Wiring Instructions for Lasermet ICS-6 Remote Arm Units

Part No. ICS-6-RA   Remote Arm Pushbutton

ICS-6-RA-KS   Remote Arm Pushbutton with Keyswitch

Lasermet's ICS-6 interlock control system performs dual-channel (PLe) interlock monitoring and switching. The ICS-6 is operated by a key-operated 'Enable' switch and an 'Arm Laser' pushbutton fitted on its front panel.

The ICS-6 Remote Arm unit is a small wall-mountable unit which provides an additional means of activating the ICS-6. The Remote Arm unit may be installed at some distance from the ICS-6, which can be useful in situations where the ICS-6 itself may be difficult to reach or where an additional arming point is required.

The ICS-6-RA provides an 'Arm Laser' pushbutton which works in addition to the one on the ICS-6 itself. So long as the keyswitch on the ICS-6 has been set to 'Enable', either pushbutton may be used to arm the system.

The ICS-6-RA-KS includes an 'Enable' keyswitch and the 'Arm Laser' pushbutton. The system may be configured to either require both keyswitches to be set to 'Enable' for the system to operate, or for the keyswitch on the ICS-6 to be disabled and only the Remote Arm keyswitch to be operative.

Installation

Remote Arm Unit

The Remote Arm unit is intended to be fixed to a wall or other fixed surface and four fixing holes are accessible in the base of the unit when the lid is removed.

One or two cables will need to be run from the Remote Arm Unit to the ICS-6 panel, and the Remote Arm unit has a Ø20mm conduit entry at the bottom. The base of the unit may be fitted the other way round so that the conduit entry is at the top.

It is recommended to minimise the length of the cable run and a limit of around 5m is suggested for reliable operation. The cables should be run in round plastic or metal conduit according to site practice. Unscreened multicore cable with a core size of at least 7/0.2mm is recommended. If the cables are to be run in the same conduit or trunking as mains power wires, the cable must have an outer sheath rated for the mains voltage. Lasermet can supply suitable cable if required.

ICS-6 Remote Arm Adaptor Circuit Board

This small circuit board which is supplied with the Remote Arm unit needs to be fitted inside the ICS-6 to permit connection to the Remote Arm unit.

To do this, switch off and isolate the mains supply to the ICS-6. Set the plastic locking screw on the front of the ICS-6 with the slot horizontal and depress the locking bar on the top edge of the ICS-6 to open it. Swing the front cover down and locate the back of the 'Arm Laser' pushbutton and Enable keyswitch down the left-hand side inside the lid.

Unplug the interconnecting ribbon cables that go to the pushbutton and keyswitch from the main control board. Unplug the ribbon cable from the back of the 'Arm Laser' pushbutton and remove it.

Remove the four screws that secure the ICS-6 Main PCB to the case front to allow the PCB to be moved sideways.

Fit the Adaptor circuit board plugs PL1 and J4 into the sockets PL1 and J4 vacated by the switch cables. Reposition the ICS-6 Main PCB and refit the four screws. Plug the ribbon cable from the Remote Arm Adaptor Board into the socket on the back of the 'Arm Laser' pushbutton. Plug the lead from the Enable keyswitch into socket J3 on the Remote Arm Adaptor Board.

Wiring

The ICS-6-RA requires eight wires to the ICS-6. Two four-core cables could be used.

The ICS-6-RA-KS requires 10 wires, so a four-core and a six-core cable could be used.

