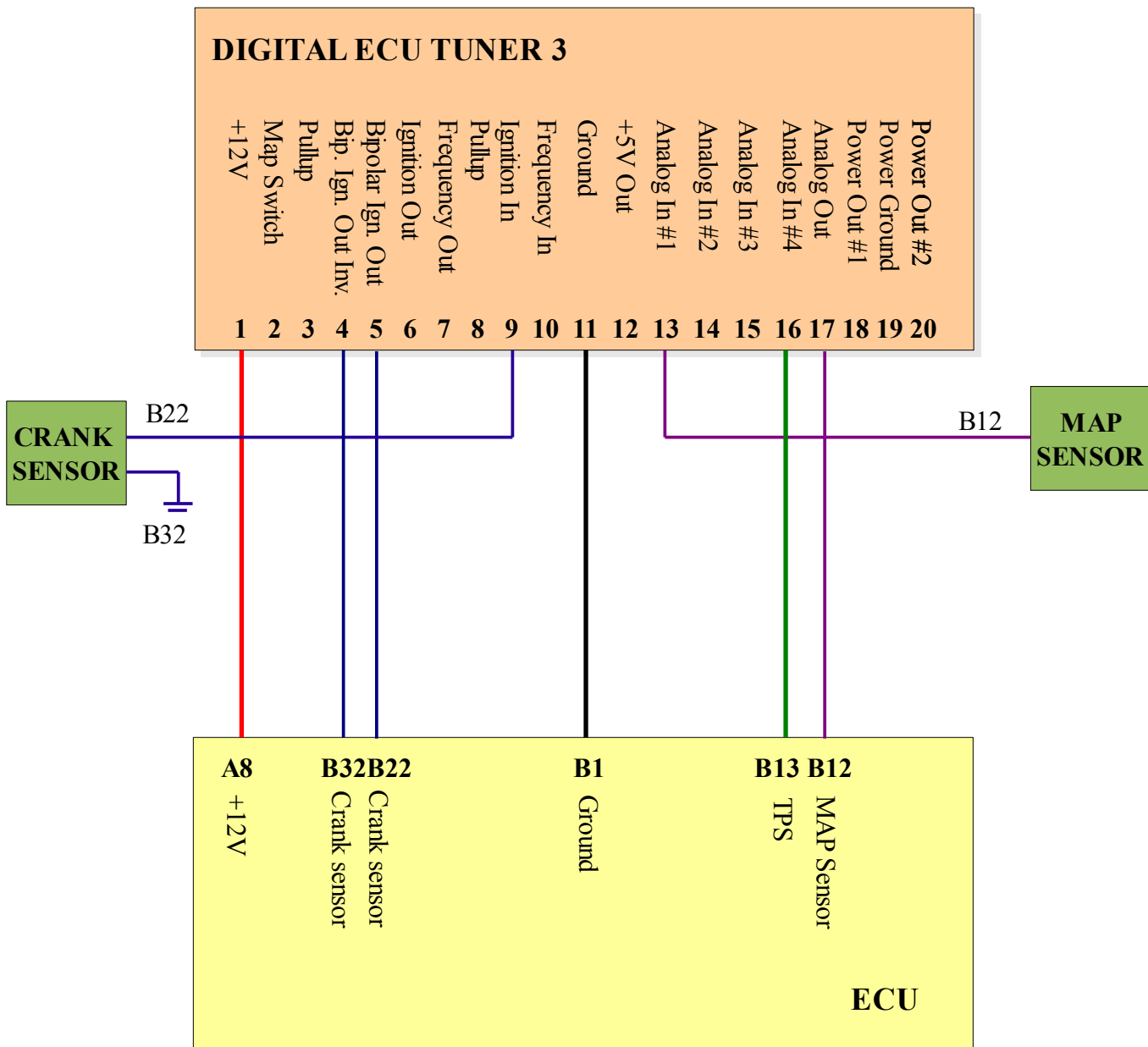
**Uwagi:** Proszę zastosować ustawienia *Konfiguracja #1*.



**Fiat Bravo 1.2 16V, Bosch Motronic 1.5.5**

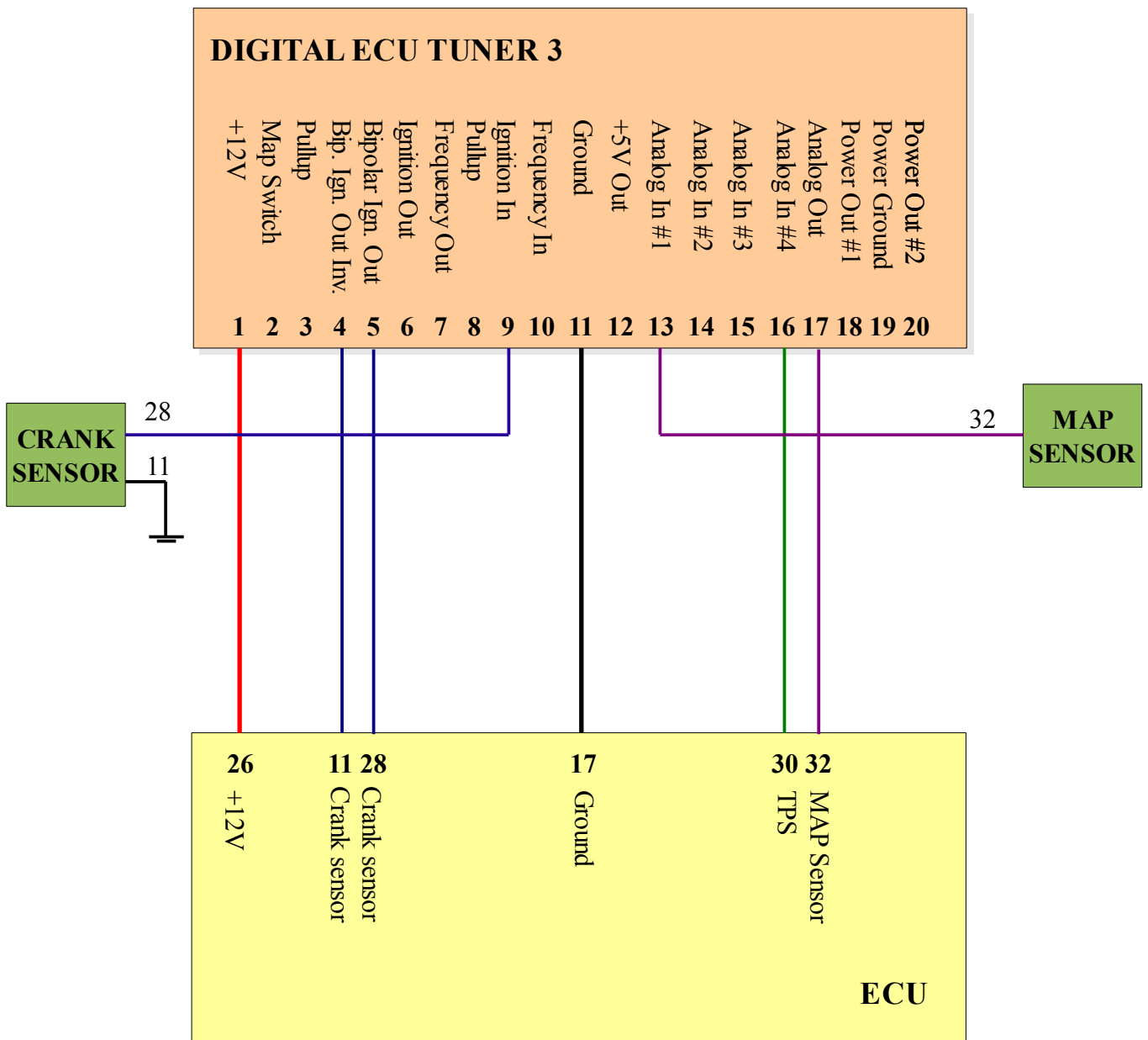
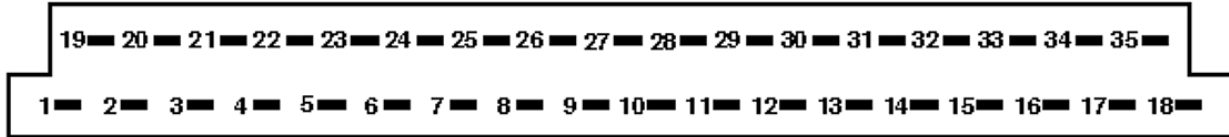
**Uwagi:** Proszę zastosować ustawienia *Konfiguracja #1*.

B																A															
38	37	36	35	34	33	32	31	30	29	1	2	3	4	5	6	7	8	9	10												
○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○												
	28	27	26	25	24	23	22	21	20		11	12	13	14	15	16	17	18	19												
	○	○	○	○	○	○	○	○	○		○	○	○	○	○	○	○	○	○												
	19	18	17	16	15	14	13	12	11		20	21	22	23	24	25	26	27	28												
	○	○	○	○	○	○	○	○	○		○	○	○	○	○	○	○	○	○												
16	15	14	13	12	11	10	9	8	7	29	30	31	32	33	34	35	36	37	38												
○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○												



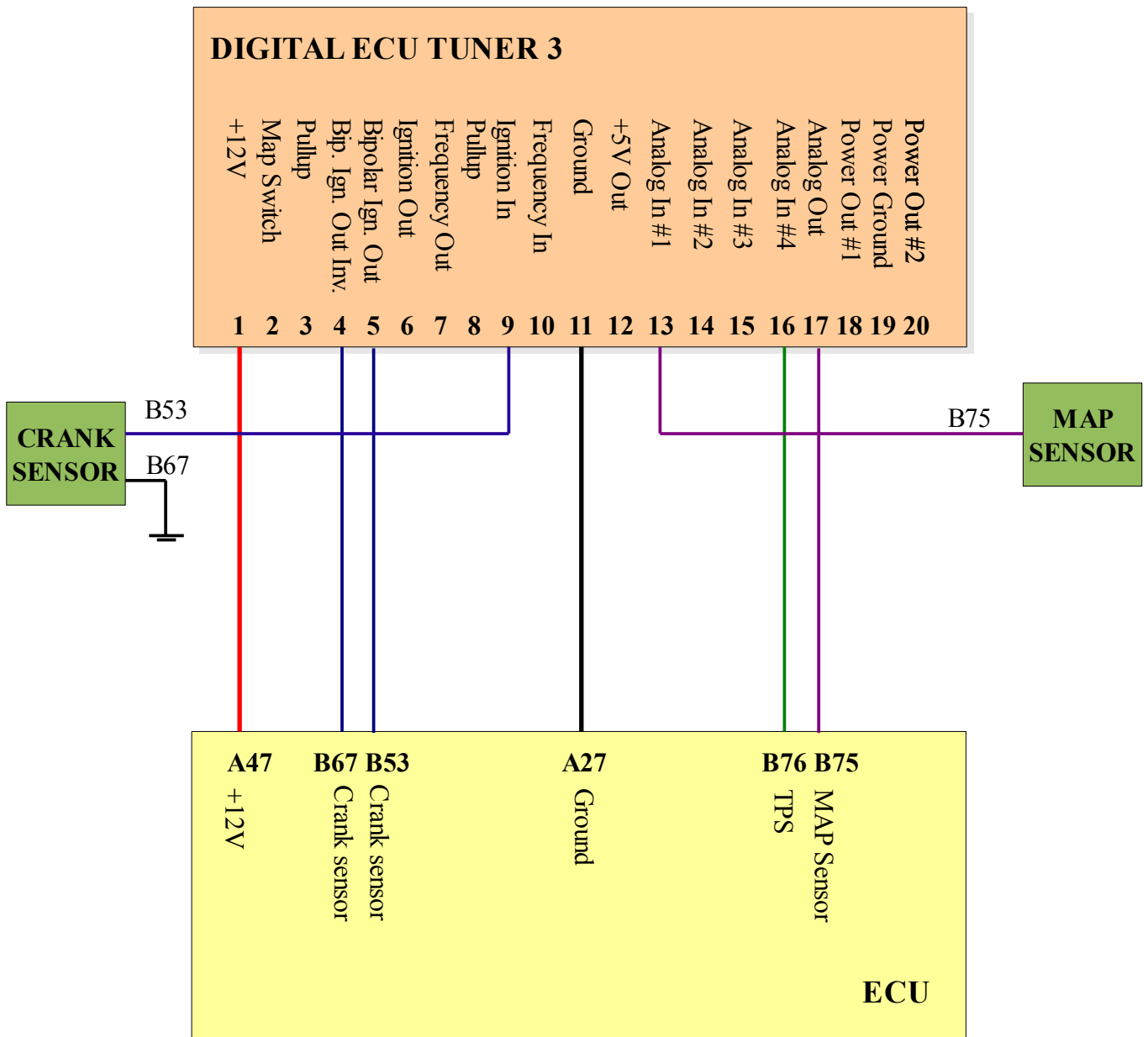
**Fiat Seicento 1.1 Sporting Weber-Marelli IAW 16F**

**Uwagi:** Proszę zastosować ustawienia *Konfiguracja #1*.

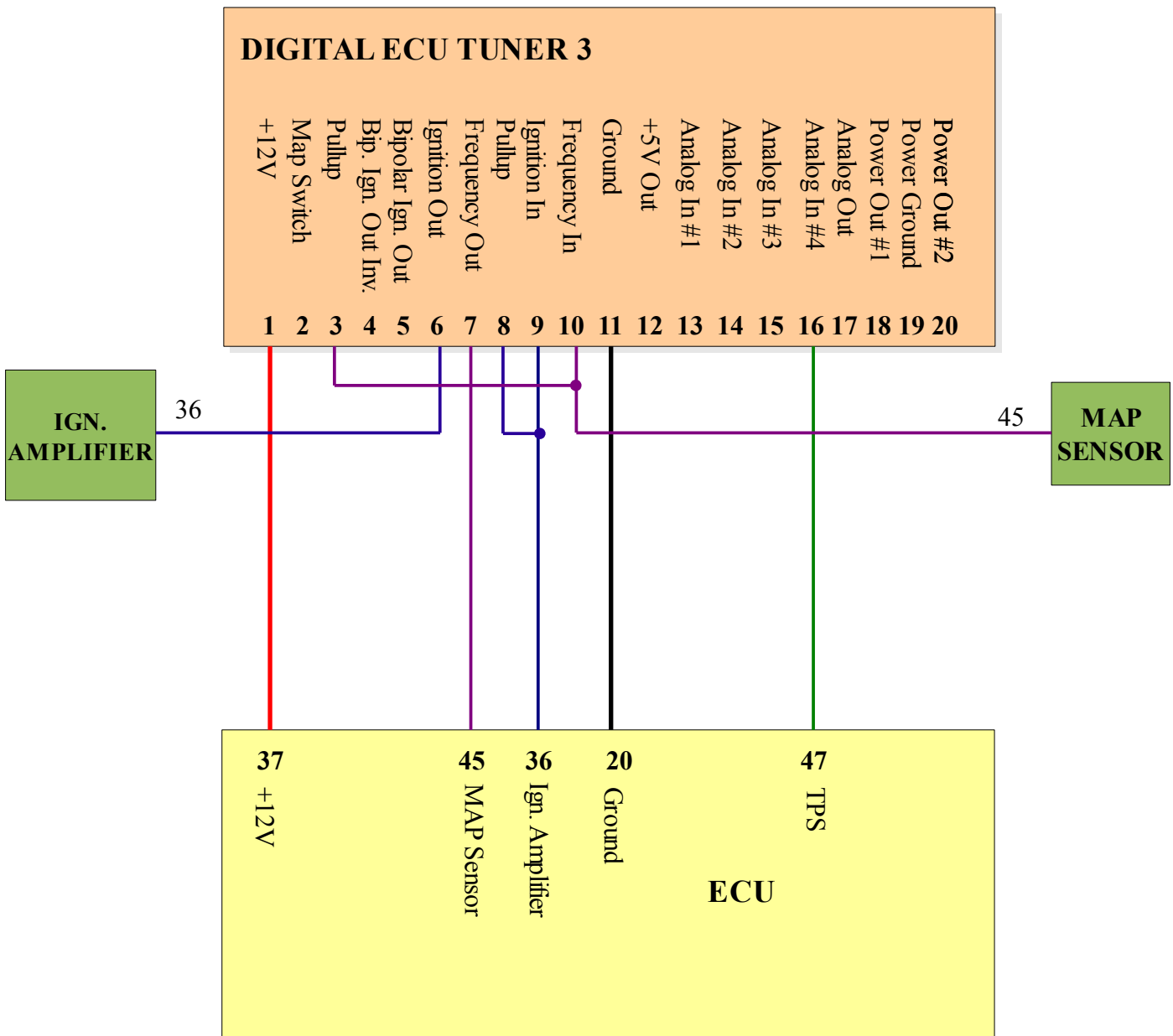
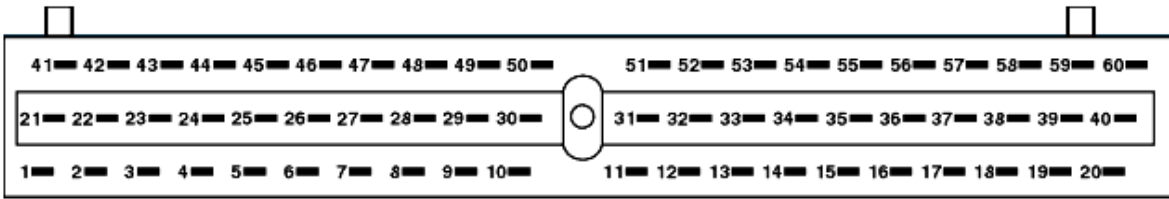


