



**Motorcycle
Electronic Cruise Control ©**

**How to identify Cruise Control Switch,
Cruise Control Computer and
Cruise Control Throttle Servo models**

17 July 2024

MOTORCYCLE CRUISE CONTROLS

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Motorcycle Cruise Controls has used several different control switches, computers (electronics module) and throttle servo (throttle actuator) over the years, and cruise controls for some models of motorcycle or ATV's have had almost ALL of the these switches, computers and servos in cruise control kits over the years.

The best example of this is the Honda ST100 cruise control kit. This model has been available since 1998 until now and in that time has been based around four different cruise control computers resulting in four different cruise control kit part numbers; MCS1010, MCS1450, MCS1580 and currently MCS4050.

There have also been seven different cruise control switches in that time. A control switch change with an unchanged computer results in a revision letter being added to the original kit part number eg. MCS1010a, MCS1010b or MCS1010c. Other changes to the cruise control kit can also be the cause for a revision number change, so not all revisions are the result of a control switch change.

These changes of computer and control switch are all because the components we used are no longer available; they were made obsolete by the manufacturer of the part. We now manufacture our own control switch and computer (and almost all components in the cruise control) and have been able to get continuity in our model range as a result.

The parts list at the end OR beginning of the cruise control installation manual supplied with your kit will give you the correct part numbers for the cruise control computer, the control switch and the throttle servo/actuator. This is the best way to ensure that you are ordering the correct part.

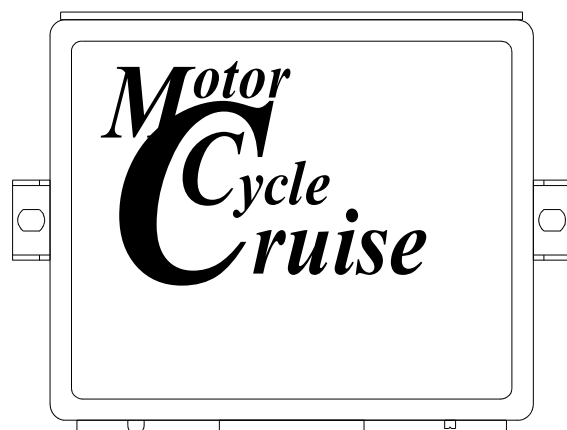
This document has pictures of the various computers and control switches to assist in identifying what you have in the event that you have lost your original installation instructions.

MCS 022 (AP50) computer

This is the first model computer used on MotorCycle Cruise Controls.

This computer is housed in a **grey plastic** box. It has a 12 way connector (on the lower face in the diagram), a red LED (light) beside the connector on one side and a small three position slide switch for gain adjustment on the other side of the connector.

The part number for this computer in the **parts list in the cruise control installation instruction set** will be MCS ***050 with no suffix or an L or H suffix (eg. MCS 02050L)



There will not be any model identifying numbers on the computer box. There may be a sticker with a serial number on it, but it is meaningless.

These part numbers tell us the configuration of the computer which varies from model to model.

This computer was only used with MCS020 vacuum throttle actuator/servo.

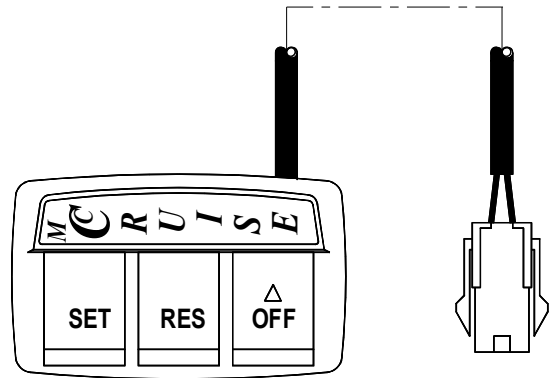
MCS 023 control switch (for MCS 022 computer)

This is the first model control switch used on MotorCycle Cruise Controls.

