

TOCS 4.3" LCD Display Kit Quick Reference Guide

<Applicable Models>

MFS 25/30C*, MFS 40/50A (013179AE~), MFS60A, MFS75/90/115A

MD 40/50B2 (004743AE~), MD 75/90C2 (011819AE~), MD 115A2 (011828AE~) and BFT models

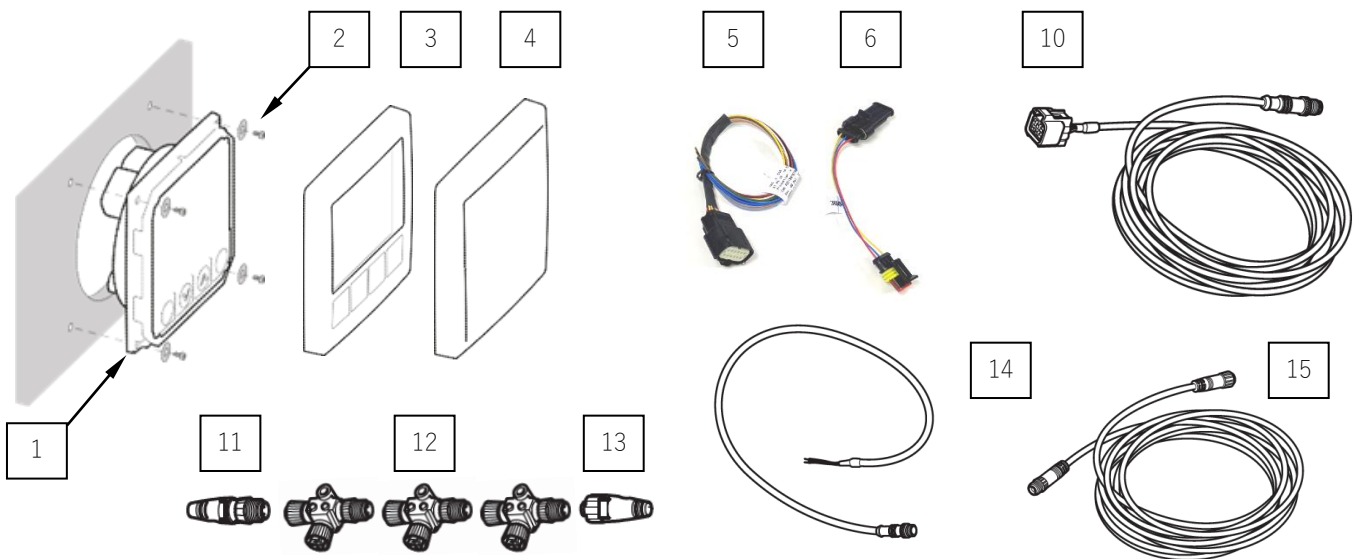
* requires 3NV-76133-0, INTERFACE CABLE, for connection between ECU and. ENGINE DROP CABLE.

<Components>



TOCS 4.3" LCD DISPLAY KIT
P/N: S681-K00046101-0

No.	Description	Part Number	Q'ty
1	TOCS 4.3" LCD DISPLAY	S681-B00046101	1
2	*MOUNTING HARDWARE		1
3	*BEZEL - 4.3" LCD BLACK	S681-A2C1083230001	1
4	*SUN COVER - 4.3" LCD DISPLAY	S681-B00046301	1
5	*PIGTAIL CABLE w/ MX150 CONNECTOR		1
6	* EASY LINK CONNECTING CABLE	S681-A2C59500139	1
7	*DRILLING TEMPLATE		1
8	*OPERATING INSTRUCTION		1
9	*INSTALLATION INSTRUCTION		1
10	ENGINEDROP CABLE =6M	3KY-76131-0	1
11	TERMINATOR (MALE)	3KY-76153-0	1
12	TEE CONNECTOR	3KY-76151-0	3
13	TERMINATOR (FEMALE)	3KY-76152-0	1
14	BATTERY CABLE	3KY-76120-0	1
15	BACKBONE CABLE =5M	3KY-76132-0	1



< General Safety Information >

Please read this manual and follow its instructions carefully. The following safety symbols and signal words are used throughout the manual to alert you to possible hazardous situations.