**Fiat Seicento 1.1 Weber-Marelli IAW 4AF.M9**

**Uwagi:** Proszę zastosować ustawienia *Konfiguracja #1*.

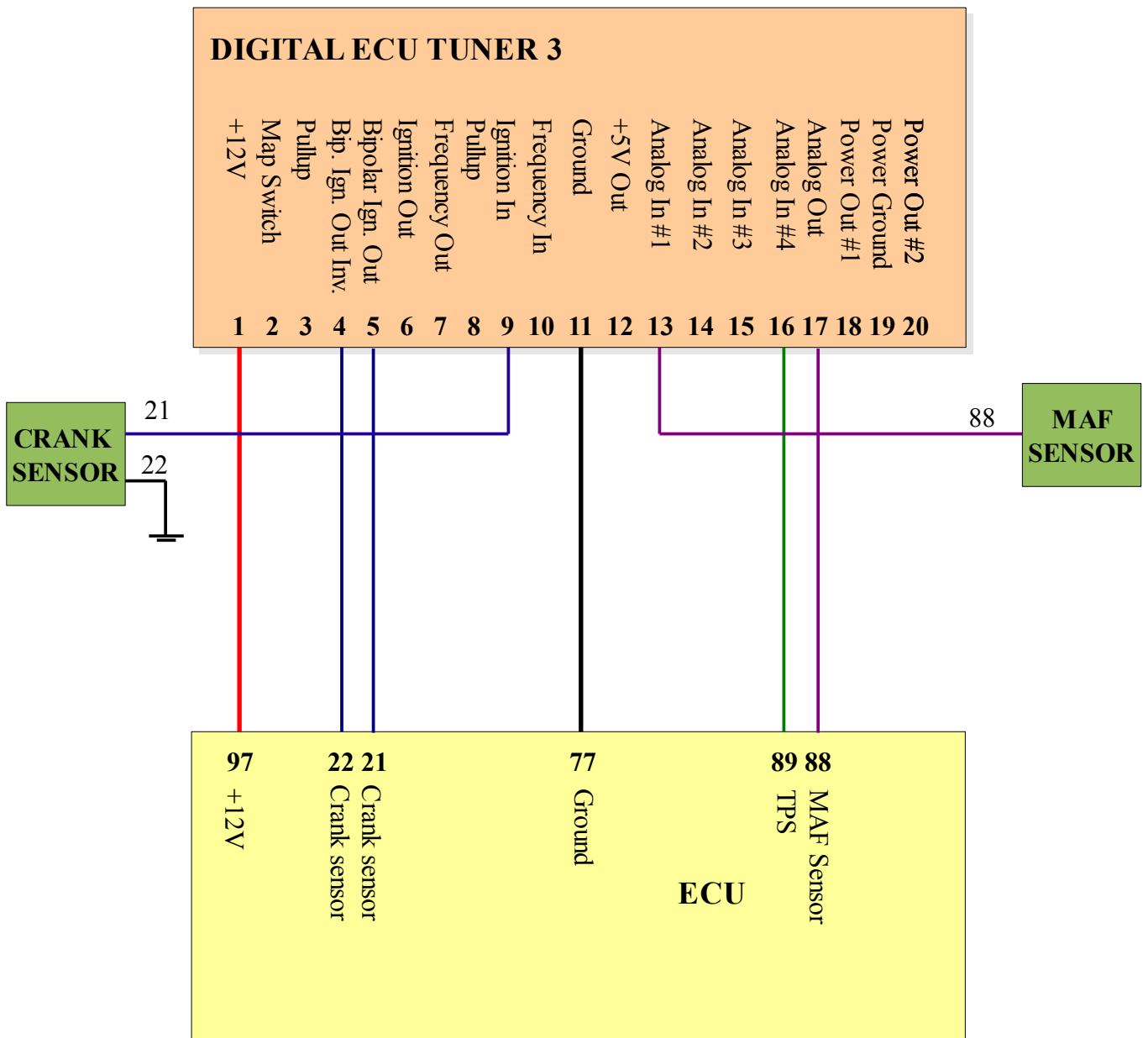
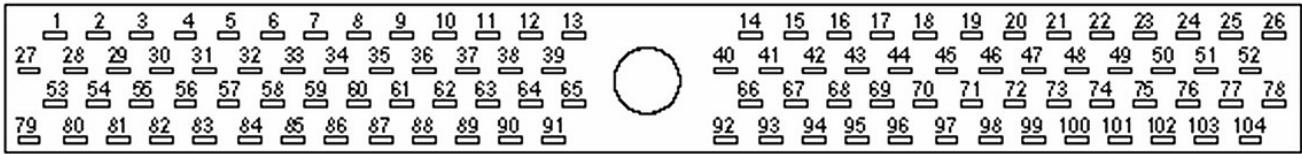


**Ford Sierra 2.9 (B4B/B4C)**



**Ford Cougar 2.0 EEC-V**

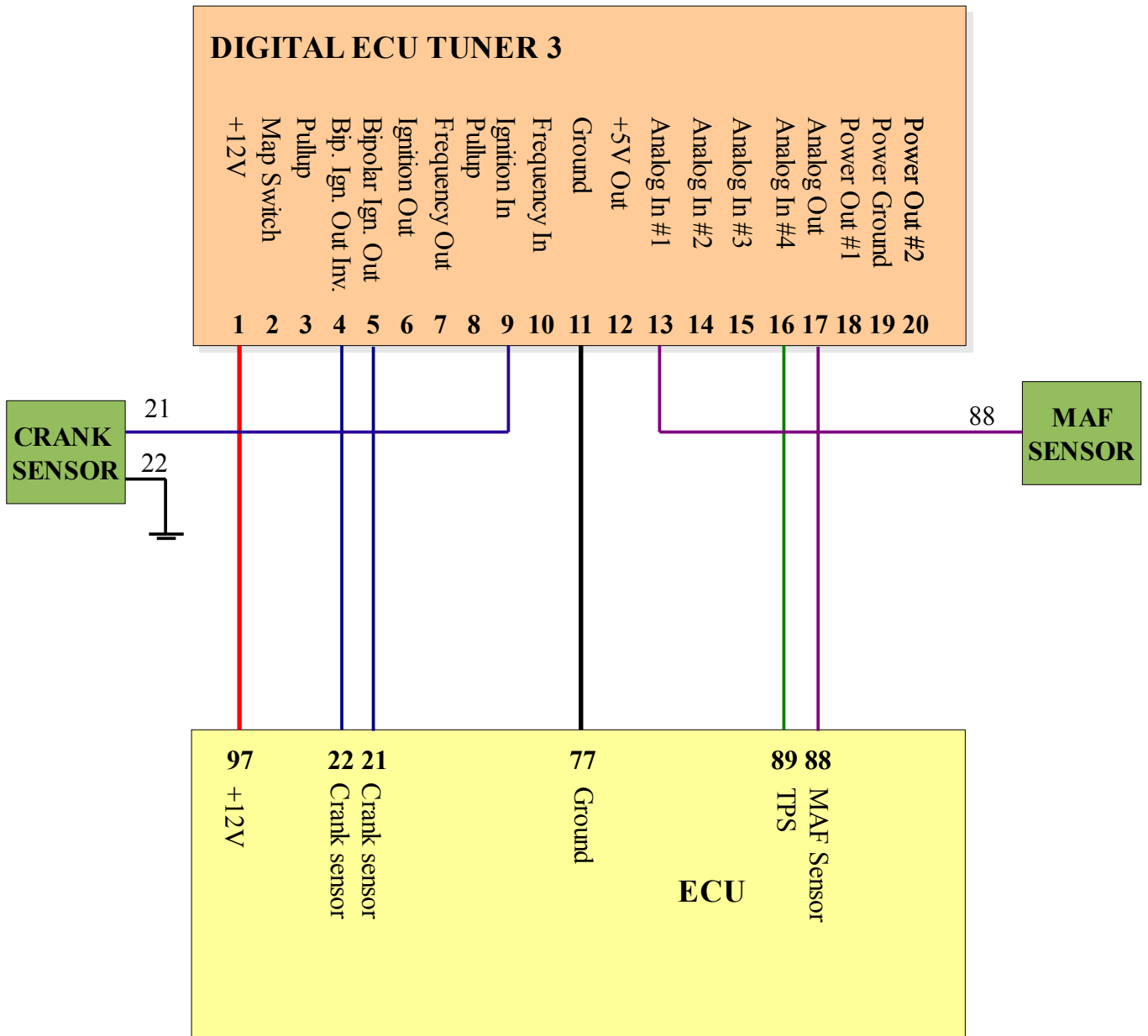
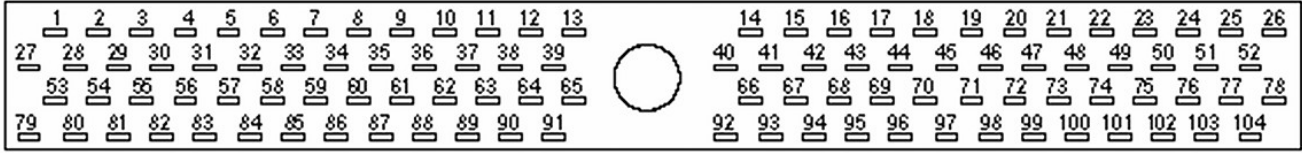
**Uwagi:** Proszę zastosować ustawienia *Konfiguracja #3*.





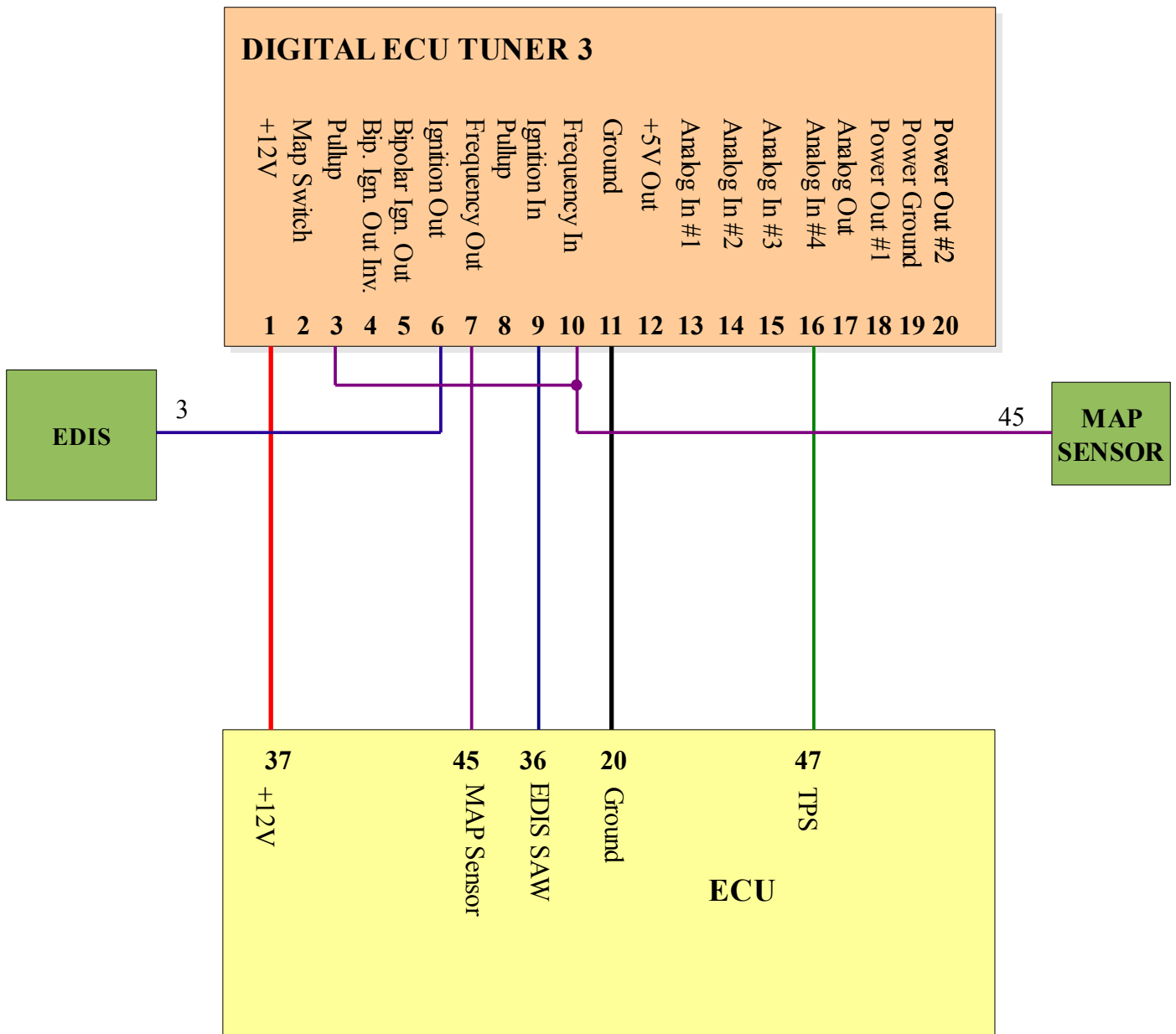
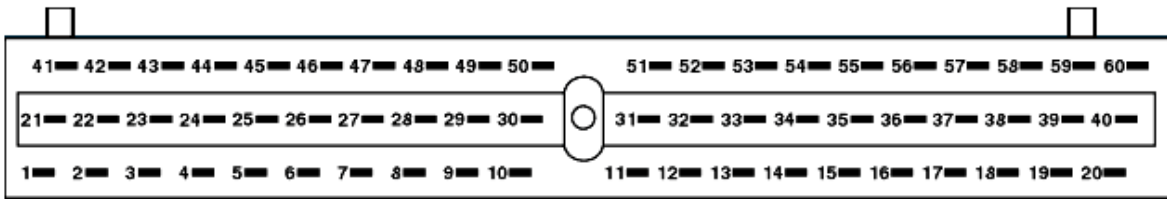
**Ford Puma 1.7 EEC-V**

**Uwagi:** Proszę zastosować ustawienia *Konfiguracja #3*.



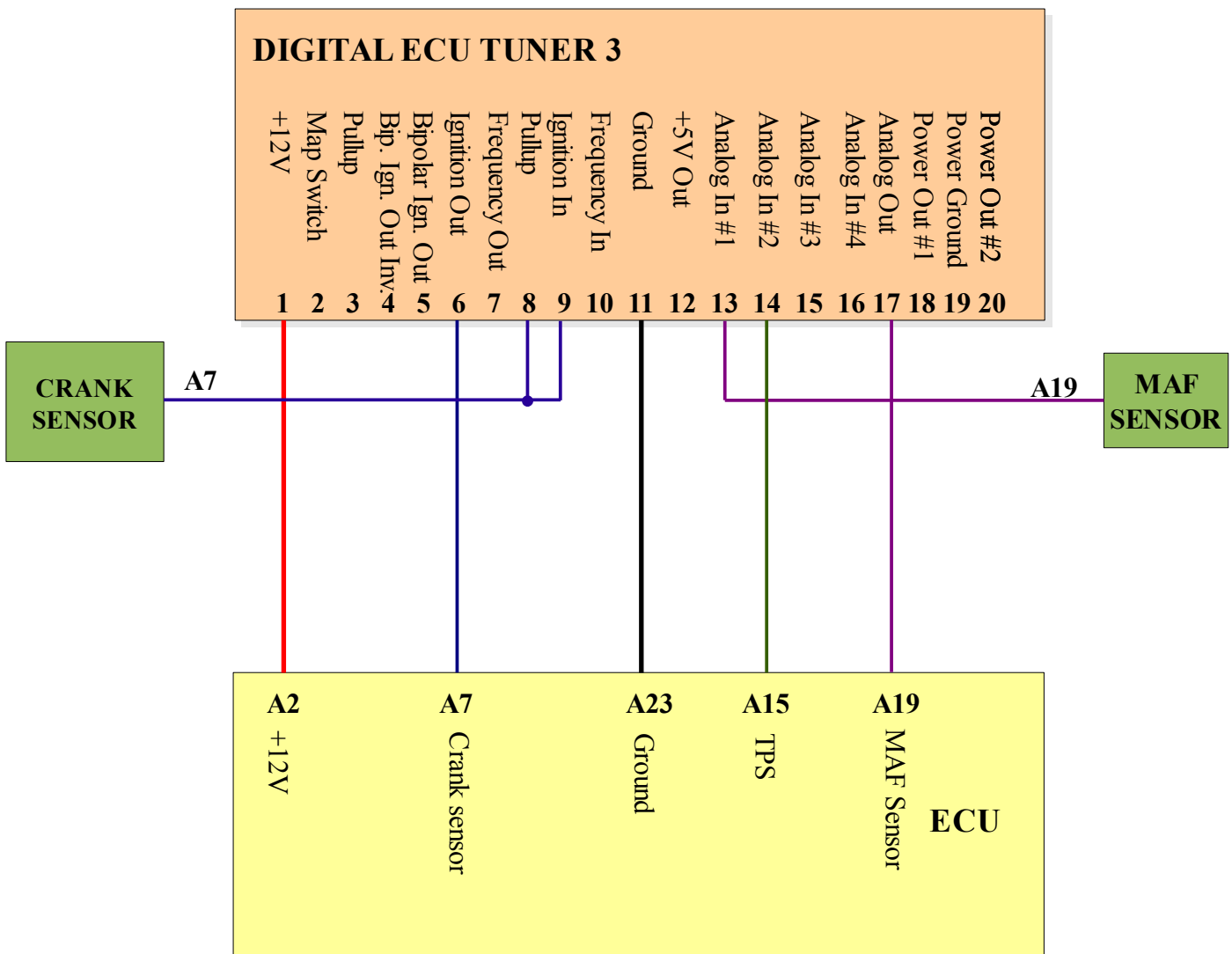
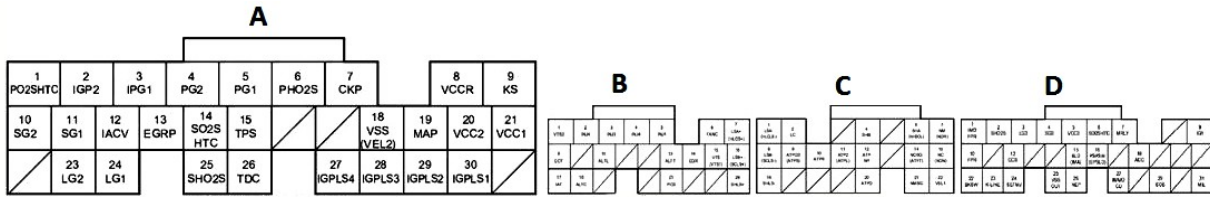
**Ford Escort RS2000 (N7A)**

**Uwagi:** Proszę zastosować ustawienia *Konfiguracja #8*.



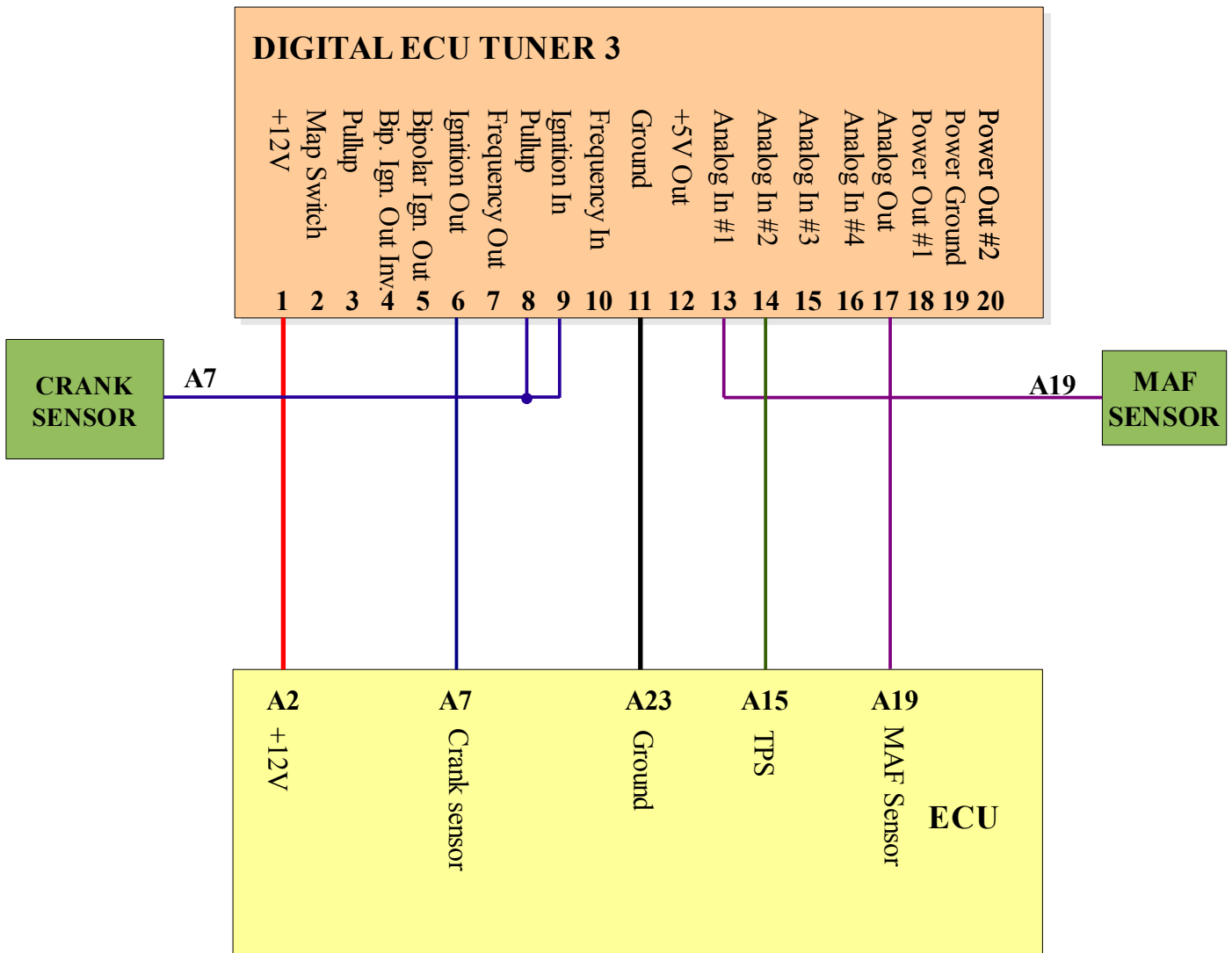
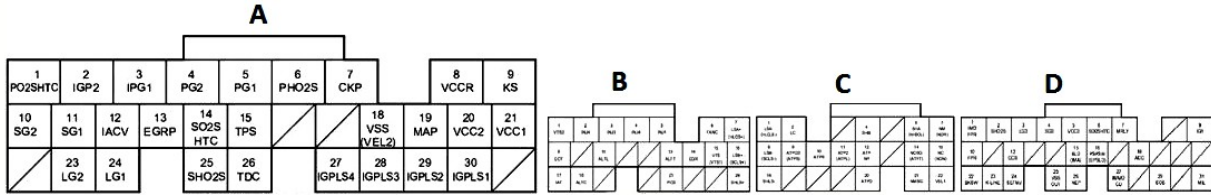
**Honda Civic 1.7 D17A (2001-2006)**

Uwagi: Proszę zastosować ustawienia *Konfiguracja #12*.



