

# **Autoplugin Therminal –DX**

**Version 12.8**

**Plug-n-Play Connection  
to the Service Socket**

**Rev. B**

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## 1. Connection Description

For cars listed below the module can be connected to the OBD-II service socket by the means of supplied Plug-n-play cable. All the time when the socket is not used for the car diagnostics, Thermanal can be connected to the socket for the operation. Thermanal can be disconnected from the socket anytime without need of further readjustment.

The Plug-n-Play connection is available for:

**Ford** models: **Focus** (2004-2017), **C-Max** (2004-2018), **Grand C-Max** (2010-2018), **Kuga** (2008-), **Connect** (2014-2018), **Mondeo** (2007-2013), **S-Max** (2006-2015), **Galaxy** (2006-2015), **Transit Custom** (2013-2016), **Tourneo Custom** (2013-2016), **Transit Van** (2014-);

**Volvo** models: **C30** (2007-2013), **S40** (2006-2012), **V40/V40CC** (2012-), **V50** (2006-2012), **S60** (2005-2018), **C70** (2007-2013), **XC60** (2008-2017), **V70** (2005-2016), **XC70** (2005-2016), **S80** (2005-2016), **XC90** (2005-2014)

## 2. Preparation for work

It is necessary to make adjustments for some cars before the operation:

- **Focus 2** (2004-2007), **C-Max** (2003-2006)

Turn on the ignition and select in the driver information system menu:

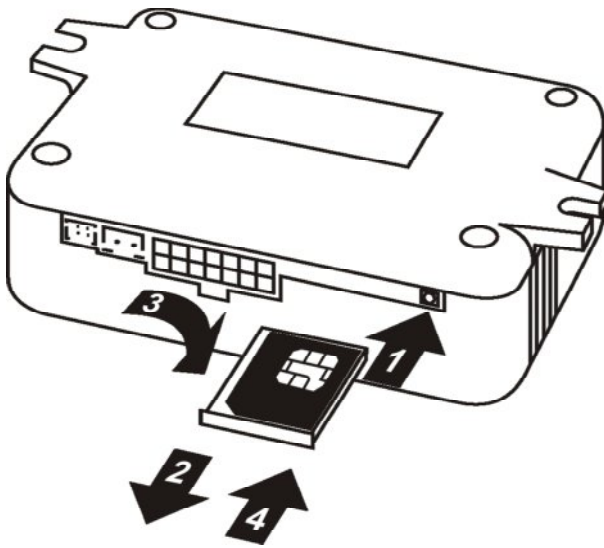
Your settings → Aux.heater programming → Instant control → Auto

- **Focus 2** (2008-2011), **C-Max** (2007-2010), **Kuga** (2008-2012)

**Start the engine** and select in the driver information system menu:

Set > Menu → Settings → Auxiliary Heating → On → Off → On [again]

SIM-card in Mini-SIM format is required for GSM-module operation and should be purchased separately from local GSM operator (2G network with GPRS technology support is demanded). *If the operator supports 3G/4G phones only, a SIM-card from the operator can't be used in Thermanal.*



Choose tariff plans with non-expensive/pre-paid SMS traffic for control by SMS or with pre-paid mobile data traffic for control via Internet (50-100 Mb per month is enough). Combine phone account with GSM module account if possible.

Android application allows use both the mobile data and SMS, iOS application allows use the mobile data only.

Install SIM card into the GSM-module, as shown at the figure. The operation should be performed with unplugged power from the GSM-module. Press with a thin blunt object (phillips screwdriver, pen, etc.) on the SIM-holder ejector pushbutton (1), pull for the SIM-holder and pull the holder out of the housing (2). Then put the SIM into the holder to commit (3) and insert the holder back to the housing up to the stop (4).

### 3. Sequencing

- Find the service socket in your car. It is a 16-contacts, double row socket. Usually it is placed at the left side of the dashboard, below the light control switch. The socket can be covered by the enclosure or by the glove box.
- Connect Plug-n-Play cable and the LED-button to the module. Connect orange wire of Plug-n-Play cable to the module. For Thermanal-DXE/DXF versions connect external GSM-antenna into the violet socket. Finally connect Plug-n-Play cable to the service socket.
- Wait for network registration complete during 30 seconds (5 flashes in series by the LED-button), then switch the ignition on for 30 seconds.

- Launch the Quickstart procedure (see **Brief User Manual** for details). When the procedure will be completed make a voice call on GSM-module number and make sure the heater is started. You can detach outer button if you don't want to install it.
- Find space inside the dashboard for kit placement. Secure module and cables inside the dashboard with straps. GSM module can be fixed with adhesive tape or can be fixed by straps. For Thermanal-DXC version pay attention that internal antenna of GSM-module (placed at the housing's side, opposite to SIM-holder) doesn't stay close to metal parts of the dashboard. For Thermanal-DXE/DXF versions connect all antennas' connectors to the GSM-module, according to connectors' colors. For Thermanal-DXF the GPS/GLONASS antenna has a magnetic base which can be attached to metal parts. Or can be fixed with adhesive tape. It is important to point the antenna toward the sky and don't cover it by metal parts from the sky side.
- GSM-module can indicate GSM signal level by the button-embedded LED. This mode can be useful to find an appropriate location of the GSM-module (Thermanal-DXC) or outer antenna (Thermanal-DXE/DXF). To activate the mode press and hold the button until the embedded LED flashes from 15 to 20 times, then release the button. The LED starts indicate GSM signal level by frequent flashes (1-5) in series. Signal status will be refreshed every 10 seconds.
- Before the final fixation of the module make sure that cables' length is enough to make connection into OBD-II socket. Shorten excess length of the Plug-n-Play cable by straps and fix all the cables of kit inside the dashboard. Finally connect Plug-n-Play cable to the OBD-II service socket.

#### **4. Unplugging from the Service Socket**

If the connector of Plug-n-Play cable has the strap for extraction, take the strap with your hand and slightly pull for the strap. Take the connector's housing by other hand and, moving the housing from side by side, gently extract the connector from the socket. If the strap is absent in connector's design, take a flat non-shape item and insert it to the connector's slot placed on the narrow side of the connector. Then, using it as a lever, gently extract the connector from the socket.