

GRIFCO®

GLCPS *Light Curtain Protector System*

Designed for eDrive +2.0 or GLMe2—Software V2.00 and above



Installation and users
manual for the Grifco Light
Curtain Protector System
(including GLCPS-B)

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CARTON INVENTORY

GLCPS Light Curtain Protector System in housing

2 x Housed Light Curtain rails
1 x Connecting cable
1 x Synchronisation cable (10m)
1 x Interface module
6 x Mounting Brackets and fasteners

GLCPS-B Light Curtain Protector System without housing

2 x Un-housed Light Curtain Rails
1 x Connecting cable (with 3 pos term block)
1 x Synchronisation cable (10m)
1 x Interface module
6 x Mounting brackets and fasteners
1 x Installation manual

SAFETY SYMBOL AND SIGNAL WORD REVIEW

The GLCPS has been designed and tested to offer safe service provided it is installed, operated, maintained and tested in strict accordance with the instructions and warnings contained in this manual

WARNING

Mechanical

WARNING

Electrical

When you see these Safety Symbols and Signal Words on the following pages, they will alert you to the possibility of serious injury or death if you do not comply with the warnings that accompany them. The hazard may come from something mechanical or from electric shock.

CAUTION

When you see this Signal Word on the following pages, it will alert you to the possibility of damage to your commercial door and/or the commercial door opener if you do not comply with the cautionary statements that accompany it.

THESE ARE IMPORTANT SAFETY INSTRUCTIONS. FOLLOW ALL INSTRUCTIONS SINCE INCORRECT INSTALLATION CAN LEAD TO SEVERE INJURY OR DEATH



Installation and wiring must be in compliance with your local building and electrical codes. **Connect the power supply cord only to properly earthed mains.**



Activate opener only when the door is in full view, free of obstructions and opener is properly adjusted. No one should enter or leave the building while the door is in motion.



Moisture and water can destroy the electronic components. Make sure under all circumstances that water moisture or storage moisture cannot penetrate the electronics. The same applies for openings and cable entries.



An electrician must disconnect electric power to the commercial door opener and control before making repairs or removing covers



After the installation a final test of the full function of the system and the full function of the safety devices must be done.



Make sure that people who install, maintain or operate the door follow these instructions. Keep these instructions in a safe place so that you can refer to them quickly when you need to.



When operating a biased-off switch, make sure that other persons are kept away.



This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.



Although the GLCPS does not emit dangerous amounts of infrared light, long exposure to intense infrared light source can result in damage to the eyes



WARNING: Important safety instructions. It is important for the safety of persons to follow all instructions. **SAVE** these instructions.

INTRODUCTION

Congratulations on your purchase of the Grifco® Light Curtain Protector System (GLCPS). The GLCPS provides industry leading safety to your industrial door application. With an actively monitored mesh of infrared beams through the height of the system, the GLCPS provides complete personal and property protection against entrapment in the closing direction

IDENTIFYING YOUR LIGHT CURTAIN SYSTEM

GLCPS Light Curtain Protector System in housing:



Suitable for any compatible (refer to Planning Section) new or retrofit installation.
The GLCPS is supplied completed with a robust aluminium housing to allow bracket mounting in a standoff position adjacent to the door plane.

GLCPS-B Light Curtain Protector System without housing:

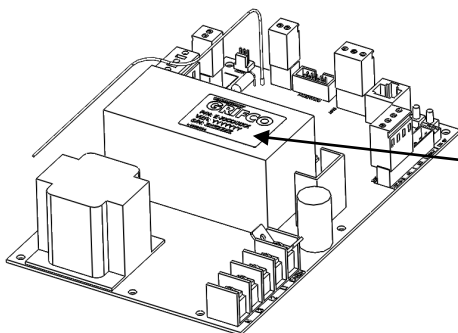


Suitable for any compatible (refer to Planning Section) new installation where the sensors can be mounted in a secure, protected zone. The GLCPS-B is typically only used by door manufacturers, where the door guide is designed to house the light curtain rail.

PLANNING

Compatibility

The GLCPS (-B) is **only compatible** with eDrive +2.0 or GLMe2 models featuring **software version 2.0 or higher** as shown below.



