

# **MICROTEC ENGINEERING**

## **EXTERNAL WARNING LIGHT INSTALLATION INSTRUCTIONS**

### **KATO MS10a, MS10b**

**ESTIMATED TIME OF INSTALLATION: 4 HOURS**

#### **Required Parts:**

- 1x Activation box
- 5mtrs 7 core cable
- 1x External warning light
- General purpose kit consumables

# **KATO MS-10 LIGHT INSTALLATION**

*Read all instructions before commencing*

## **PRE-INSTALLATION CHECKS**

1. Set up machine on full outriggers and raise the boom so there are no errors or buzzers active. Set-up computer for main hook and full outriggers.
2. Raise any hook to an ATB alarm situation. Check that the crane motions winch up, luff down, and tele out functions are cut off. Check that the “safe” crane motions winch down, tele in and luff up are operable.
3. Whilst still in alarm condition, press the ATB over-ride and verify that the unsafe functions are now operable. \*note: be careful not to overwind hook
4. Repeat steps 2-3 with the other hook.
5. Change the boom state select switch fully counter clockwise to the test position. Check that all unsafe motions (Luff down, winch up, Tele out) are in-operable and safe functions (luff up, winch down, tele in) are operable.
6. Then press the ACS over-ride switch and confirm all unsafe functions are operational. Beware: Auto-stop functions will not operate during over-ride.
7. Change the outrigger settings. Confirm that the voice message “check outrigger and boom...” is heard.

➤ Should any of these tests fail call Microtec for service

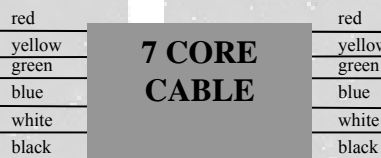
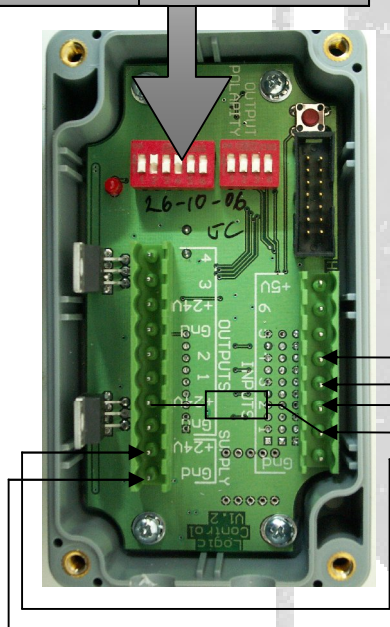
### **INSTALLATION OF INPUTS**

#### **PREINSTALLATION PREPARATION**

1. Isolate batteries during installation with isolator switch.
2. Remove seat in cabin
3. Remove cover on fuse side panel located on the left hand side of the seat to expose connections to switches and relays
4. Fit the activation box behind the panel. There is usually space to the left side of the relay block.