Note that J7 GND pin has no connection.
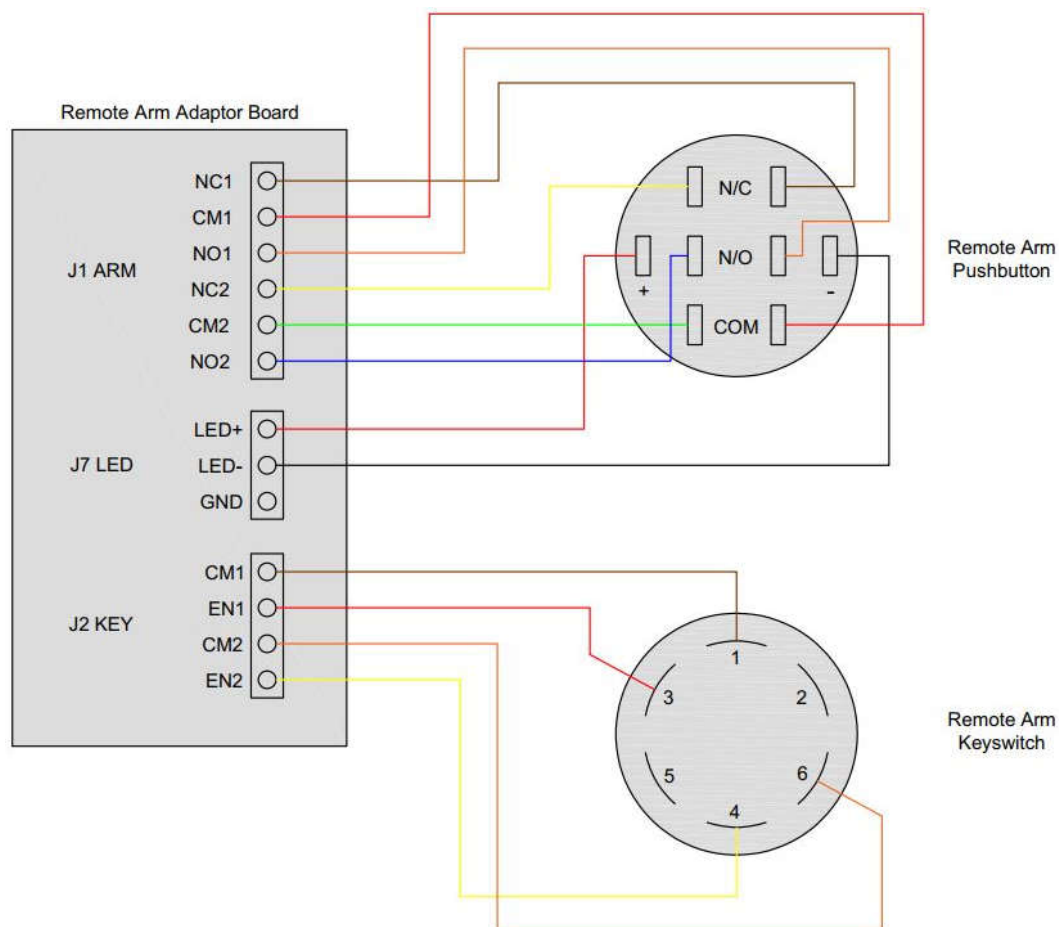
If your Remote Arm unit does not have a keyswitch, fit a wire link between terminals EN1 and CM1, and a second wire link between terminals EN2 and CM2, on the terminal block J2 'KEY' on the Remote Arm adaptor board.
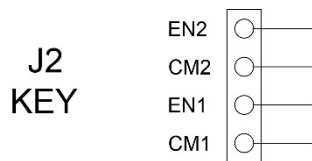

Keyswitch Selection

If only the Remote Arm keyswitch is to be used, links J5 and J6 must be closed on the Adaptor board. This will disable the ICS-6 internal keyswitch leaving only the remote keyswitch operational.
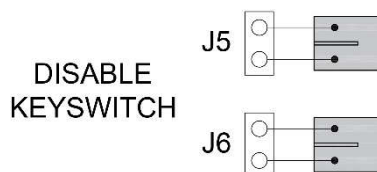
The system can also be configured to allow the use of the ICS-6 keyswitch and the Remote Arm Keyswitch. If both keyswitches are to be operative open both links J5 and J6 on the Adaptor board, storing the jumpers on one of the pins.
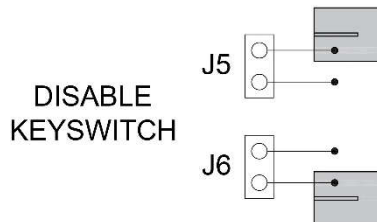
Double-check all the connections and make sure the wiring is correct before closing the ICS-6 and Remote Arm unit.

Testing

Ensure that any laser controlled by the ICS-6 is disabled and preferably disconnected.

Switch on the ICS-6 Mains supply. Close all interlocked doors, covers, blinds etc. and ensure any Emergency Stop buttons and break glass switches are not activated.

Check that the keyswitches on the ICS-6 and Remote Unit (if applicable) operate as desired. The Arm pushbutton on the ICS-6 will illuminate blue when the system is enabled.

When the Arm pushbuttons are illuminated, check that the ICS-6 arms and the 'Laser Armed' light illuminates when either of the Arm pushbuttons is pressed. Disarm the system by turning an operational keyswitch, re-enable, and check that the other pushbutton works.

In the event of a problem, start by removing the Adaptor board and refitting the internal switches to their connections on the main control board, and verifying correct operation. If all is well, refit the Adaptor board and check all the connections and wiring sequence.

Dimensions

The unit measures 72mm wide x 110mm high x 65mm deep.

Contact Details

Lasermet provide a full range of laser interlock equipment including interlock switches, illuminated warning signs, laser shutters, entry keypads with built-in fail-safe override timer, door locks, external power supplies etc. which can be interconnected to provide a complete system. We also supply equipment and consultancy covering all aspects of laser safety. Full support, design, and installation is available from Lasermet, please contact us for any queries.

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