

## AUDI –VOLKSWAGEN ( 4 Pines ) :

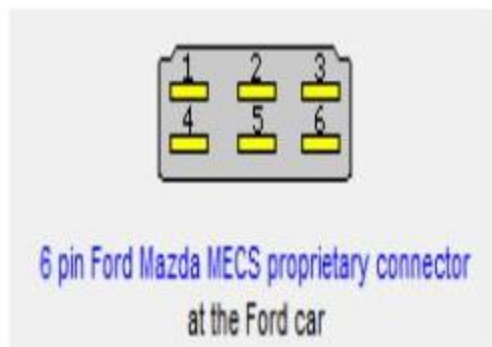
Usado en todos los modelos de 1989 – 1994 y en algunos vehículos de 1994 – 1997



Pin Number	Pin Name	Description (may be empty)
1		+12V power
2		Ground
3		diagnostic K-Line
4		diagnostic L-Line

## FORD - MAZDA ( 6 Pines ) :

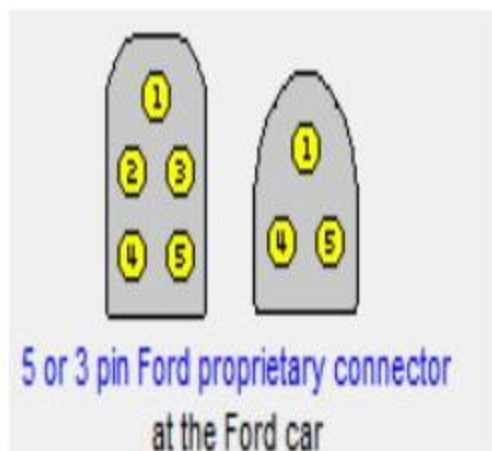
Usado en algunos modelos de Ford y Mazda de 1989 -1995



Pin Number	Pin Name	Description (may be empty)
1	FEN	engine self-diagnostic codes
2	+B	+12V
5	MEN	engine self-diagnostic codes
additional one-pin connector	TEN	engine self-diagnostic codes

## FORD ( 5 ó 3 Pines ) :

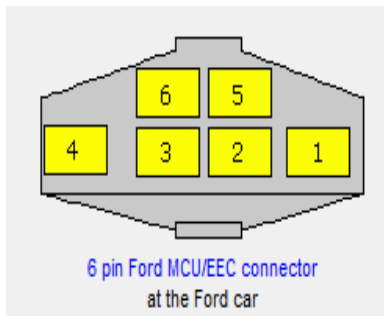
Usado en algunos modelos producidos en 1989 – 1994



Pin Number	Pin Name	Description (may be empty)
1	K-Line	Diagnostic K-line
4	GND	Ground
5	L-Line	Diagnostic L-line

## FORD ( 6 Pines ) :

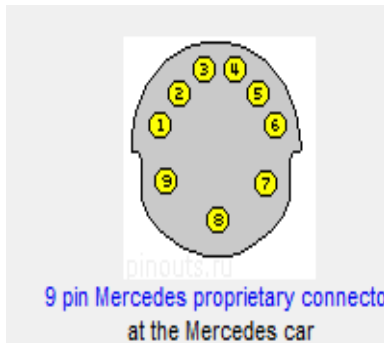
Usado en modelos producidos entre 1980 – 1995



Pin Number	Pin Name	Description (may be empty)
2		L diagnostic line
3		K diagnostic line

## MERCEDES BENZ ( 9 Pines ) :

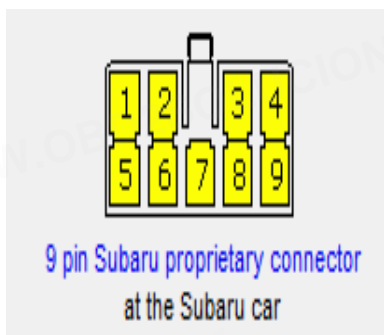
Usado en algunos modelos Mercedes producidos en 1985 -1993 ( MB 190(W201),S(W126),G(W463) )



Pin Number	Pin Name	Description (may be empty)
3		Diagnostic codes output. Works with special equipment only.

## SUBARU ( 9 Pines ) :

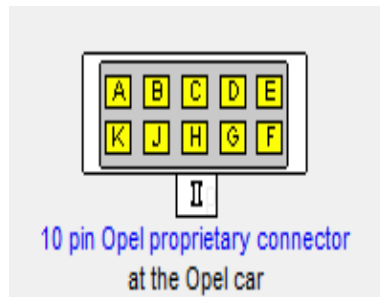
Este conector amarillo usado en algunos modelos producidos despues de 1993



Pin Number	Pin Name	Description
2		for SSM (Subaru Select Monitor)
3		SSM (Subaru Select Monitor)
9		Ground

**OPEL - DAEWOO (10 Pines ) :**

Utilizado para modelos de 1988 - 1996



Pin Number	Name	Description (may be empty)
A	GND	Ground
B		Slow self-diagnostic codes. Engine diagnostic K-Line.
C		Automatic transmission slow self-diagnostic codes. Transmission diagnostic (L-Line).
D		Trip computer slow self-diagnostic codes. Engine diagnostic K-Line.
E		Slow self-diagnostic codes out.
F	+12V	Accumulator +12v
G	K-Line	Automatic transmission, engine, ABS diagnostic
H		Cruise control, ATWS slow self-diagnostic codes.
J		4WD slow self-diagnostic codes.
K		ABS slow self-diagnostic codes. ABS L-Line.

## DAEWOO (12 Pines) :

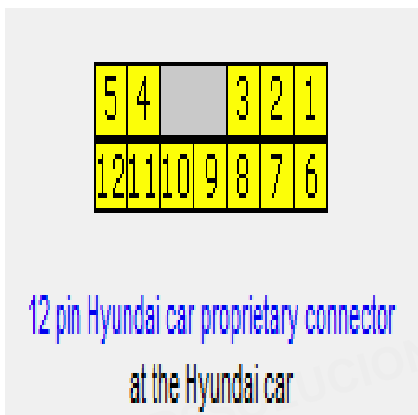
Utilizados para modelos hasta el 2000



Pin Number	Pin Name	Description (may be empty)
A	GND	Chassis Ground
B	L-Line	Engine diagnostic, ABS (8KBaud Serial Data, not always present)
C	AIR	may be n/a
D	SES-LAMP	Self-diagnostic lamp (may be not available)
E	K-Line	K diagnostic line (160-Baud Serial Data)
F	TCC	may be not available or +12V
G		fuel pump control (may be n/a)
J	K-Line	Airbag diagnostic (8KBaud Serial Data)
M	K-Line	Engine, ABS diagnostic

