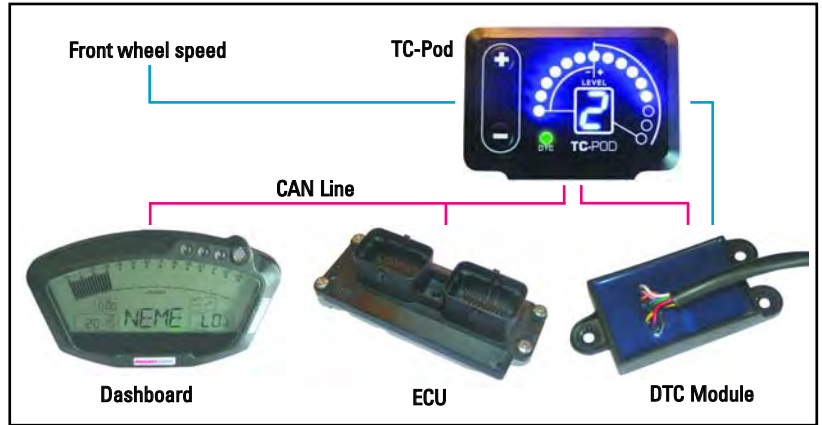# TC-POD

DTC – Control Module for Ducati

CS

What is the TC-Pod?

The TC-Pod is a revolutionary device, which gives you total control of your DTC system while you are riding as well as adjustment for different tyre or wheel sizes.

TC-Pod plugs into the existing bike wiring loom without any need for wiring changes to the standard bike. It then takes over the control of the DTC module from the dashboard making it possible to adjust both the Level of DTC and allowing it to be switched off/on, all without stopping the bike. There is no need to activate the DTC on the standard dashboard.

But equally important is its ability to adjust the calibration of the front wheel to make corrections for fitting different tyres or wheel sizes to front or rear. Imagine you have changed from a 17" rear rim to a 16.5" rim, your back wheel will be spinning much faster than the front simply because the rolling circumference has changed, and your DTC overreacts because the rear is faster than the front which it thinks is excessive spin. The TC-Pod simply makes the front speed faster to catch up with the new rear and feeds this modified value into the DTC module.

Alternatively, if you kept the same rear and fitted a smaller front rim and tyre the front speed would be too fast compared to the rear and the DTC would not activate enough. In this case the TC-Pod can slow down the front until balanced speed values are achieved again.

Front wheel speed   TC-Pod

CAN Line

Dashboard   ECU   DTC Module

Contents

System functions

- DTC, ON/OFF and UP/Down Level, at the touch of a button and no need to stop the bike
- No need to activate the DTC system via the dashboard setup pages, all can be done via the TC-Pod.
- Speed correction setup, to trim the DTC system for different tyre or wheel diameters.
- 100% compatible with the standard Ducati ECU with 'Plug n play' kits for 1098R / 1198S / Streetfighter-S.
- Multi LED display to indicate the amount of DTC correction being applied in real time.
- Numeric display of the current DTC level.
- Adjustable back lit displays for day or night riding.
- Memory of speed correction and TC level settings, even after power off.
- Warning LED in case of DTC or sensor errors, and built in self-diagnostic capability.
- Supplied with brackets to fit the handlebars, or alternative centre mounting with remote buttons.
- 100% compatible with all other CAN based bike systems such as DDA, DTC, ECU & dashboard.

Remember to register your product - see Terms and Conditions on the back page.

What can I see on the display?

- Current DTC level setting from 1 to 8.
- Amount of DTC activity via the 15 blue LEDs, the more lights you have showing, the more DTC correction is taking place.
- Bi-colour DTC LED, Green for DTC on and working normally, Red for a problem or DTC off.

15 x LEDs indicate the amount of DTC correction being applied in real time as you are riding

Blue LEDs are also used to indicate (during power on) the amount of adjustment being applied to the wheel speed calibration

DTC level up / down

Current DTC level setting from 1 to 8. Selected by using the buttons on the TC-Pod or the remote switches

DTC status
Green - DTC = ON
Red - DTC - Error

Installation

1098R / 1198S

Due to limited clearance on the handlebars the TC-Pod should be fitted centrally just in front of the dashboard using the angled bracket CS1243. This can be held in place using the double sided adhesive or any alternative method using the single mounting hole. The pod should be pushed back as far as possible so that the upper edge touches the front lower face of the dash, the kit contains a small piece of foam tape to avoid wear on the dash surround.

Mount the CS972 switch assembly to the upper or lower clutch master cylinder clamp using the longer bolt and spacer provided. Connect the CS972 switch assembly to the TC-Pod via the remaining 4 way connector of the TC-Pod.

Remote push button operation, Green = UP and Blue = DOWN

Streetfighter-S

For installation on the streetfighter you can fit the TC-Pod directly to the clutch master cylinder clamp using the longer bolt, CS1249 adaptor and spacer provided. In this position the rider can access the TC+ and TC- buttons directly.