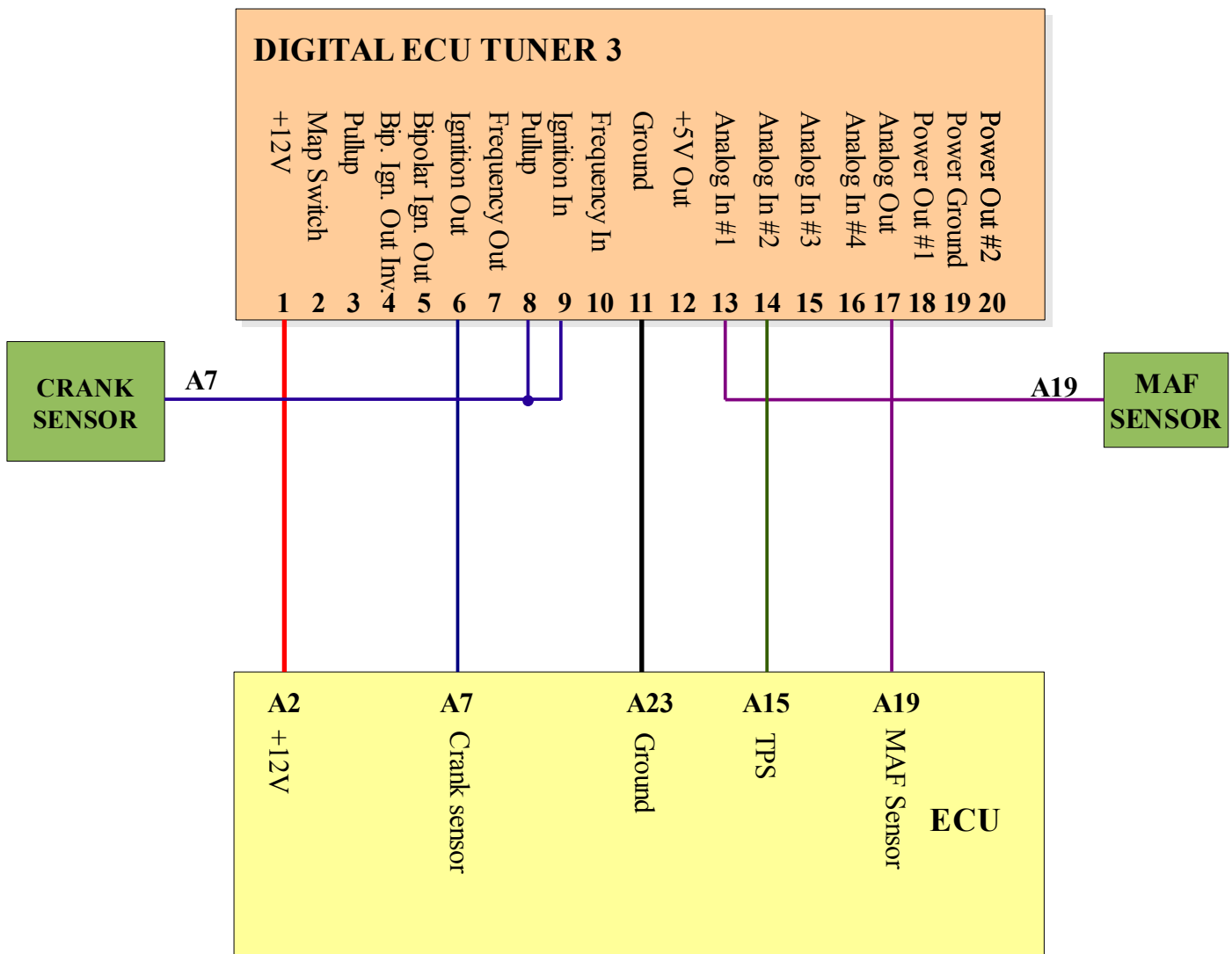
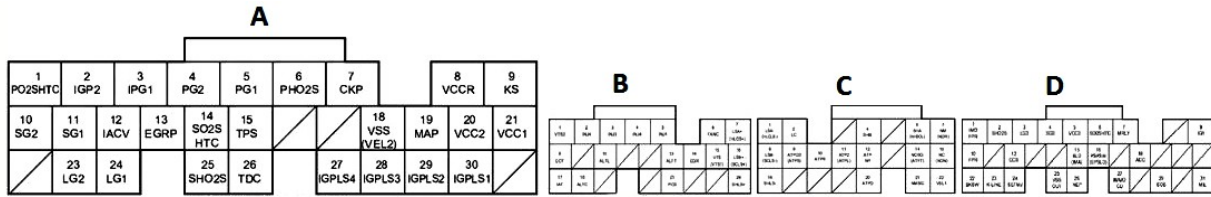
**Honda Civic 1.6 D16V (2001-2006)**

Uwagi: Proszę zastosować ustawienia *Konfiguracja #12*.



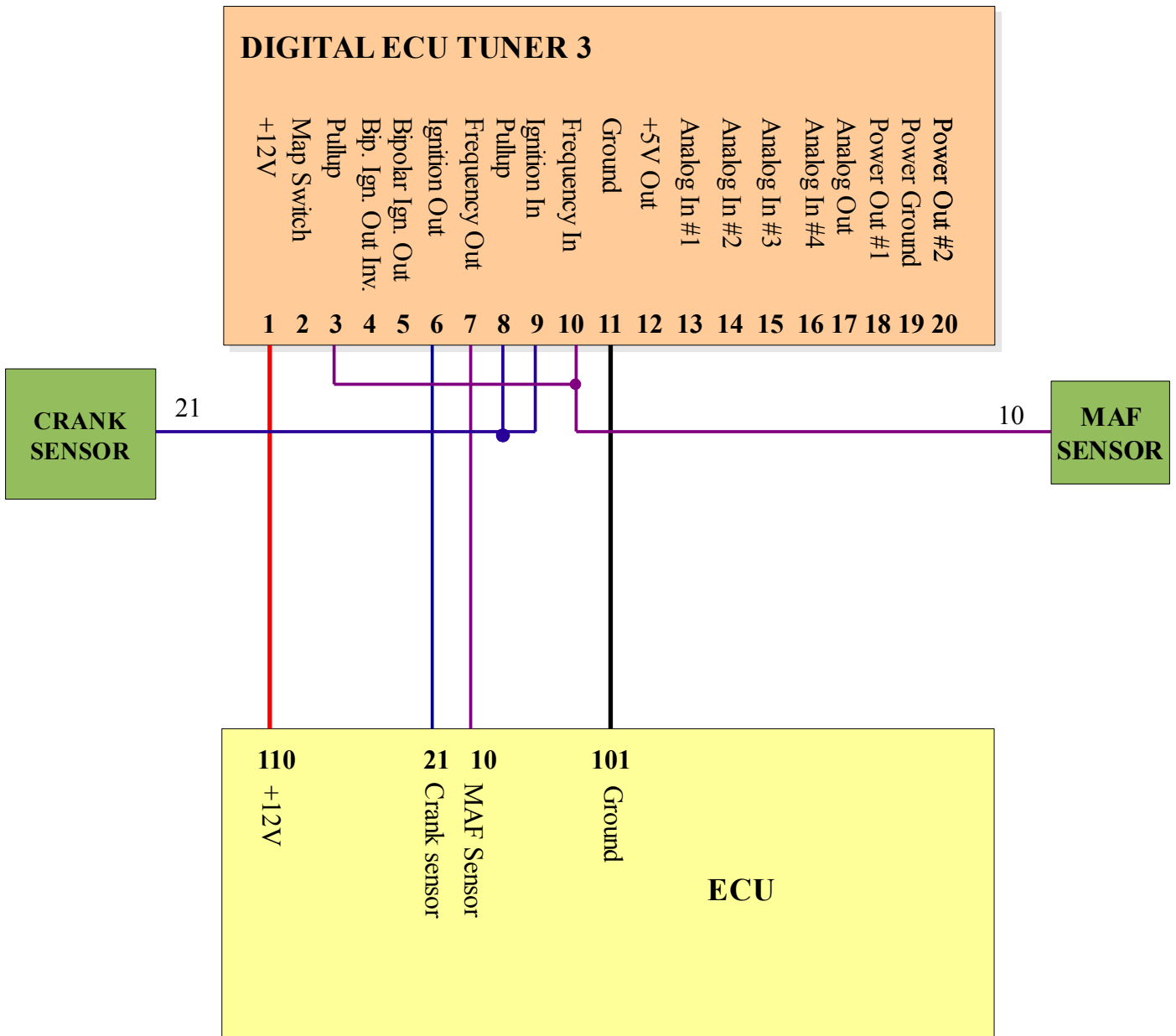
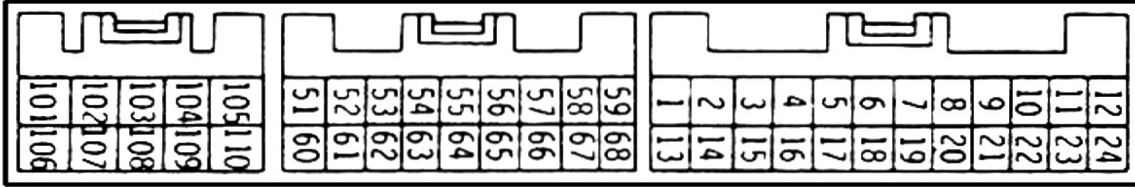
## Honda Civic 1.4 D14Z (2001-2006)

Uwagi: Proszę zastosować ustawienia *Konfiguracja #12*.



**Mitsubishi Eclipse GSX 1G**

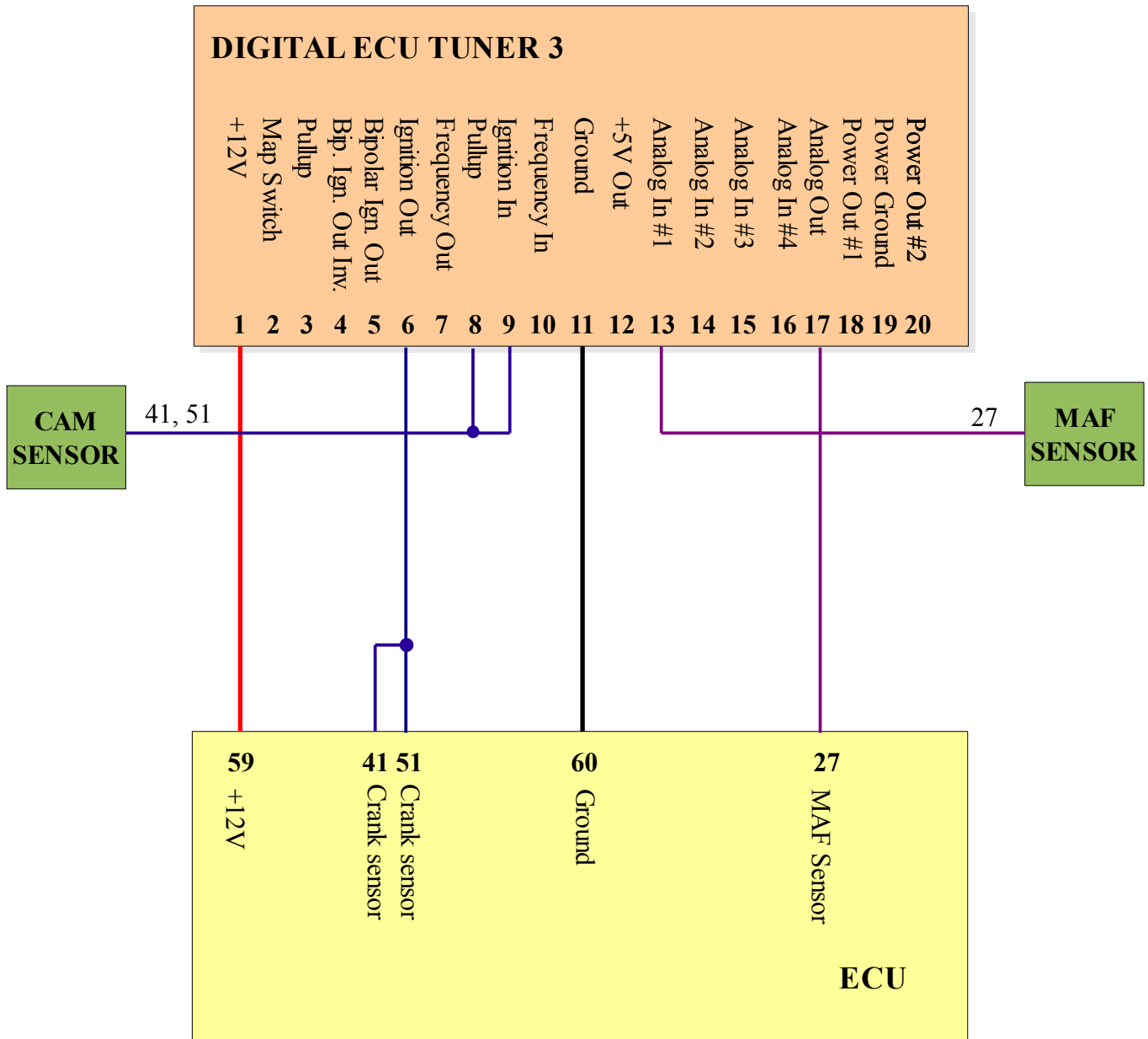
**Uwagi:** Proszę zastosować ustawienia *Konfiguracja #6*.



**Nissan 200SX S13 CA18DET**

**Uwagi:** Proszę zastosować ustawienia *Konfiguracja #7*.

101	102	103	104	105	106	107	108	1	2	3	4	5	6	7	8	9	10	21	22	23	24	25	26	27	28	29	30	41	42	43	44	45	46	47	48	49	50
109	110	111	112	113	114	115	116	11	12	13	14	15	16	17	18	19	20	31	32	33	34	35	36	37	38	39	40	51	52	53	54	55	56	57	58	59	60

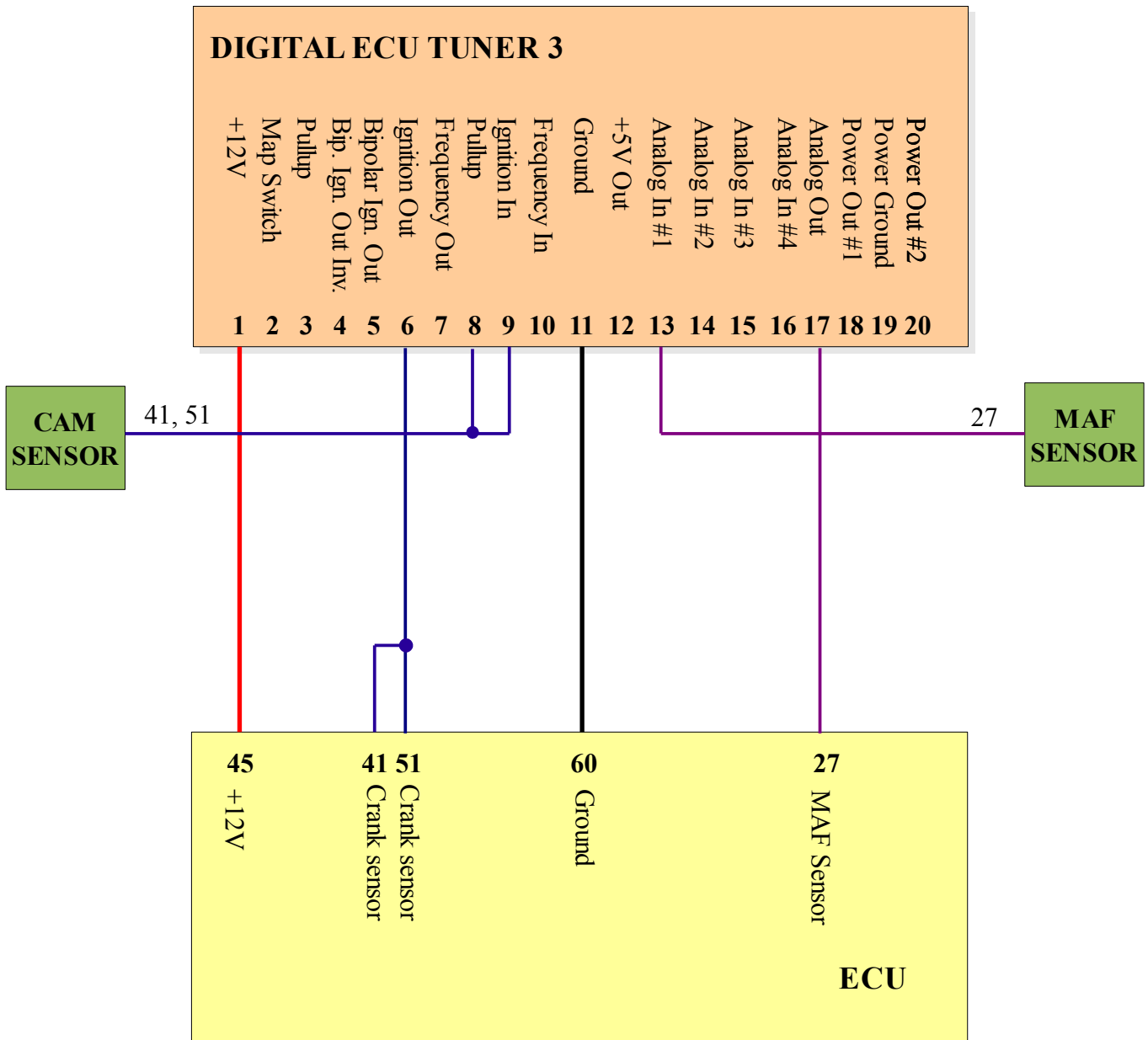


**Comment:** Wires from pin 41 and 51 are connected together about 30cm from ECU. Connect DET 3 ignition input / output to the common wire of these pins. It is suggested to use external map sensor as deflection.