## HYUNDAI ( 12 Pines ) :

Usado en los modelos de 1990 – 1996 y algunos modelos mas adelante

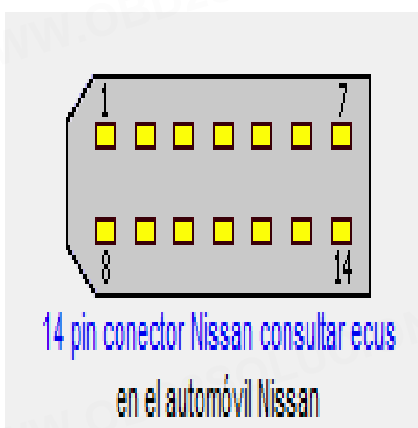


Pin Number	Pin Name	Description (may be empty)
1	K-Line	Engine control diagnostic and error codes
2	K-Line	Airbag diagnostic
4	K-Line	ABS diagnostic
6	K-Line	Gearbox diagnostic
10	L-Line	Engine diagnostic and errors codes
11		Speed monitoring
12	GND	Ground

## NISSAN ( 14 Pines ) :

Usado para todos los modelos de 1989 – 2000 . A veces acompañado con el conector OBD2

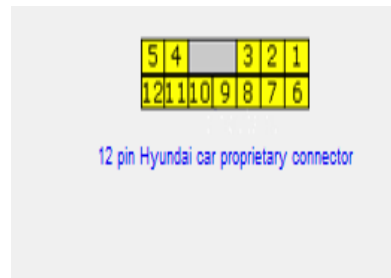
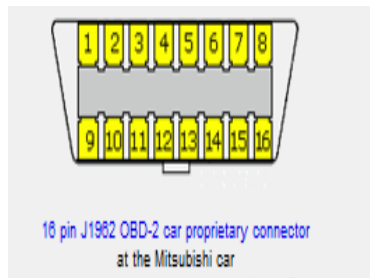
( por ejemplo , Nissan Pathfinder )



Perno Número	Perno Nombre	Descripción (puede estar vacío)
1	RX (TX?)	Los datos de
2	TX (RX?)	Datos a cabo
4	ABS	ABS de diagnóstico
6	CHK	Verifique ECCS
7	12 v	Poder
8	GND	Suelo
9	CLK	Sincronización de la señal

## MITSUBISHI ( 16 Pines y 12 Pines ) :

Utilizado en modelos Mitsubishi de 1994 -2002

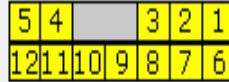


16 pin connector	12 pin connector	Description (may be empty)
1		Diagnosis control line - all serial communication with electronic equipment (grey red)
2		J1850 (+) line
3		Suspension - ECS control
4		Ground (black)
5		Chassis ground (black)
6		Transmission - ELC-4/5AT automatic transmission control (yellow blue)
7		ISO 9141 K-Line of engine control module (yellow)
8		ABS control module (yellow red)
9		ETACS control module (pulse signal only)
10		J1850(-) line
11		Air conditioner (full auto AC) control module (brown)
12		Airbag and other safety systems control module (yellow black)
13		ASC Cruise Control
14		Vehicle speed signal (yellow white)
15		ISO 9141 L-Line
16		+12V power (brown red)
	1	Traction – TCL/4WD control module
	2	Steering - 4WS/ECPS wheel control module
	5	Engine control module
	6	Engine microprogram update
	7	Automatic transmission microprogram update
	12	Adapter (cable) identification



## MITSUBISHI ( 12 Pines ) :

Usado en todos los modelos de 1989 – 1998

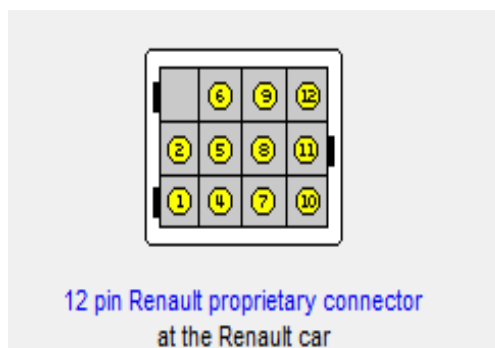


12 pin Hyundai car proprietary connector  
at the Mitsubishi car

Pin Number		Description (may be empty)
1	Engine	MPI - engine control system (yellow), ABS/ASR control (black connector)
2	Steering	4WS - Steering wheel control
3	Suspension	Active ECS
4	Brake	ABS diagnostic (yellow red)
5	Cruise control	ASC diagnostic (yellow black)
6	Transmission	ELC-4/5AT - automatic transmission diagnostic
7	Air conditioner	Full auto AC - air conditioner diagnostic
8	Air bag	SRS - safety systems
9	ETACS	Pulse signal only - electronic equipment
10	Diagnosis Control	Diagnosis control. In 6G72 MPI SOHC, Mirage 1.5L, 1.8L short to GND if check and adjust idle or connect the voltmeter positive probe for read DTC ECS (pink blue)
11		Simulation of speed sense
12	GND	Ground (black)

## RENAULT ( 12 Pines ) :

Usado en todos los modelos anteriores a 1998

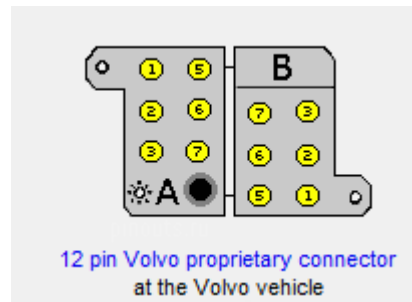


Pin Number	Pin Name	Description (may be empty)
1	K-Line	Automatic transmission diagnostic (AD4)
2	GND	
6	+12V	Accumulator
7	K-Line	Automatic transmission diagnostic (M)
8	L-Line or (MIL) Malfunction Indicator Lamp (some old models)	Engine diagnostic (Siemens/Bendix/Renix SPI/MPI)
9	K-Line or Unidirectional (only TX) diagnostic line at 62500bps with open collector (some old models)	Engine diagnostic (Siemens/Bendix/Renix SPI/MPI)
10	L-Line	Engine diagnostic (Fenix 5, Magneti Marelli 06R, Motronic M4.4.2)
11	K-Line	Engine diagnostic (Fenix 5, Magneti Marelli 06R, Motronic M4.4.2), ABS, Airbag



**VOLVO ( 12 Pines ) :**

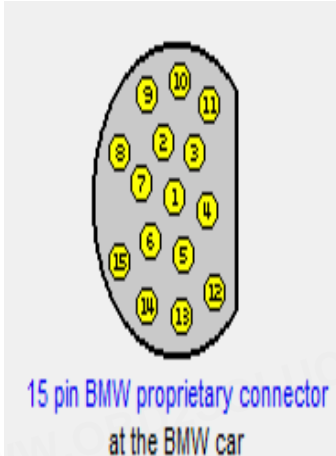
Usado para todos los modelos de 1985 – 1995



