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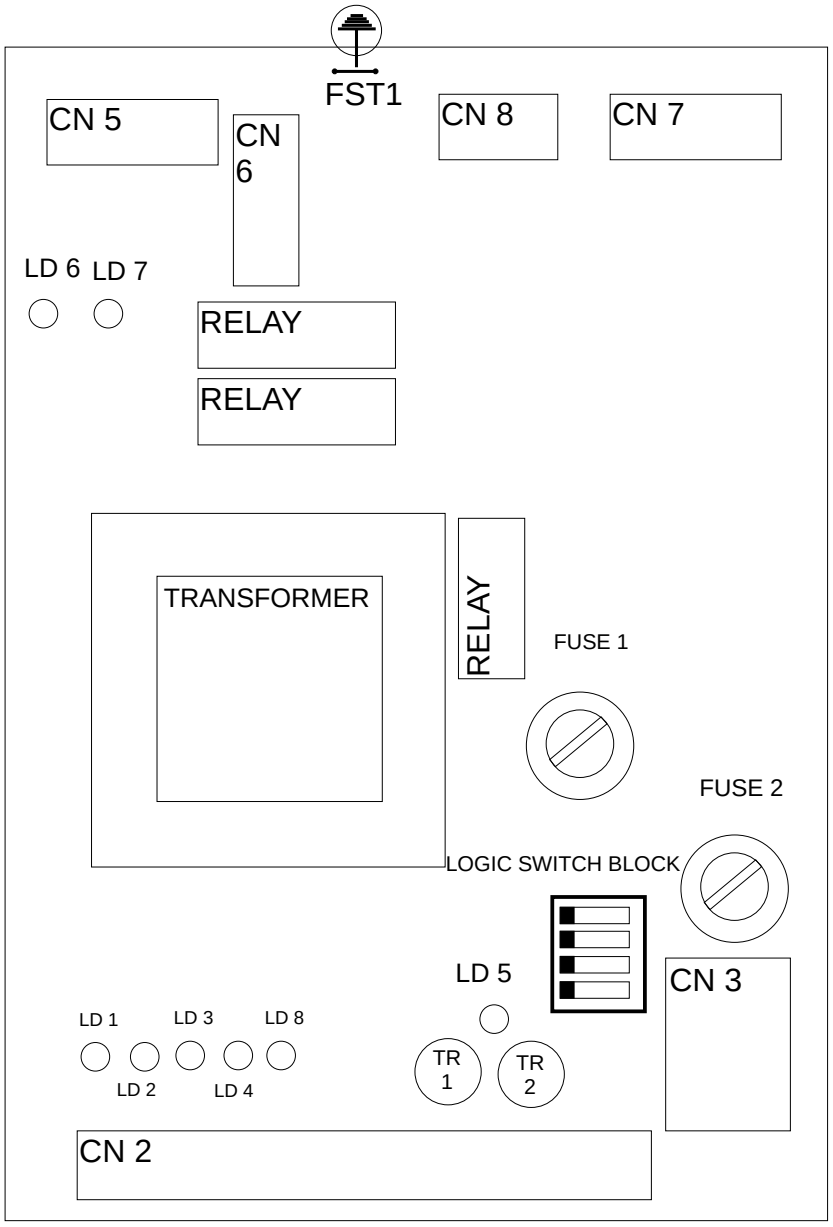
MPU/SU

GB

English

MPU/SU SLIDING GATE CIRCUIT BOARD LAYOUT



CN 2: Low Voltage Controls Terminal Block
CN 3: 230V Mains Supply & Warning Light Terminal Block
CN 5: Limit Switch Connector
CN 6: Rotation Sensor Connector [encoder]
CN 7: Motor Connector
CN 8: Capacitor Connector

FST 1: Circuit Board Earth Connection Tag

Fuse 1: 1amp
Fuse 2: 3.15amp

LD 1: Start (normal) Led
LD 2: Start (pedestrian) Led
LD 3: Stop Led
LD 4: Safety Led
LD 5: Gate Status Indication Led
LD 6: Limit Led
LD 7: Limit Led
LD 8: Photocell Led

TR 1: Open Pause Time Trimmer
TR 2: Brake Trimmer

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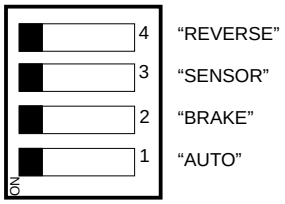
LOGIC SELECTION SWITCH BLOCK