⚠ CAUTION

Failure to observe could result in personal injury or property damage.

Note

Indicates special information to make maintenance easier or instructions clear.

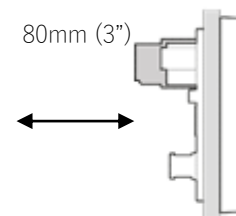
< Installation >

⚠ CAUTION

Disconnect battery during installation.

Use stranded, insulated wire not smaller than 18 AWG. Be certain wire insulation is not in danger of melting from engine or exhaust heat or interfering with moving mechanical parts.

1. Location: The TOCS 4.3" LCD Display should be located at least 300 mm (12") from a magnetic compass.
2. Disconnect the battery.
3. Remove the Bezel from the display.
4. Cut a 111mm (4.371") diameter hole in the dash allowing a clearance of behind 80mm (3") for wires.



5. Thread the cables through the hole and plug the connector.









Note

Screw in M12-connector with care. If it screws with difficulty, remove and screw it back in.

6. Mount the display from the front. Use the supplied screws and washers and tighten.
7. Install the bezel.

< Engine Data Availability >

MFS models









Icon	Information	Input signal		Output signal		Unit of measure
		NMEA 2000	Analog sensor	NMEA 2000	EasyLink	
	Engine rpm	x	x	x	-	rpm
	Trim	x*	x	x*	x	%
	Boost pressure	-	-	-	-	bar / psi / kPa
	Engine coolant temperature**	x	-	x	x	° C / ° F
	Battery voltage	x	x	x	x	V
	Fuel consumption	x	-	-	-	gal/h or l/h
	Total Fuel consumption	x	-	-	-	gal or l
	Total engine operating hours	x	x	x	-	h

*NMEA2000 Trim signal available on MFS 75-115A with use the trim sensor digital.

** Engine coolant temperature: MFS 25/30C

Coolant passage wall temperature: MFS 40-60A and MFS 75-115A

BFT models

Icon	Information	Input signal		Output signal		Unit of measure
		NMEA 2000	Analog sensor	NMEA 2000	EasyLink	
	Engine rpm	x	x	x	-	rpm
	Trim	x	-	x	x	%
	Boost pressure*	x	-	x	x	bar / psi / kPa
	Engine coolant temperature	x	-	x	x	° C / ° F
	Battery voltage	x	x	x	x	V
	Fuel consumption	x	-	-	-	gal/h or l/h
	Total Fuel consumption	x	-	-	-	gal or l
	Total engine operating hours	x	x	x	-	h

*Boost pressure: Manifold air pressure

< Digital Trim Sensor Setting >

TOCS 4.3" LCD Display has been set the analog trim sensor as default setting.

Trim sensor setting requires to OFF manually on the display on all BFT models, and MFS 75-115A models that digital trim sensor is installed.

1. Select SENSOR CONFIG.

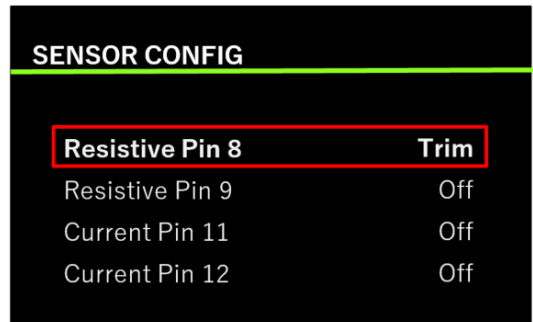


Press "ENTER".



2. Select Resistive Pin 8.

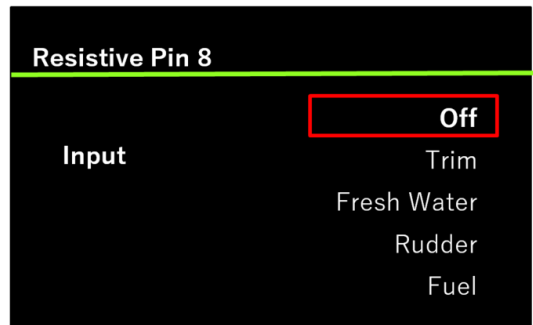
Press ""ENTER".