The part number for this control switch in the **parts list in the cruise control installation instruction set** will be MCS 011, MCS 012 or MCS 013 depending on the type of label (the MC Cruise label) on the switch.

This switch is **ONLY** suitable for use with the MCS 022 computer.

This switch has a four-way connector on the wires, but only three positions are used.



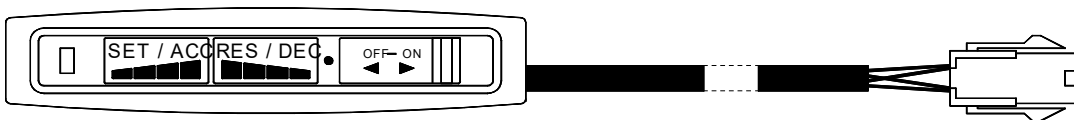
MCS 019 control switch (for MCS 022 computer)

This is the second model control switch used on MotorCycle Cruise Controls.

The part number for this control switch in the **parts list in the cruise control installation instruction set** will be MCS 019.

This switch is **ONLY** suitable for use with the MCS 022 computer shown above.

This switch has a four-way connector on the wires.



MCS 062 (CA350) computer

This is the second model computer used on MotorCycle Cruise Controls.

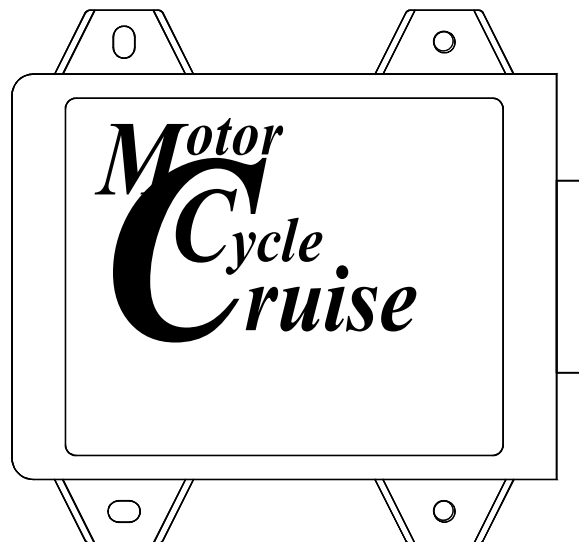
This computer is housed in a **black plastic** box. It has a 20 way connector (on the right face in the diagram) and a red LED (light) beside the connector OR a red light visible on the top face of the box (depending on the design of the plastic box).

The part number for this computer in the **parts list in the cruise control installation instruction set** will be MCS ***0C with an M or K suffix (eg. MCS 1450CM).

Originally there would have been a sticker on the end of the box with this part number, but it may be lost or have faded with time.

The basic part number of the computer is the same as the cruise control kit part number with a 'C' suffix. The M or K suffix after the 'C' identifies it as set up for KPH or MPH.

This computer was only used with MCS020 vacuum throttle actuator/servo.



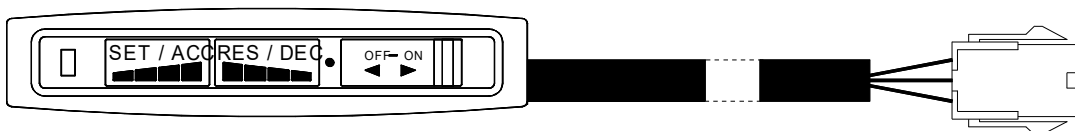
MCS 064 control switch (for MCS 062 computer)

This is the third model control switch used on MotorCycle Cruise Controls.

The part number for this control switch in the **parts list in the cruise control installation instruction set** will be MCS 064.

This switch is **ONLY** suitable for use with the MCS 062 computer shown above.

This switch has a six-way connector on the wires but only five positions are used.