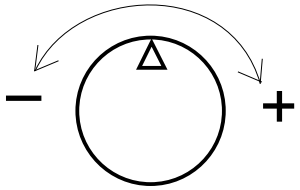
SWITCH 4 - "REVERSE" = INVERSION FUNCTION
ON - INVERSION FUNCTION = ON
OFF - INVERSION FUNCTION = OFF

SWITCH 3 - "SENSOR" = GATE HANDING
ON = L/H CLOSING GATE
OFF = R/H CLOSING GATE

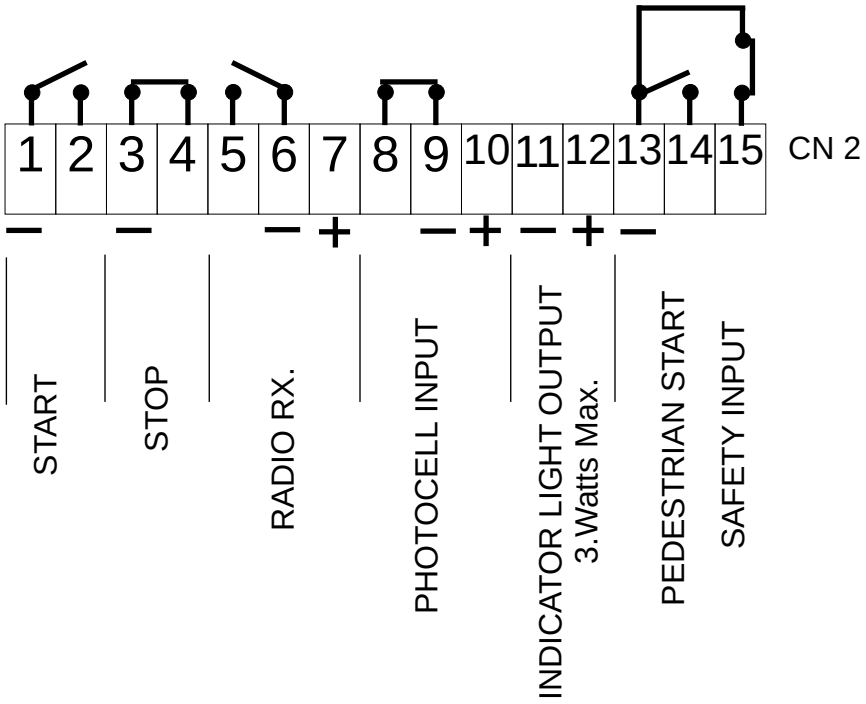
SWITCH 2 - "BRAKE"
ON - BRAKING = ON
OFF - BRAKING = OFF

SWITCH 1 "AUTO" - OPENING LOGIC
ON - AUTOMATIC CLOSING
OFF - SEMI AUTOMATIC

PAUSE & BRAKE ADJUSTING TRIMMER



TERMINAL CONNECTIONS



230Vac SUPPLY

N.B: On Terminal Block CN 2. Terminals 3&4 (Stop), 8&9 (Photocell) and 13 & 15 (Safety) are normally closed (N.C.) inputs. These trminals must be wire linked out if a device is not being fitted

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SETTING UP THE GATE STOPPING POSITION

A gap of 5 to 8mm is required between the limit plate and limit switch. The limit switch is located on the side of the casing directly above the pinion. The limit switch is an induction type and contains separate sensing areas located at each end of the switch. As the steel limit plates pass in front of the switch a signal is sent to the circuit board. The limit plates are required to activate each relevant limit approx. 50mm (!"£:@~{};'#[];' 10mm) ***before*** the gate physically strikes a travel stop. Open and close limit LED indicators on the circuit board will assist in this setting up process. Fully secure the limit plates in position after satisfactory testing for correct stopping position.