3. Select "Off".



Press "ENTER".



4. Beck to the menu with press "MENU BACK".



< Fuel Tank Sensor Setting >

TOCS 4.3" LCD Display has been set up 3-180 Ohm sensor as default setting.

Fuel sensor setting requires manually on the display when other type of fuel level sensor is installed.

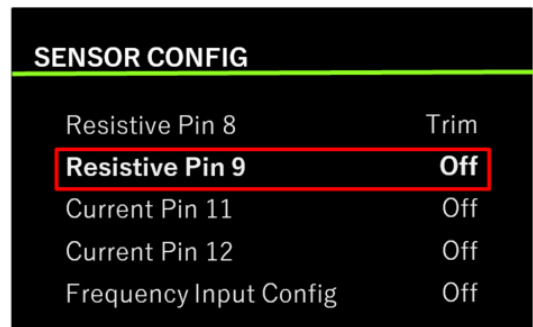
2. Select SENSOR CONFIG.

Press "ENTER".

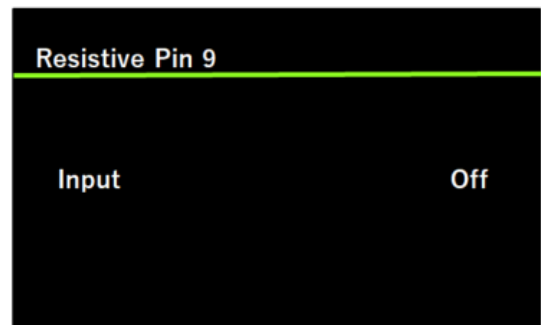


2. Select Resistive Pin 9.

Press "ENTER".

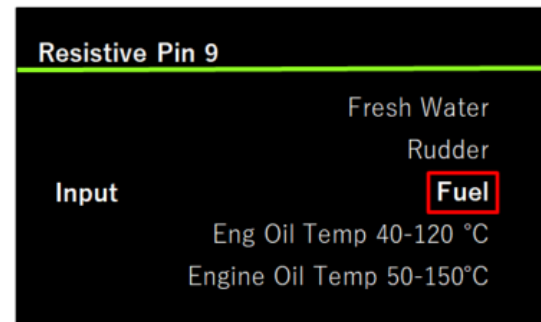


3. Press "ENTER",

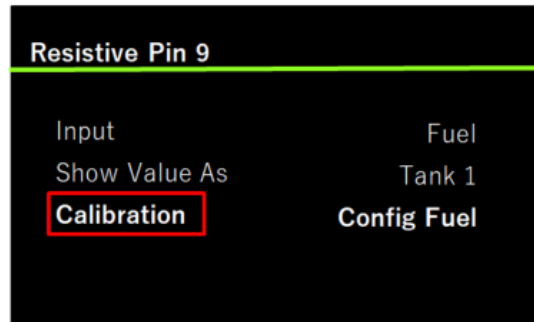


4. Select "Fuel".

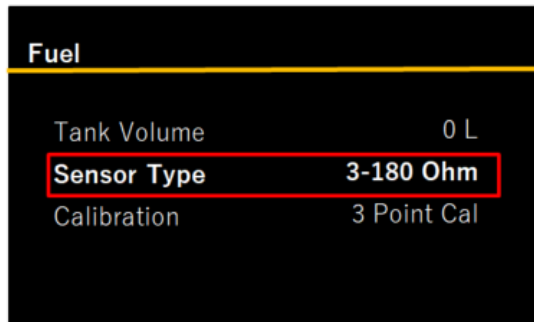
Press "ENTER".