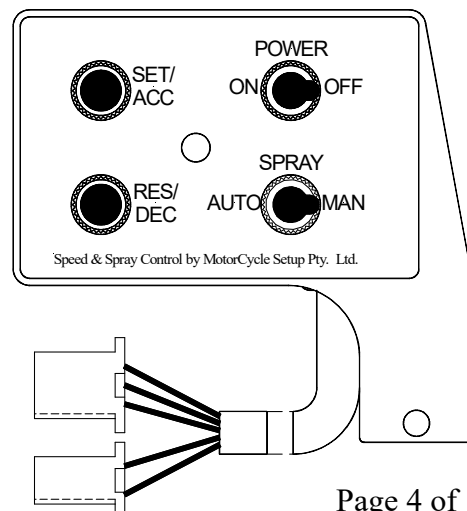


The control switch looks identical to the MCS 019 control switch. The only visible difference is the six-way connector fitted to the wires on this switch.

ATVSw MCS 1** series control switch (for MCS 062 computer) fitted to ATV's (QuadCruise)

This is the fourth model control switch used on MotorCycle Cruise Controls.

This switch was used on the MCS062 computer and later revisions of the switch fitted with sealed connectors (ATVSw MCS1**S – note the S suffix) were used with the later MCS800/MCSU400C computer.



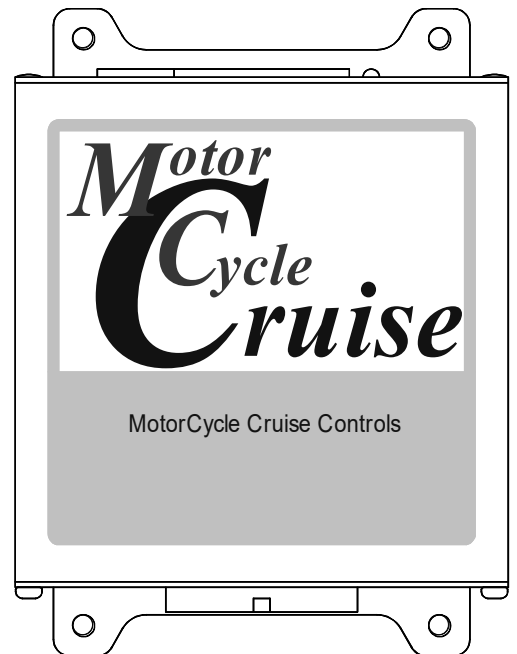
MCS 572 (AP150) computer

This is the third model computer used on MotorCycle Cruise Controls.

This computer is housed in a **black metal** box. It has a 16 way connector in the lower end plate (the lower face in the diagram) and a red LED (light) on the opposite end plate (the upper face in the diagram). There is a rubber cover fitted in the upper end plate. There are a number of DIP switches under this cover.

The part number for this computer in the **parts list in the cruise control installation instruction set** will be MCS 1**0C (eg MCS 1580C).

Originally there would have been a sticker on the side of the box with this part number and the default DIP switch settings, but it may be lost or have faded with time.



The basic part number of the computer is the same as the cruise control kit part number with a 'C' suffix.

This computer was only used with MCS574 vacuum throttle actuator/servo.

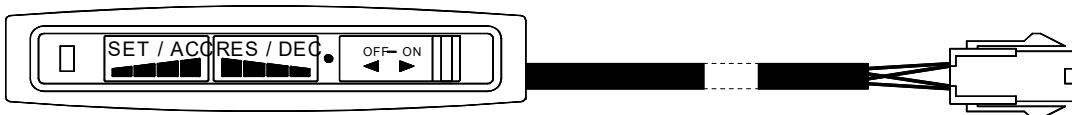
MCS 581 control switch (for MCS 572 computer)

This is the fifth model control switch used on MotorCycle Cruise Controls.

The part number for this control switch in the **parts list in the cruise control installation instruction set** will be MCS 581.

This switch is ONLY suitable for use with the MCS 572 computer shown above.

This switch has a four-way connector.



The control switch looks identical to the MCS 019 control switch, but the internal circuitry is totally different.