**Nissan 200SX S14 SR20DET**

**Uwagi:** Proszę zastosować ustawienia *Konfiguracja #7*.

101	102	103	104	105	106	107	108	1	2	3	4	5	6	7	8	9	10	21	22	23	24	25	26	27	28	29	30	41	42	43	44	45	46	47	48	49	50
109	110	111	112	113	114	115	116	11	12	13	14	15	16	17	18	19	20	31	32	33	34	35	36	37	38	39	40	51	52	53	54	55	56	57	58	59	60



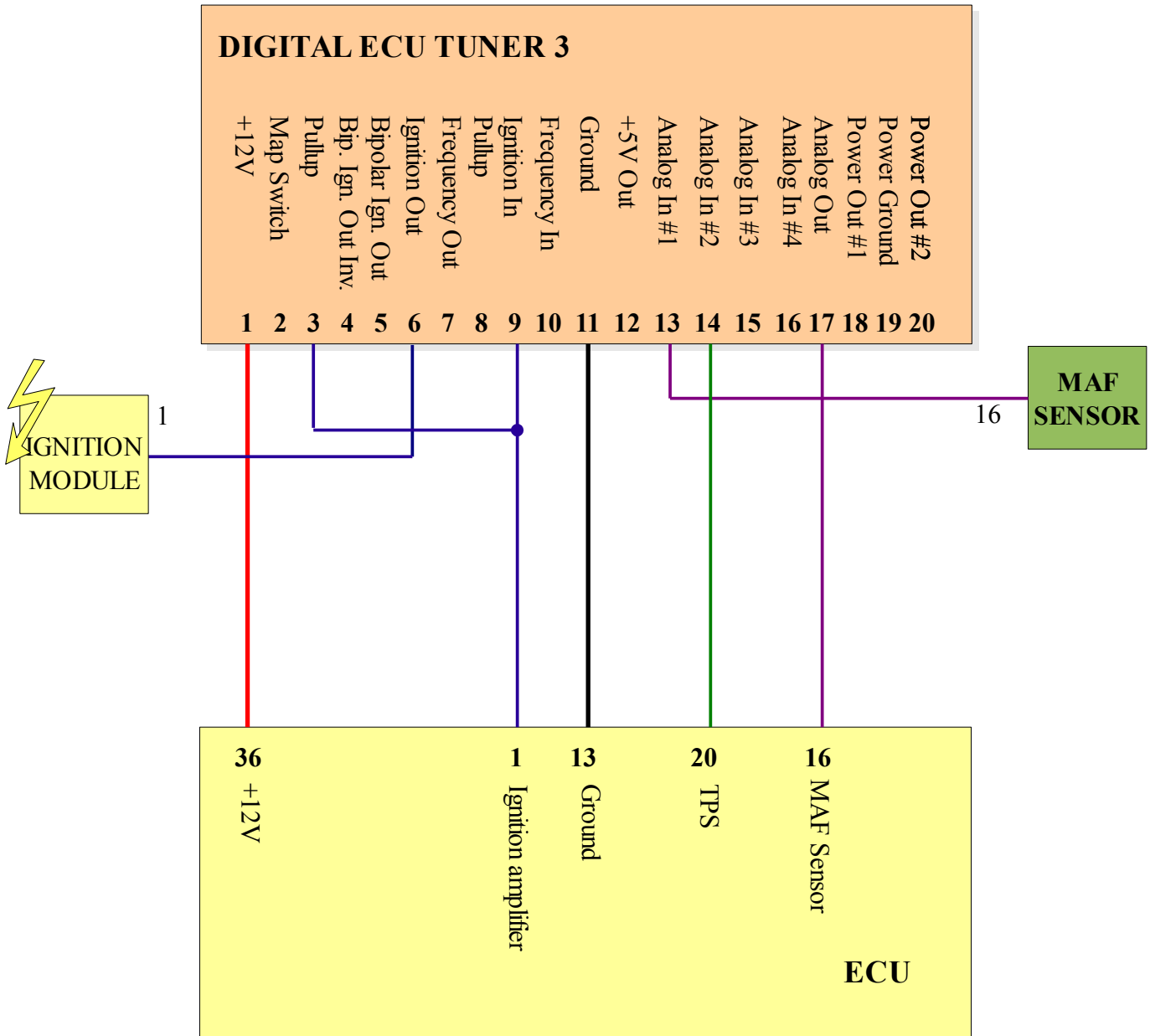
**Comment:** Wires from pin 41 and 51 are connected together about 30cm from ECU. Connect DET 3 ignition input / output to the common wire of these pins. It is suggested to use external map sensor as deflection



**Nissan Primera P11, 2.0 SR20DE**

**Uwagi:** Proszę zastosować ustawienia *Konfiguracja #11*.

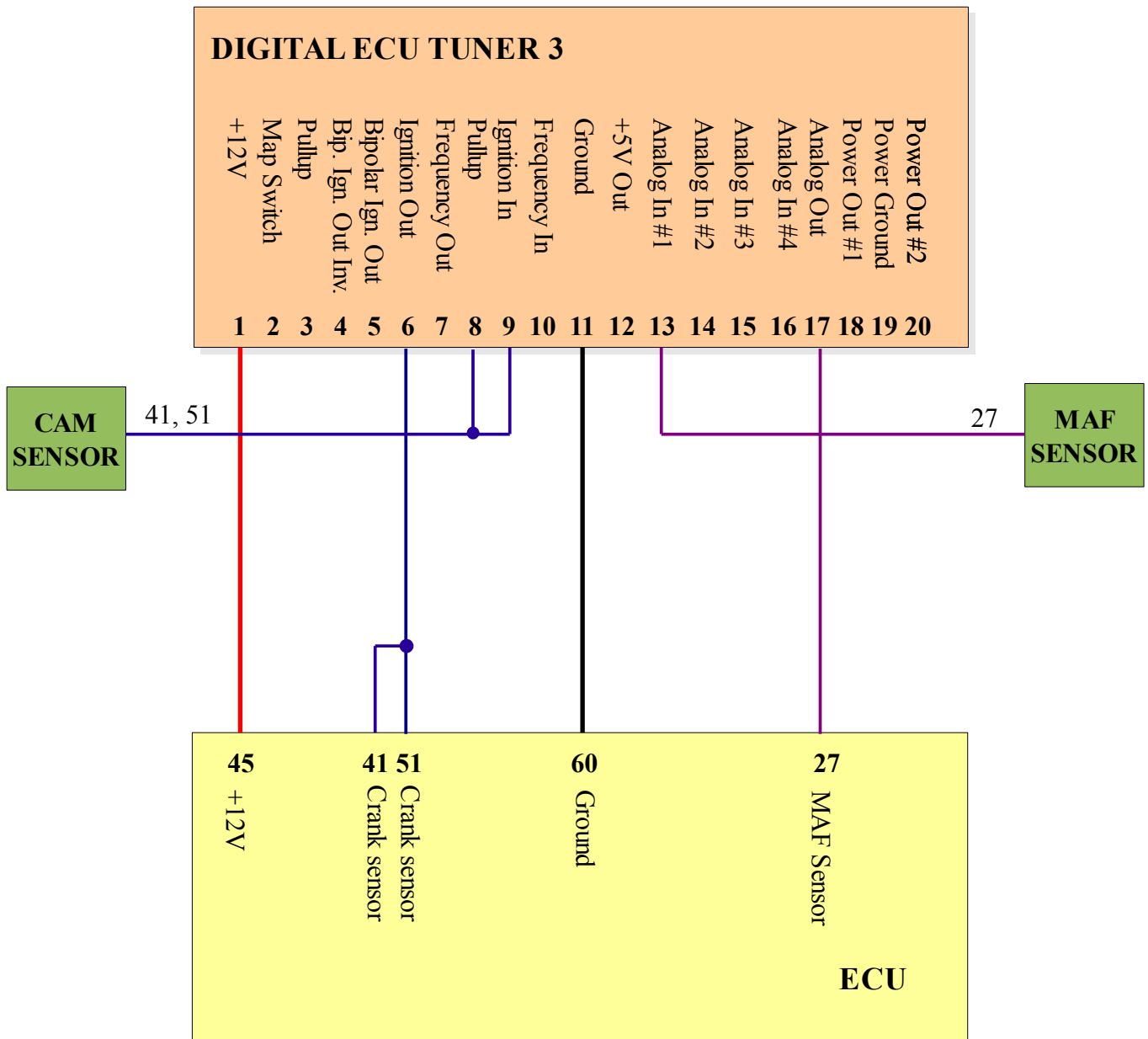
39	38	37	36	35	34	33	32	31	22	21	20	19	18	17	16	15	7	6	5	4	3	2	1	108	107	106	105	104	103	102	101
48	47	46	45	44	43	42	41	40	30	29	28	27	26	25	24	23	14	13	12	11	10	9	8	116	115	114	113	112	111	110	109



## Nissan Skyline R33 RB25DET

**Uwagi:** Proszę zastosować ustawienia *Konfiguracja #7*.

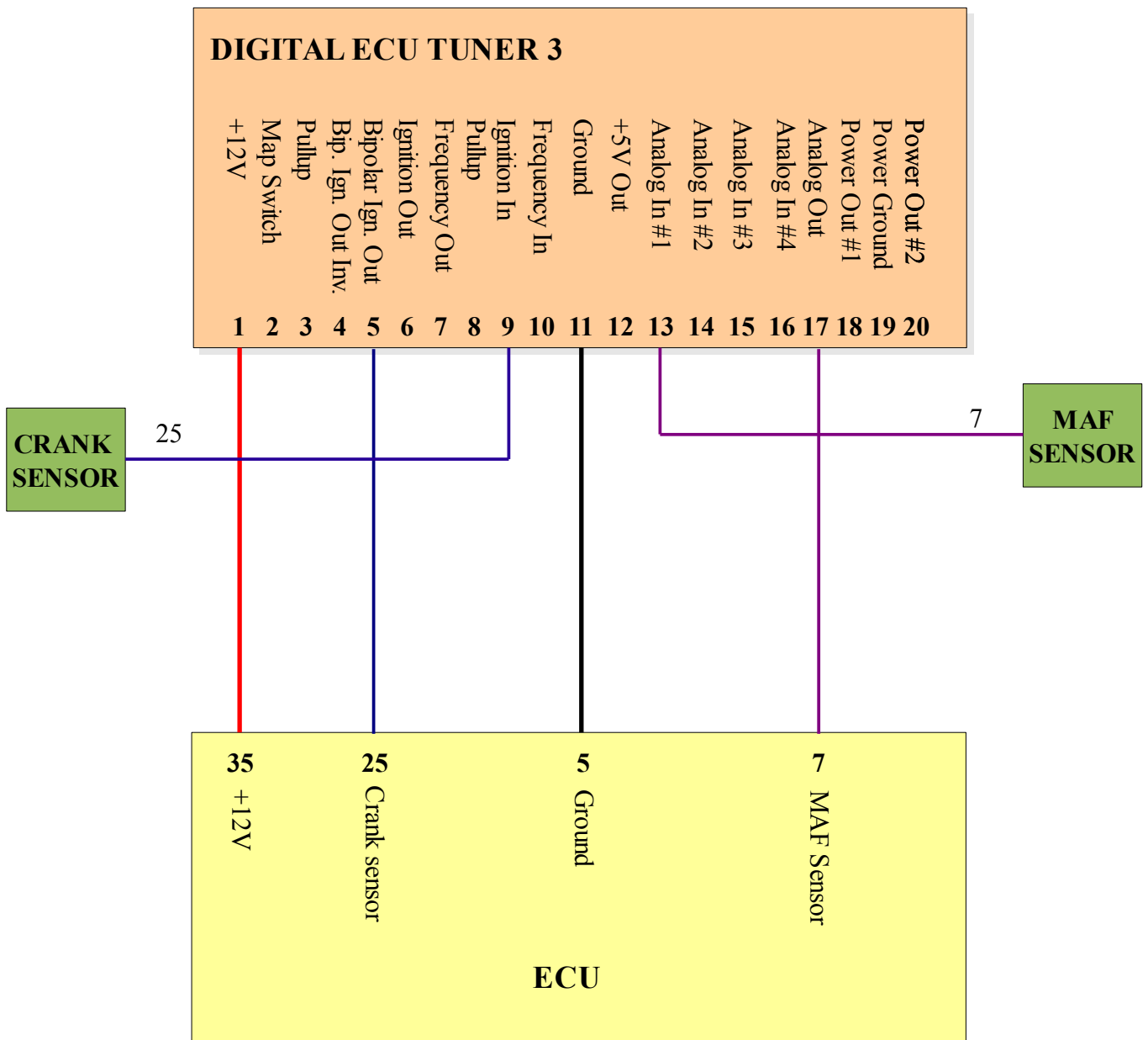
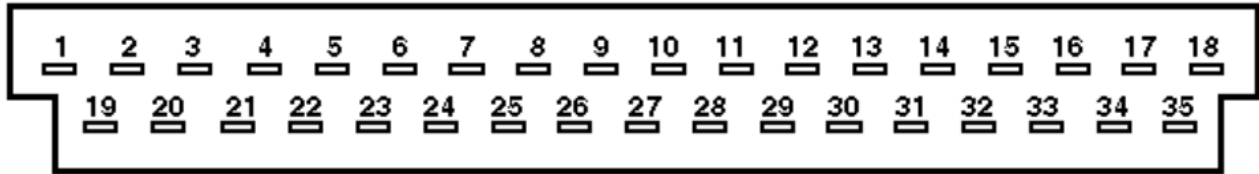
101	102	103	104	105	106	107	108	1	2	3	4	5	6	7	8	9	10	21	22	23	24	25	26	27	28	29	30	41	42	43	44	45	46	47	48	49	50
109	110	111	112	113	114	115	116	11	12	13	14	15	16	17	18	19	20	31	32	33	34	35	36	37	38	39	40	51	52	53	54	55	56	57	58	59	60



**Comment:** Wires from pin 41 and 51 are connected together about 30cm from ECU. Connect DET 3 ignition input / output to the common wire of these pins. It is suggested to use external map sensor as deflection

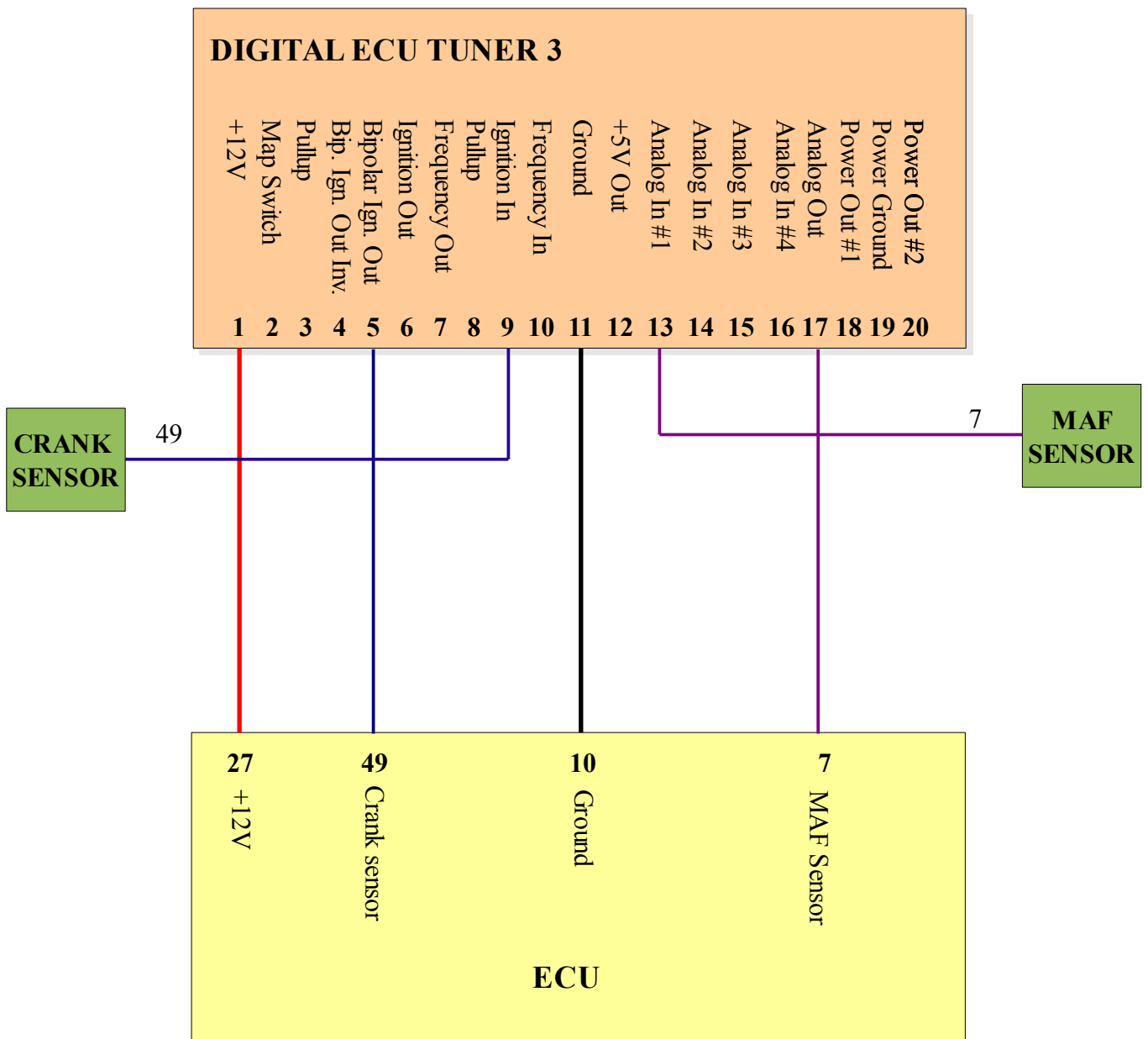
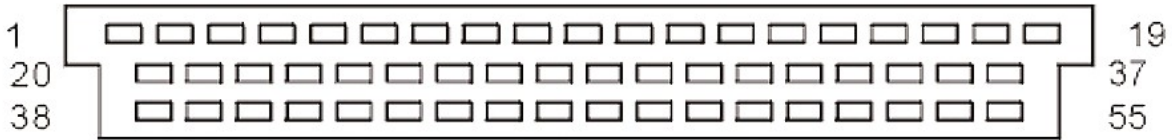
**Opel / Vauxhall C20NE, 20NE, Bosch Motronic ML4.1**