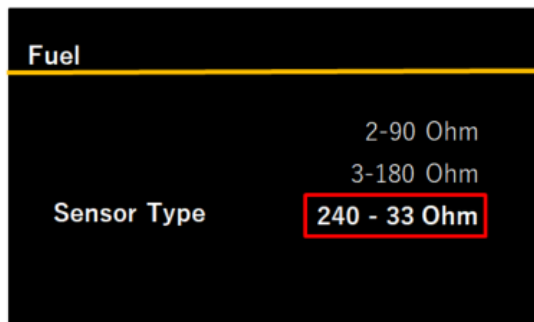
5. Select "Calibration".



6. Select "Sensor Type".
Press "ENTER".



7. Select desire sensor type.
Press "ENTER".



8. Beck to the menu with press
"MENU BACK".



< Reset Total Fuel Consumption >

TOCS4.3" LCD Display records total fuel consumption. It can be reset by following procedure.

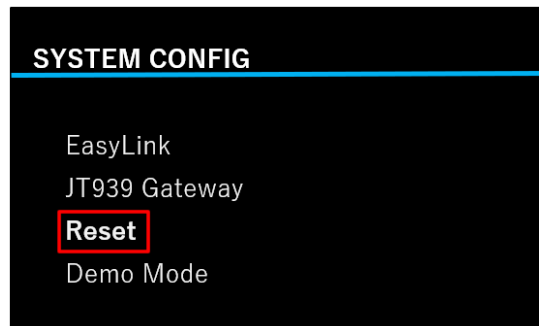
1. Select "SYSTEM CONFIG".
Press "ENTER".



2. Select "Reset"



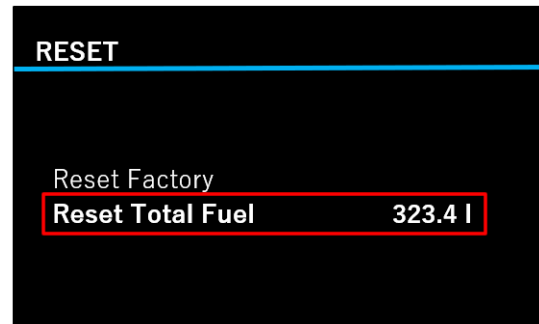
Press "ENTER"



3. Select "Reset Total Fuel"



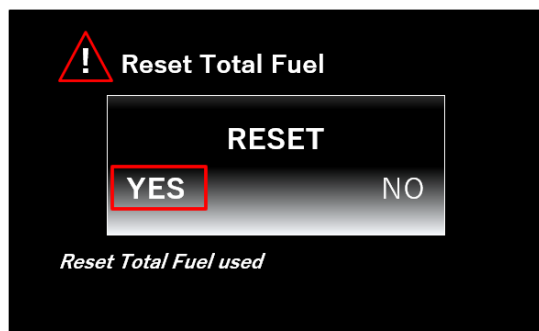
Press "ENTER"



4. Select "YES",



Press "ENTER".



< Gateway >

If sharing and displaying the analog signal data on two or more TOCS4,3LCD displays and/or other NMEA2000 devices.

 CAUTION
<p>The gateway function of analog trim signals cannot be used for MFS and MD models. Do not turn on the gateway function. Otherwise, the engine instance number may not be displayed properly.</p>

When turning on the gateway function on Resistive Pin 8 gateway function.

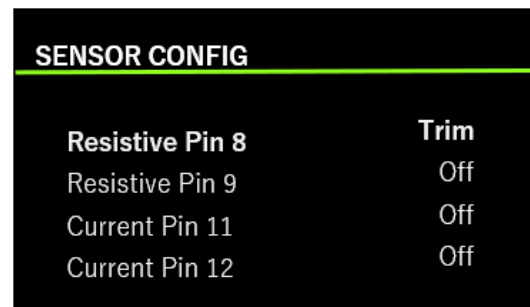
1. Select SENSOR CONFIG.