Pin	Description (may be empty)
A1	Automatic transmission diagnostic
A2	Engine diagnostic (fuel pump)
A3	ABS diagnostic
A5	Automatic transmission diagnostic - TCU (Transmission Control)
A6	Engine diagnostic (ignition)
A7	Dash diagnostic
B1	Air-conditioner and climate control diagnostic
B2	Cruise-control diagnostic
B5	Airbags diagnostic
B6	Seats control diagnostic
B7	Dash diagnostic

## BMW ( 15 Pines ) :

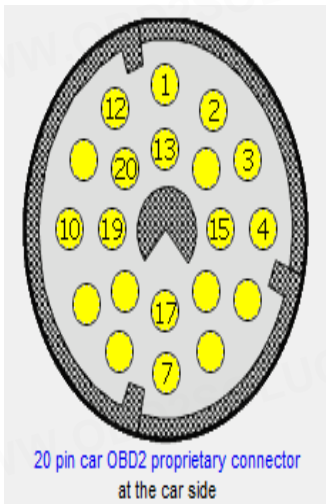
Usado en todos los modelos de bmw hasta el 1988



Pin Number	Pin Name	Description (may be empty)
1	GND	Ground
4		Temperature sensor
5		Oxygen sensor
6		SRS diagnostic
7		Oil service and inspection reset
8		Drankshaft position (+)
9		Shield
10		Drankshaft position (-)
11		Starter external turn on
12		Generator status
13		Ignition status
14		Battery power
15		Ignition power

## BMW ( 20 Pines ) :

Usado en todos los modelos en 1988 – 2000

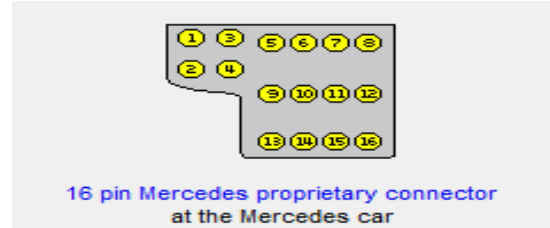


Pin	Signal	Description
1	Engine rotation speed	TD
2	OBD-II diagnostic	
7	Oil service and Inspection reset	
11	External starter turn on	
14	Battery power	
15	ISO 9141-2 L Line	RXD- Diagnostic Data link
16	Ignition +12V	
17	ISO 9141-2 K Line	n/c?
18	PGSP	Programming line
19	GND	
20	ISO 9141-2 K Line	TXD - Diagnostic data link

## MERCEDES BENZ (16 Pines) :

Usado en algunos modelos de 1993 – 1998 ( MB C (W202) , E (W124) )

**NOTA :** Para poder scanear este vehículo utilizar el conector 3 PINES UNIVERSAL de X431 LAUNCH

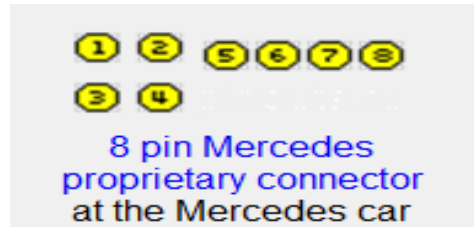


Pin Number		Description (may be empty)
1	GND	Ground
2		Self-diagnostic button (if present)
3	K-Line	benzine engine diagnostic (CFI, KE) and DM
4	K-Line	diesel engine diagnostic (EDS, ARA) or self-diagnostic LED (if present)
5	K-Line	ASD, 4MATIC diagnostic
6	K-Line	safety devices: Airbag, SRS, AB diagnostic. Service interval reset.
7	K-Line	air-conditioner and heater (Tempmatic, Automatic) diagnostic
8	K-Line	benzine engine diagnostic (HFM-SFI, DI)
9	K-Line	ADS diagnostic
10		Engine speed sense (gasoline engine). K-Line for RST (R129), CST (W124)
11	K-Line	Anti-theft (ATA) diagnostic
12	K-Line	IRCL diagnostic
13	K-Line	Transmission Control Unit diagnostic (EGS, EATC)
14	K-Line	Engine (ESCM, MAS) diagnostic, ISC, EA, EFP diagnostic, cruise-control (CC) diagnostic
16	+12v	Power

## MERCEDES BENZ ( 8 Pines ) :

Usado para modelos Mercedes de 1988 -1993

NOTA : Para poder scanear este vehículo utilizar el conector 3 PINES UNIVERSAL de X431 LAUNCH



Pin Number		Description (may be empty)
1	GND	Ground
3		Self-diagnostic button (if equipped)
2	K-Line	benzine engine diagnostic (CFI, KE) and DM
4	K-Line	diesel engine diagnostic (EDS, ARA) or self-diagnostic LED (if present)
5	K-Line	ASD, 4MATIC diagnostic
6	K-Line	safety devices: Airbag, SRS, AB diagnostic. Service interval reset.
7	K-Line	air-conditioner and heater (Tempmatic, Automatic) diagnostic
8	K-Line	Engine and ignition diagnostic

## KIA (20 Pines) :

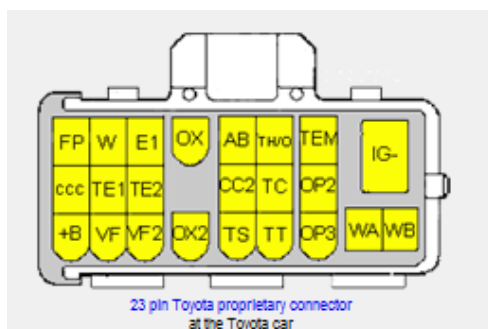
Usado en todos los modelos fabricados en 1990 – 1996 y algunos modelos más adelante



Pin Number	Pin Name	Description (may be empty)
1	+12V	Power, after fuel pump
2		Cooling fan signal
3		Engine rotation speed / ignition signal
4	GND	Ground
5	+12V	+12V power
7		initial ignition management (coil 2)
8	L-Line	ABS diagnostic
9	K-Line	Engine diagnostic
10		Automatic transmission failure code
11		Check Engine indicator. Self-diagnostic codes output.
12	GND	Ground
14	K-Line	Airbag diagnostic
15	K-Line	ABS diagnostic codes
16		initial ignition management (coil 1)
17	K-Line	Cruise-control
18	L-Line	Automatic transmission diagnostic
19	L-Line	Engine diagnostic
20		Engine monitor output

## TOYOTA ( 23 Pines ):

Usado en algunos modelos producidos después de 1990 (ej. Land Cruiser , Carina , Camry , corolla)

