D2 Turbo
Pocket Installation Guide

CENTSYS

DOMESTIC SLIDING GATE OPERATOR

CENTSYS

0.07.B.0013

www.centsys.com.au

1. Introduction

This guide is designed specifically for installers who are familiar with the installation of standard sliding gate motors, but do not know the specifics of the **D2 Turbo**.

2. Important safety instructions

Please do not proceed with the installation until you have read and fully understand the Safety instructions included in your product packaging. The Safety instructions are also available on **www.centsys.com.au**

3. Icons used in this guide

This icon indicates tips and other information that could be useful during the installation.

This icon denotes variations and other aspects that should be considered during installation.

This icon indicates a warning, caution or attention! Please take special note of critical aspects that MUST be adhered to in order to prevent injury.

4. General description

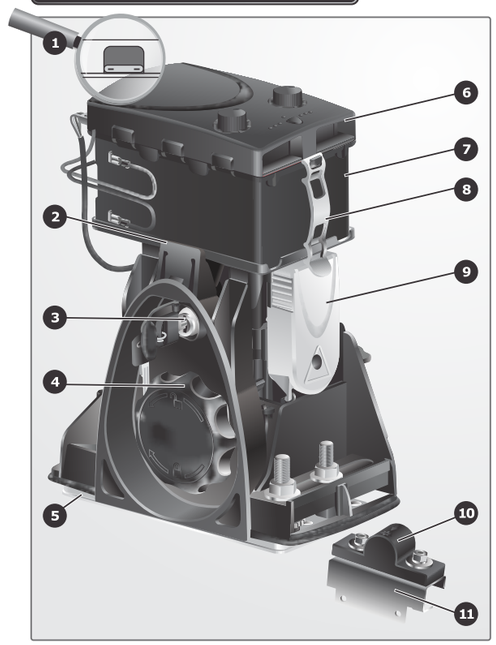
The **D2 Turbo** domestic sliding gate operator has been designed solely to open and close domestic sliding gates. It must not be installed or used to automate the entrances of townhouse complexes, housing estates, industrial sites, etc.

5. Technical specifications

It is a 12V DC battery operated unit with the following limitations:

Gate mass maximum:	250kg
Starting pull force:	< 18kgf
Rated running force:	< 9kgf
Maximum speed:	24 metres/minute
Maximum gate length:	10 metres
Design life:	Ten years at ten cycles per day

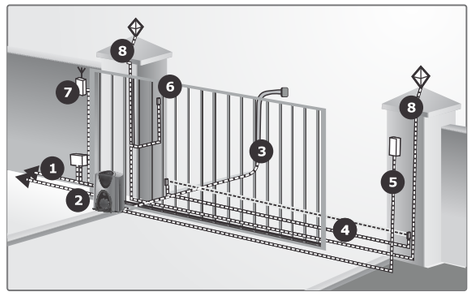
6. D2 Turbo identification



Which bit is what?

1. Motor fuse
2. Motor enclosure unit
3. Camlock cover
4. Release thumbwheel
5. Foundation plate
6. **D2 Turbo** controller
7. 12V 7.2Ah or 5Ah battery
8. Battery strap
9. Pulley guard
10. Gate mounted origin marker
11. Origin marker bracket

7. Cabling requirements



Legend

1. 220-240V AC mains cable via double pole mains isolator switch ✳☆ (3 core LNE 1.5mm² SWA)

Optional wiring (all cable is multi-stranded): ✣

2. Intercom cable from motor to dwelling (n1 + 6 core 0.5mm²)
3. Intercom cable from motor to entry panel (n2 0.5mm²)
4. **Safe CLS:** Recommended infrared safety beams (3 core 0.5mm²)
5. **TRG:** Access control device (3 core 0.5mm²)
6. **PED:** Optional pedestrian keyswitch (a) OR keypad (b) (3 core 0.5mm²)
7. **TRG:** Optional external radio receiver (3 core 0.5mm²)
8. **LIGHT:** Optional pillar lights (3 core LNE SWA, size according to power requirements)

