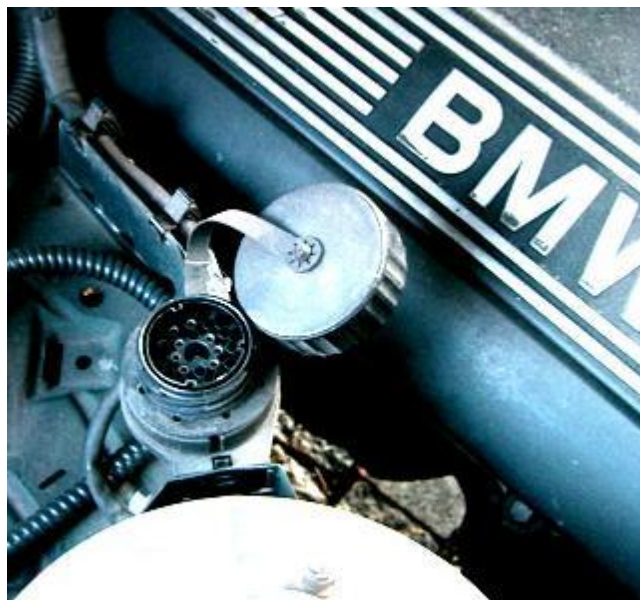


# General

## Introduction Manual

**BMW uses 2 types of diagnostic connectors, the older 20pin socket, also sometimes referred to as the "PAC-MAN" style socket that can be found in cars from 1987 to 2000 and the 16pin OBD2 socket that can be found in cars from 2000 until now.**

**The older 20pin socket is under the hood, often located close to the engine, it's usually high up and easily accessible, it is covered by a round dust cap which twists off like the lid of a jar. The black dust cap is attached by a plastic strap so it can't be lost and you will be reminded to put it back on.**



**The picture shows a typical view on the 20pin socket after the dust cap got twisted off.**

**Most of the BMWs built from 1996 to 2000 have both the 16pin OBD2 socket AND the round 20pin socket. In those cases it's important for you to know that you will still have to use the 20pin connector for those cars since the 16pin OBD2 socket found in those cars does not have all modules connected. In simply words, if there is a 20pin socket available - it must be used for factory diagnostic.**

## **20pin OBD1 socket**

**For BMWs after 1987 equipped with the 20pin OBD1 socket there are two possible scenarios, let us get now into details:**

### **20pin OBD1 socket Scenario 1:**

**You have an E30 to E36 BMW that makes use of the L-Line, you can see that pin15 of the 20pin socket is installed / wired. Those cars will have certain modules (ECUs) inside that will require a diagnostic mode called ADS to be accessible. In this case the only way to access them is our OBD/ADS Interface in ADS mode, to run it in ADS mode you will need a real comport at your PC, converters such as USB to serial, Express to serial, PCI to serial and even most PCMCIA to serial cards will NOT work since you will need a real legacy base address for the comport which is hardcoded to COM1 with direct I/O Access to the Address range 03F8(h)-03FF(h).**

**Only certain 16bit PCMCIA cards can offer such a legacy Address and will be correctly accessed by your PC software and are therefore usable in ADS mode. This cards are either very old or if purchased new pretty expensive right now, examples of such cards are the SL232 from Elandigitalsystems (UK) as well as the SP320-1P from Argosy (Taiwan).**

### 20pin OBD1 socket Scenario 2:

**You have an E38 or above that does not use the L-Line anymore and does not have pin15 of the 20pin socket installed / wired. Those cars and all modules (ECUs) inside them behave pretty much the same as the later 16pin OBD2 socket equipped ones, and you will have full access to all modules (ECUs) using Interfaces that were intended and designed for the 16pin OBD2 socket, all you will need is an Adapter from OBD2 female to the 20pin plug.**

**(We recommend that you only use adapters made by us because adapters made by other manufacturers might not have all the wiring needed to work correctly for the products sold by us)**

**Since Interfaces that were intended and designed for the 16pin OBD2 socket can be used for those cars and they get setup as "STD:OBD" you can choose any comport number for them (which must be assigned in the obd.ini of course) and also make use of converters such as USB to serial, Express to serial, PCI to serial and PCMCIA to serial cards without any problems.**

## **16pin OBD2 socket**

**For BMWs after 2000 equipped with the 16pin socket there are also few possible scenarios let us get into details here as well:**

### 16pin OBD2 socket Scenario 1:

**You have an BMW that is equipped with an 16pin OBD2 socket and uses K-Line diagnostic, those are cars built between 2000-2006+, there are many low cost diagnostic Interfaces available for those kind of cars.**

## **16pin OBD2 socket Scenario 2:**

**You have an E60, E61 after 3/2007, E83 after 9/2006, E81, E87 after 3/2007, E90, E91, E92, E93 after 3/2007, E70 (New X5), R56 (New Mini), New F Series, And other newer models / models yet to be released.**

**Those BMWs no longer use K-Line diagnostic and all diagnostic runs over high-speed CANBUS (aka DCAN) you will need a special DCAN Interface for them that interprets all the diagnostic traffic to the high-speed CANBUS and vice versa.**

### **Common Issues and Frequently Asked Questions:**

**Q: What will happen if I use an Interface that was intended and designed for the 16pin OBD2 socket with an Adapter from OBD2 female to the 20pin plug on an BMW such as the E36?**

**A: You will have access to the modules (ECUs) that already use the bi-directional K-Line, but you won't be able to get an connection to modules that require real ADS mode such as the DME.**

**Q: What will happen if I use an Interface that was intended and designed for the 16pin OBD2 socket with an Adapter from OBD2 female to the 20pin plug on an BMW such as the E39?**

**A: Everything will be fine, since all modules in this car will behave exactly the same as in an 16pin OBD2 socket equipped BMW you will be able to access all of them.**

**Q: What will happen if I use an (cheap) Interface that was intended and designed for the 16pin OBD2 socket using K-Line diagnostic on a new DCAN equipped BMW.**

**A: Nothing will happen you won't be able to access anything.**

**Q: Can I use the DCAN Interface on 16pin OBD2 socket BMWs that are equipped with K-Line (2000-2006+) ?**

**A: Yes you can, the DCAN does also have a inbuilt K-Line for those cars, however those cars often used a second K-Line on PIN8 of the 16pin OBD2 connector which is now used on latest F Series as an Ethernet activation pin. Having the PIN8 installed and used as a 2nd K-Line does result in mayor connection problems with those new F Series cars. Because of that, and on the request of most customers that prefer full compatibility on the newest DCAN cars instead of beeing fully backward compatibly new units sold by us do have PIN8 removed. There is a special Adapter available which can be connected in between the DCAN Interface (which got no pin8) and the older K-Line equipped car which can offer once again the full backward compatibilty on those cars.**

**Q: Can I use the DCAN Interface on 20pin socket BMWs that do not use the L-Line ?**

**A: Yes you can, the DCAN does also have a inbuilt K-Line for those cars, all you need is an Adapter from OBD2 female to the 20pin plug. (We recommend that you only use adapters made by us because adapters made by other manufacturers might not have all the wiring needed to work correctly for the products sold by us)**

**Q: I have a Question not answered here, whom do I ask?**

**A: This is the general Interface FAQ, please check again from the specific FAQ for the product or its application notes, if you cannot find an answer to it there you are welcome to contact us by email or using our webpage contact form to ask, we will try our best to assist you.**

**All the brands mentioned in this Manual belong to their respective owners.**