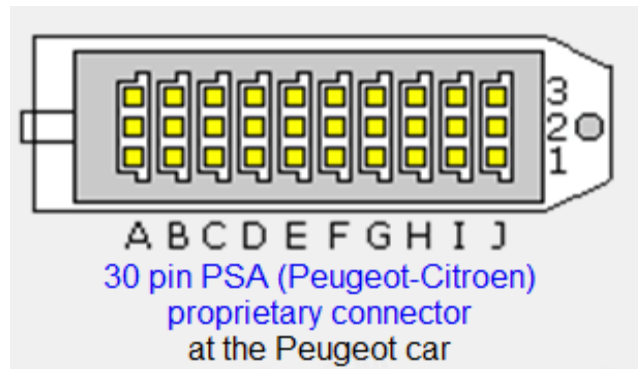


Pin	Description (may be empty)
FP	Fuel pump voltage control
W	Self-diagnostic codes (Check engine light)
E1	Engine self-diagnostic codes
Ox	Lambda sensor out voltage control
TE	Engine self-diagnostic codes
Te1	Engine self-diagnostic codes
Te2	Engine self-diagnostic codes
CC2	Second lambda sensor diagnostic
Tc	ABS, traction control, Hight Control and other system diagnostic codes
OP2	Diagnostic K-Line
+B	+12V
VF1	Vf-feedback voltage
VF2	Vf-feedback voltage for second lambda sensor
Ox2	Second Lambda sensor out voltage control
Ts	ABS speed sensor and traction control diagnostic codes
Tt	Automatic transmission diagnostic codes
OP3	Diagnostic L-line
TD	air-powered suspension turn off (LS400)
T	Engine self-diagnostic codes
OP1	Immobilizer self-diagnostic codes
IG-	Ground



## PEUGEOT – CITROEN ( 30 Pines ) :

Usado para modelos 106 (05.96-94.98) , 406 (antes 1998) , 605 , 806 (antes 1997) , Expert

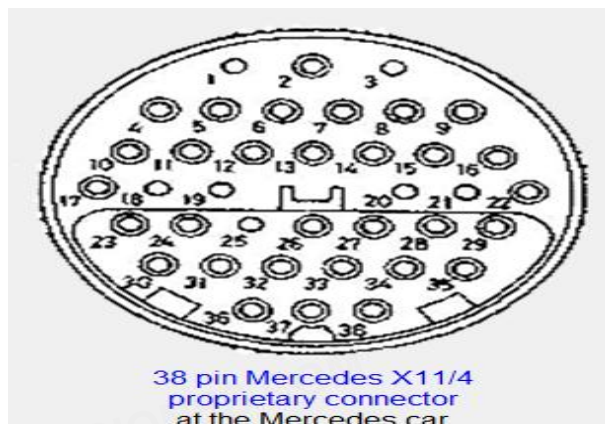


Pin Number	Pin Name	Description (may be empty)
A1,A2	+12V	Accumulator
A3	GND	Ground
B1	GND	for engine sensor
B2	shield	for engine sensor
B3		engine sensor power or rotation sense
C1	K-line	engine control module diagnostic
C2	K-line	engine control module diagnostic
C3		Slow codes
D1		GMV1 test
D2		GMV2 test
D3		rotation speed sense relay
E1	K-Line	ABS/ASR diagnostic
E2	K-Line	clearance adjustment diagnostic
E3	K-Line	steering wheel module diagnostic

F1	K-Line	heater and air conditioner diagnostic
F2	K-Line	seat adjustment diagnostic
F3	K-Line	airbag module diagnostic
G1	K-Line	Gearbox module diagnostic
G2	K-Line	Back axle module diagnostic
G3	K-Line	Differential gear diagnostic
H1	K-Line	Cruise-control diagnostic
H2	K-Line	Trip computer diagnostic
H3	K-Line	door lock diagnostic
I1	K-Line	Rear-view mirror diagnostic
I2	K-Line	Antitheft alarm diagnostic
I3	K-Line	Immobilizer diagnostic

## MERCEDES BENZ ( 38 Pines ) :

Usado en modelos de 1994 – 2002 - W124 , W140 , W202 , W 210 , W220 , .....

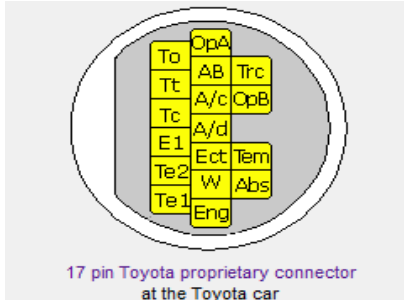


Pin Number	Pin Name	Description (may be empty)
1	GND	Ground
2		Voltage, circuit 87
3		Battery voltage, circuit 30
4		LH-SFI or right LH-SFI control module or ME-SFI or right ME-SFI engine control module or HFM-SFI engine control module; EDS control module
5		Left LH-SFI control module or right engine control module ME-SFI or HFM-SFI engine control module or EDS control module
6		ABS or ABS/ASR or ASR/SPS or ETS/SPS or ESP/SPS control module
7		EA/CC/ISC control module
8		Base module
9		ASD control module
10		Transmission control module (TCM or ETC)
11		ADS control module
12		SPS control module13
13		TNA-Signal (LH/Me/Diesel)
14		O2S (LH)

15		O2S II (LH) or instrument cluster
16		A/C pushbutton control module
17		DI control module or TD-Signal (Diesel) or TN-Signal (LH)
18		Left DI control module
19		Diagnostic module (OBD II)
20		PSE control module
21		CF control module
23		ATA control module
28		Ultrasonic PTS control module
30		SRS control module
31		RCL control module
35		Headlamp range adjustmint control module

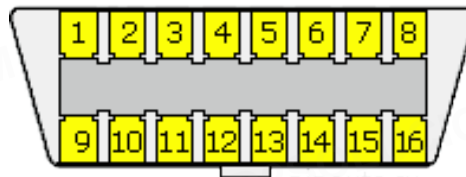
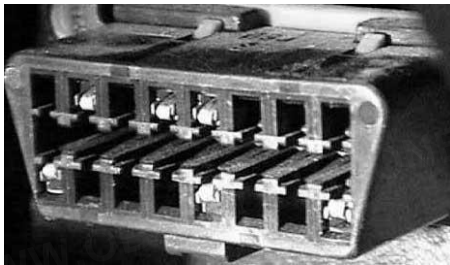
## TOYOTA ( 17 Pines ) :

Usado en algunos modelos producidos después de 1990



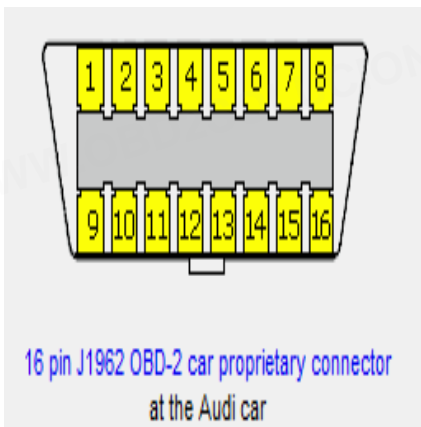
Pin	Description (may be empty)
TE1	Engine self-diagnostic codes
E1	Engine self-diagnostic codes
W	Engine self-diagnostic codes