✳ n1 ☆ number of cores required by intercom

n2 = number of cores required by intercom

Possibly increase cable thickness if pillar lights are installed

✣ Type of cable must adhere to municipal bylaws but typically SWA (steel wire armoured) cable is recommended. The armouring provides excellent screening, which gives better protection against lightning – earth one end of the screening)

✧ Allows for all features such as pedestrian opening, status LED, etc., to be operated from the intercom handset inside the

8. D2 Turbo operator installation

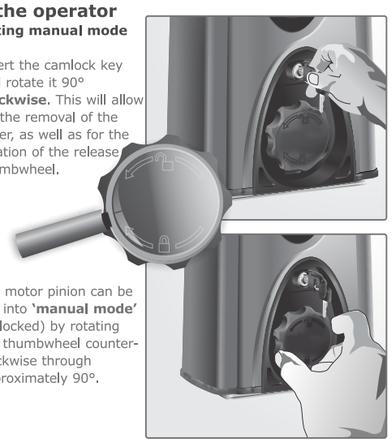
Ensure that all the standard considerations for a quality gate installation are adhered to as specified in CENTSYS' comprehensive installation manuals. If you are unfamiliar with these, then you may find them on www.centsys.com.au. However, as a minimum please ensure that:

- Unobstructed access in and out of the premises. The operator must not protrude into the driveway.
- Endstops are mandatory and must be capable of stopping the gate at rated speed
- Guide-rollers and anti-lift brackets are correctly fitted
- The specified gate mass, starting- and rated-pull-force limitations are not exceeded
- All relevant safety instructions are adhered to

Mount the operator

8A. Selecting manual mode

8A.1. Insert the camlock key and rotate it 90° **clockwise**. This will allow for the removal of the cover, as well as for the rotation of the release thumbwheel.



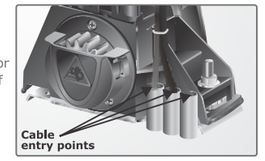
8A.2. The motor pinion can be put into '**manual mode**' (unlocked) by rotating the thumbwheel counter-clockwise through approximately 90°.

Using the camlock, it is possible to lock the operator cover in place with the release thumbwheel in either the **'locked'** or **'unlocked'** position

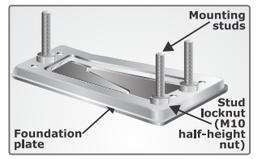
When locked, the release thumbwheel cannot be moved from **'locked'** to **'unlocked'** or vice versa

8B. Locate entry points for conduits/cables

8B.1. Cable entry is allowed for on the far LHS corner of the gearbox.

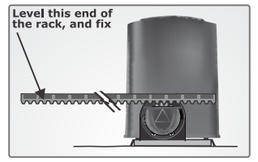


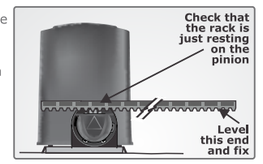
8B.2. Fit the mounting studs to the foundation plate and secure in place with the stud locknuts.



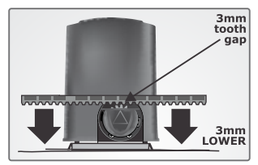
8B.3. Position the foundation plate to allow for the pinion to be unmeshed from the rack when the gearbox has to be removed.

Leave clearance under the gearbox to allow for the gearbox to be lowered if the rack and pinion mesh is too tight.



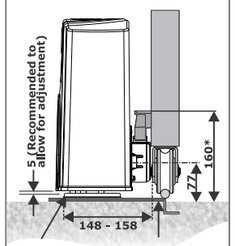


A gap of 3mm between the rack and the pinion must be maintained.