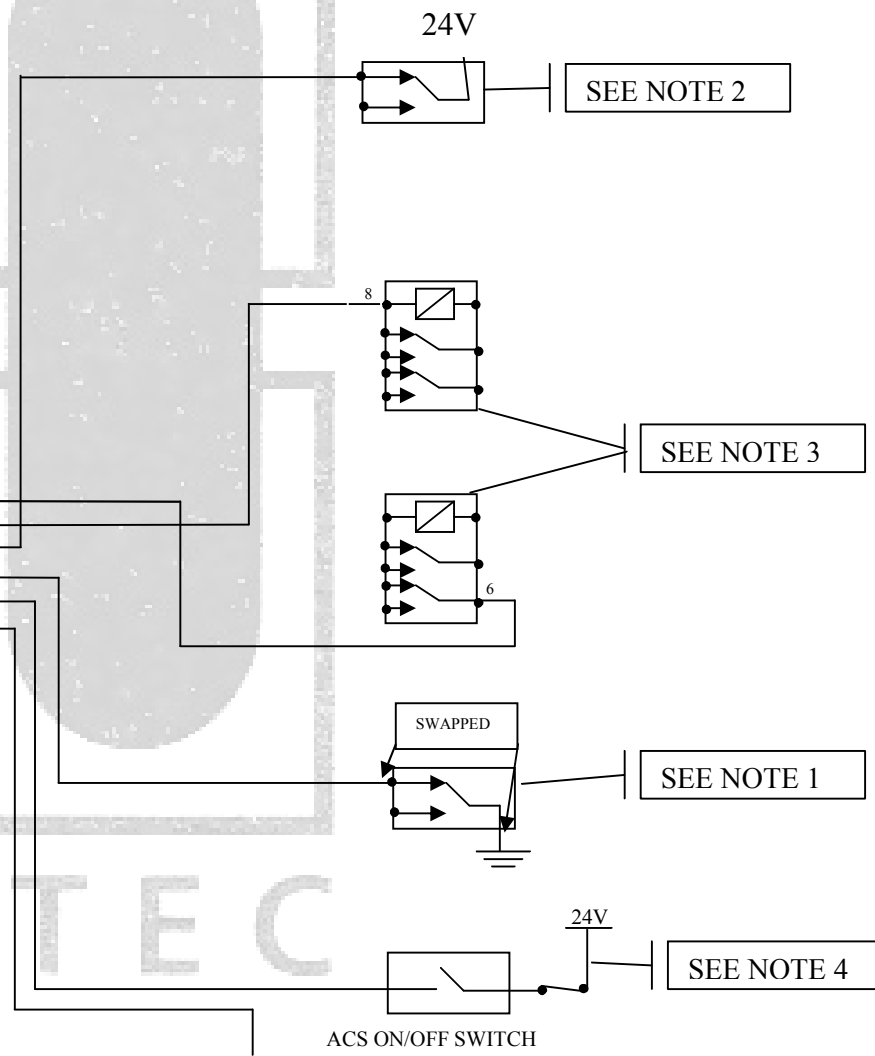
# CONNECTIONS TO KATO MS-10(a),(b)

SWITCH NO.	SWITCH POSITION
1	Off
2	On
3	Off
4	On
5	Off
6	On



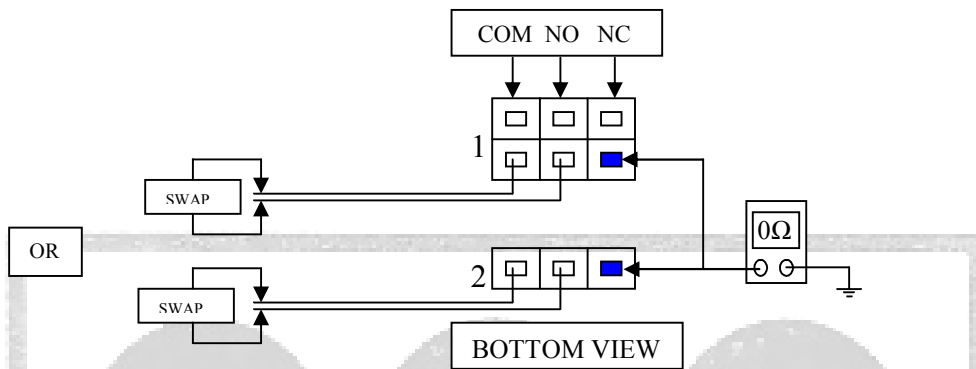
❖ Unused from 7 core cable may be cut off from the loom.

Use ferrule crimps provided to make the connections to the activation box. You may also need to shorten the length of the ferrules so the lid can close easily.



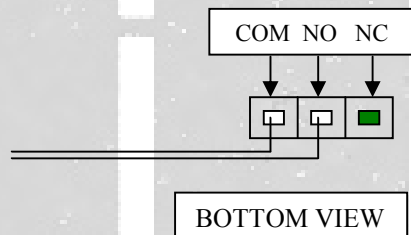
## NOTES

- 1
- Inspect connections to ATB over-ride switch. The machine will have one of the following switches:



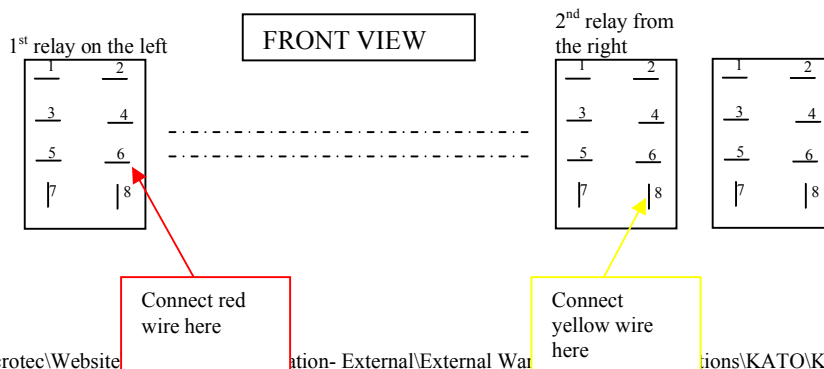
- Connect the blue wire to the corresponding switch contact shown in diagram above.
- Swap the 2 wires connected to the switch around (NO & COM).
- Measure the NC (Normally Closed) contact with a multimeter as shown above. With the meter on the resistance setting, should read approx. 0-3ohms.

- 2
- Inspect the ACS O/R switch. Confirm that there are 2 wires connected to the switch and the 3<sup>rd</sup> contact is free.



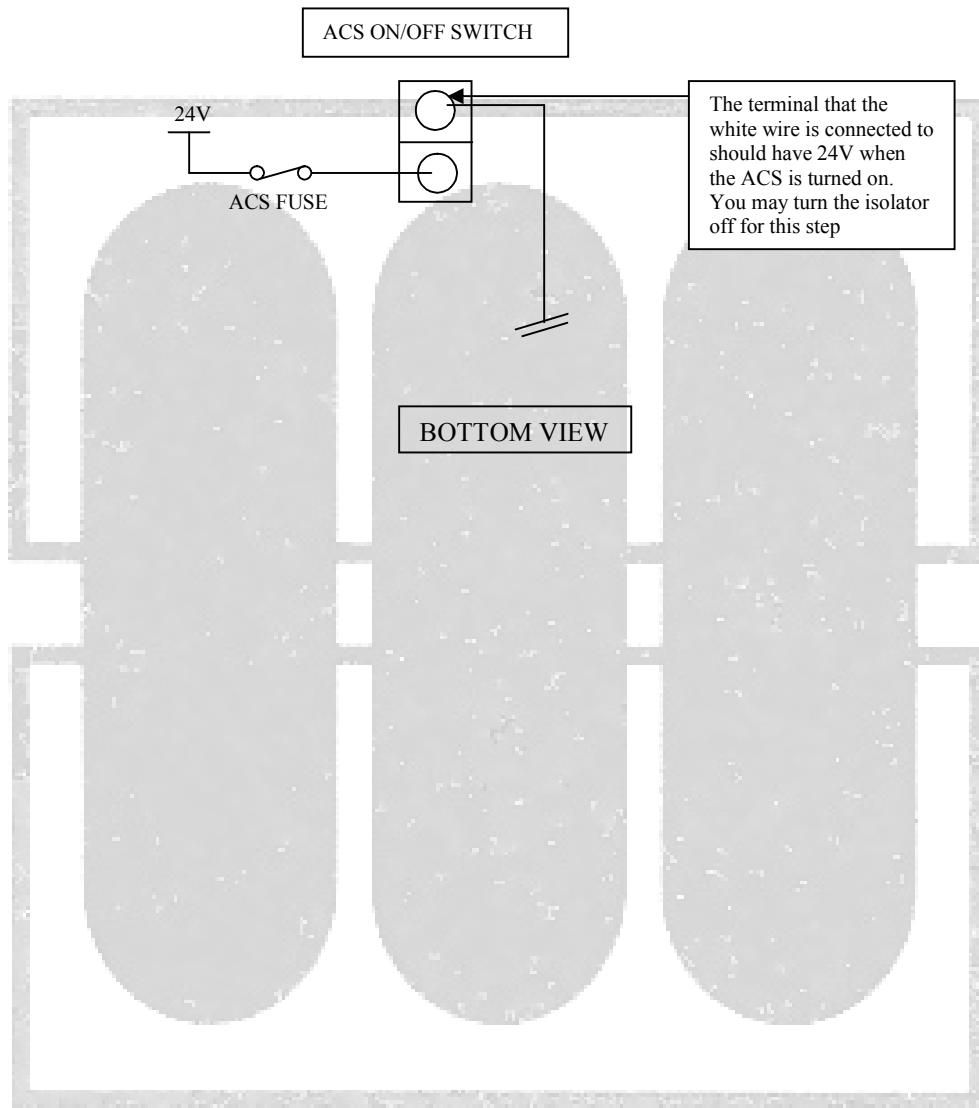
- Connect the green wire to the corresponding contact shown in the diagram above.
- This contact should have +24V normally and should disappear when pressed.