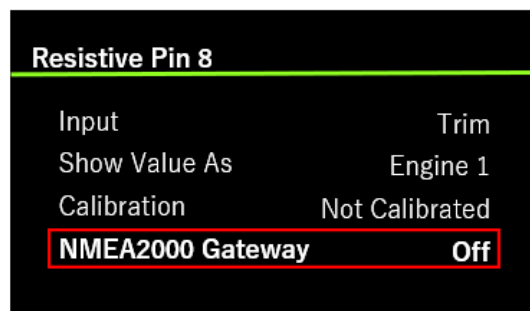
Press ENTER button.



2. Press ENTER button.



3. Select NMEA2000 Gateway.

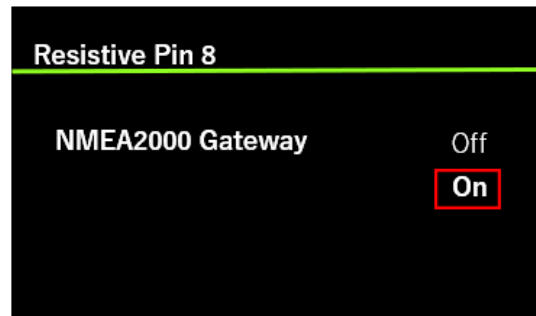


Press ENTER button.



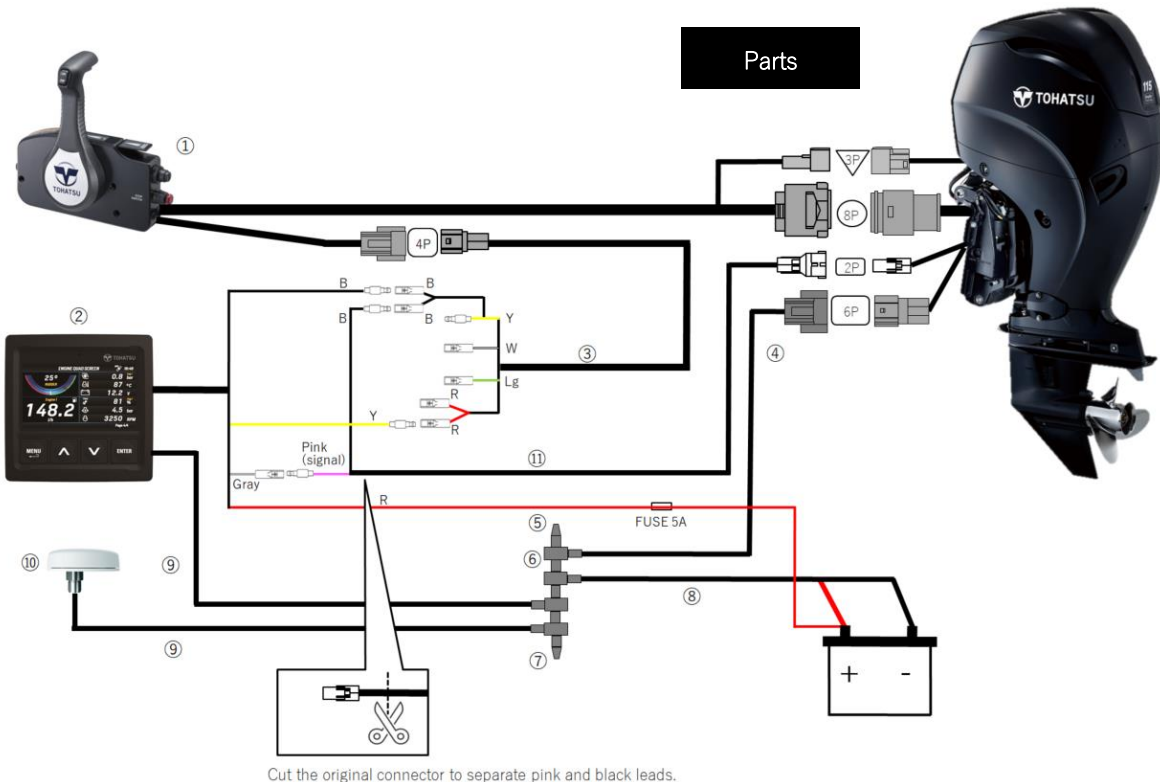
4. Select On.

