

PRODUCT INFORMATION

IDLE TIMER CONTROLLER WITH INVERTED PARK BRAKE 12/24 V

Part No. 12444

Operation and Use

The Muirhead[®] Idle Timer Controller, part number 12444, operates (by default) by shutting down the machine after a three-minute time delay when the ignition is switched off. The operation of the controller is detailed below;

1. Turn the ignition switch off.
 - a. The machine will continue to run for the timed cycle with the cycle LED (usually mounted in the instrument panel) illuminated. Once the timed cycle has been completed, the machine will shut down.
 - b. If the ignition is switched back to run at any time within the timed cycle, the timer will reset and commence the full cycle, once the ignition is switched back to off position.
2. Activating the engine shutdown switch while the unit is in idle down mode will cause the machine to shut down immediately. This will only occur with the ignition in the off position.

Note

If the ground level shutdown feature is active, then the engine shutdown switch will shut down the machine when the key is in the on or off position.

Park Brake Applied Detection

1. When the key is switched to the off position and the park brake is applied, the controller will enter idle down mode. If the park brake is released while in idle down mode, the alarm will sound and the machine will shut down instantly, preventing an operator driving off with the key in the off position.
2. If the key is switched off at any time with the park brake released, the machine will shut down immediately and the alarm will sound.
3. If an operator is required to mobilise the machine whilst the key is switched to the off position and the machine is in idle down mode, the key must be returned to the run position before the park brake is released.

Ground Level Shutdown (Optional)

If this option is used, it allows additional ground level shutdown switches to be installed in series with the standard engine shutdown switch. It also allows the machine to be shut down at any time whether it is in idle down mode or not.

These switches allow for shutdown of the machine when not in idle down mode (key ON).

To activate this option, pin 7 must be connected to machine ground.

Warning

This product has been designed to shut down the engine while at idle only. If the engine RPM is high, there is a possibility of the control unit not being able to force a shutdown.

Controller Status Indicator Operation

State	Indicator Sequence
Battery Power-up	<ul style="list-style-type: none"> ■ All indicators will turn on. ■ All indicators will turn off. ■ After power-up, the controller will revert to normal operation.
Status Indicator in Operation	<p>RED – Fault.</p> <ul style="list-style-type: none"> ■ If outputs have problems, this will turn on. ■ Outputs 1 & 2 – high current outputs: checked for over current. ■ Output 3 – not checked as it is a low side driver. ■ Output 4 – checked for correct output voltage. ■ Temperature – checked for board temperature exceeding 80 °C. <p>YELLOW – Pulses during normal operation, indicates system OK.</p> <ul style="list-style-type: none"> ■ Flashes on and off at one-second intervals (on for one second, off for one second). <p>GREEN – On for normal operation.</p>