- Call 1800 GRIFCO or your local dealer if you require an upgrade MCB for either eDrive +2.0 or GLMe2 -

PLANNING

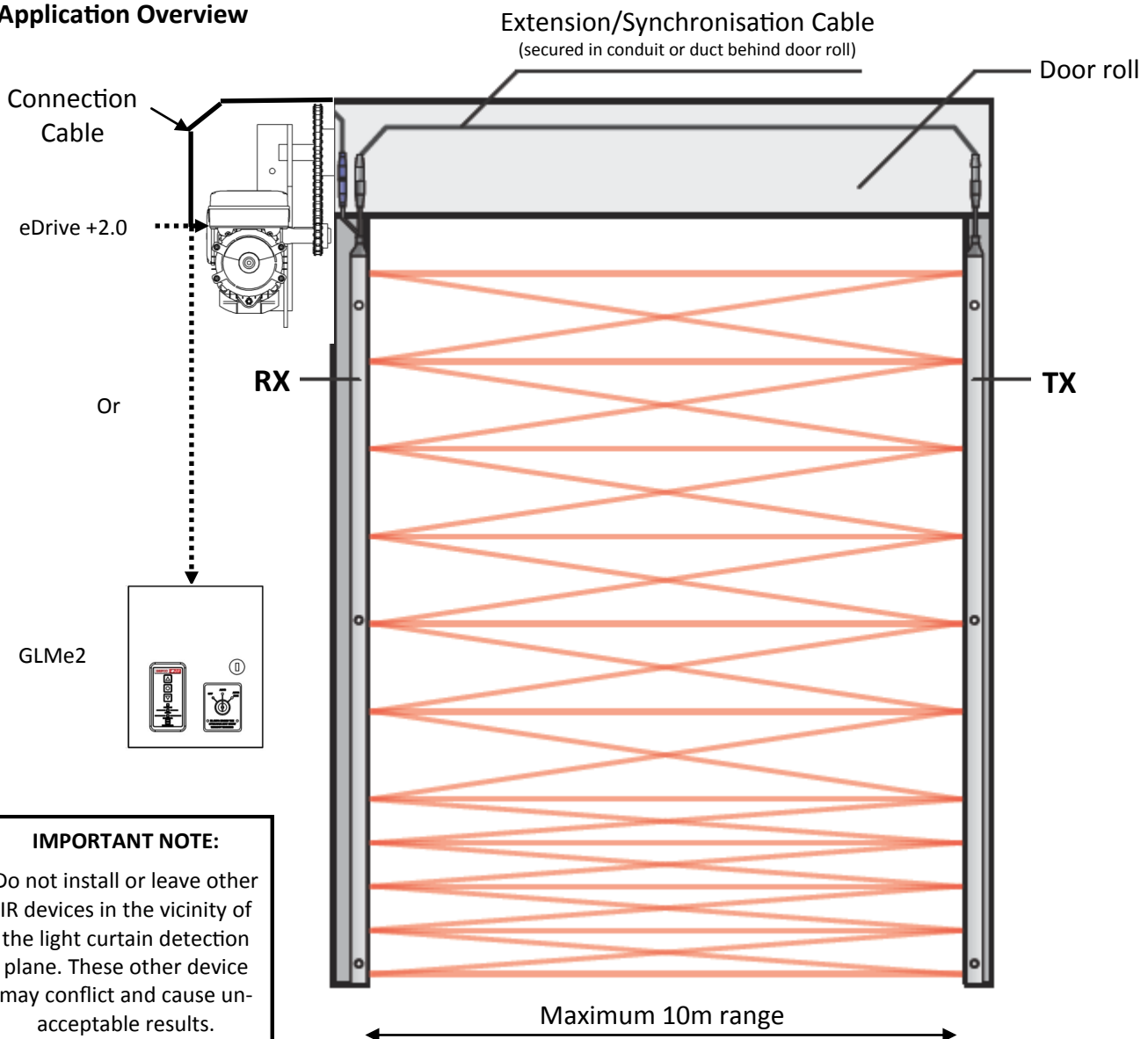
The GLCPS is provided with plug in cabling to allow for a door size of approximately 20m². On larger doors, you may need to allow for a plug in extension cable accessory (P/N: GLC-3E).