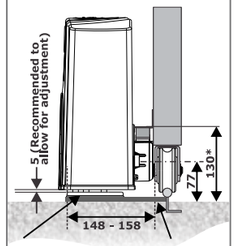
8B.4. Fit RAZ/Nylon angle rack as recommended by CENTSYS. Use height-adjustment nuts to obtain correct rack and pinion mesh. Rack can be mounted above or below the pinion to suit site conditions. Refer to illustration A1, A2, B1 and B2.

A1: Above pinion - RAZ rack



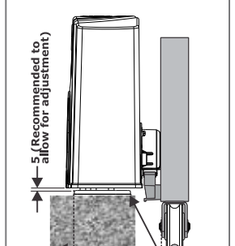
* Includes 3mm clearance required between rack and pinion

A2: Above pinion - Nylon rack

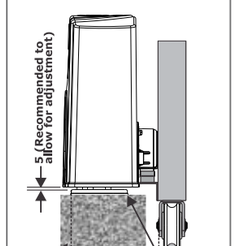


* Includes 3mm clearance required between rack and pinion

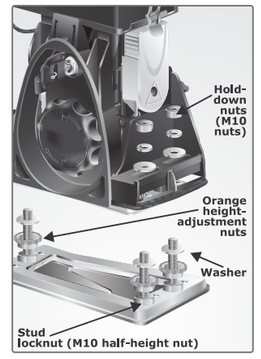
B1: Below pinion - RAZ rack



B2: Below pinion - Nylon rack

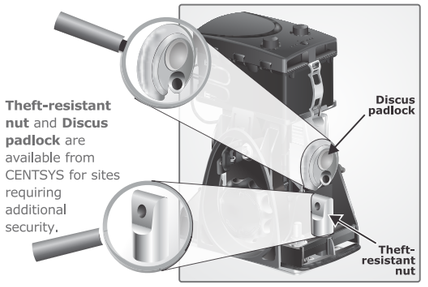


The pinion guard is easily removed and rotated allowing the rack to be fitted above or below the pinion.

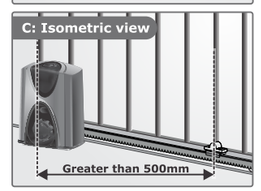


8B.5. Use the orange height-adjustment nuts provided to level the gearbox.

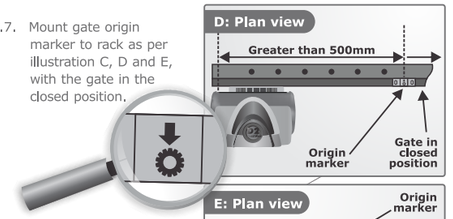
8B.6. Tighten the hold-down nuts when the gearbox is in the correct position.



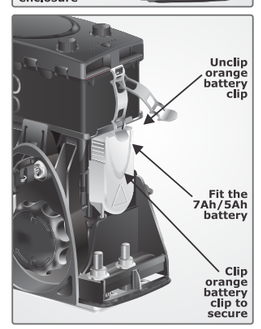
Theft-resistant nut and **Discus padlock** are available from CENTSYS for sites requiring additional security.



8B.7. Mount gate origin marker to rack as per illustration C, D and E, with the gate in the closed position.



Take care with the orientation of the arrow on the origin marker. This arrow must face the operator.



8B.8. Battery is fitted between the **motor enclosure unit** and the **D2 Turbo** controller.

8B.9. Unclip the orange clips holding the controller onto the motor enclosure unit.

8B.10. Fit the 7.2Ah/5Ah battery and clip the orange clips down to secure the battery in place.

9. Electrical setup

9.1. Always check that the circuit breaker in the electrical panel is in the OFF position, and that all high voltage circuits (more than 42.4V) are completely isolated from the mains supply before doing any work.

9.2. Ensure that all low voltage systems (less than 42.4V) are suitably protected from damage, by disconnecting all sources of power such as chargers and batteries before doing any work.

9.3. All electrical work must be carried out according to the requirements of all applicable local electrical codes. (It is recommended that a licensed electrical contractor perform such work.)