MCS 590 control switch (for MCS 572 computer)

This is the sixth model control switch used on MotorCycle Cruise Controls.

The part number for this control switch in the **parts list in the cruise control installation instruction set** will be MCS 590.

This switch is ONLY suitable for use with the MCS 572 computer shown above.

This switch has a four-way connector.



MCSU 400C (for bikes) & MCS800 (for ATV's) computer

This is the fourth model computer used on MotorCycle Cruise Controls, and is designed and made by MotorCycle Cruise Controls. All previous computers were modified automotive cruise control computers.

This computer is housed in a **silver metal** box (aluminium). It has a 26 way connector in the lower end plate (the lower face in the diagram) and two LED's (lights) on the same face as the connector, one on each side of the connector. One light is green and the other is red.

The part number for this computer in the **parts list in the cruise control installation instruction set** will be MCSU 400C for bikes, or MCS800 for ATV's.

There is usually a label on the side of the computer to say what model of motorcycle it was originally configured for. This label may also have a version number on it (eg V2.79). Later versions had a separate label on the end plate (the top of the computer in the diagram at right) with the version number on it (eg V2.81).

Typical version numbers for Motorcycle Cruise are V2.79, V2.80, V2.81, V2.83, V2.83BL, V2.83.22BL, V2.83.22BL, V4.24BL V4.35BL, V4.373 and V4.378. These version numbers tell us about hardware and firmware revisions.

Typical versions numbers for QuadCruise ATV cruise control are V2.37, V2.49, V2.51, V2.52, V2.54BL, V2.55BL. These version numbers tell us about hardware and firmware revisions.

This information can be useful for us to help diagnose problems and supply the correct replacement parts.

This computer is only used with MCS574 vacuum throttle actuator/servo, MCS810 electric throttle actuator/servo and MCS850 compact electric throttle servo.

WARNING: - While the MCSU400C and MCS8000 computers (see next page) have the same wiring harness connector, THEY ARE NOT COMPATIBLE. The wiring connections are different and MUST NOT be exchanged unless the wiring harness connector is re-pinned to suit.

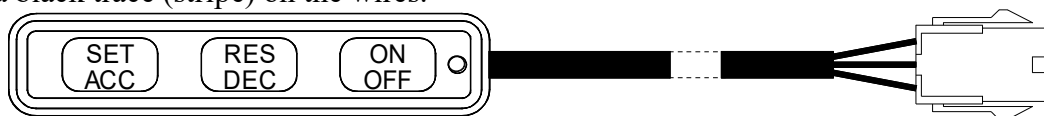
MCS 820 control switch (for MCSU 400C and MCS 8000C computers)

This is the seventh model control switch used on MotorCycle Cruise Controls.

The part number for this control switch in the **parts list in the cruise control installation instruction set** will be MCS 820 OR MCS826 if the switch is mounted on the right side (the button and indicator light positions are reversed). In some cases it may be listed as MCS 820-***. The last two or three digits refer to the length of the wires on the switch.

This switch is ONLY suitable for use with the MCSU 400C computer shown above and the MCS 8000C computer over the page.

This switch has a six-way connector, wire colours are red, orange, grey, brown, yellow and green, sometimes with a black trace (stripe) on the wires.



The control switch looks identical to the MCS 590 control switch but the internal circuitry is totally different. The only visible difference is the six-way connector fitted to the wires on this switch versus the four way connector on the MCS590 switch.