- 3
- Locate the relay bank below switches.
  - Next locate the relay on the far left and the relay 2<sup>nd</sup> in from the far right.
  - Connect the red wire to the far left relay, pin 6 (shown in the connection diagram).
  - Connect the yellow wire to the relay 2<sup>nd</sup> in from the far right, pin 8 (shown in the connection diagram).

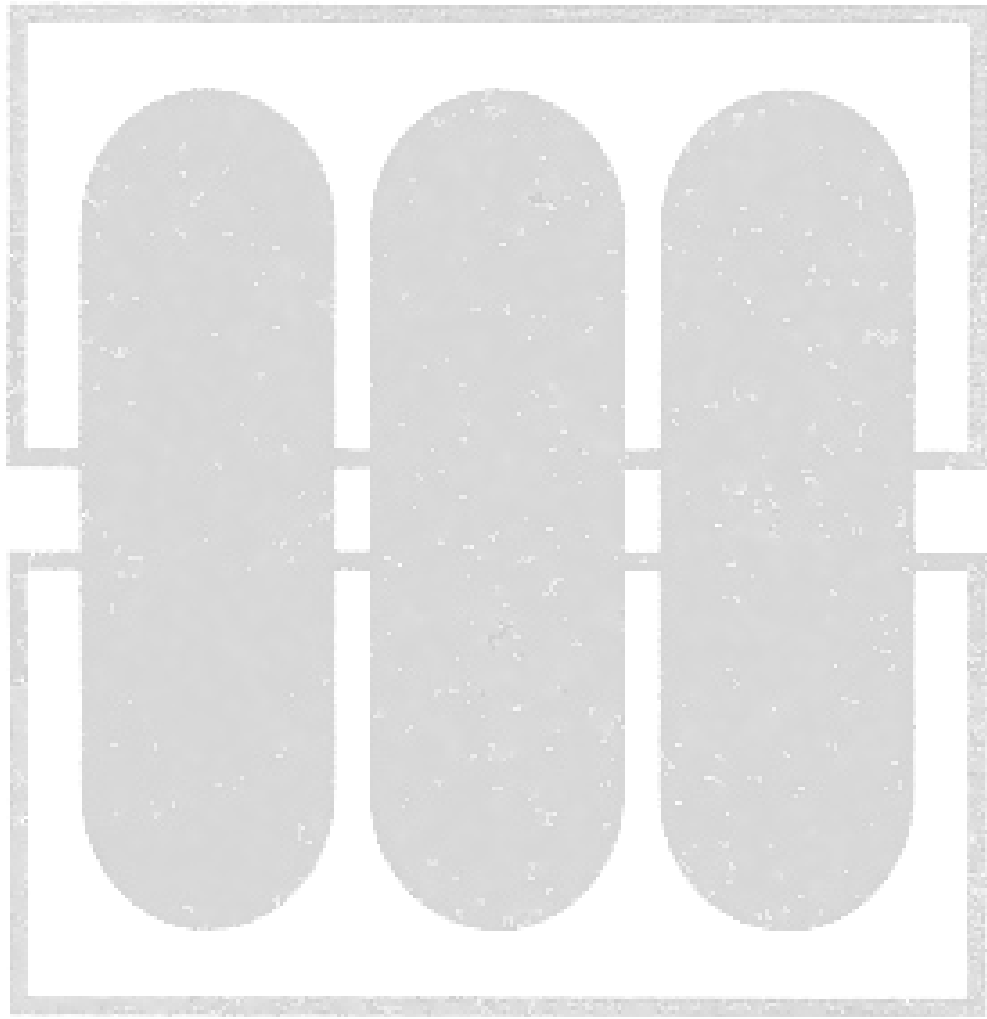


4

- Use an eye crimp terminal and terminate it to the black wire.
- Connect this wire to the metal plate using a self drilling screw.
- Use the white wire and terminate an eye crimp at the end.
- Connect this wire to the ACS on/off switch.



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