## CONECTOR DE DIAGNOSTICO DE 16 PINES OBD2



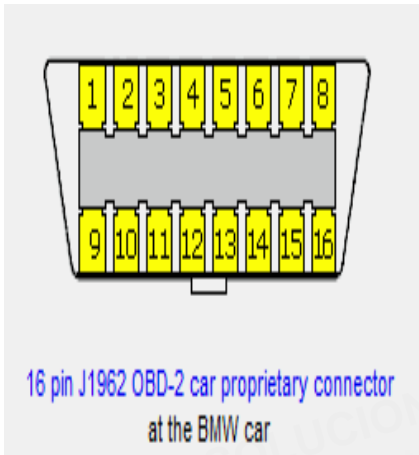
Lista de vehículos equipados con conector de 16 pines de protocolo J1962 y otros

## AUDI : Adecuado para los modelos de Audi de 1996



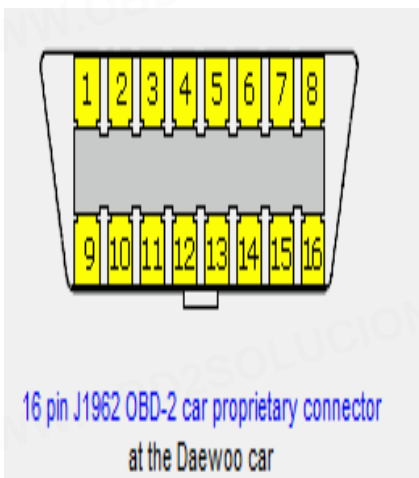
Pin	Signal	Description
2	J1850 Bus+	
4	CGND	Chassis ground
5	SGND	Signal ground
6	CAN High	J-2284
7	K-LINE	(ISO 9141-2 and ISO/DIS 14230-4)
10	J1850 Bus-	
14	CAN Low	J-2284
15	ISO 9141-2 L-LINE	(ISO 9141-2 and ISO/DIS 14230-4)
16	+12v	Battery power

**BMW :** Usado en todos los modelos BMW después de 2000



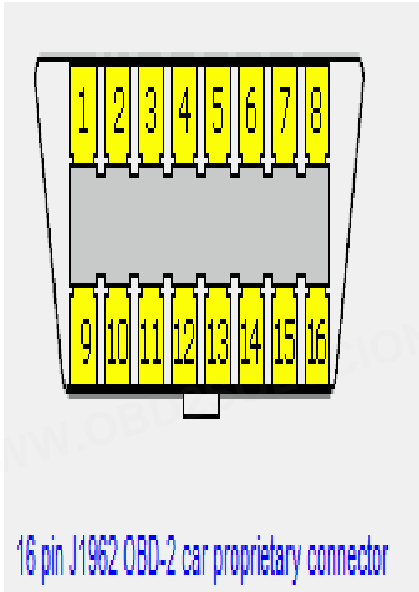
Pin	Signal	Description
1	+12V	Power
4	CGND	Chassis ground
5	SGND	Signal ground
7	ISO 9141-2 K-LINE	engine (ISO-9141 and ISO-14230), automatic transmission diagnostic (in some models)
8	ISO 9141-2 K-LINE	IKE/KOMBI, ABS, ABS/ASR, ABS/ABD, ESP, DSC, Airbag and other electronic equipment
9	TD/RPM	Engine rotation speed
16	+12v	Battery power

**DAEWOO :** Usados en los modelos Daewoo 1996 – 2001 , los que están equipados con protocolo J1850-VPW . Después de 2001 – KWP2000



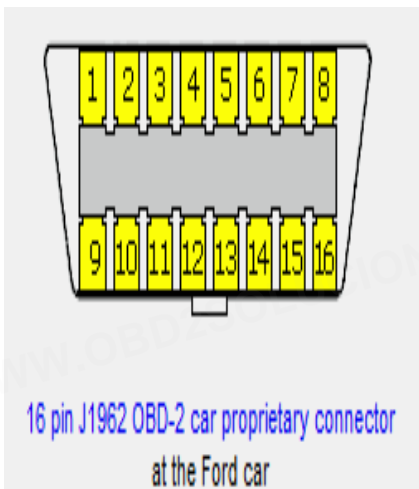
Pin	Signal	Description
2	J1850 Bus+	
4	CGND	GND
5	SGND	GND
6	CAN High	J-2284
7	K-LINE	(ISO 9141-2 and ISO/DIS 14230-4)
10	J1850 Bus-	
14	CAN Low	(ISO 9141-2 and ISO/DIS 14230-4)
15	ISO 9141-2 L-LINE	Tx/Rx
16	+12v	Battery power

**FIAT :** Utilizado en algunos modelos de fiat



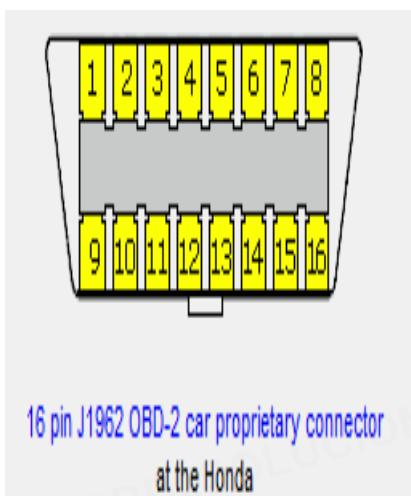
Pin Number	Pin Name	Fiat car function
1		ABS, Brakes, K-Line
2	J1850	DW-FT-CAN
3		Airbag
4	GND	Chassis ground
5	SGND	Signal Ground
6	HS-CAN	ISO 15765 HS-CAN(+)
7	K-Line	ISO 9141 K-Line (engine)
8		n/c
9		Body ECU , EPS
10	PWM	DW-FT-CAN (-)
11		Anti-Theft system
12		engine compartment
13		Luggage compartment
14	HS-CAN(-)	ISO 15765 HS-CAN (-)
15	L-Line	n/c
16	Battery+	Battery +, unswitched