Connect all wiring

Wire the controller to the required input and output devices as per the wiring diagrams on the right hand side.

10. Setting up the system

Refer to the illustration of the **D2 Turbo** controller, which shows the position of the **Function** and **Setting Dials**, the **status LED**, and the **select/toggle Pushbutton**.

All programming is done by means of two rotary Dials, a Pushbutton, and the bi-colour (red and green) status LED.

The rotary **Function Dial** selects the required function you wish to set. **This is selected first.**

Secondly, the rotary **Setting Dial** dials in the actual setting for the function selected.

10A. Using the Pushbutton and status LEDs

- To select a particular setting, press the **pushbutton**
- The **status LED** indicates the **status of the setting**
  - A **green status LED** indicates that particular setting is **selected**
  - A **red status LED** indicates it is **off or not selected**

If the setting is a single fixed value, e.g. 15 second Autoclose time, then the pushbutton acts as a **select.**

If the setting has an option such as **On/Off**, or **Hi/Low** then the **pushbutton** will act as a **toggle**.

- If the **status LED is green**, then **the first option is selected**
- If the **status LED is red**, then the **second option is selected**

10B. Using the Function Dial

The **Function Dial** has six different settings that may be selected:

- **RUN:** Fully anti-clockwise. The unit **must** be left in this position for "Normal run" operation
- **A - LIMITS:** Sets up the gate open and closed positions automatically.
- **B - REMOTES:** Allows for CENTSYS code-hopping remotes to be added or deleted
- **C - AUTOCLOSE:** Allows for different Autoclose times to be set
- **D - MODE:** Allows for different modes of Operation to be set
- **E - PROFILE:** Allows for specific gate profiles to be toggled

10C. Using the Setting Dial

The **Setting Dial** has six different positions, which allow the function required, to be selected.

Function dial	Setting dial (Ring position-Dial position)
A - LIMITS	**A-1** Automatic; **Start with gate closed**
B - REMOTES	**B-1** Learn a transmitter button to Trg **B-2** Learn a transmitter button to Ped **B-3** Learn a transmitter button to Lck **B-4** Delete a transmitter **B-5** Delete all transmitters
C - AUTOCLOSE	**C-1** Autoclose off **C-2** Autoclose after 5 seconds **C-3** Autoclose after 10 seconds **C-4** Autoclose after 15 seconds **C-5** Autoclose after 30 seconds **C-6** Autoclose after 45 seconds
D - MODE	**D-1** Standard Mode **D-2** Open Only Mode **D-3** Reversing Mode **D-4** PIRAC Mode On / Off **D-5** Pre-Flash Mode A ✻ On / Off **D-6** Pre-Flash Mode B ✻ On / Off
E - PROFILE	**E-1** Positive Close Mode **E-2** Speed Hi ✪ / Low ✶ **E-3** Sensitivity Hi ✪ / Low **E-4** Backup to Backup Memory Module ✹ **E-5** Restore from Backup Memory Module ✹

Use toggle pushbutton to select preference.
For D - MODE, **green** status LED=**On; red** status LED=**Off**
For E - PROFILE, **green** status LED=**Hi; red** status LED=**Low**