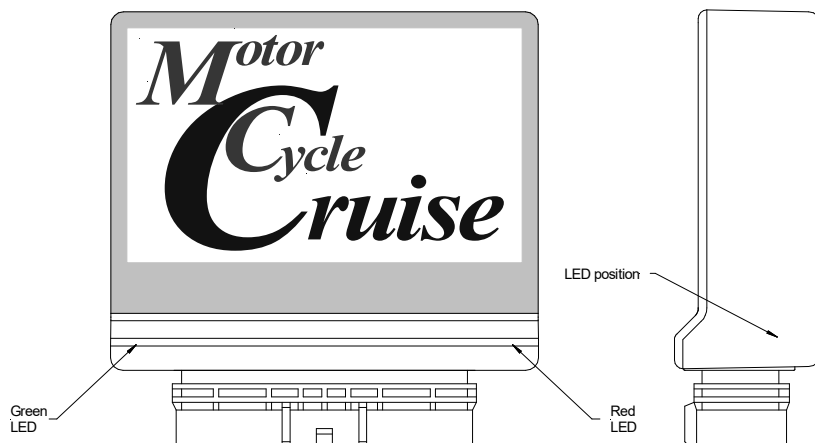
The control switch also looks identical to the MCS 920/926 control switch but the internal circuitry is totally different. The ONLY visible difference between this switch and the MCS 920/926 switch is the green wire on the MCS 820 switch is replaced with a pink wire on the MCS 920 switch.

MCS 8000C computer

This is the fifth model computer used on MotorCycle Cruise Controls, and is designed and made by MotorCycle Cruise Controls. All previous computers were modified automotive cruise control computers.

This computer is housed in a **dark 'smoked' (almost black) semi-transparent plastic box**. It has the same 26 way connector in the lower end (the lower face in the diagram) as the previous MCSU400C computer.

There are two LED's (lights) INSIDE the computer box mounted on the circuit board. They will only be visible when turned on. One light is green and the other is red. Typically the red LED will start flashing as soon as the ignition is turned on, the green LED will come on with button presses (on the cruise control switch) brake application.

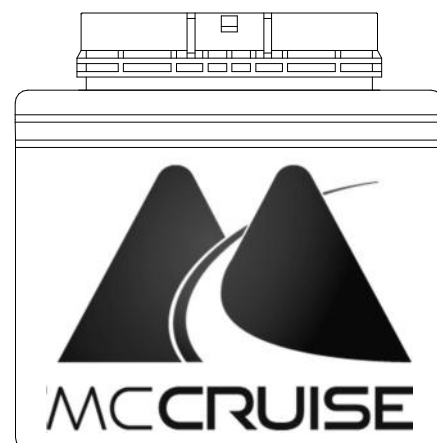


There are also two different **labels** for this computer, the earlier one shown above and this later one shown at right.

The latest box style has the **MCCRUISE logo** moulded into the box instead of a label.

The part number for this computer in the **parts list in the cruise control installation instruction set** will be MCS 8000C.

If the computer is used in a speed limiter instead of a cruise control, the part number of the computer will be the basic speed limiter kit part number (eg SL2470) with a "C P24" suffix (eg SL2470C P24).



There is usually a label on the side of the computer to say what model of motorcycle or ATV it was originally configured for. On earlier versions, there will also be a separate label on the top end (the bottom of the computer in the diagram above right) with the version number on it (eg V4.68). These version numbers tell us about hardware and firmware revisions. The latest version (image at above right) will have a single label on the bottom with the computer part number and version, the part number of the cruise control kit, what make/model/s it fits, the software version number and what type of cruise control it is for.

This information can be useful for us to help diagnose problems and supply the correct replacement parts.

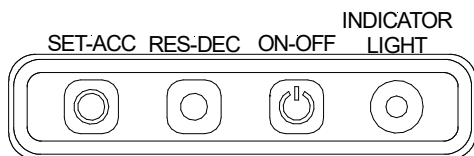
This computer can be used with MCS574 vacuum throttle actuator/servo, but normally is only used with MCS810 electric throttle actuator/servo and MCS850 compact electric throttle servo.

WARNING: - While the MCSU400C and MCS8000 computers have the same wiring harness connector, THEY ARE NOT COMPATIBLE. The wiring connections are different and MUST NOT be exchanged unless the wiring harness connector is re-pinned to suit.

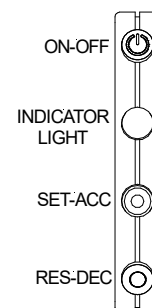
MCS 820 control switch used with the MCS8000C computer is exactly the same control switch as used on the previous model computer (MCSU400C/MCS800). This switch is being phased out in 2021.