**Uwagi:** Proszę zastosować ustawienia *Konfiguracja #2*.



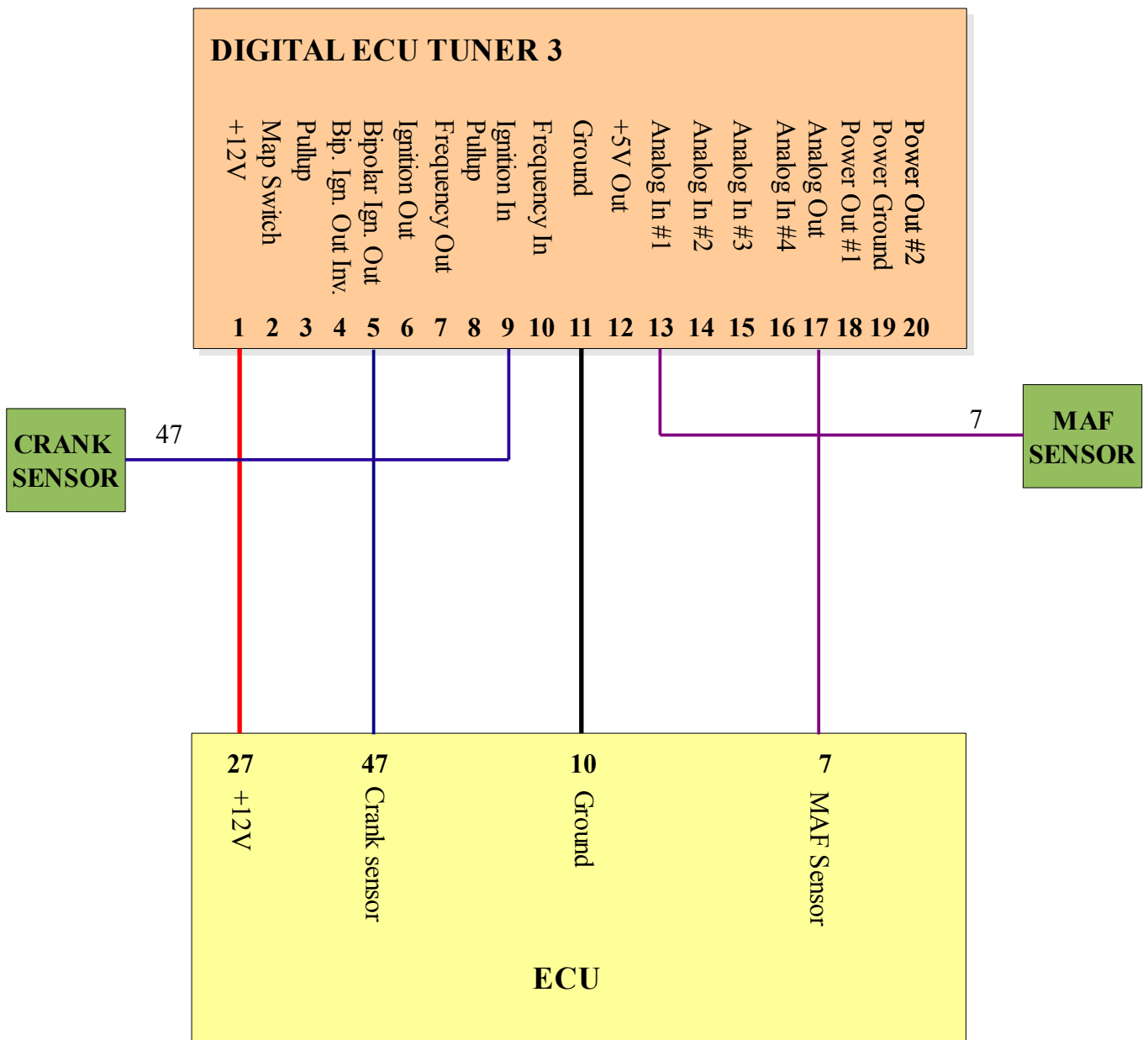
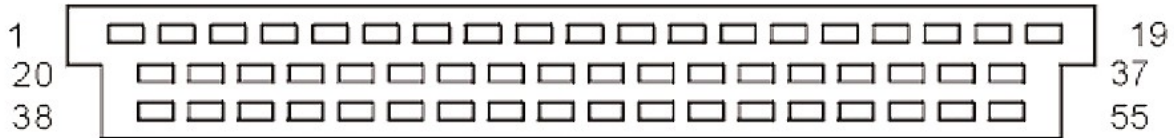
**Opel / Vauxhall C20NE, 20NE, Bosch Motronic 1.5**

**Uwagi:** Proszę zastosować ustawienia *Konfiguracja #2*.



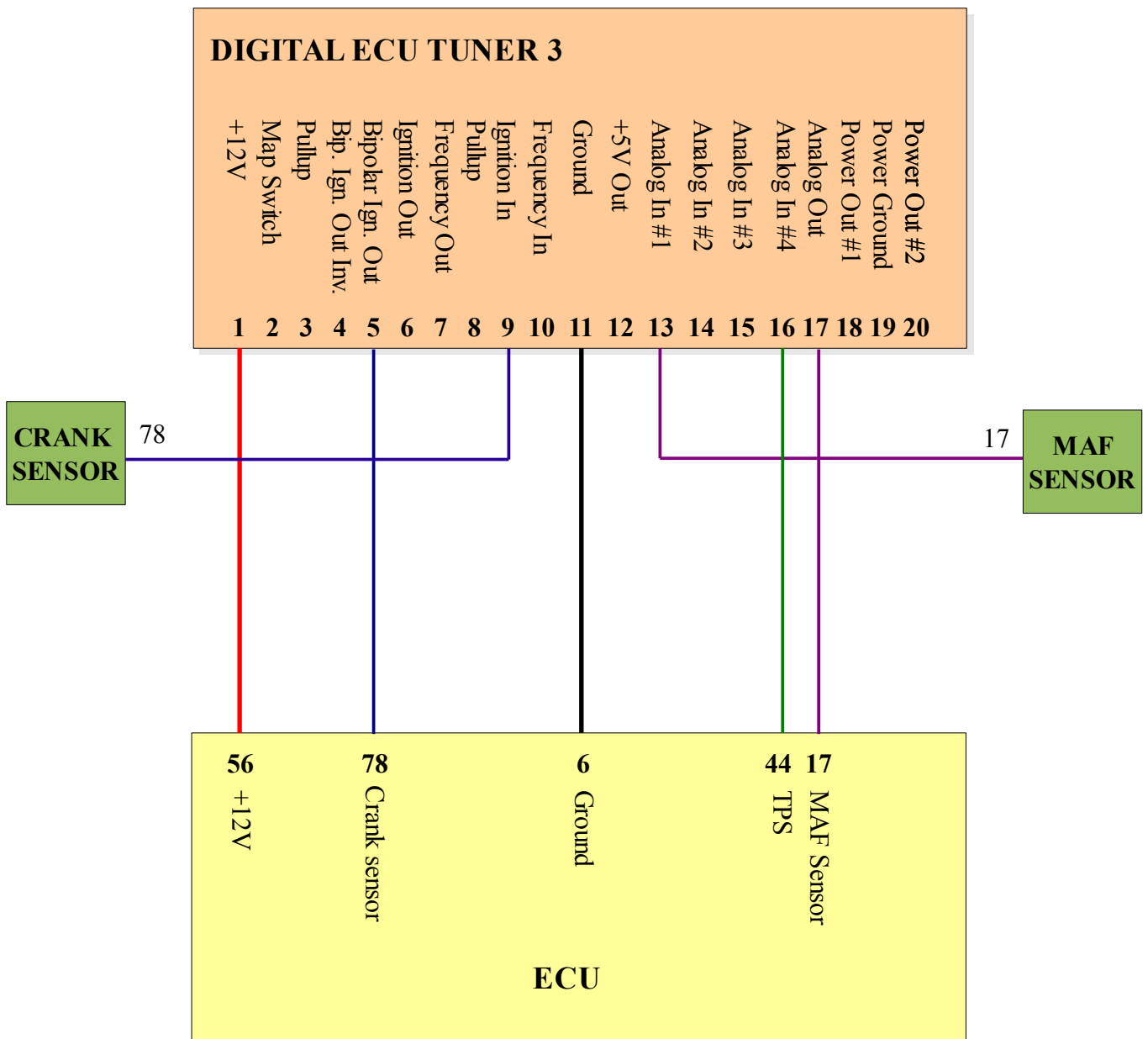
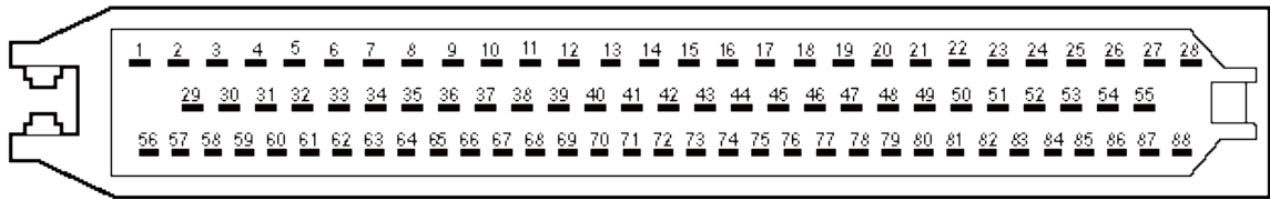
**Opel / Vauxhall C20XE, Bosch Motronic 2.5**

**Uwagi:** Proszę zastosować ustawienia *Konfiguracja #2*.



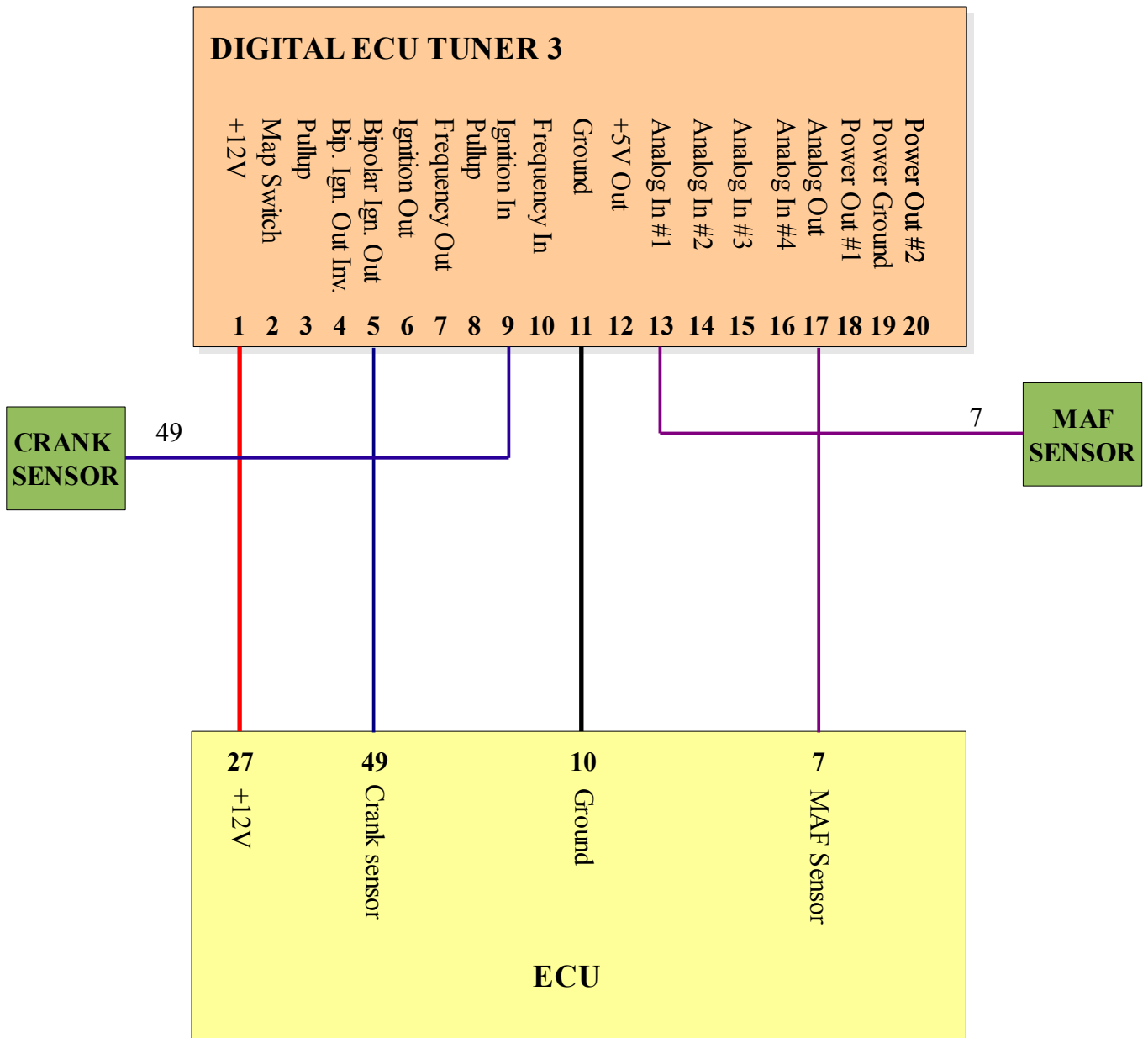
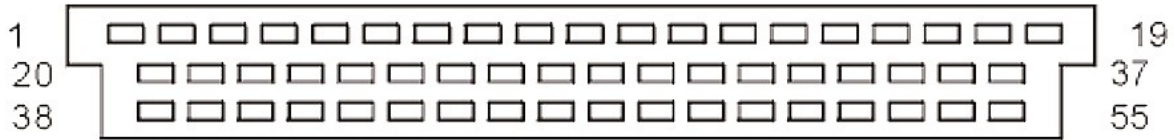
**Opel / Vauxhall X25XE, Bosch Motronic 2.8.3**

**Uwagi:** Proszę zastosować ustawienia *Konfiguracja #1*.



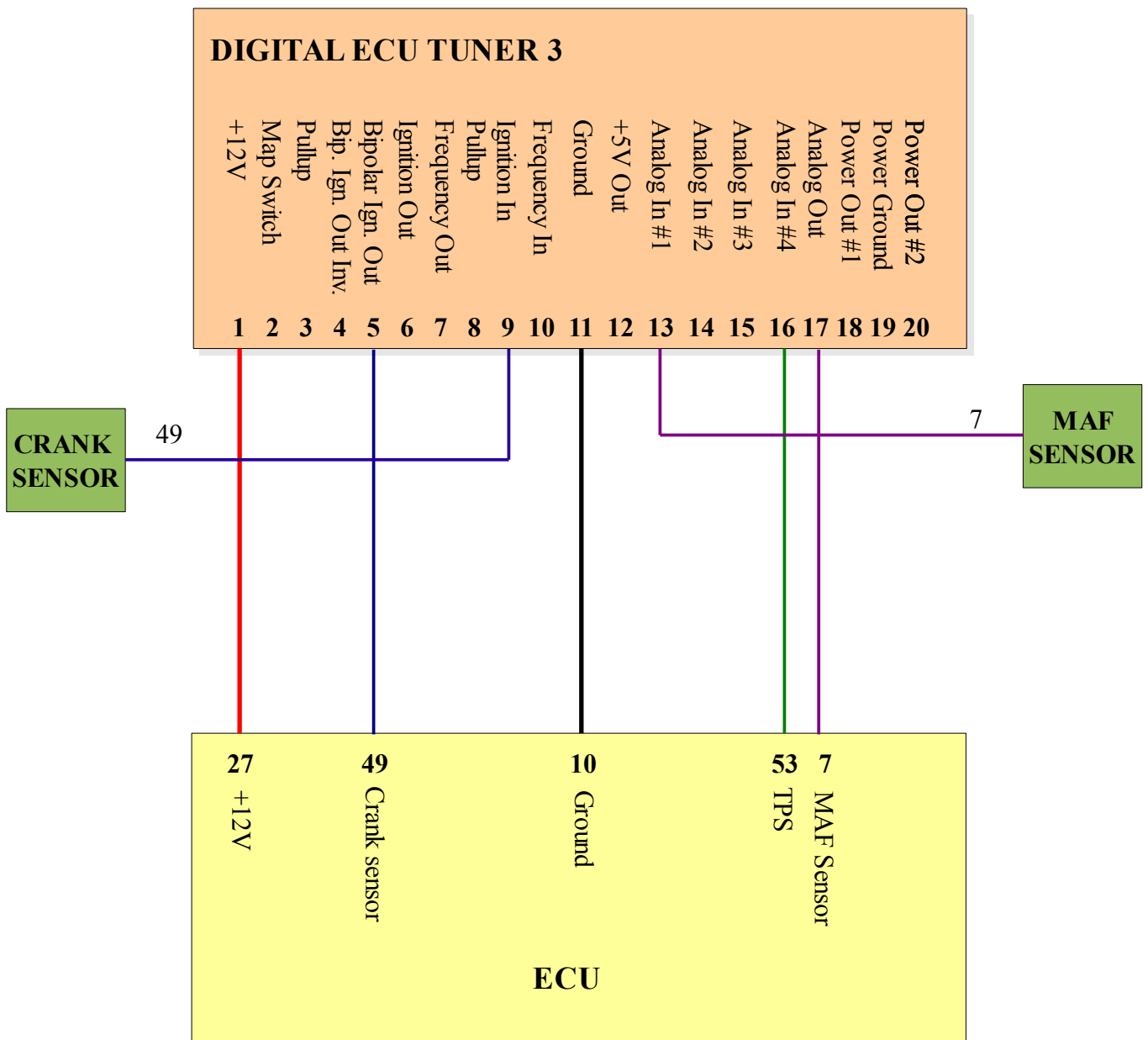
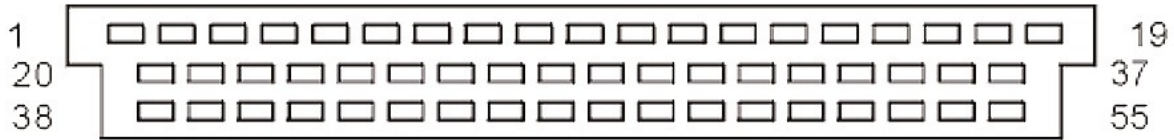
**Opel / Vauxhall C20LET, Bosch Motronic 2.7**