Press ENTER button.



< Wiring Diagram >

Analog Trim Sensor (Standard)



Display Lead Wire Color Code

Code	Color	Function
B	Black	Ground
Y	Yellow	+12V key ON
Gr	Gray	Trim signal
R*	Red	+12V always ON
Br	Brown	Fuel Gauge signal

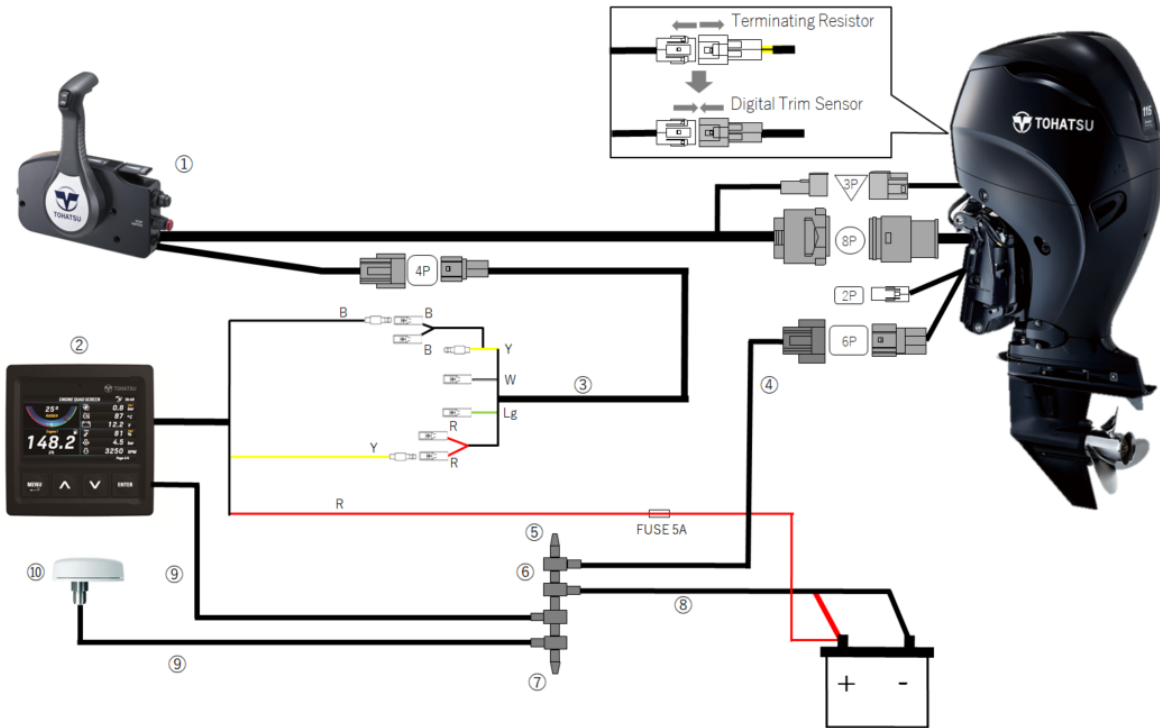
Meter Lead Wire Color code

Code	Color	Tag	Function
B	Black	GND	Ground
Y	Yellow	TAC-	Ground
W	White	TAC+	Tachometer signal
Lg	Light Green	OIL	Oil signal
R	Red	BAT+	+12V key ON

Parts

No.	Description
①	REMOTE CONTROL HEAD ASSY. (RC12F)
②	TOCS 4.3" LCD DISPLAY
③	METER LEAD WIRE L=2000 (6.5')
④	ENGINE DROP CABLE
⑤	TERMINATOR (FEMALE)
⑥	TEE CONNECTOR
⑦	TERMINATOR (MALE)
⑧	BATTERY CABLE
⑨	BACKBONE CABLE
⑩	GPS MODULE
⑪	EXTENSION CORD (TRIM SENSOR)

Digital Trim Sensor (Option)



Display Lead Wire Color Code

Code	Color	Function
B	Black	Ground
Y	Yellow	+12V key ON
R*	Red	+12V always ON
Br	Brown	Fuel Gauge signal