BRAKE REGULATION

1.**Switch off the electrical supply to the operator.**
2. Turn the brake trimmer (TR 2) fully clockwise to maximum braking
3. Use the manual release key to disengage the motor drive mechanism and slide the gate to approximately a midway open position (completely clear of limit switch).
4. Again using the manual release key, re-engage the motor drive mechanism and ***gently*** slide the gate in either direction until you feel the drive mechanism re-engage.
5. Restore the electric supply to the operator.
6. Give a "Start" pulse.
7. The gate will travel in the closing direction and stop ***abruptly*** when the closed limit is reached.
8. Regulate the trimmer (TR 2) and run the gate open & closed until the desired braking intensity is reached. Please note, each new adjustment will not be effective until the gate starts a ***"new"*** opening cycle.

DIAGNOSTIC FUNCTION.

The MPU/SU circuit board had a bu in diagnostic feature that will cause LD 7 to flash every 2 seconds if a limit fault is detected.
If a revolution counter fault is detected, LD 7 will flash twice every second.
Note. It is possible to temporarily exclude the revolution counter function by setting Dip Switch 4 to the **OFF** position.

Installation troubleshooting

Problem: The board is receiving a start signal, but the gate does not move.
Check: **STOP** circuit is closed on block CN 2 terminals 3 & 4 (n.c.) and likewise for terminals 13 & 15.

Problem: On receiving a start signal, the motor can be heard but gate does not move.
Action: Increase clutch. friction pressure.

Problem During the "***braking set up",*** the gate ran towards **OPEN** instead of closed.
Action: Set switch 3 to the opposite position

Problem: Gate opens but will not close.
Check: That the safety device (photocell, induction loop or other) is wired correctly so as to give a normally closed (n.c.) input to terminals 8 & 9 on block CN 2 (or wire linked if a device is not fitted).

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MPU/SU SLIDING GATE CIRCUIT BOARD LAYOUT

Please read ***all instructions*** supplied with the operator ***before*** starting the installation.
All electrical installation work ***must*** be carried out by qualified personnel and conform to the current edition of the I.E.E. regulations.
The 230Vac electrical supply to this unit must have incorporated in it:-
1) A conveniently situated and labelled method of electrical isolation.
2) Trip fuse rated at 6Amps.
3) Residual Current Device (RCD/ELCB) 16Amp - 30mA..
4) Incoming Mains Earth correctly bonded to the motor and MPU/SU control panel.

N.B. Terminals 3 & 4 (STOP), 8 & 9 (PHOTOCELL) and 13 & 15 (SAFETY) are all normally closed (n.c.) inputs. These inputs must be wire linked if an appropriate device is not being used. **A Safety device (i.e. photocell or vehicle loop detector) is strongly recommended for all automatic gates.**

BLADE TYPE MAINS EARTH CONNECTION (FST1).
To be connected to the incoming mains earth. This connection provides an earth for the double sided earth barrier tracks that are situated between mains and low voltage tracks.

MPU/SU FUNCTION DESCRIPTION

The MPU/SU control unit had been designed to control one sliding gate operator.
The gate must run freely and not have any side to side play.
It must also have open and close physical travel stops ***fitted before*** the automation is carried out.
Plan the cabling requirements before installing the foundation plate. Leaving a spare cable duct into the unit can often be helpful.
Mains voltage cables ***must be run in sparate ducts or conduits to low voltage cables.***

ELECTRONIC BRAKE ADJUSTMENT.
The electronic braking action can be adjusted to give either a slow soft or rapid hard stop to the gate movement by adjusting trimmer (TR 2). The electronic braking action is started by the proximity limit plate. (selectable by switch 2).

ELECTRONIC REVERSE DEVICE.
The electronic reverse device is activated by the slipping action of the friction clutch coupling inside the electric motor.
If the gate is obstructed when closing, the obstruction is detected by the motor revolution counter and the gate movement is stopped and reversed.
If an obstacle is detected when the gate is opening, movement is stopped.

The fricting clutch is located inside the top of the motor housing and should be adjusted to a minimal force that will move the gate relatively easily but will allow clutch slip to take place when the gate meets with minial obstruction. The emergency release key can be used to adjust the clutch.
To decrease friction, turn the key anti-clockwise. To increase the friction, turn the key clockwise.
The clutch pressure must be adjusted in every instance to take into account the weight and running condition of the gate being automated.
It os recommended that the maximum force at the leading edge of the gate does not exceed 15Kgs.
The pressure must never be excessive.

PHOTOCELL OR INDUCTION LOOP SAFETY IS RECOMMENDED FOR ALL AUTOMATED SLIDING GATES.