To ensure the GLCPS cabling will suit your door size, refer to the chart below

Maximum Door Height (m)	Maximum Door Width		
	Standard GLCPS	Add 3m ext cable 1 x GLC-3E	Add 2 x 3m ext cable 2 x GLC-3E
2m	9m	10m	
2.5m	8m	10m	
3m	7m	10m	
3.5m	6m	9m	10m
4m	5m	8m	10m
5m	3.5m	6m	9m
6m	1.2m	4m	8m
8m			3.5m

Call 1800 GRIFCO or your dealer to obtain any GLC-3E extension cables

Application Overview



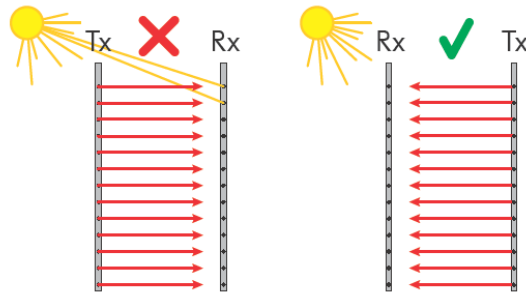
IMPORTANT NOTE:

Do not install or leave other IR devices in the vicinity of the light curtain detection plane. These other device may conflict and cause unacceptable results.

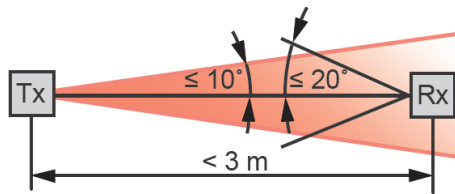
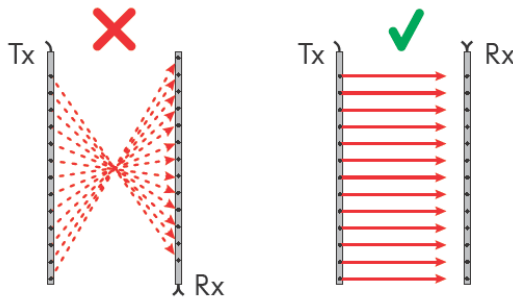
INSTALLATION

Mounting

Where possible, it is always preferred to mount the RX side of the light curtain away from direct sunlight.



Avoid incorrect orientation, as shown below:



The optical axis of the emitter (TX) and the receiver edge (RX) need to be aligned towards each other to ensure the light curtain functions reliably



Reflective surfaces near to or parallel to the safeguarded area can cause reflections and interfere with the GLCPS functions. Keep a reasonable distance between the sensor edges and any reflective surface

The **GLCPS-B** is offered to allow door manufacturers to closely couple the light curtain rail to the door guide to provide a discrete and effective mounting location.

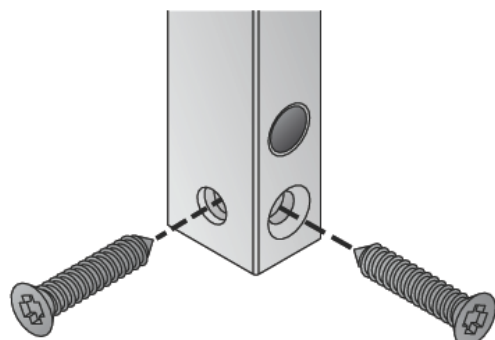
To mount the **GLCPS-B**, use countersunk headed fasteners to secure in 3 places per side along the length of the light curtain rail. The image below shows how the system can be mounted through either direction. The bottom edge must be set 50mm from the floor level.

Fasteners should be either M4 or 6 gauge self tapping screws.



Notice! Mechanical damage risk to the GLCPS

- Do not drill additional holes into the light curtain
- Do not over tighten the mounting screws
- Mount the edges on a flat surface



INSTALLATION

Mounting

To mount the GLCPS, utilise the six provided mounting brackets to secure as shown below. Follow the steps as suggested.