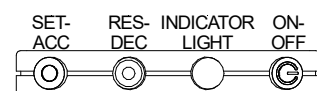
It is being replaced by this switch in 2021. This switch will still have the same part number and is a direct replacement.



GT1014 Slim control switch was released in 2018 and is a direct replacement for the MCS820 control switch and can be used on any cruise computer that works with the MCS820 switch. This switch is usually mounted directly on the handlebars and the switch button operation is as shown.



In some applications the switch is mounted horizontally, but when this is done, the programming of the cruise control computer is changed so the SET and RES button positions are swapped.



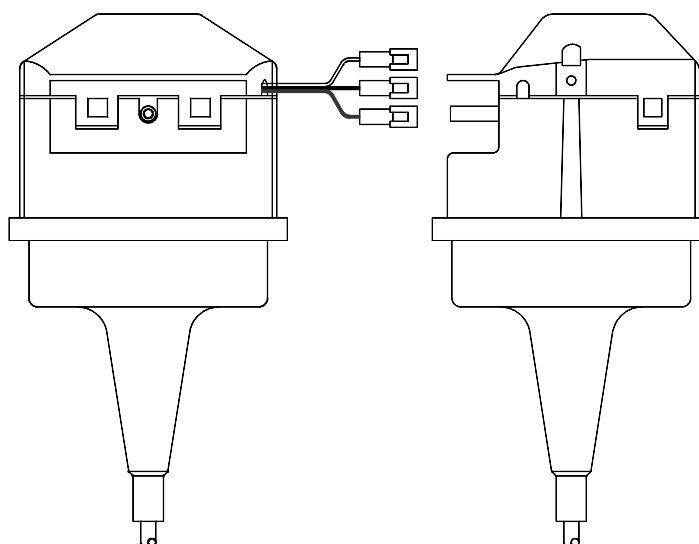
MCS020 Vacuum Throttle Actuator/Servo.

This is the first throttle actuator/servo used.

The part number for this actuator in the **parts list in the cruise control installation instruction set** will be MCS 020.

This device is controlled electrically, but uses engine vacuum as the power source to control the throttle movement.

This actuator has two solenoid valves under the top cover, and has three wires, red, white and black going to three one-way connectors.



This servo is sometimes enclosed in either black or silver painted covers. These are fitted partly to protect it from water/dirt/heat and also to improve the appearance of the actuator.

This actuator was supplied in either black or grey colour.

MCS574 Vacuum Throttle Actuator/Servo.

This is the second throttle actuator/servo used. It looks almost identical to the previous MCS020 actuator/servo.

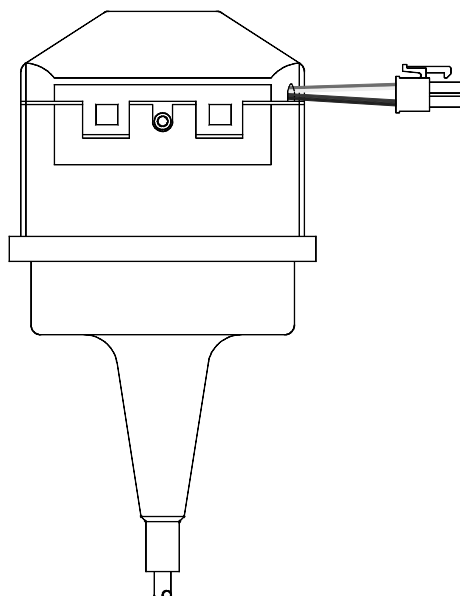
The part number for this actuator in the **parts list in the cruise control installation instruction set** will be MCS 574.

This device is controlled electrically but uses engine vacuum as the power source to control the throttle movement.

This actuator has three solenoid valves under the top cover, and has four wires, red, yellow, green and brown going to one four-way connector.