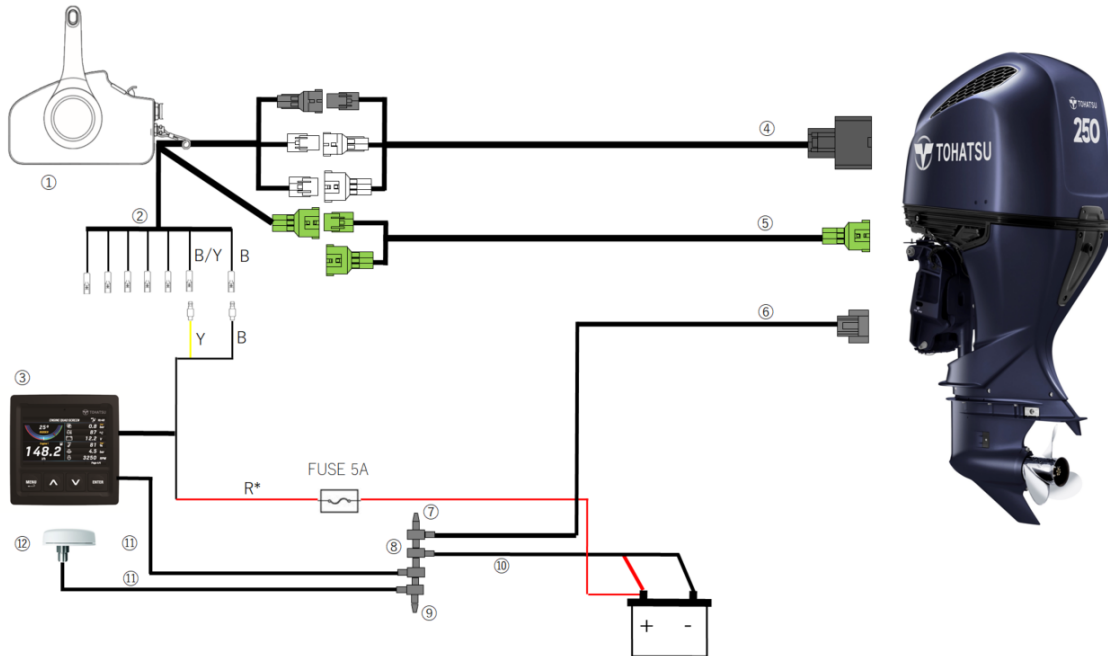
Meter Lead Wire Color code

Code	Color	Tag	Function
B	Black	GND	Ground
Y	Yellow	TAC-	Ground
W	White	TAC+	Tachometer signal
Lg	Light Green	OIL	Oil signal
R	Red	BAT+	+12V key ON

Parts

No.	Description
①	REMOTE CONTROL HEAD ASSY. (RC12F)
②	TOCS 4.3" LCD DISPLAY
③	METER LEAD WIRE L=2000 (6.5')
④	ENGINE DROP CABLE
⑤	TERMINATOR (FEMALE)
⑥	TEE CONNECTOR
⑦	TERMINATOR (MALE)
⑧	BATTERY CABLE
⑨	BACKBONE CABLE
⑩	GPS MODULE

BFT 60-150 & 200-250D Mechanical Models



Display Lead Wire Color Code

Code	Color	Function
B	Black	Ground
Y	Yellow	+12V key ON
R*	Red	+12V always ON
Br	Brown	Fuel Gauge signal

