Wired Device Installation Guide

DART3 12-wire Harness Definition

- The Dart3 comes with a 12 wire, 650mm long harness
- 15mm is pre-stripped on the input (red), ground (black), and the ignition (white) wires.
- Wire gauge is 0.35mm²

Pin	Colour	Function
1		+VIN / BATT (8-36V)
3		GROUND
3*		VOUT
4*		Driver ID 2 TTL RX / Wiegand D0 / Digital Input 3
5		DIGITAL INPUT 1 (48V max)
6		ANALOGUE INPUT (0-30V)
7		GROUND
8		IGNITION INPUT
9*		GROUND
10*		Driver ID 1 TTL TX / Wiegand Data 1, iButton
11		DIGITAL INPUT 2 (48V max)
12		SW GROUND

3-Wire Install

The Dart3 is supplied with a 12-wire harness. The harness contains pins for various I/Os. For many installs, where we simply are looking for 'standard' vehicle tracking, we only need to connect 3-wires.

For quick plug-and-play installs, there are additional Dart3 harness options (OBDII harness, Cig Lighter harness) - or the Bolt2 is a good option. The benefit of a 3-wire 'hard-wired' install is that the device can't be easily dislodged/removed.

Wiring Description:

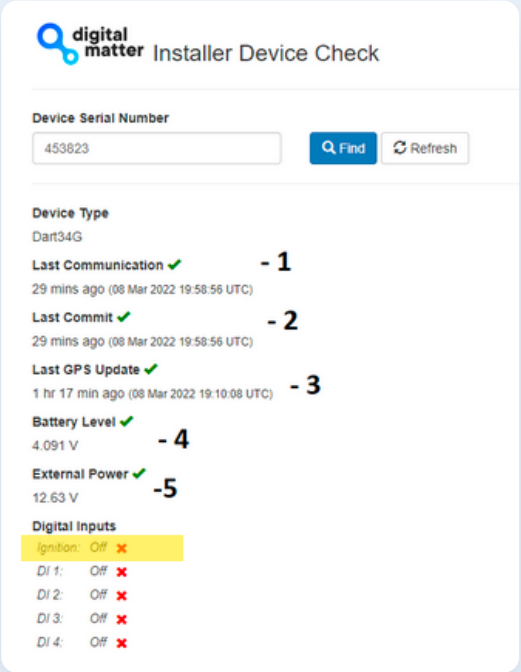
- Connect Red (Pin 1) on the Dart3 harness to the vehicle battery (8-36V).
- Connect Black (Pin 3 - or any black wire on the harness) to chassis ground
- Connect White (Pin 8) - to an ignition source.

Standard Three Wire Install Wiring Diagram

- Vehicle >9v Permanent Supply
- Vehicle Ground
- Vehicle Positive wire when Ignition ON

Testing: OEM Installer Page

The OEM Installer page (www.oemserver.com/installer) is designed to verify than an installation has been done correctly. We will be using it going forward in this document. The Function of this page is generic across all devices. It is not password protected, and as such is designed to not give any sensitive information away.



Getting Started

DM devices may be damaged by electrostatic discharge if not handled correctly. Ensure adequate static precautions are taken. Consider wearing an anti-static wrist guard. Avoid touching the antennae and any of the electronic components on the PCB. Take special care not to touch the ceramic GPS antenna as static can damage the sensitive GPS circuitry.

Insert SIM Card

The Dart3 uses a Micro (3FF) SIM Card.

The Dart3 operates on 2G (sold by our branch in South Africa only), or LTE-M/NB-IoT networks which requires a specific SIM card from these networks.

Locate the silver SIM holder on the PCB.

Slide the SIM holder to the right and position the holder upright. Do note the side with with the keyed corner first and place the SIM down to make contact with SIM contacts on the PCB.

Connect the Battery

The DM Powered Devices all come with various Li-PO battery packs.

- Leave the battery in the position it is stuck down, away from the antennas
- Plug the battery into the socket shown in the image, positive (red) wire closest to battery.
- The LED should start to flash.

Checking the Device is Connected

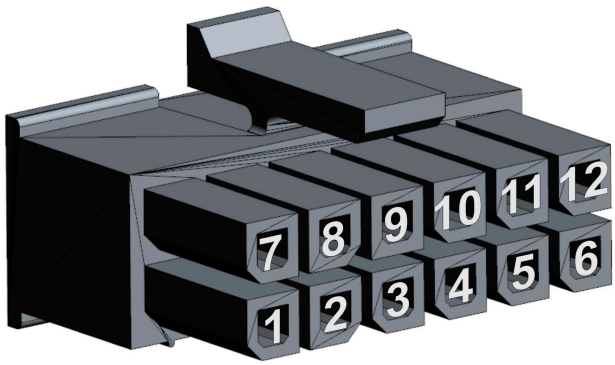
LED Behaviour

The battery should come pre-charged. Once you insert it, the internal LED will come on and flash. The LED will flash slowly at first. When it opens a connection to the server, it will flash fast. Once data is sent, it will go solid briefly, and revert to flashing fast. When the device goes to sleep, the LED will switch off. If the battery is too low, use the harness to provide external power. If the LED flashes but the Dart3 does not connect, check the SIM is in the holder correctly and check that the SIM is working. Further troubleshooting steps are discussed further on in this document.

Installation Location

The housing has mounting holes for screws, bolts or cable ties. There are a few considerations for the final mounting position of DM devices. The devices have been engineered to have the best possible GPS reception. It will work from inside engine bays, body panels, under dashboards and other places where other GPS devices simply fail to operate reliably. Although the units will work in these locations it is always advisable to install them where it is best able to get signals from the GPS satellites, with the optimum position being a location with a clear 180-degree view of the sky

Full Dart wiring harness diagram



*** TTL EXPANSION BUS**

WIRE DEFINITION:

Pin 1 (RED)		***+VIN*** / BATT
Pin 2 (BLACK)		**MAIN** GROUND
***Pin 3** (PURPLE)		VOUT
***Pin 4** (GREEN)		TTL RX
Pin 5 (PINK)		DIGITAL IN 1
Pin 6 (BLACK)		GROUND
Pin 7 (BLACK)		GROUND
Pin 8 (WHITE)		IGNITION INPUT
***Pin 9** (BLACK)		GROUND
***Pin 10** (BROWN)		TTL TX
Pin 11 (BLUE)		DIGITAL IN 2
Pin 12 (YELLOW)		SW GND OUT 1