**FORD :** Usado en los modelos a partir del 1998



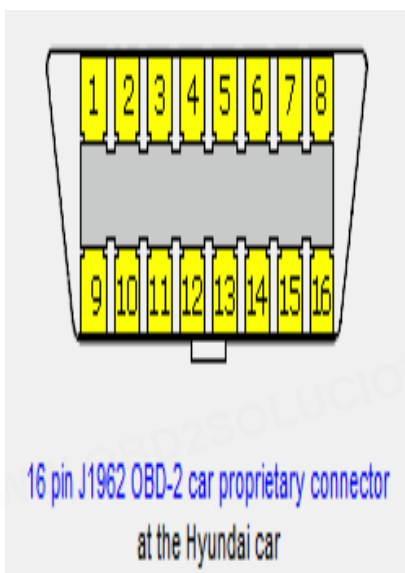
Pin	Signal	Description
2	J1850 Bus+	
4	CGND	Chassis ground
5	SGND	Signal ground
6	CAN High	J-2284
7	K-LINE	(ISO 9141-2 and ISO/DIS 14230-4)
10	J1850 Bus-	
14	CAN Low	J-2284
15	ISO 9141-2 L-LINE	(ISO 9141-2 and ISO/DIS 14230-4)
16	+12v	Battery power

**HONDA :** Utilizado en modelos Honda producidos después de 1996



Pin	Signal	Description
4	CGND	Chassis ground
5	SGND	Signal ground
6	CAN High	J-2284
7	K-LINE	(ISO 9141-2 and ISO/DIS 14230-4)
9		SCS (Service Check System) - diagnostic codes
12		Programming out
13 or 14?		Input/Output for VTM-4 and immobilizer control
14	CAN Low	J-2284
15	ISO 9141-2 L-LINE	(ISO 9141-2 and ISO/DIS 14230-4)
16	+12v	Battery power

**HYUNDAI :** Usado mayormente en los modelos producidos después de 1996



Pin	Signal	Description
1	K-Line	Gearbox diagnostic
2	K-Line	ABS diagnostic, BUS+ Line
4	CGND	Chassis ground
5	SGND	Signal ground
6	CAN High	J-2284, ABS/ASR diagnostic
7	K-LINE	Engine and gearbox diagnostic ISO 9141-2 and ISO/DIS 14230-4
8	K-Line	ABS diagnostic
9	K-Line	Cruise-control diagnostic
10	BUS-Line	
12	K-Line	Airbag diagnostic
14	CAN Low	J-2284, VSS (vehicle speed)
15	ISO 9141-2 L-LINE	(ISO 9141-2 and ISO/DIS 14230-4)
16	+12v	Battery power



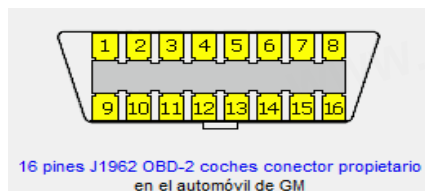
## CONECTORES DE DIAGNÓSTICO

Telf: 364-7213  
 Cel: 994794474  
 Nex: (94) 607\*2204

GM : La mayoría de los vehículos de GM producidos en 1996 – 2003 utilizan el protocolo J1850-VPW ,

Para los años 2003 – 2006 utilizan el protocolo J1850 – VPW o CAN .

La mayoría de los vehículos fabricados después de 2006 están equipados con CAN BUS.

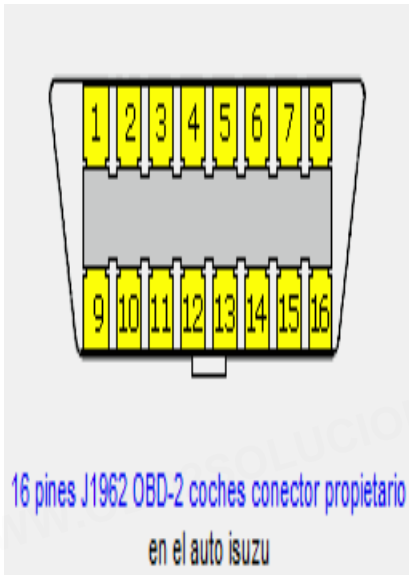


Perno Número	Perno Nombre	Descripción (puede estar vacío)
1		En segundo lugar UART
2	J1850	J1850 (+) VPW
3		Comodidad
4	GND	Tierra del chasis
5	SGND	Señal de tierra
6	HS-CAN	PCM
7	K-Line	n / c
8		MCP
9		primera UART
10	PWM	n / c
11		EVA controlador
12		ABS
13		SIR
14	HS-CAN (-)	E & C
15	L-Line	n / c
16	Batería +	Batería +, sin interruptor

Desde el 2002 , hay otro pinout - GM – LAN (para vehículos equipados con CAN BUS )

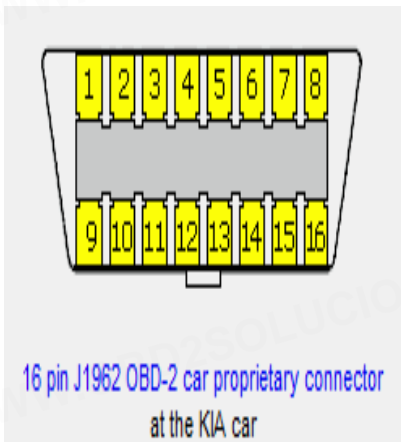
Perno Número	Perno Nombre	Descripción (puede estar vacío)
1		SW-LS-CAN (33kB) o DW-FT-CAN (+) (<125KB)
2	J1850	n / a
3		MS-CAN (+) (95KB)
4	GND	Tierra del chasis
5	SGND	Señal de tierra
6	HS-CAN	ISO 15765 HS-CAN (+) (500 KB)
7	K-Line	n / a
8		n / a
9		DW-FT-CAN (-) (<125KB)
10	PWM	n / c
11		MS-CAN (-) (95KB)
12		K-Line (KW82 Prot).
13		reservado
14	HS-CAN (-)	ISO 15765 HS-CAN (-) (500 KB)
15	L-Line	n / a
16	Batería +	Batería +, sin interruptor

**ISUZU :** Utilizado en vehículos con protocolo J1850 –VPW a partir de 1996 hasta la actualidad



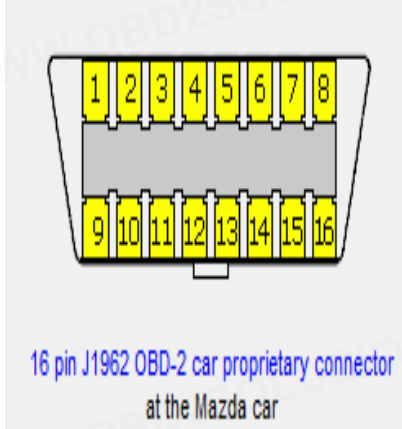
Perno Número	Perno Nombre	Isuzu función del vehículo
1		SIR (GM8192 Prot).
2	J1850	n / a
3		ABS (KW81-Prot.)
4	GND	Tierra del chasis
5	SGND	Señal de tierra
6	HS-CAN	TCM
7	K-Line	K-Line, K1 (motor)
8		n / a
9		ECM / TCM (GM8192 Prot).
10	PWM	n / a
11		SIR
12		ABS
13		ECM
14	HS-CAN (-)	n / a
15	L-Line	n / a
16	Batería +	Batería +, sin interruptor