This servo is sometimes enclosed in either black or silver painted covers. These are fitted partly to protect it from water/dirt/heat and also to improve the appearance of the actuator.

This actuator is supplied black colour.



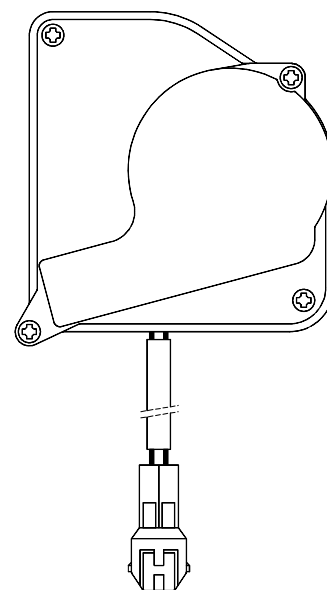
MCS810 Electric Throttle Actuator/Servo.

This is the first electric throttle actuator/servo used.

The part number for this throttle actuator/servo in the **parts list in the cruise control installation instruction set** will be MCS 810.

This device is controlled and powered electrically. It uses an electric motor to control the throttle and has an electromagnetic clutch inside to ensure safe release of the throttle.

This servo is only used on a couple of motorcycle cruise control models, it is mainly used on ATV or Tractor cruise controls due to the size, weight and power of the servo.



MCS850 Compact Electric Throttle Actuator/Servo.

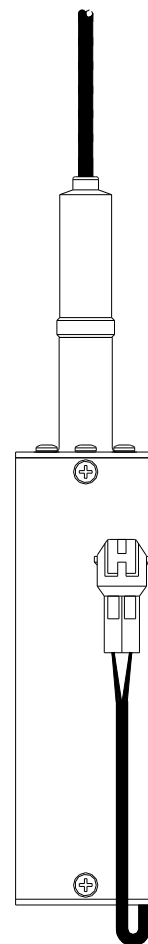
This is the second electric throttle actuator/servo used.

The part number for this throttle servo in the **parts list in the cruise control installation instruction set** will be MCS850.

This is the second model electric throttle servo used on MotorCycle Cruise Controls, and is designed and made by MotorCycle Cruise Controls. All previous actuator/servos were modified automotive cruise control actuators.

This device is controlled and powered electrically. It uses an electric motor to control the throttle and has an electromagnetic clutch to ensure safe release of the throttle.

This servo was developed to give a compact light weight electric servo for use on motorcycles, but will also be used on other vehicles where possible. This servo is not suitable for use on most cars or tractors as it does not develop enough power to operate the throttle on these vehicles.

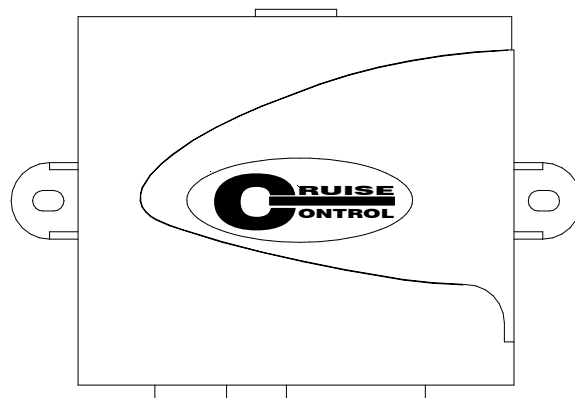


Throttle-By-Wire cruise controls (TBW).

MCS 9000C computer

This is the sixth model computer used on MotorCycle Cruise Controls. This is a modified automotive cruise control computer.

This computer is housed in a **black plastic** box. It has two connectors, one 8-way and one 20 way connector in the lower end (the lower face in the diagram) and a red LED (light) on the opposite end (the upper face in the diagram). There is a rubber cover fitted in the upper end plate.



The part number for this computer in the **parts list in the cruise control installation instruction set** will be MCS 9000C.