For users who wish to mount the TC-Pod in an alternative location, the CS972 switch assembly may be fitted as an optional extra.
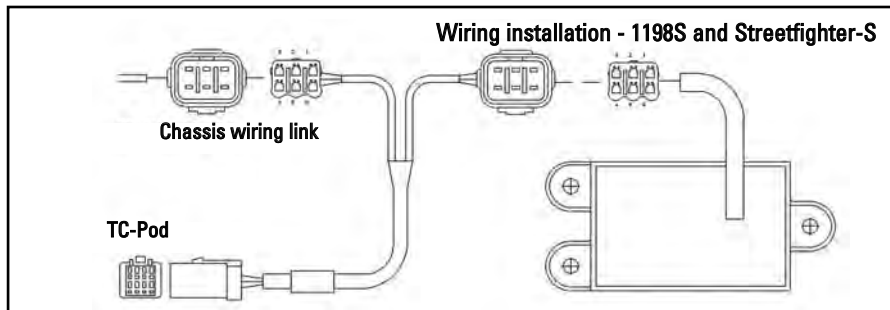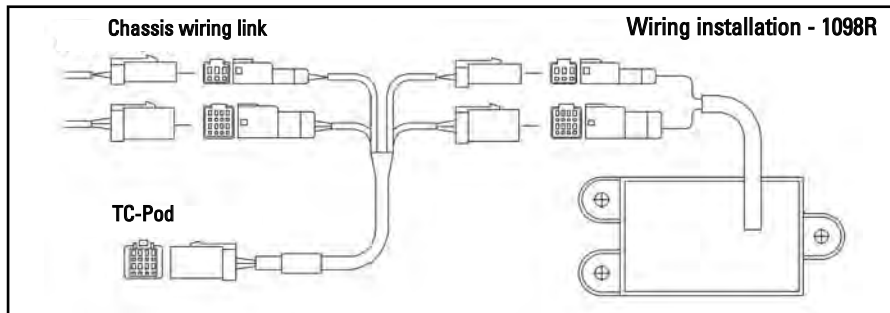
Wiring installation

All Models

Route the wiring along the same path as the stock loom all the way to the back of the bike.

Disconnect the DTC module from the stock loom and re-connect it to the TC-Pod loom, now connect the TC-Pod loom into the stock wiring.

The finished installation should have both the DTC module and the bike wiring connected to the TC-Pod wiring using all 4 connectors on the 1098R or 2 connectors on the 1198S & Streetfighter-S.

Wiring installation - 1098R

Chassis wiring link

TC-Pod

Wiring installation - 1198S and Streetfighter-S

Chassis wiring link

TC-Pod

Power on sequence

1. All of the blue LEDs are activated sequentially left to right to confirm that all are working correctly.
2. The centre numeric display will activate all segments sequentially.
3. The DTC LED will light up, then turn off.
4. One of the blue LEDs will then be activated for 1 second to indicate the previously applied speed correction value. Vertical being 0% gain, each LED clockwise being 0.5% higher speed up to a maximum of 4%, each Led anticlockwise being 0.5% lower speed up to a maximum of 3%.
5. If the DTC was previously turned OFF then the red LED will light up for 3 seconds to remind you DTC is off. The centre display will show a '-' symbol.
6. If the DTC was previously turned ON then the centre display will show the last used DTC level you chose and the DTC LED will turn green to indicate that the system is active.
7. The green DTC LED at the bottom left stays on whenever the DTC system is switched on Level 1>8.

Speed adjustment

1. Hold down the TC-UP(+) button while you switch on the ignition.
2. The TC-Pod will not go through the normal start up sequence, it will simply show a single blue LED indicating the current front speed correction value. LED 7 indicates 0% correction.
3. Use the UP or DOWN buttons to adjust the front speed in 0.5% steps in either direction.

   a. Going positive (+) makes the front speed faster reducing DTC activity.

   b. Going negative (-) makes the front slower increasing DTC activity.

4. When you get to your desired level, press and hold the UP(+) button for 2 seconds. The TC-Pod will now run through the normal 'power on' sequence where you will get the confirmation of your new speed correction settings.
5. The TC-Pod will then revert to it's normal operation.
6. These settings will be saved even after power off/on.

Please also read Page 1 'What is the TC-Pod?' to better understand the speed correction system.

IMPORTANT NOTES -

The front speed adjustment settings are intended for use as a correction so that users can achieve the normal DTC operation when using non-standard wheels & tyres. It is not intended for use as a method of altering the way DTC works.

It is strongly recommended that these speed corrections are made in individual steps of 0.5% at a time. If for example your DTC is coming in too much because of tyre or wheel changes, increase the speed correction ONE step (0.5%) at a time until you feel that the correction and control is back to normal.