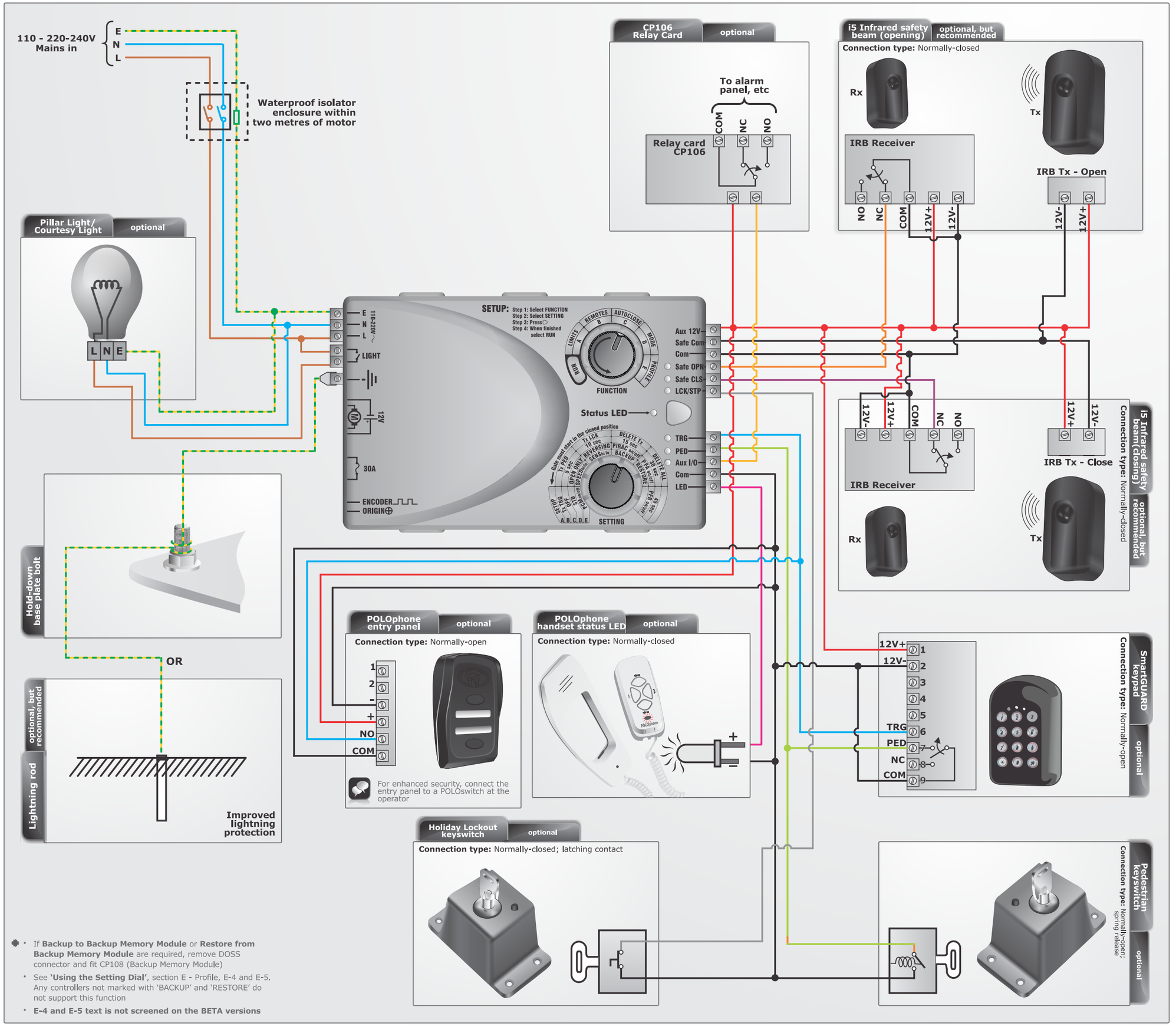
✻ PFA: The Pillar light relay will activate for two seconds before gate movement occurs, as well as during gate movement. This means gate movement will be delayed for a period of two seconds after a trigger has been received.

✻ PFB: The pillar light relay will only activate during gate movement

✪ Hi Speed: Gate will operate at its maximum speed – typically 24 metres per minute

✶ Low Speed: Gate will operate at 16 metres per minute

✹ Backup Memory Module (CP108) connected via DOSS connector socket



✹ • If **Backup to Backup Memory Module** or **Restore from Backup Memory Module** are required, remove DOSS connector and fit CP108 (Backup Memory Module)

• See **'Using the Setting Dial'**, section E - Profile, E-4 and E-5. Any controllers not marked with 'BACKUP' and 'RESTORE' do not support this function

• **E-4 and E-5 text is not screened on the BETA versions**