MCS 920 control switch (for MCS9000C computer)

This is the eighth model control switch used on MotorCycle Cruise Controls.

The part number for this control switch in the **parts list in the cruise control installation instruction set** will be MCS 920 OR MCS 926 if the switch is mounted on the right side (the button and indicator light positions are reversed). In some cases it may be listed as MCS 920-***. The last two or three digits refer to the length of the wires on the switch.

This switch is ONLY suitable for use with the MCS9000C computer shown above.

This switch has a six-way connector, wire colours are red, orange, grey, brown, yellow and pink, sometimes with a black trace (stripe) on the wires.



The control switch looks identical to the MCS 820/826 control switch but the internal circuitry is totally different. The ONLY visible difference between this switch and the MCS 820/826 switch is the green wire on the MCS 820 switch is replaced with a pink wire on the MCS 920 switch.

MCS 8128 TBW & MCS10128 TBW computers

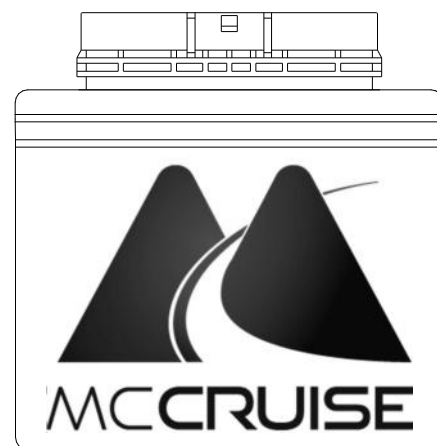
The MCS8128 TBW computer is the seventh model computer used on MotorCycle Cruise Controls and is a revision of the MCS8000C computer.

The MCS10128 TBW computer is the eighth model computer and is an all new computer based on circuits from the MCS8128 TBW computer.

Both of these computers use the box with the **MCCRUISE logo** moulded into the box.

The part number for these computers are in the **parts list in the cruise control installation instruction set** will be MCS 8128 TBW for normal versions and MCS 8128 TBWCAN for versions with CAN-BUS connectivity, or MCS 10128 TBW for the later version.

There is label on the bottom (bottom of the image at right). The label will have the computer part number and version, the part number of the cruise control kit, what make/model/s it fits, the software version number and what type of cruise control it is for.



This information can be useful for us to help diagnose problems and supply the correct replacement parts.

MCS 820 control switch (for MCSU 400C, MCS 8000C and MCS10000C computers)

This is the seventh model control switch used on MotorCycle Cruise Controls.

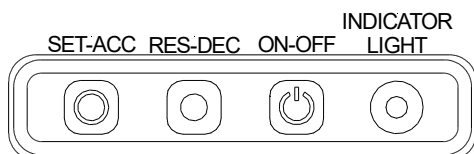
The part number for this control switch in the **parts list in the cruise control installation instruction set** will be MCS 820 OR MCS826 if the switch is mounted on the right side (the button and indicator light positions are reversed). In some cases it may be listed as MCS 820-***. The last two or three digits refer to the length of the wires on the switch.

This switch is ONLY suitable for use with the older MCSU 400C computer, the MCS 8000C, the MCS8000 TBW and the MCS10000TBW computer shown here.

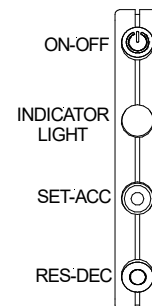
This switch has a six-way connector, wire colours are red, orange, grey, brown, yellow and green, sometimes with a black trace (stripe) on the wires.



It is being replaced by this switch in 2021. This switch will still have the same part number and is a direct replacement.



GT1014 Slim control switch was released in 2018 and is a direct replacement for the MCS820 control switch and can be used on any cruise computer that works with the MCS820 switch. This switch is usually mounted directly on the handlebars and the switch button operation is as shown.



In some applications the switch is mounted horizontally, but when this is done, the programming of the cruise control computer is changed so the SET and RES button positions are swapped.