Brightness adjustment

1. Hold down the TC-DOWN (-) button while you switch on the ignition.
2. The TC-Pod will not go through the normal start up sequence, it will show a number from 0>9 in the centre and corresponding number of blue LEDs.
3. Use the UP or DOWN buttons to adjust the brightness of the display, 0 being the lowest, 9 the brightest.
4. When you get to your desired level, press and hold the UP(+) button for 2 seconds. The TC-Pod will now run through the normal 'power on' sequence.
5. The TC-Pod will then revert to it's normal operation.
6. These brightness settings will be saved even after power off/on.

IMPORTANT NOTE

It is recommended that a lower brightness level is used for night riding.

Questions & Answers

Q. Do I need to turn on the DTC at the dashboard?

A. *No. The on/off for the DTC and level selection are all done via the Pod.*

Q. What happens if I do switch ON the DTC via the dash in the standard way?

A. *This has no affect on the operation of the TC-Pod or the DTC system.*

Q. Are the normal DTC correction dash warning lights still visible?

A. *Yes, these operate in unison with the blue LEDs on the TC-Pod.*

Q. How do I change the DTC level while riding?

A. *Simply use the UP or DOWN buttons on the TC-Pod, or the remote switch assembly CS972 on the handlebars. Both are linked together and it makes no difference which you use.*
IMPORTANT - Keep your eyes on the road and only do these changes if you can find the buttons without looking at them.

Q. How do I turn off the DTC while riding?

A. *Use the DOWN button until you get to DTC level 1, then hold the DOWN button for more than 2 seconds to turn it OFF. You will be warned that DTC is off by the red DTC-LED coming on for 3 seconds. The display will then show a '-'.*

IMPORTANT - Keep your eyes on the road and only do these changes if you can find the buttons without looking at them.

Q. How do I turn ON the DTC while riding?

A. *From the '-' symbol (DTC-off), press and hold the UP button until DTC level 1 is shown and the DTC-LED turns green, press the UP again repeatedly to get to your desired DTC level.*
IMPORTANT - Keep your eyes on the road and only do these changes if you can find the buttons without looking at them.

Q. Can I adjust the speed calibration while riding?

A. *No, we inhibit this possibility.*

Q. Can the TC-Pod be used with an aftermarket ECU

A` *Only for use with the standard Ducati ECUs fitted to 1098R / 1198S / Streetfighter-S, or aftermarket ECUs that are DTC compatible.*

Q. How do I activate the 'demo' mode?

A. *For shop displays or to check all LEDS & display features, hold down both buttons while you switch on the ignition. To re-set back to normal, simply turn off/on the ignition.*

TC-POD

Built in diagnostics

The TC-Pod monitors the front and rear speed data continually as well as CAN messages from other devices on the bike to look for potential problems.

If a problem is found which lasts longer than 0.5 seconds the DTC- LED will flash red and the centre display will show a number code. Use this number and the ERROR CHART opposite to define the nature of the fault.

During diagnostic events the DTC system is disabled, but immediately the fault is resolved the TC-Pod will automatically revert back to the previously used TC-Level settings.

If the diagnostic event has a very short duration it can be impossible for the user to notice the diagnostic value, for this reason, any diagnostic event code will stay visible for 2 seconds.

DTC Red (not flashing) - If on for 3 seconds at start up, this is just a reminder that DTC is switched off.

DTC Red (flashing) - look at the flashing number in the centre display and refer to the ERROR CHART opposite to identify the fault.

DTC Green - DTC is switched on and working normally, no diagnostics are present. The numeric value in the centre denotes the DTC level being used.

ERROR CHART

Error 1 - Front speed sensor signal is not present

Error 2 - Front speed sensor - erratic signal

Error 3 - Loss of CAN communication from dashboard or ECU

Error 4 - Loss of CAN communication from DTC module

Error 5 - Diagnostic message from DTC module (also rear speed)

Error 6 - Internal error - CAN-IN

Error 7 - Internal error - CAN-OUT

TC-Pod kits

TC-Pod kit - 1098R　　　　　　　　　　**TC-Pod - 1098R**

   (TC-Pod + mount bracket + remote switches
   + wiring for 1098R)

TC-Pod kit - 1198S　　　　　　　　　　**TC-Pod - 1198S**

   (TC-Pod + mount bracket + remote switches
   + wiring for 1198S)

TC-Pod kit - Streetfighter-S　　　　　　**TC-Pod - SF**

   (TC-Pod + clutch slave bracket + wiring for SF)

Spares

TC pod centre mounting bracket - 1198S / 1098R	CS1243
Remote switch set	CS972
Adaptor bracket - Streetfighter-S handlebar mount	CS1249
Wiring loom - 1098R	CS1246
Wiring loom - 1198S / Streetfighter-S	CS1245

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- This manual is correct at the time of printing, but we reserve the right to change product specification without prior notice to the end user.

- Warranty & liability is limited to the replacement of components in the event of manufacturer defect for a period of 12 months from purchase. To initiate your 12 months warranty please Email your name / address / country / date of product purchase / bike model / name of shop or re-selling agent / product serial number to **mail@competitionsystems.co.uk** with the words 'Pod Warranty' as the subject line.

TC-POD