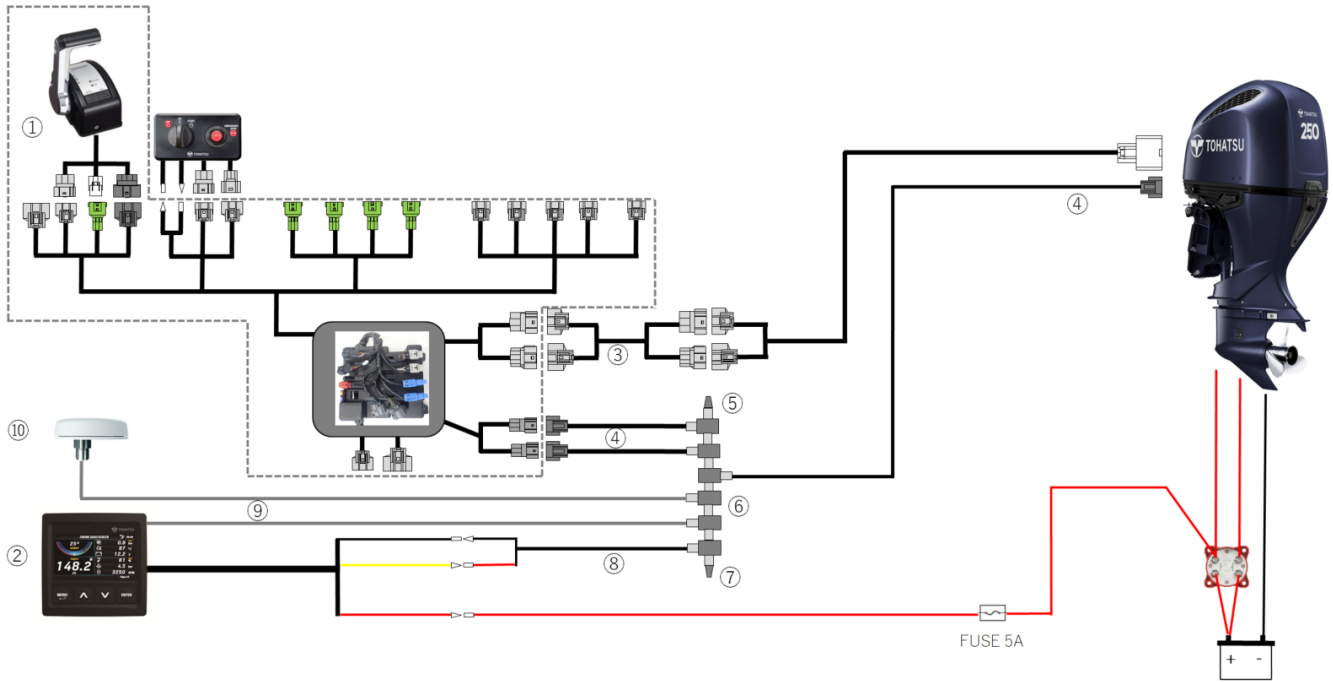
Meter Lead Wire Color code

Code	Color	Function
Gr	Grey	Tach
B/Y	Black/Yellow	+12V key ON
Y	Yellow	Oil Pressure
B	Black	Ground
R/W	Red/White	Boat Instrument Light +
Y/L	Yellow/Blue	Trim

Parts

No.	Description
①	SIDEREMOTE CONTROL BOX ASSY
②	METER LEAD WIRE
③	TOCS 4.3" LCD DYSPLAY
④	CONTROL PANEL CABLE ASSY
⑤	PGM INDICATOR CODE
⑥	ENGINE DROP CABLE
⑦	TERMINATOR (FEMALE)
⑧	TEE CONNECTOR
⑨	TERMINATOR (MALE)
⑩	BATTERY CABLE
⑪	BACKBONE CABLE
⑫	GPS MODULE

BFT 200-250D DBW



Display Lead Wire Color Code

Code	Color	Function
B	Black	Ground
Y	Yellow	+12V key ON
R*	Red	+12V always ON
Br	Brown	Fuel Gauge signal

Parts

No.	Description
①	BOX KIT, R/C(TOP/S) (MAIN)
②	TOCS 4.3" LCD DYSPLAY
③	CABLE ASSY, DBW TRUNK
④	CABLE KIT, INTERFACE
⑤	TERMINATOR (FEMALE)
⑥	TEE CONNECTOR
⑦	TERMINATOR (MALE)
⑧	BATTERY CABLE
⑨	CABLE ASSY, NETWORK
⑩	GPS MODULE