**Uwagi:** Proszę zastosować ustawienia *Konfiguracja #2*.



**Opel / Vauxhall C20XE, C25XE, Bosch Motronic 2.8**

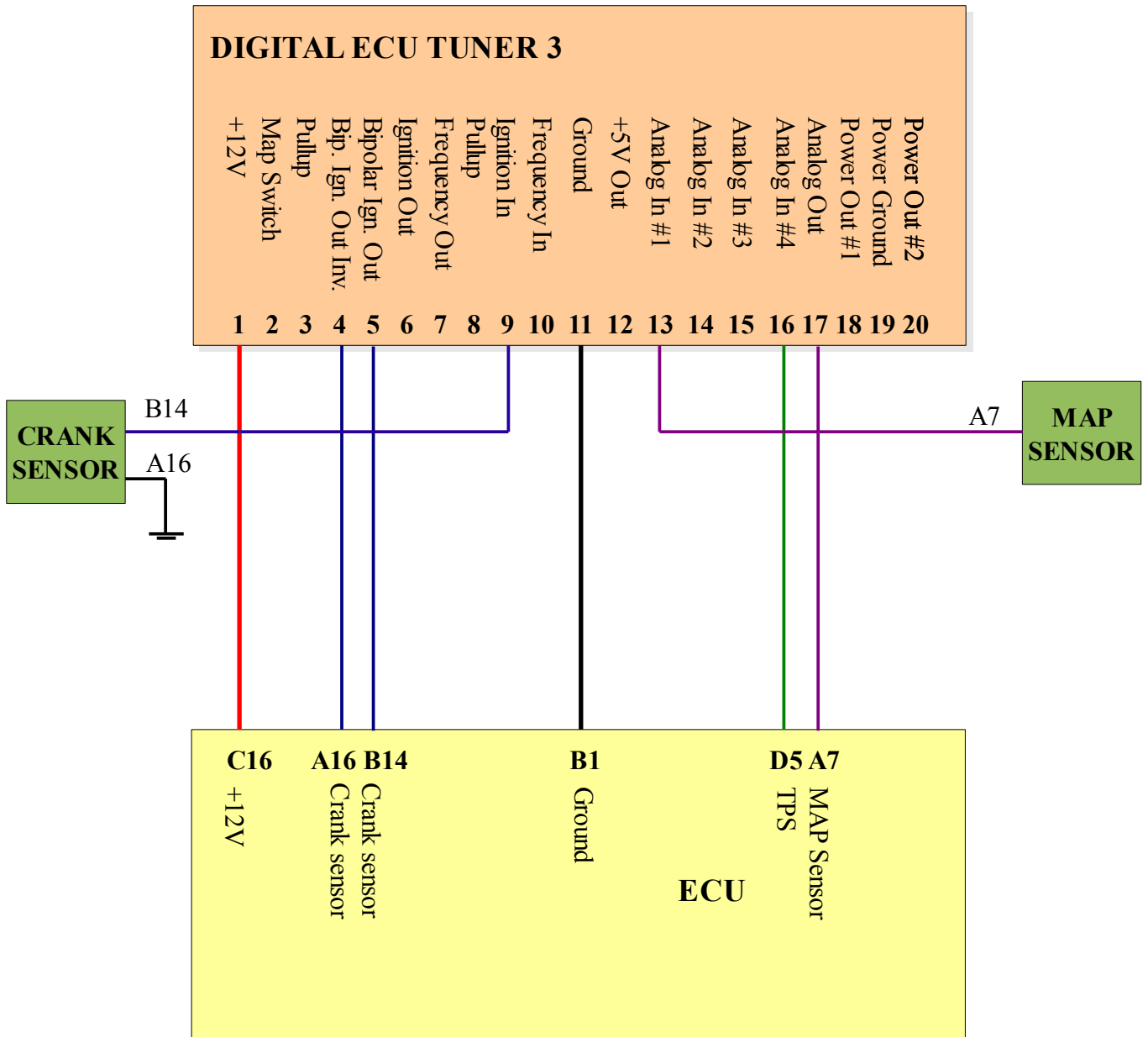
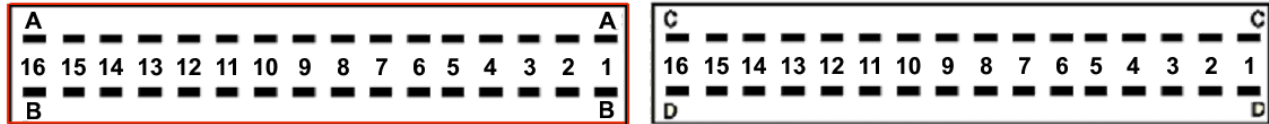
**Uwagi:** Proszę zastosować ustawienia *Konfiguracja #1*





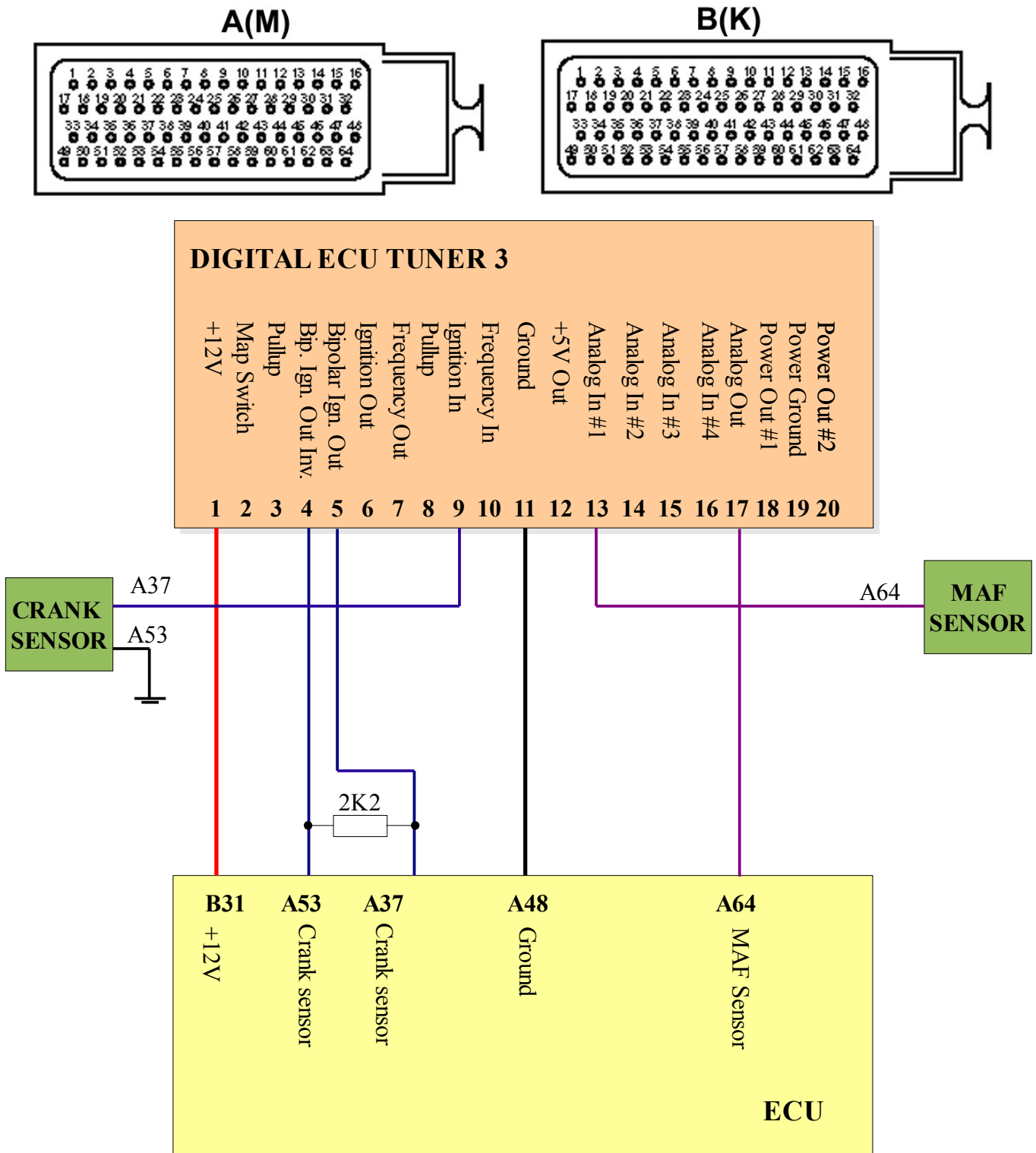
**Opel / Vauxhall Astra 1.6 X16XEL**

**Uwagi:** Proszę zastosować ustawienia *Konfiguracja #1*.



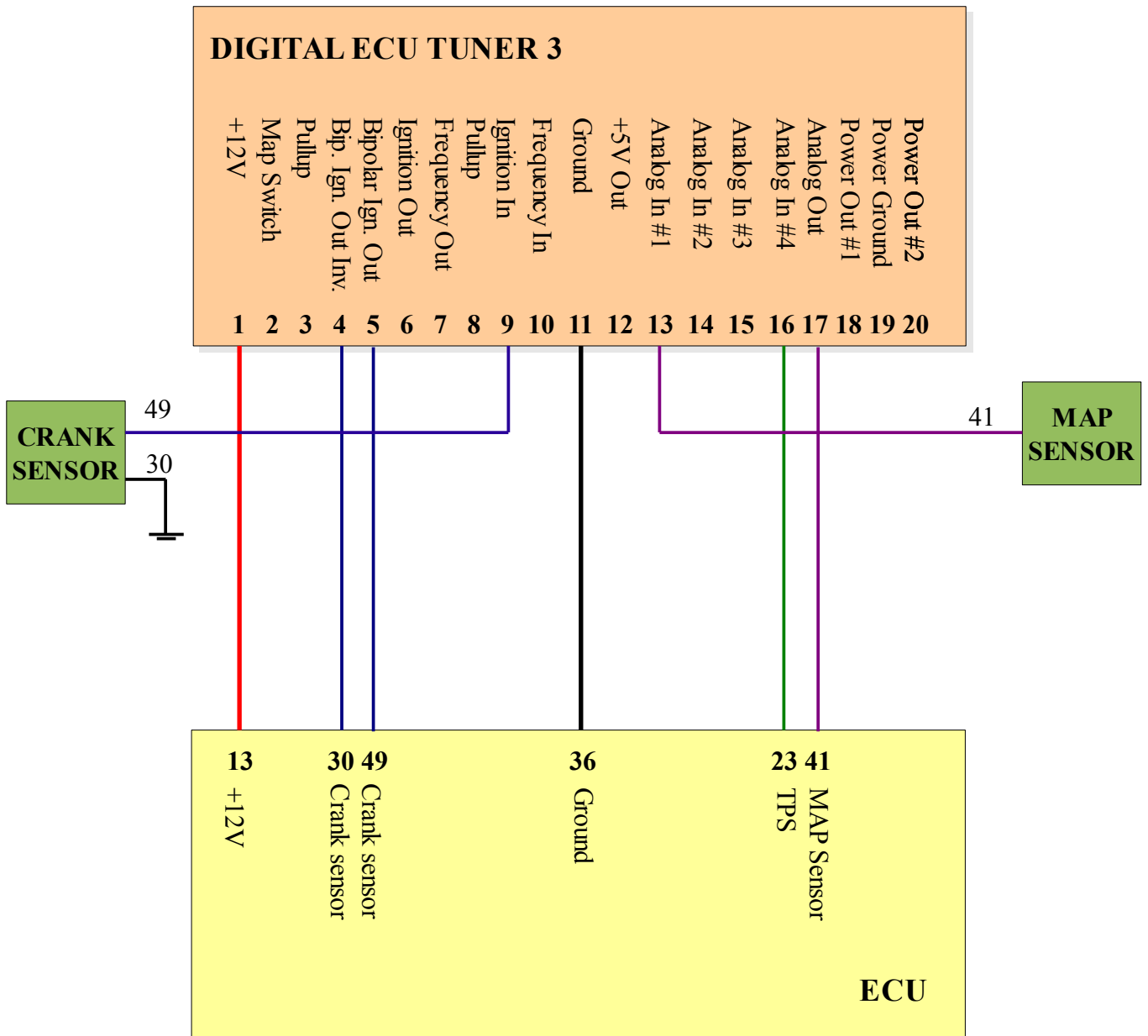
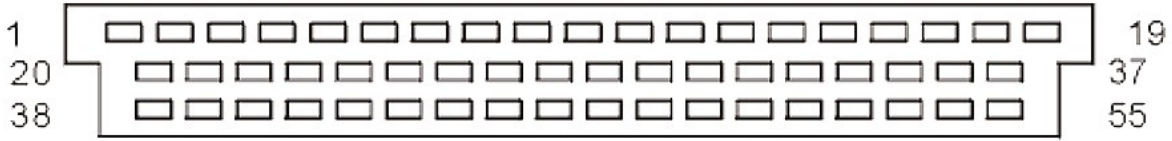
**OPEL VECTRA B X20XE, SIMTEC 70**

Uwagi: Proszę zastosować ustawienia *Konfiguracja #2*.



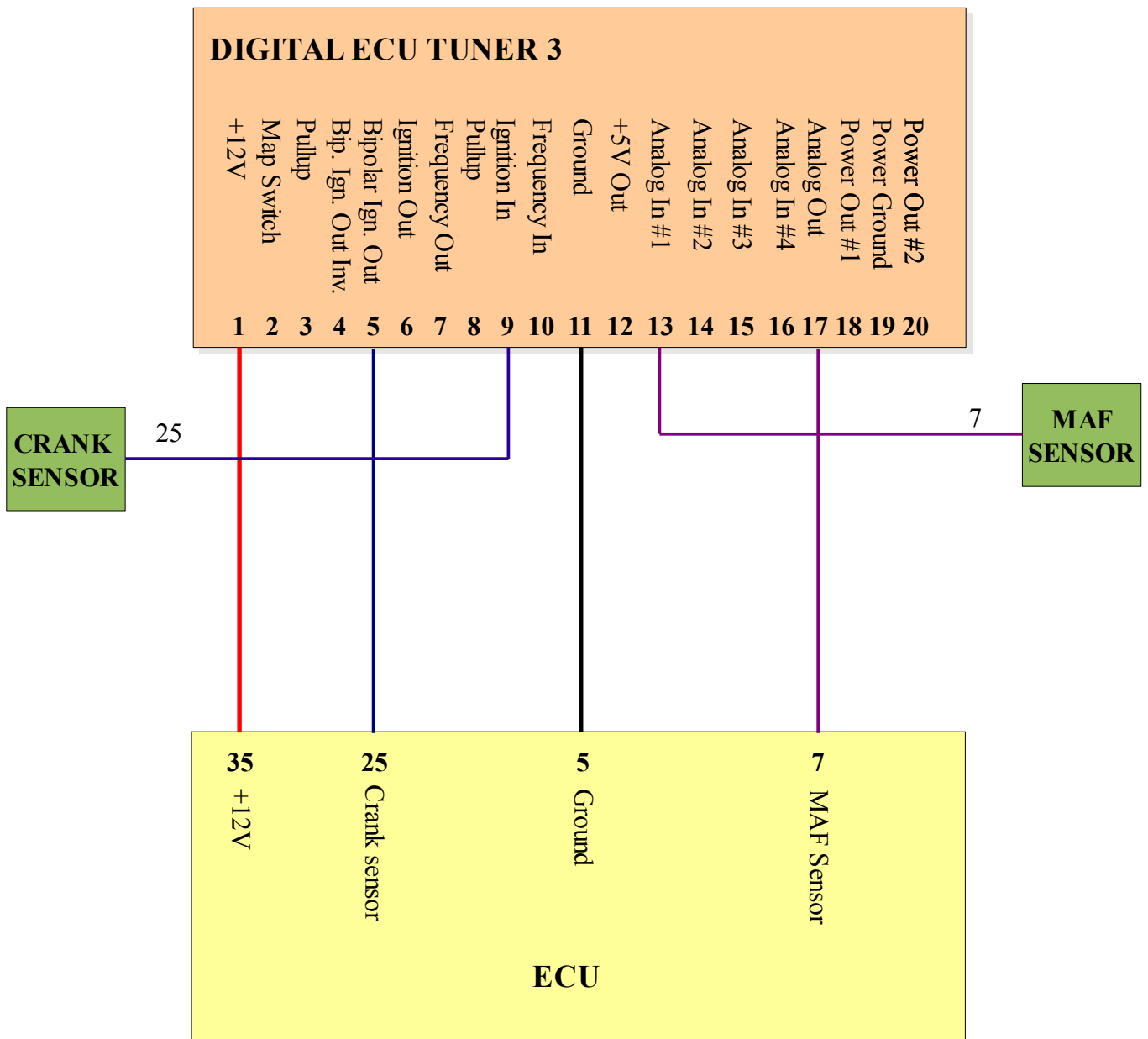
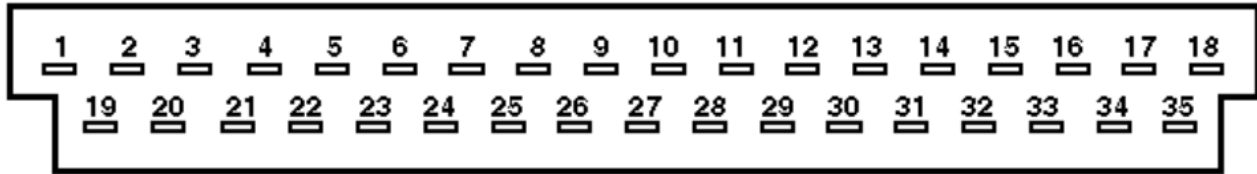
**Peugeot 106 1.6 16V TUJP4 MM 1AP41**