Install steps:

- Use each rail to mark the approximate mounting height for each bracket on both sides of the door opening.
- Mount all the brackets in accordance with the marked locations. The brackets can fix in any location vertically along the rail (spacing generally as pictured below right), so the importance of positioning should be placed on vertical alignment of the brackets. If needed, use a spirit level to ensure true vertical.
- With all brackets fastened to the wall, take the M5 hexagon head fasteners and slide 3 into each rail at the cable end (Fig 1).
- Whilst holding the rail in the vicinity of the brackets, with nyloc nuts in hand, position the M5 fastener through each bracket (working from the top down) and secure the nyloc nuts finger tight (ref Fig 1.).
- Position the rail vertically as it relates to the door plane, and tighten the nyloc nuts. Ensuring the rail location does not breach the dimensions shown (Fig 2).

Fig.1

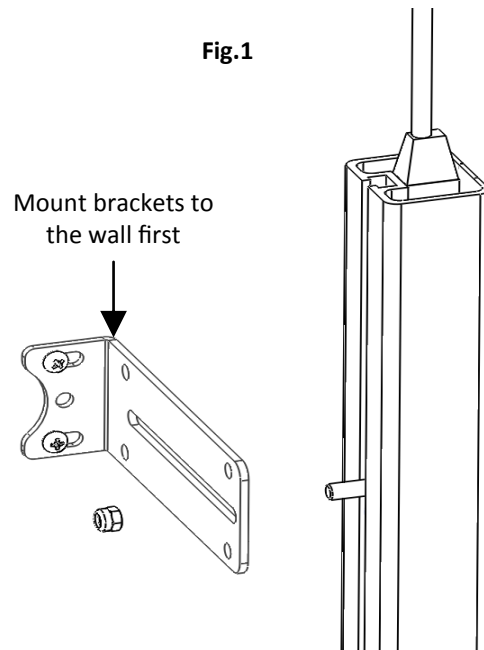
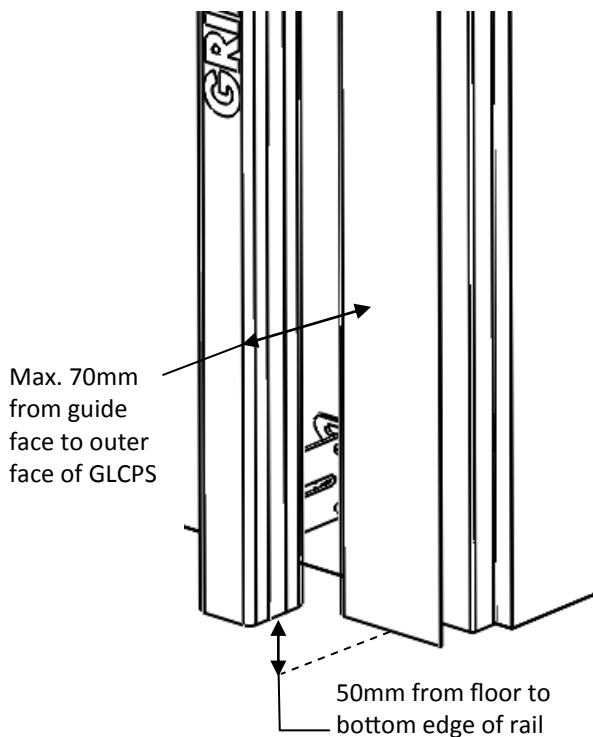
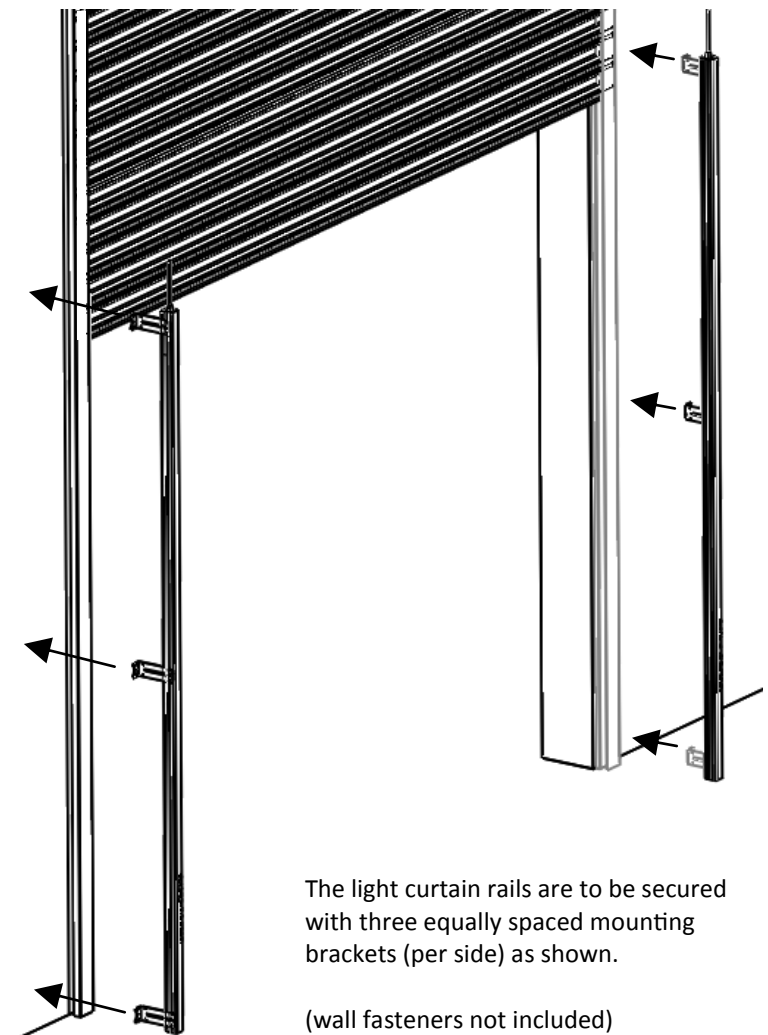