**KIA :** Utilizado en modelos producidos después de 1996



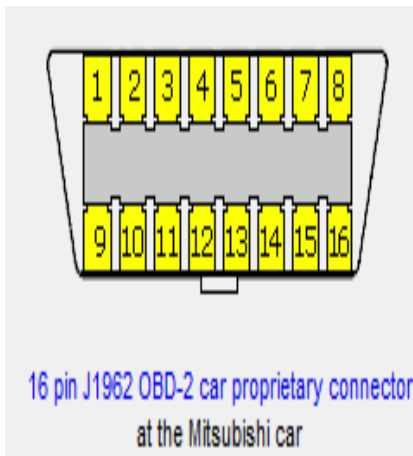
Pin	Signal	Description
1		IGN control
2	BUS(+) SCP	
4	CGND	Chassis ground
5	SGND	Signal ground
6	CAN High	J-2284
7	K-LINE	(ISO 9141-2 and ISO/DIS 14230-4)
8	K-Line	ABS diagnostic
10	BUS(-)SCP	
13	FEPS	Flash EEPROM
14	CAN Low	J-2284
16	+12v	Battery power

## MAZDA : Utilizados en modelos producidos después de 1996



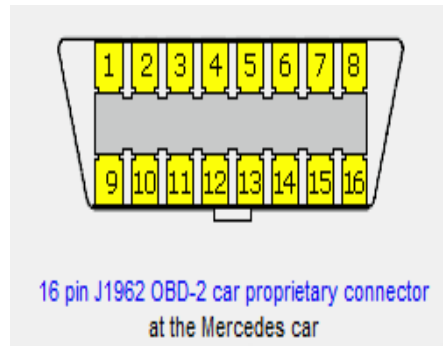
Pin	Signal	Description
2	J1850 Bus+	
4	CGND	Chassis ground
5	SGND	Signal ground
6	CAN High	J-2284
7	K-LINE	Diagnostic, (ISO 9141-2 and ISO/DIS 14230-4)
10	J1850 Bus-	
14	CAN Low	J-2284
15	ISO 9141-2 L-LINE	Diagnostic, (ISO 9141-2 and ISO/DIS 14230-4)
16	+12v	Battery power

## MITSUBISHI : Utilizados en modelos producidos después de 1996



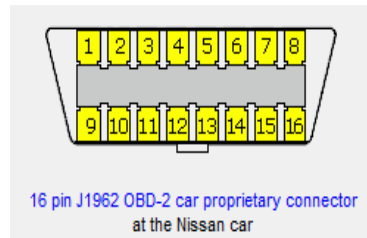
Pin	Signal	Description
2	J1850 Bus+	
4	CGND	Chassis ground
5	SGND	Signal ground
6	CAN High	J-2284
7	K-LINE	(ISO 9141-2 and ISO/DIS 14230-4)
10	J1850 Bus-	
14	CAN Low	J-2284
15	ISO 9141-2 L-LINE	(ISO 9141-2 and ISO/DIS 14230-4)
16	+12v	Battery power

**MERCEDES BENZ :** Utilizados en modelos producidos después de 1996



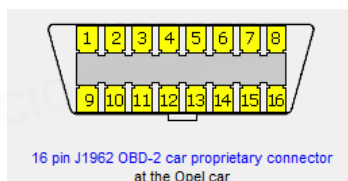
Pin Number	Pin Name	Description (may be empty)
1	K-Line	Ignition control (EZS), air-conditioner (KLA), PTS, safety systems (Airbag, SRS, AB) and some other
3	TNA	TD engine rotation speed
4,5	GND	Ground
6	CAN-high	CAN-High (including AirBag system in W203, W209, W220, W240, R230, E215 after 2004y)
7	K-Line	Engine control diagnostic (ME/MSM/CDI)
8		Ignition,...
9	K-Line	ABS, ASR, ESP, ETS, BAS diagnostic
11	K-Line	Gearbox and other transmission components (EGS, ETC, FTC)
12	K-Line	All activity module (AAM), Radio (RD), ICS, ...
13	K-Line	AB diagnostic - safety systems
14	CAN-Low	CAN
15	K-Line	IC, KI), TAU, LWR diagnostic
16	+12V	Power

**NISSAN** : Utilizados en modelos producidos después de 1996



Pin	Signal	Description
1	CHECK	
2	J1850 Bus+	
4	CGND	Chassis ground
5	SGND	Signal ground
6	CAN High	J-2284
7	K-LINE	(ISO 9141-2 and ISO/DIS 14230-4)
8	Ignition ON	
10	J1850 Bus-	
11	Adjust Switch	
12	SCI TX	
13	SCI RX	
14	CAN Low	J-2284
15	ISO 9141-2 L-LINE	(ISO 9141-2 and ISO/DIS 14230-4)
16	+12v	StorageBattery power

**OPEL :** Utilizado en todos los modelos después de 1996 , el cual tenemos dos versiones

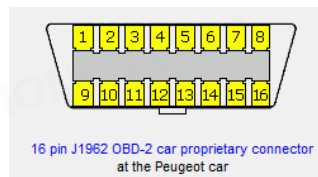


Pin Number	Name	Description (may be empty)
2	K-Line	ABS diagnostic
3	K-Line	Radio, automatic transmission, immobilizer, steering wheel and other components
4	GND	Chassis ground
5	GND	Signal ground
6	CAN-High, J-2284	If car isn't equipped with CAN bus, you'll find self-diagnostic slow codes (e.g. on Astra-F-G) or ABS K-Line at this pin
7	K-Line	Engine, ABS, AT, Airbag, Navigation system, Radio diagnostic
8	K-Line	TID, MID diagnostic
9	K-Line	ABS, Airbag
11	K-Line	Automatic transmission diagnostic
12	K-Line	TID, MID, ABS, AirBag, air conditioner, Kuhlerlufte-Steuergerat
13	K-Line	immobilizer, MID, Airbag diagnostic
14	CAN-Low, J-2284	if CAN present
16	+12V	Accumulator

Pin Number	Pin Name	Opel vehicle function
1		n/a
2	J1850	n/a
3		K-Line, K2, TCM, Sunroof, CDL, Multi-Timer
4	GND	Chassis ground
5	SGND	Signal Ground
6	HS-CAN	Blinkcode
7	K-Line	K-Line, K1 (engine)
8		K-Line, K4
9		reserved
10	PWM	n/c
11		reserved
12		K-Line, K3, ABS, TC, Steering, RTD, OW
13		reserved, K-Line, K5
14	HS-CAN(-)	reserved
15	L-Line	n/c
16	Battery+	Battery +, unswitched