**Uwagi:** Proszę zastosować ustawienia *Konfiguracja #1*.



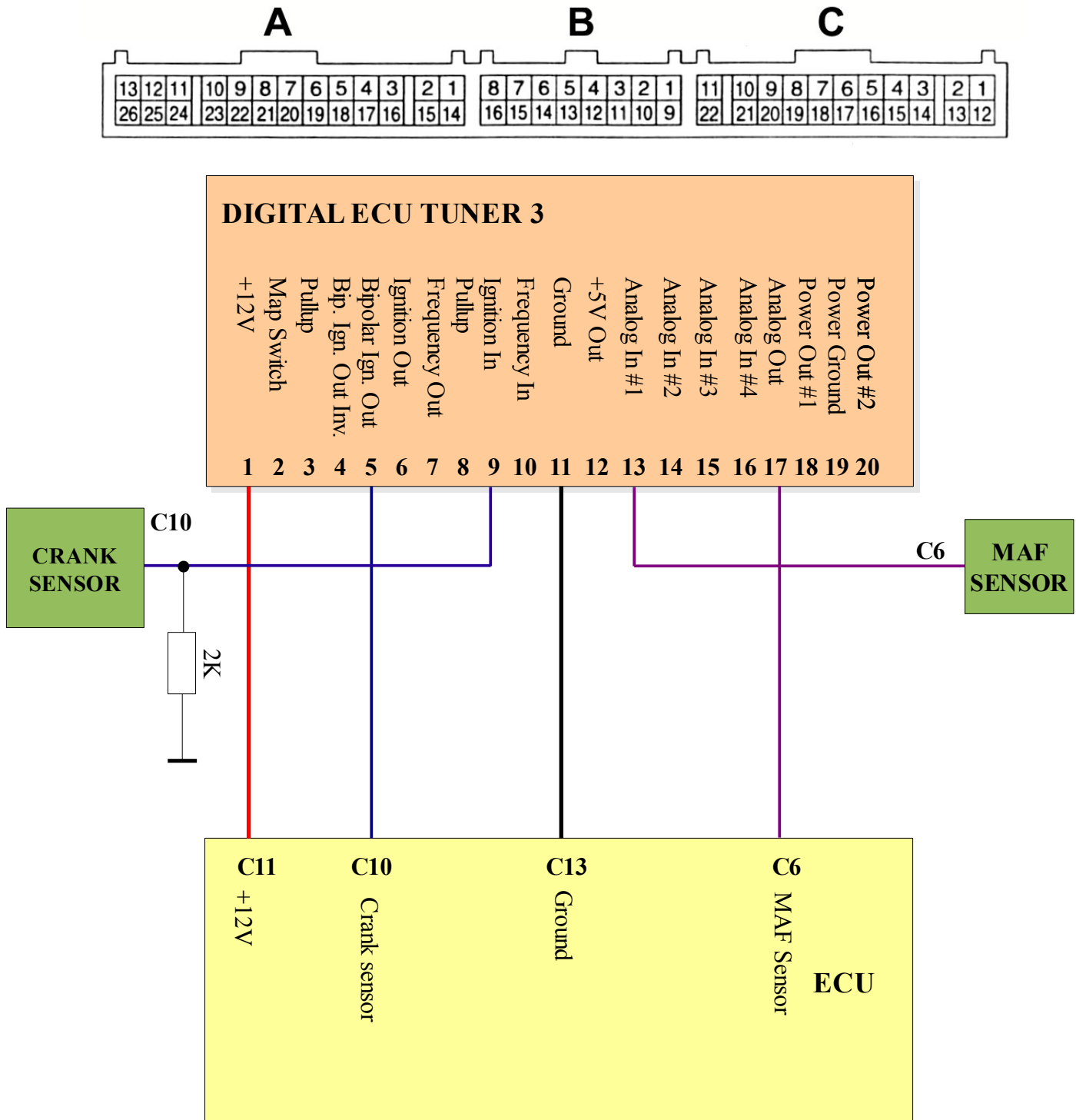
**Peugot 405 1.9 16V Bosch Motronic ML4.1**

**Uwagi:** Proszę zastosować ustawienia *Konfiguracja #2*.



**Subaru GT Turbo EJ20K, EJ20G (without immo)**

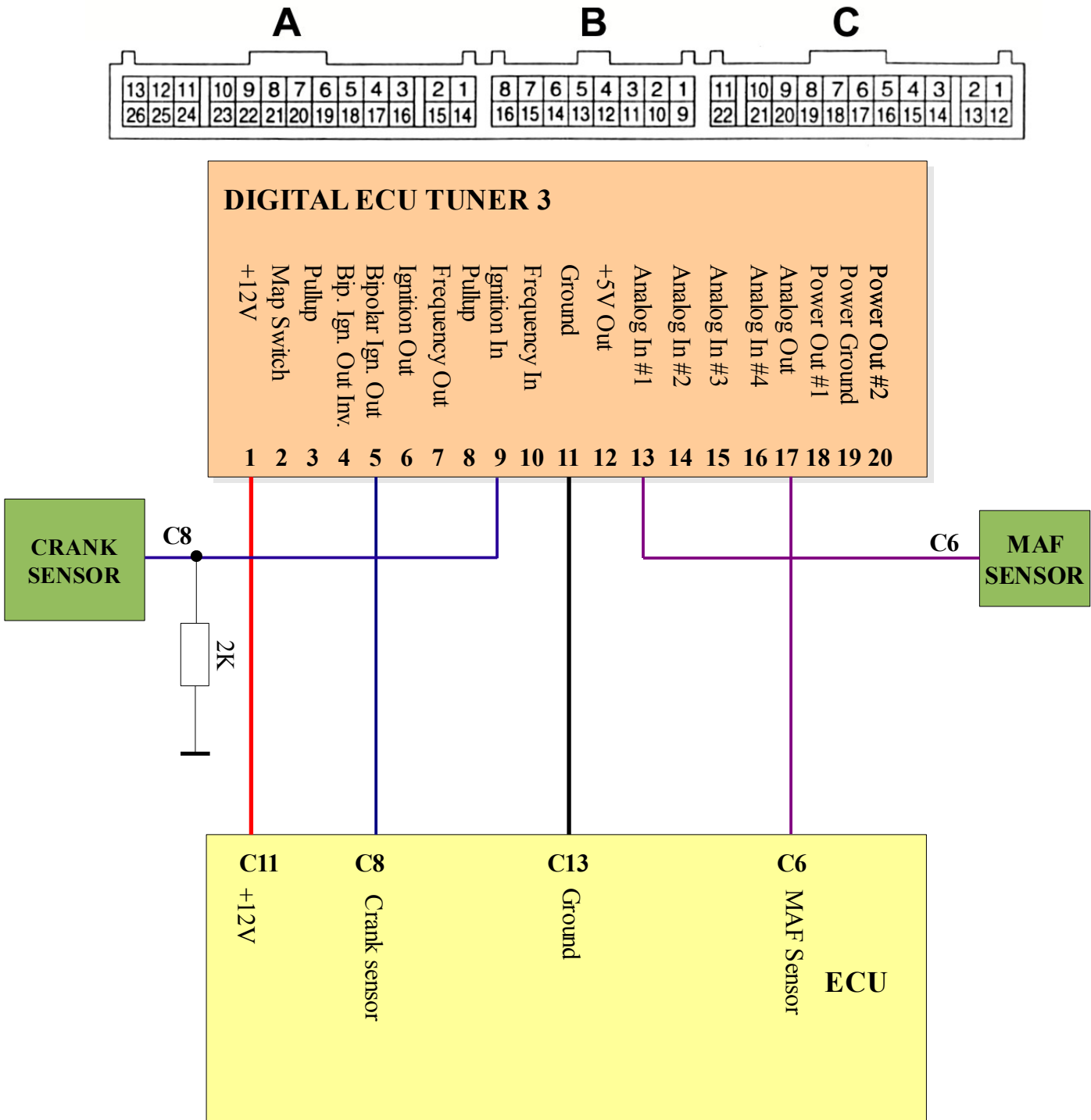
**Uwagi:** Proszę zastosować ustawienia *Konfiguracja #10*.



Sygnal z czujnika położenia wału powinien być ekranowany. Ekran powinien być podłączony do masy tylko po jednej stronie!

**Subaru GT Turbo EJ20K, EJ20G (with immo)**

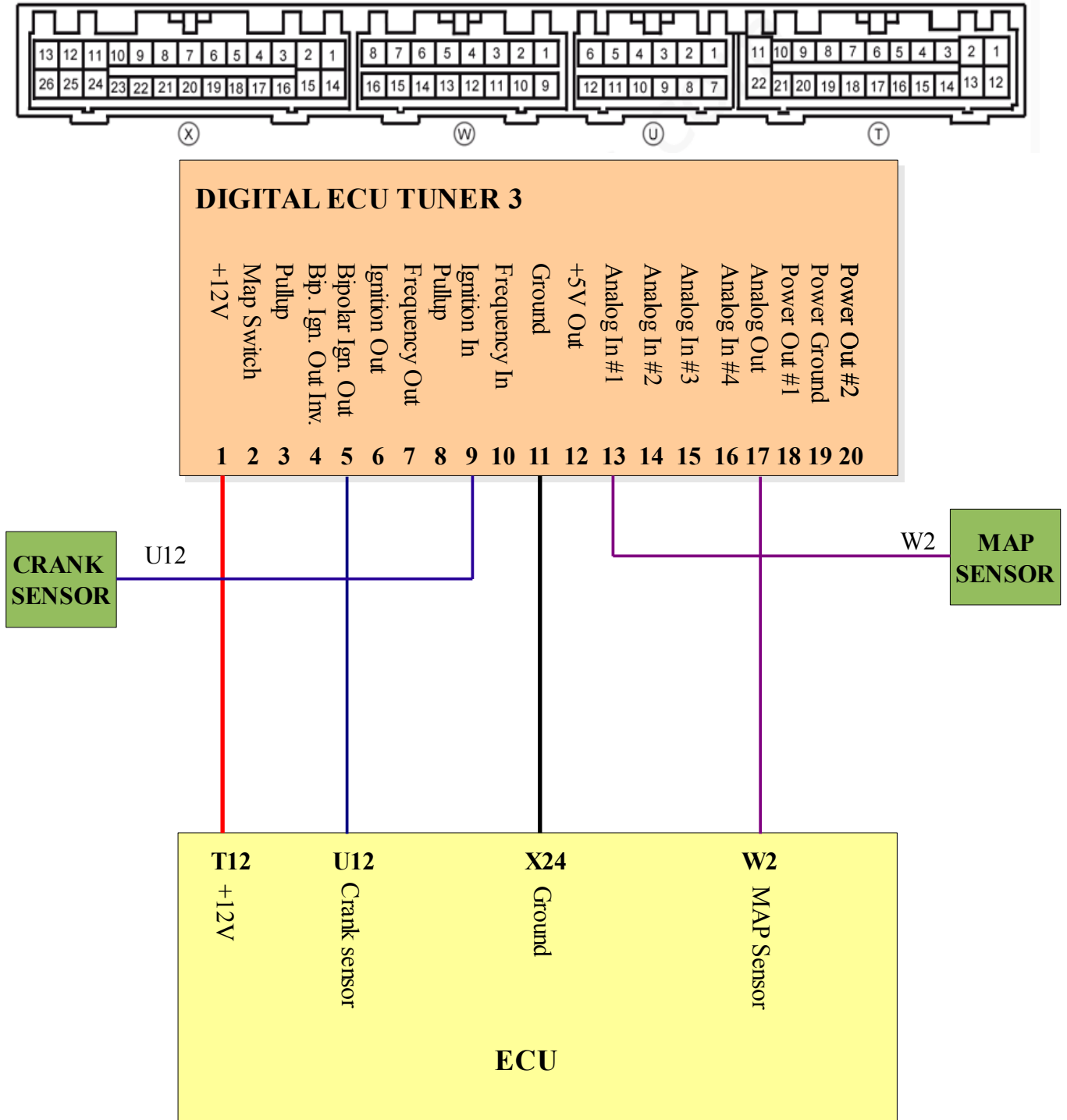
**Uwagi:** Proszę zastosować ustawienia *Konfiguracja #10*



Sygnal z czujnika położenia wału powinien być ekranowany. Ekran powinien być podłączony do masy tylko po jednej stronie!

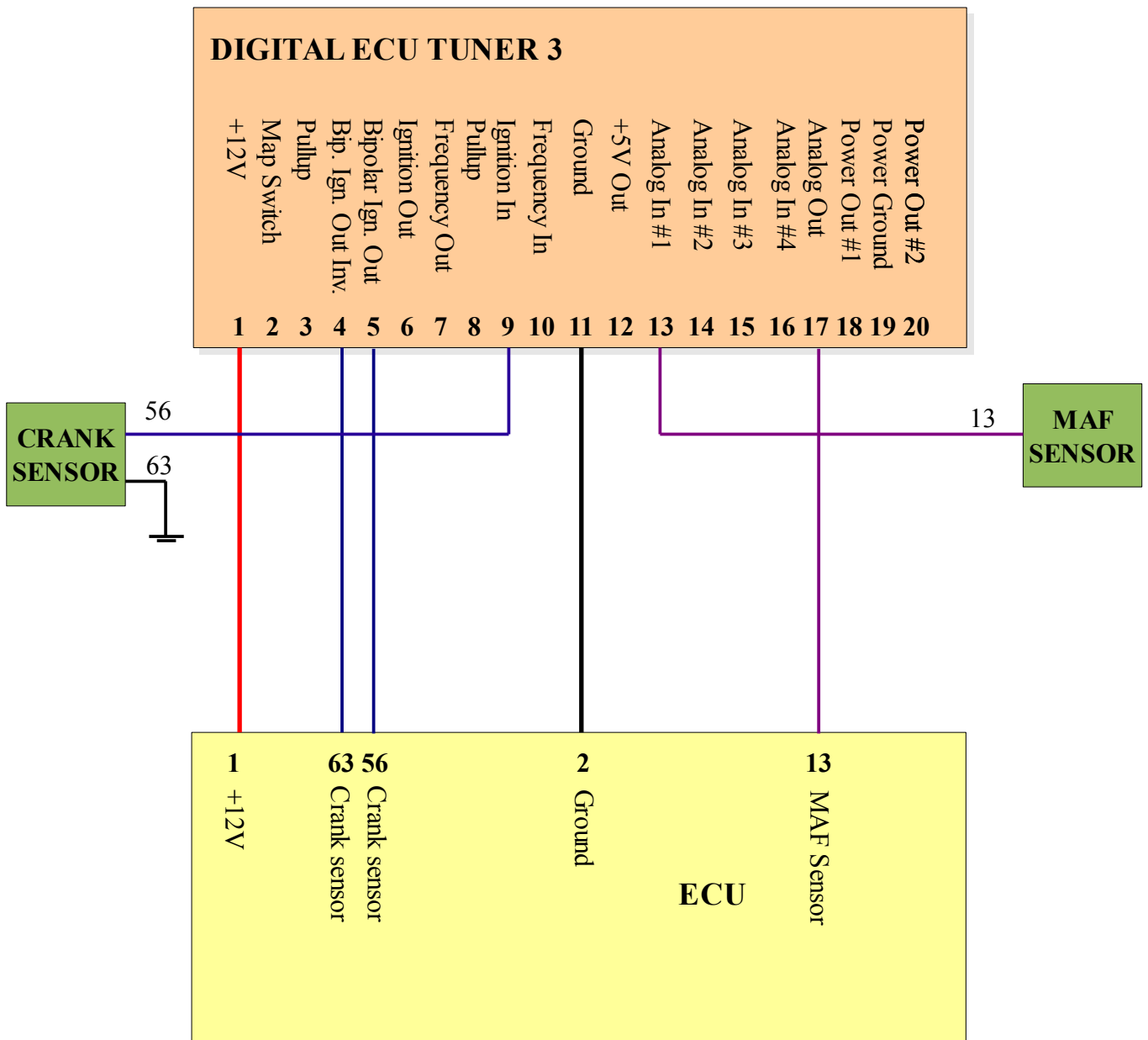
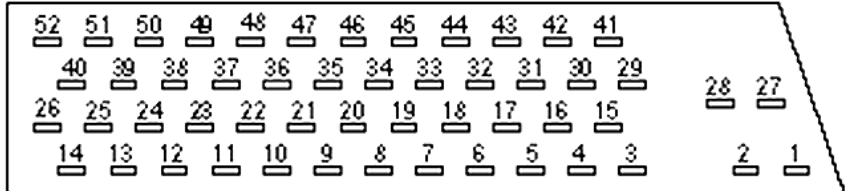
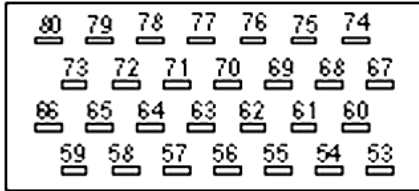
## Toyota Supra, 1JZ-GTE

**Uwagi:** Proszę zastosować ustawienia *Konfiguracja #9*.



**Volkswagen Golf (98-06) 1.8T (AGU) Bosch Motronic 3.8.5**

**Uwagi:** Proszę zastosować ustawienia *Konfiguracja #2*.





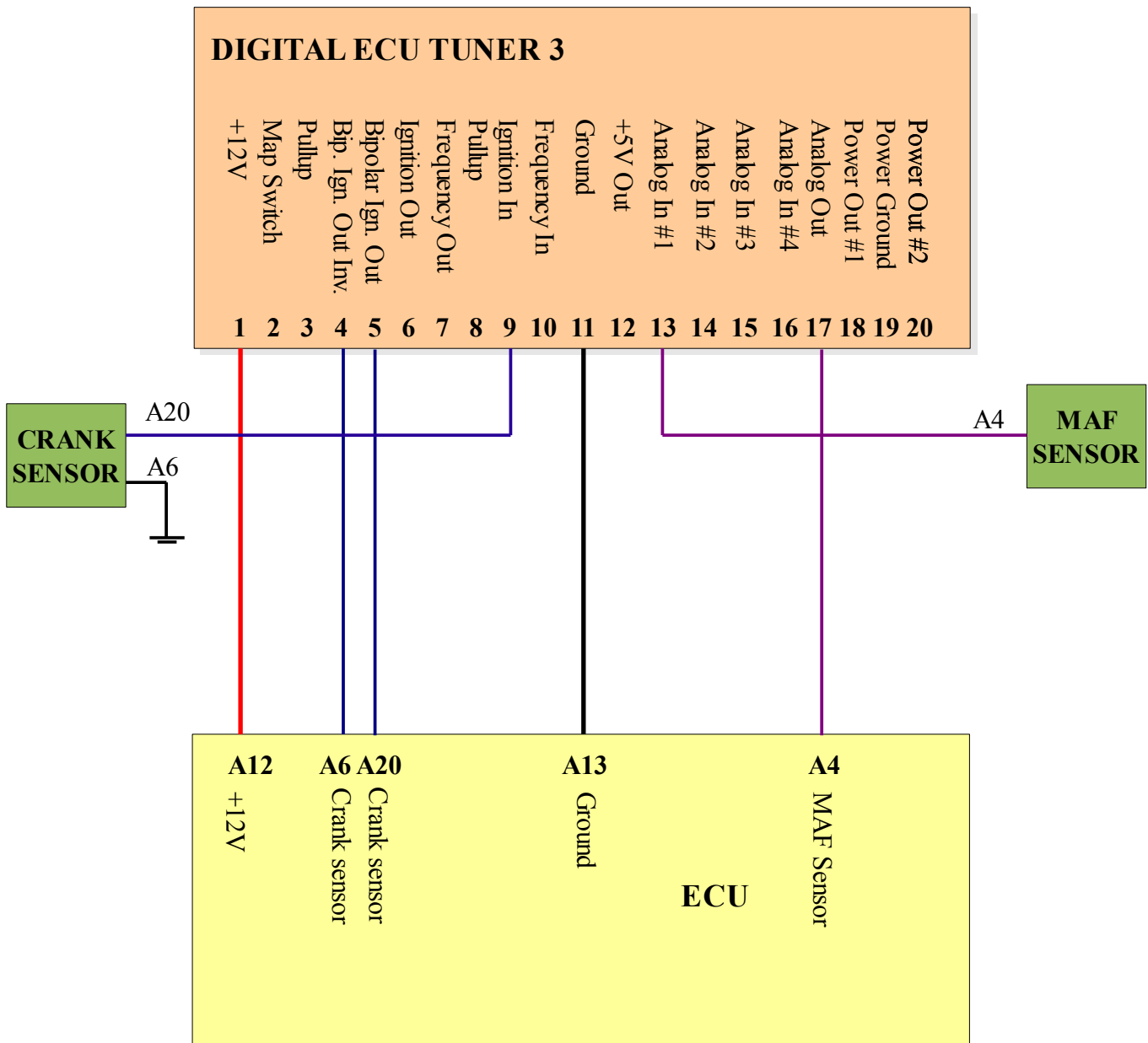
**Volvo 850 2.0T, 2.3T Bosch Motronic 4.3/4.4**

**Uwagi:** Proszę zastosować ustawienia *Konfiguracja #2*.

14	13	12	11	10	9	8	7	6	5	4	3	2	1	30	31	32	33	34	35	36	37	38	39	40	41	42	43		
29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
43	42	41	40	39	38	37	36	35	34	33	32	31	30	1	2	3	4	5	6	7	8	9	10	11	12	13	14		

**A**

**B**



## Konfiguracja

### Konfiguracja #1

### Konfiguracja #2

## Konfiguracja #3

**Setup tables**

Fuel Table  
 Modify: Analog in #1  
 Load: Analog in #4  
 Correction #1: Disable  
 Correction #2: Disable

PWM Table #1  
 Load: Analog in #4  
 Correction #1: Disable  
 Correction #2: Disable

Ignition Table  
 Load: Analog in #4  
 Correction #1: Disable  
 Correction #2: Disable

PWM Table #2  
 Load: Analog in #4  
 Correction #1: Disable  
 Correction #2: Disable

This configuration window allow to configure what signal will act as deflection, correction and what signal will be modified for given table.