	Alarm Indication
	System Status
	Power Indication

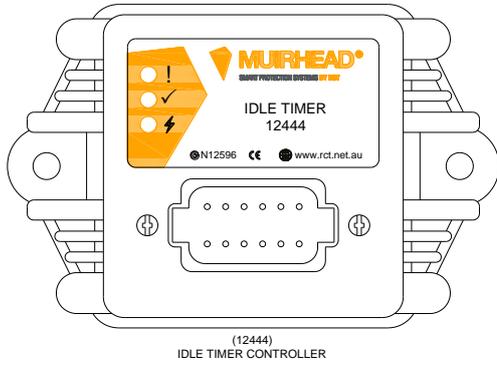
Installation Guide

1. Install the controller in a suitable location preferably in the cabin.
2. Refer to the wiring table below and the wiring diagram in this manual to connect the controller. It is recommended that the wiring is installed alongside the OEM wiring ensuring that it is secured at regular intervals; this will provide protection from heat and abrasion, and any other excess damage that may occur with extended vehicle operation. When securing the wiring to the OEM wiring, ensure that the loom is away from moving vehicle parts, which could lead to loom damage.
3. Mount the LED in a suitable location that is visible to the operator. Install the engine shutdown switch in an area that is easily accessible to the operator.
4. Disconnect the existing ignition (OEM) wires from the ignition terminal at the key switch and connect the orange wire (pin 5) to the ignition terminal.
5. Connect the yellow/blue wire (pin 3) to the (OEM) ignition wires previously disconnected from the ignition terminal at the key switch.
6. If you are installing the device on machines using the C terminal at the key switch for auxiliary control after shutdown, e.g., Caterpillar, disconnect the existing (OEM) wire no. 326 from the C terminal at the key switch and connect to the purple wire (pin 9) from the controller.

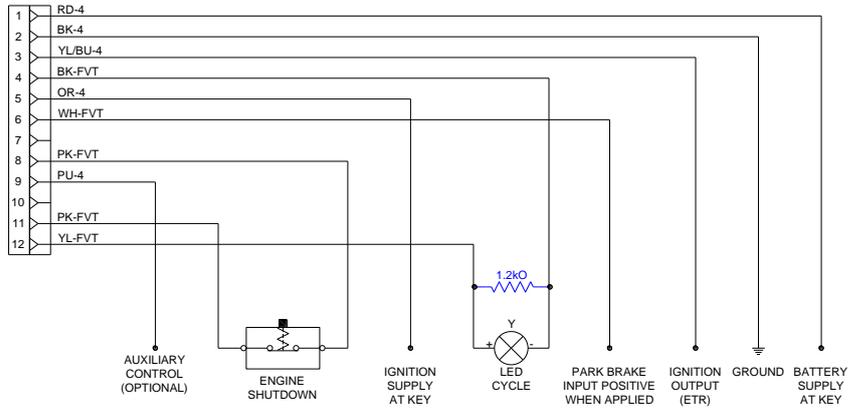
Wiring Connections

No.	Colour	Function	Description
1	Red	Battery +VE	Connect to the permanent battery supply at the key switch (supply 12-24 V DC).
2	Black	Ground	Earth (ground).
3	Yellow/Blue	Output 1	Ignition Input. Connect to the (OEM) ignition wires previously disconnected from the ignition terminal at the key switch (10 A continuous output).
4	Black	Output 3	LED -VE (low side 0.6 A sink).
5	Orange	Input 1	Ignition Input. Disconnect the existing ignition (OEM) wires from the ignition terminal at the key switch and connect the orange wire to the ignition terminal.
6	White	Input 3	Park brake input (positive when applied).
7	Brown (Optional)	Input 4	Optional. Ground input (this input is connected when ground level shutdown switches are fitted).
8	Pink	Input 2	Engine shutdown stop switch (N/C).
9	Purple (Optional)	Output 4	Only to be used on machines using the C terminal at key switch for auxiliary control after shutdown, e.g., Caterpillar. Disconnect the existing (OEM) wire no. 326 from the C terminal at the key switch and connect to the purple wire from the controller (maximum 0.7 A continuous output. If a larger load is required, this output can be used to trigger a relay).
10	Blue (Optional)	Output 2	Positive alarm output (triggers when a released park brake causes an instant shutdown).
11	Pink	- VE	Engine shutdown stop switch (N/C) (ground).
12	Yellow	Battery +VE	LED +VE (supply 12-24 V).

External Wiring Diagram (532t)



NOTE:
 WHEN USING LED PART NO 11111, OR AN EQUIVALENT NO LOAD LED, A RESISTOR SHOULD BE CONNECTED ACROSS THE LED TO PREVENT CURRENT LEAKAGE WHICH CAUSES A FALSE INDICATION. RESISTOR TYPE IS (1W 1.2K OHM RCT PART NUMBER 11981)



For detailed product information, please contact your local RCT branch for a copy of the product manual [M0894](#). For configuration settings and adjustment, please contact your local RCT branch to purchase the Muirhead® Programming Utility, part number 13647.

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