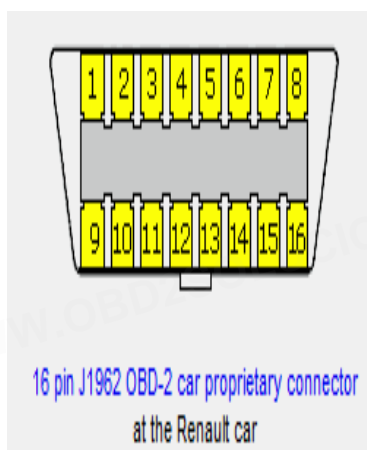


**PEUGEOT : Usado para todos los modelos de 1997 hacia adelante**



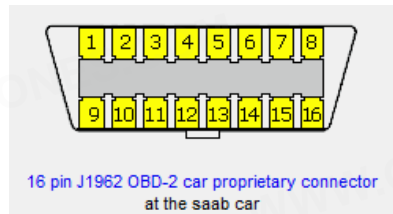
Pin Number	Pin Name	Description (may be empty)
2	K-Line	Heater and air-conditioner diagnostic
3		engine rotation sense
4	GND	Chassis ground
5	SGND	Signal ground
6	CAN-high	J-2284
7	K-Line	Engine and transmission diagnostic
10	K-Line	Steering wheel module diagnostic
11	K-Line	anti-theft module, tire pressure module, some other modules (for Peugeot 307,607,807) diagnostic
12	K-Line	ABS diagnostic
13	K-Line	Airbag diagnostic
14	K-Line	lock diagnostic
14	CAN-low	J-2284
15	L-Line	Engine and transmission
16	+12V	Accumulator

**RENAULT : Usado en modelos de 1997 en adelante**



Pin	Signal	Description
2	J1850 Bus+	
4	CGND	Chassis ground
5	SGND	Signal ground
6	CAN High	J-2284
7	K-LINE	(ISO 9141-2 and ISO/DIS 14230-4)
10	J1850 Bus-	
14	CAN Low	J-2284
15	ISO 9141-2 L-LINE	(ISO 9141-2 and ISO/DIS 14230-4)
16	+12v	Battery power

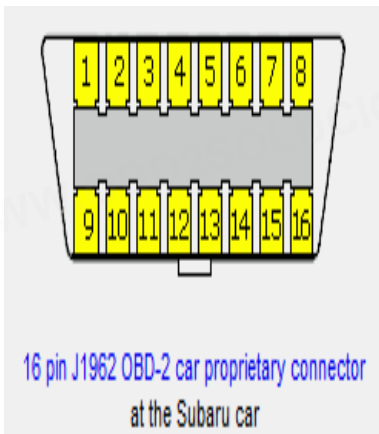
**SAAB :** Utilizado en todos los modelos Saab



Pin Number	Pin Name	Saab vehicle function
1		Saab Instruments (+)
2	J1850	n/a
3		n/a
4	GND	Chassis ground
5	SGND	Signal Ground
6	HS-CAN	Blinkcode
7	K-Line	K-Line, K1 (engine)
8		K-Line (Saab 9000/1, KW81/82 protocols)
9		Saab Instruments (-)
10	PWM	n/a
11		L-Line Memory Seats
12		n/a
13		n/a
14	HS-CAN(-)	n/a
15	L-Line	n/a
16	Battery+	Battery +, unswitched

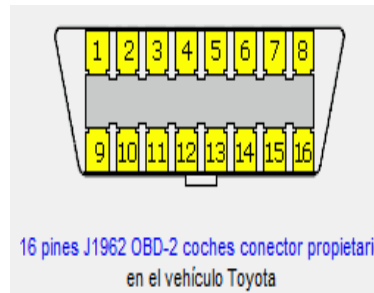
**SUBARU :** Utilizado en la mayoría de los modelos americanos producidos a partir de 1996 y

En modelos europeos producidos a partir de 2001



Pin	Signal	Description
4	CGND	Chassis ground
5	SGND	Signal ground
6	CAN High	J-2284
7	K-LINE	(ISO 9141-2 and ISO/DIS 14230-4)
9		SSM (Subaru Select Monitor) timing pulse
11		SSM (Subaru Select Monitor) timing pulse
12		SSM to ECM signal
13		ECM to SSM signal
14	CAN Low	J-2284
15	ISO 9141-2 L-LINE	(ISO 9141-2 and ISO/DIS 14230-4)
16	+12v	Battery power

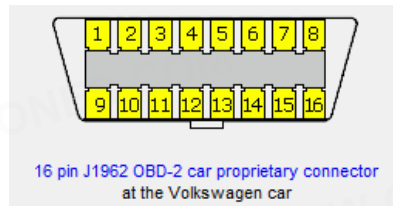
**TOYOTA** : Utilizados en la mayoría de los modelos a partir de 1998



Perno	Señal	Descripción
2	J1850 + Bus	
4	CGND	Tierra del chasis
5	SGND	Tierra de señal
6	CAN High	J-2284
7	K-LINE	(ISO 9141-2 e ISO / DIS 14230-4)
10	J1850- Bus	
13	TC	El tiempo de verificación - Ajuste de encendido previamente el ángulo o la lenta ABS códigos a cabo
14	CAN Low	J-2284
15	ISO 9141-2 L-LINE	(ISO 9141-2 e ISO / DIS 14230-4)
16	12 v	Carga de la batería

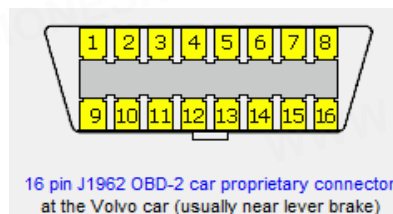
## CONECTORES DE DIAGNÓSTICO

**VOLKSWAGEN :** Utilizado mayormente en vehiculos de fabricación a partir 1996



Pin	Signal	Description
2	J1850 Bus+	
3	CAN-high	
4	CGND	Chassis ground
5	SGND	Signal ground
6	CAN High?	J-2284
7	K-LINE	(ISO 9141-2 and ISO/DIS 14230-4)
10	J1850 Bus-	
11	CAN Low	
14	CAN Low?	J-2284
15	ISO 9141-2 L-LINE	(ISO 9141-2 and ISO/DIS 14230-4)
16	+12v	Battery power

**VOLVO :** Utilizado para todos los modelos producidos de 1996 en adelante



Pin	Signal	Description
2	J1850 Bus+	
4	CGND	Chassis ground
5	SGND	Signal ground
6	CAN High	J-2284
7	K-LINE	(ISO 9141-2 and ISO/DIS 14230-4)
10	J1850 Bus-	
14	CAN Low	J-2284
15	ISO 9141-2 L-LINE	(ISO 9141-2 and ISO/DIS 14230-4)
16	+12v	Battery power