Fig.2



Note: Positioning the GLCPS rails too close to the door plane may result in nuisance reversals if the door curtain is able to flex inward (e.g. wind load condition). Check for this at the conclusion of the installation by lightly pushing on the door curtain from the outside during closing travel. If a reversal occurs, consider moving the rails further away from the door plane.



INSTALLATION

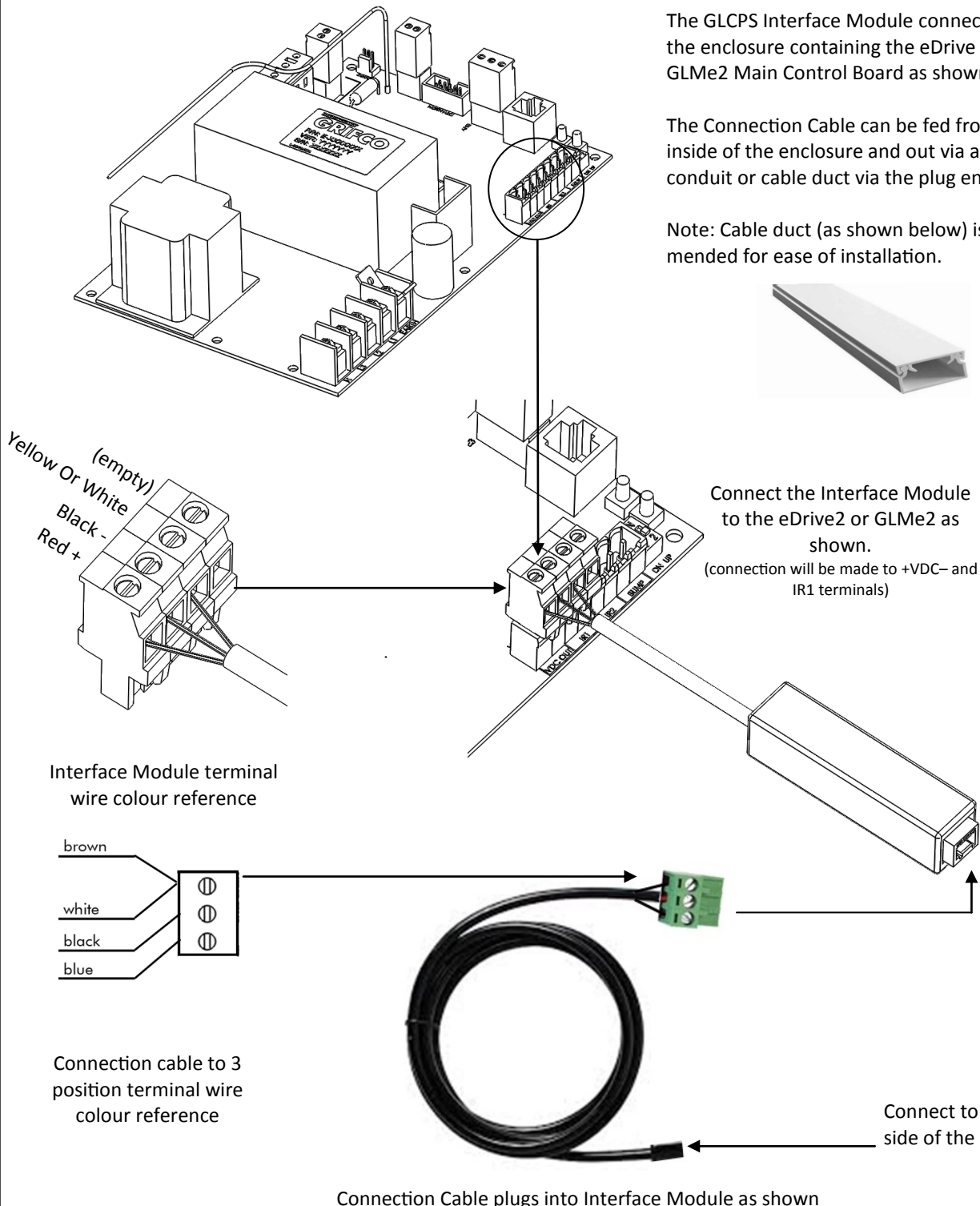
Connection

The GLCPS is connected to the eDrive +2.0 or the GLMe2 board as shown below. Ensure power is isolated before proceeding.

The GLCPS Interface Module connects within the enclosure containing the eDrive +2.0 or GLMe2 Main Control Board as shown.

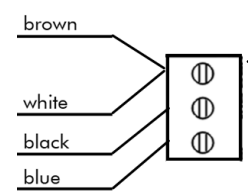
The Connection Cable can be fed from the inside of the enclosure and out via a suitable conduit or cable duct via the plug end.

Note: Cable duct (as shown below) is recommended for ease of installation.



Connect the Interface Module to the eDrive2 or GLMe2 as shown. (connection will be made to +VDC- and IR1 terminals)

Interface Module terminal wire colour reference



Connection cable to 3 position terminal wire colour reference

Connect to the RX side of the GLCPS

Connection Cable plugs into Interface Module as shown

To complete connection, plug the extension/synchronisation cable to each light curtain rail (ref pg-5 Application Overview)



WARNING

An electrician must disconnect electric power to the commercial door opener and control before removing or opening covers

OPERATION

The GLCPS will operate as a safety reversal sensor when correctly installed. Obstructing the plane of the light curtain will cause the door operator to stop and open, or simply prevent closing if the door is already open.

Refer to your eDrive +2.0 or GLMe2 manual for further configuration and set up information.

When correctly connected and installed, apply power to the control system.

Both sides should show a Green LED if there is no obstruction.

Note: on the housed GLCPS, you will see the LED through the IR filter strip. If suitable, cup your hand around the top end of the rail and look down through the assembly to see the Green LED

If necessary (for troubleshooting) the IR filter can be removed by sliding out of the extrusion.