Apply OK Cancel

**Ignition configuration**

Ignition mode: Retard / Advance 36-1 signal

This ignition mode is suitable for all cars with ignition trigger system based on toothed wheel with 36 teeth and gap with 1 missing tooth (commonly known as 36-1). It is commonly used by Ford. For older systems like EEC IV with external EDIS module, it is suggested to use EDIS SAW signal modification.

Ignition input configuration  
 Ignition input type: VR Sensor adaptive threshold

Input mode suitable for wide range of VR sensors. Adaptive hysteresis and true zero cross detection makes this mode very immune for potential noise, however it is recommended to use shielded wires.

General  
 Maximum RPM: 7500  
 Num signals per 720: 4  
 Maximum retard(deg): 15  
 Maximum advance(deg): 15  
 Max RPM ever: 0  
 Reset RPM

Max RPM - maximum rpm represented on map Y axis.  
 Num sig. per 720 - number of crank/cam signals per 2 engine revolutions.  
 Max RPM ever - maximal RPM that was recorded by device.  
 Reset RPM - reset maximum RPM ever value.  
 Maximum retard - maximum allowable spark retard  
 Maximum advance - maximum allowable spark advance.

Apply OK Cancel

## Konfiguracja #4

**Setup tables**

Fuel Table  
 Modify: Analog in #1  
 Load: Analog in #4  
 Correction #1: Disable  
 Correction #2: Disable

PWM Table #1  
 Load: Analog in #4  
 Correction #1: Disable  
 Correction #2: Disable

Ignition Table  
 Load: Analog in #4  
 Correction #1: Disable  
 Correction #2: Disable

PWM Table #2  
 Load: Analog in #4  
 Correction #1: Disable  
 Correction #2: Disable

This configuration window allow to configure what signal will act as deflection, correction and what signal will be modified for given table.

Apply OK Cancel

**Ignition configuration**

Ignition mode: Retard single signal

This ignition mode is suitable retarding low resolution signals and signals driving ignition modules. In this mode both edges of signal are considered (eg. proper dwell time). For ignition modules driving signals use Hall effect or optical sensor input type.

Ignition input configuration  
 Ignition input type: Hall effect or optical sensor

Input mode suitable for wide range optical and Hall effect sensors with fixed threshold at 2.5V. This mode is also suitable for ignition module drive signals. Lots of sensors are open collector type, so input pullup is required.

General  
 Maximum RPM: 7500  
 Num signals per 720: 4  
 Maximum retard(deg): 15  
 Maximum advance(deg): 15  
 Max RPM ever: 0  
 Reset RPM

Max RPM - maximum rpm represented on map Y axis.  
 Num sig. per 720 - number of crank/cam signals per 2 engine revolutions.  
 Max RPM ever - maximal RPM that was recorded by device.  
 Reset RPM - reset maximum RPM ever value.  
 Maximum retard - maximum allowable spark retard  
 Maximum advance - maximum allowable spark advance.

Apply OK Cancel

## Konfiguracja #5

**Setup tables**

Fuel Table  
 Modify: Frequency  
 Load: Analog in #4  
 Correction #1: Disable  
 Correction #2: Disable

PWM Table #1  
 Load: Analog in #4  
 Correction #1: Disable  
 Correction #2: Disable

Ignition Table  
 Load: Analog in #4  
 Correction #1: Disable  
 Correction #2: Disable

PWM Table #2  
 Load: Analog in #4  
 Correction #1: Disable  
 Correction #2: Disable

This configuration window allow to configure what signal will act as deflection, correction and what signal will be modified for given table.

Apply OK Cancel

**Frequency configuration**

Frequency modification type  
 Modify frequency input (fuel map, linear)

This mode is used for frequency signal modification. The frequency is clamped to Freq. Max and Freq. Min value, and modified (in additive way) using Fuel Map table. Base unit is the minimal step in Hertz of modification.

Parameters  
 Freq. Min[Hz]: 10      Freq. Max[Hz]: 4000  
 Base unit[Hz]: 1      RPM Multiplier: 1.000

Apply OK Cancel

**Ignition configuration**

Ignition mode  
 Retard single signal

This ignition mode is suitable retarding low resolution signals and signals driving ignition modules. In this mode both edges of signal are considered (eg. proper dwell time). For ignition modules driving signals use Hall effect or optical sensor input type.

Ignition input configuration  
 Ignition input type: Hall effect or optical sensor

Input mode suitable for wide range optical and Hall effect sensors with fixed threshold at 2.5V. This mode is also suitable for ignition module drive signals. Lots of sensors are open collector type, so input pullup is required.

General  
 Maximum RPM: 7500      Maximum retard(deg): 15  
 Num signals per 720: 6      Maximum advance(deg): 15  
 Max RPM ever: 0      Reset RPM

Max RPM - maximum rpm represented on map Y axis.  
 Num sig. per 720 - number of cran/cam signals per 2 engine revolutions.  
 Max RPM ever - maximal RPM that was recorded by device.  
 Reset RPM - reset maximum RPM ever value.  
 Maximum retard - maximum allowable spark retard  
 Maximum advance - maximum allowable spark advance.

Apply OK Cancel

## Konfiguracja #6

**Setup tables**

Fuel Table  
 Modify: Frequency  
 Load: Frequency  
 Correction #1: Disable  
 Correction #2: Disable

PWM Table #1  
 Load: Frequency  
 Correction #1: Disable  
 Correction #2: Disable

Ignition Table  
 Load: Frequency  
 Correction #1: Disable  
 Correction #2: Disable

PWM Table #2  
 Load: Frequency  
 Correction #1: Disable  
 Correction #2: Disable

This configuration window allow to configure what signal will act as deflection, correction and what signal will be modified for given table.

Apply OK Cancel

**Frequency configuration**

Frequency modification type  
 Modify frequency input nonlinear (fuel map, non linear)

This mode is used for frequency signal modification. The frequency is clamped to Freq. Max and Freq. Min value, and modified (in additive way) using Fuel Map table. The minimal step is non linear and is 1Hz for table value 1, 100Hz for table value 50.

Parameters  
 Freq. Min[Hz]: 10      Freq. Max[Hz]: 2000  
 Base unit[Hz]: 4      RPM Multiplier: 1.000

Apply OK Cancel

**Ignition configuration**

Ignition mode  
 Retard single signal

This ignition mode is suitable retarding low resolution signals and signals driving ignition modules. In this mode both edges of signal are considered (eg. proper dwell time). For ignition modules driving signals use Hall effect or optical sensor input type.

Ignition input configuration  
 Ignition input type: Hall effect or optical sensor

Input mode suitable for wide range optical and Hall effect sensors with fixed threshold at 2.5V. This mode is also suitable for ignition module drive signals. Lots of sensors are open collector type, so input pullup is required.

General  
 Maximum RPM: 7500      Maximum retard(deg): 15  
 Num signals per 720: 4      Maximum advance(deg): 15  
 Max RPM ever: 0      Reset RPM

Max RPM - maximum rpm represented on map Y axis.  
 Num sig. per 720 - number of cran/cam signals per 2 engine revolutions.  
 Max RPM ever - maximal RPM that was recorded by device.  
 Reset RPM - reset maximum RPM ever value.  
 Maximum retard - maximum allowable spark retard  
 Maximum advance - maximum allowable spark advance.

Apply OK Cancel

## Konfiguracja #7

**Setup tables**

Fuel Table  
 Modify: Analog in #1  
 Load: Analog in #1  
 Correction #1: Disable  
 Correction #2: Disable

PWM Table #1  
 Load: Analog in #1  
 Correction #1: Disable  
 Correction #2: Disable

Ignition Table  
 Load: Analog in #1  
 Correction #1: Disable  
 Correction #2: Disable

PWM Table #2  
 Load: Analog in #1  
 Correction #1: Disable  
 Correction #2: Disable

This configuration window allow to configure what signal will act as deflection, correction and what signal will be modified for given table.

Apply OK Cancel

**Ignition configuration**

Ignition mode: Retard single signal  
 This ignition mode is suitable retarding low resolution signals and signals driving ignition modules. In this mode both edges of signal are considered (eg. proper dwell time). For ignition modules driving signals use Hall effect or optical sensor input type.

Ignition input configuration  
 Ignition input type: Hall effect or optical sensor  
 Input mode suitable for wide range optical and Hall effect sensors with fixed threshold at 2.5V. This mode is also suitable for ignition module drive signals. Lots of sensors are open collector type, so input pullup is required.

General  
 Maximum RPM: 7500  
 Num signals per 720: 4  
 Maximum retard(deg): 15  
 Maximum advance(deg): 15  
 Max RPM ever: 0  
 Reset RPM

Max RPM - maximum rpm represented on map Y axis.  
 Num sig. per 720 - number of cran/cam signals per 2 engine revolutions.  
 Max RPM ever - maximal RPM that was recorded by device.  
 Reset RPM - reset maximum RPM ever value.  
 Maximum retard - maximum allowable spark retard  
 Maximum advance - maximum allowable spark advance.

Apply OK Cancel

## Konfiguracja #8

**Ignition configuration**

Ignition mode: EDIS SAW signal  
 This ignition mode is suitable for FORD ignition system based on EDIS module. Ignition can be advanced or retarded by modifying SAW signal. This mode works only with Hall effect or optical sensor input type.

Ignition input configuration  
 Ignition input type: Hall effect or optical sensor  
 Input mode suitable for wide range optical and Hall effect sensors with fixed threshold at 2.5V. This mode is also suitable for ignition module drive signals. Lots of sensors are open collector type, so input pullup is required.

General  
 Maximum RPM: 7500  
 Num signals per 720: 4  
 Maximum retard(deg): 15  
 Maximum advance(deg): 15  
 Max RPM ever: 0  
 Reset RPM

Max RPM - maximum rpm represented on map Y axis.  
 Num sig. per 720 - number of cran/cam signals per 2 engine revolutions.  
 Max RPM ever - maximal RPM that was recorded by device.  
 Reset RPM - reset maximum RPM ever value.  
 Maximum retard - maximum allowable spark retard  
 Maximum advance - maximum allowable spark advance.

Apply OK Cancel

**Setup tables**

Fuel Table  
 Modify: Frequency  
 Load: Analog in #4  
 Correction #1: Analog in #3  
 Correction #2: Analog in #4

PWM Table #1  
 Load: Analog in #4  
 Correction #1: Analog in #3  
 Correction #2: Analog in #4

Ignition Table  
 Load: Analog in #4  
 Correction #1: Analog in #3  
 Correction #2: Analog in #4

PWM Table #2  
 Load: Analog in #4  
 Correction #1: Analog in #3  
 Correction #2: Analog in #4

This configuration window allow to configure what signal will act as deflection, correction and what signal will be modified for given table.

Apply OK Cancel

**Frequency configuration**

Frequency modification type: Modify frequency input (fuel map, linear)  
 This mode is used for frequency signal modification. The frequency is clamped to Freq. Max and Freq. Min value, and modified (in additive way) using Fuel Map table. Base unit is the minimal step in Hertz of modification.

Parameters  
 Freq. Min(Hz): 1  
 Base unit(Hz): 1  
 Freq. Max(Hz): 200  
 RPM Multiplier: 1.000

Apply OK Cancel

## Konfiguracja #9

**Setup tables**

Fuel Table  
 Modify: Analog in #1  
 Load: Analog in #1  
 Correction #1: Disable  
 Correction #2: Disable

Ignition Table  
 Load: Analog in #1  
 Correction #1: Analog in #3  
 Correction #2: Analog in #4

PWM Table #1  
 Load: Analog in #1  
 Correction #1: Analog in #3  
 Correction #2: Analog in #4

PWM Table #2  
 Load: Analog in #1  
 Correction #1: Analog in #3  
 Correction #2: Analog in #4

This configuration window allow to configure what signal will act as deflection, correction and what signal will be modified for given table.

Apply OK Cancel

**Ignition configuration**

Ignition mode: Retard / Advance multitooth signal  
 This ignition mode is suitable for all cars with toothed wheel where the angular distance between teeth is constant and there is 4 or more teeth per engine revolution.

Ignition input configuration  
 Ignition input type: VR Sensor adaptive threshold  
 Input mode suitable for wide range of VR sensors. Adaptive hysteresis and true zero cross detection makes this mode very immune for potential noise, however it is recommended to use shielded wires.

General  
 Maximum RPM: 7000  
 Num signals per 720: 24  
 Max RPM ever: 0  
 Maximum retard(deg): 15  
 Maximum advance(deg): 15  
 Reset RPM

Max RPM - maximum rpm represented on map Y axis.  
 Num sig. per 720 - number of crank/cam signals per 2 engine revolutions.  
 Max RPM ever - maximal RPM that was recorded by device.  
 Reset RPM - reset maximum RPM ever value.  
 Maximum retard - maximum allowable spark retard  
 Maximum advance - maximum allowable spark advance.

Apply OK Cancel

## Konfiguracja #10

**Ignition configuration**

Ignition mode: Subaru trigger  
 Subaru 6 tooth pattern

Ignition input configuration  
 Ignition input type: VR Sensor adaptive threshold  
 Input mode suitable for wide range of VR sensors. Adaptive hysteresis and true zero cross detection makes this mode very immune for potential noise, however it is recommended to use shielded wires.

General  
 Maximum RPM: 7000  
 Num signals per 720: 4  
 Max RPM ever: 0  
 Maximum retard(deg): 15  
 Maximum advance(deg): 15  
 Reset RPM

Max RPM - maximum rpm represented on map Y axis.  
 Num sig. per 720 - number of crank/cam signals per 2 engine revolutions.  
 Max RPM ever - maximal RPM that was recorded by device.  
 Reset RPM - reset maximum RPM ever value.  
 Maximum retard - maximum allowable spark retard  
 Maximum advance - maximum allowable spark advance.

Apply OK Cancel

**Setup tables**

Fuel Table  
 Modify: Analog in #1  
 Load: Analog in #1  
 Correction #1: Analog in #3  
 Correction #2: Analog in #4

Ignition Table  
 Load: Analog in #1  
 Correction #1: Analog in #3  
 Correction #2: Analog in #4

PWM Table #1  
 Load: Analog in #1  
 Correction #1: Analog in #3  
 Correction #2: Analog in #4

PWM Table #2  
 Load: Analog in #1  
 Correction #1: Analog in #3  
 Correction #2: Analog in #4

This configuration window allow to configure what signal will act as deflection, correction and what signal will be modified for given table.

Apply OK Cancel

**Analog output configuration**

Analog Out Min [V]: 0.20  
 Analog Out Max [V]: 4.80  
 Analog Out Offset [V]: 0.00

Force startup output voltage  
 Startup Voltage [V]: 0.18  
 Analog signal modification step [V]: 0.0195V

This configuration window allows to configure analog output.  
 Analog Out Offset - constant offset addet to analog output voltage.  
 Analog Out Min - minimum voltage at analog output.  
 Analog Out Max - maximum voltage at analog output.  
 Startup Value - voltage at analog output at device startup.  
 Analog signal modification step - analog output resolution.

Apply OK Cancel

## Konfiguracja #11

**Ignition configuration**

Ignition mode  
Retard single signal

This ignition mode is suitable retarding low resolution signals and signals driving ignition modules. In this mode both edges of signal are considered (eg. proper dwell time). For ignition modules driving signals use Hall effect or optical sensor input type.

Ignition input configuration  
Ignition input type: Hall effect or optical sensor

Input mode suitable for wide range optical and Hall effect sensors with fixed threshold at 2.5V. This mode is also suitable for ignition module drive signals. Lots of sensors are open collector type, so input pullup is required.

General

Maximum RPM: 7000  
Maximum retard(deg): 15  
Num signals per 720: 4  
Maximum advance(deg): 15  
Max RPM ever: 0  
Reset RPM

Max RPM - maximum rpm represented on map Y axis.  
Num sig. per 720 - number of crank/cam signals per 2 engine revolutions.  
Max RPM ever - maximal RPM that was recorded by device.  
Reset RPM - reset maximum RPM ever value.  
Maximum retard - maximum allowable spark retard  
Maximum advance - maximum allowable spark advance.

Apply OK Cancel

**Setup tables**

Fuel Table  
Modify: Analog in #1  
Load: Analog in #2  
Correction #1: Analog in #3  
Correction #2: Analog in #4

PWM Table #1  
Load: Analog in #2  
Correction #1: Analog in #3  
Correction #2: Analog in #4

Ignition Table  
Load: Analog in #2  
Correction #1: Analog in #3  
Correction #2: Analog in #4

PWM Table #2  
Load: Analog in #2  
Correction #1: Analog in #3  
Correction #2: Analog in #4

This configuration window allow to configure what signal will act as deflection, correction and what signal will be modified for given table.

Apply OK Cancel

## Konfiguracja #12

**Ignition configuration**

Ignition mode  
Honda 12+1

Honda 12+1 trigger

Ignition input configuration  
Ignition input type: Hall effect or optical sensor

Input mode suitable for wide range optical and Hall effect sensors with fixed threshold at 2.5V. This mode is also suitable for ignition module drive signals. Lots of sensors are open collector type, so input pullup is required.

General

Maximum RPM: 7500  
Maximum retard(deg): 15  
Num signals per 720: 4  
Maximum advance(deg): 15  
Max RPM ever: 0  
Reset RPM

Max RPM - maximum rpm represented on map Y axis.  
Num sig. per 720 - number of crank/cam signals per 2 engine revolutions.  
Max RPM ever - maximal RPM that was recorded by device.  
Reset RPM - reset maximum RPM ever value.  
Maximum retard - maximum allowable spark retard  
Maximum advance - maximum allowable spark advance.

Apply OK Cancel

**Setup tables**

Fuel Table  
Modify: Analog in #1  
Load: Analog in #2  
Correction #1: Analog in #3  
Correction #2: Analog in #4

PWM Table #1  
Load: Analog in #2  
Correction #1: Analog in #3  
Correction #2: Analog in #4

Ignition Table  
Load: Analog in #2  
Correction #1: Analog in #3  
Correction #2: Analog in #4

PWM Table #2  
Load: Analog in #2  
Correction #1: Analog in #3  
Correction #2: Analog in #4

This configuration window allow to configure what signal will act as deflection, correction and what signal will be modified for given table.

Apply OK Cancel