Receiver — RX

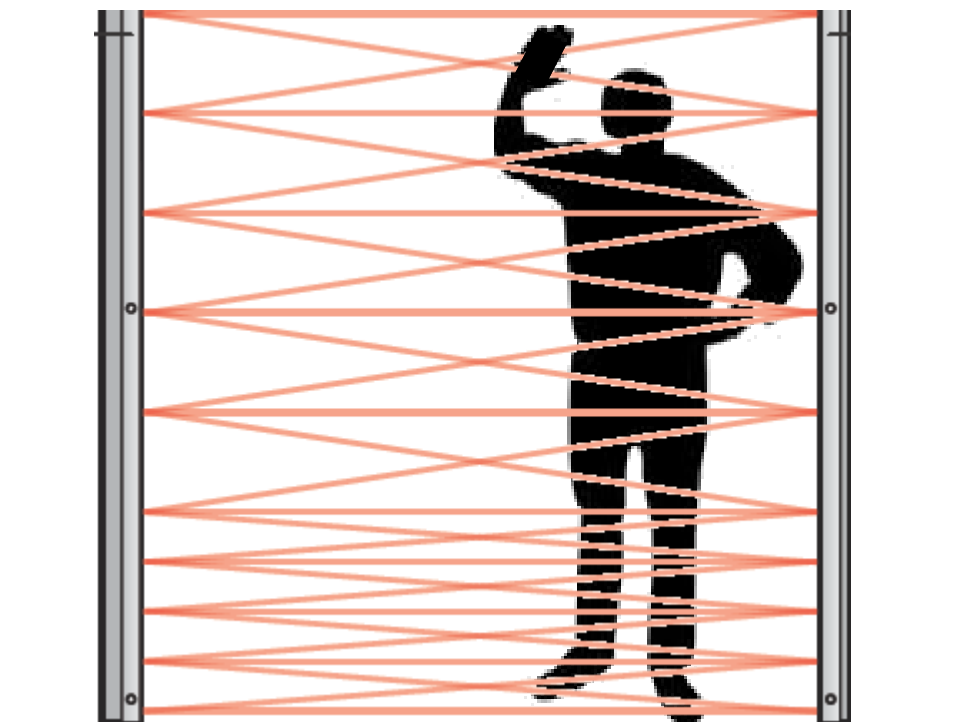
Green LED	Red LED	Sensor status
● ON	○ OFF	Light Curtain Free
○ OFF	● ON	Light Curtain interrupted
☀ BLINK SLOW	○ OFF	Start up (slow blink)
○ OFF	☀ BLINK FAST	Internal malfunction

Emitter — TX

Green LED	Sensor status
● ON	Power Status
○ OFF	No power or not within the limits

TESTING

With the installation complete, the system must be tested to ensure an obstruction will be detected when moving through the protection zone. Refer below.



MAINTENANCE

Although the GLCPS does not need regular maintenance, a periodic functional check is strongly recommended. Make sure the optical elements are clear of dirt and dust. If necessary, clean the front surface with a soft towel. Make sure the edges are securely fastened. Check the mounting position, cable routing and connection of the sensor.

If disposal is required, it should be done using the most up to date recycling technology according to local regulations and laws. There are no harmful materials used in the design and manufacture of the sensor. Traces of such dangerous materials may be found in the electronic components but not in quantities that are harmful

TROUBLESHOOTING

Emitter TX	Receiver RX	Action
LED off	LED off	Check electrical connections
LED off	LED red	Check the Synchronisation Cable
LED on	LED always red	Make sure the detection plane is clear of obstructions
LED on	LED always green (even when obstructed)	Make sure the Light Curtain rails are not mounted closely to any shiny or reflective surfaces Check electrical connections
LED on	LED switching between red and green without obstruction	Check alignment and ensure no misalignment due to vibration during door operation Make sure cables and Light Curtain rails are not mounted near any sources of electromagnetic interference
LED blinking	LED blinking	Check alignment Check connection of the Synchronisation Cable Check for obstructions to the Light Curtain

SPECIFICATIONS

Optical		Electrical		
Max. operating range	1 ... 10m (3 ...33ft)	Supply Voltage USP	10 ... 30VDC	
Number of elements	4 ... 50	Current Consumption at 24VDC	100mA	
Max. ambient light	100,000 Lux	Output	PNP/NPN (push-pull) or FSS	
Aperture angle at 3m (10ft)	Tx: $\leq \pm 10^\circ$ and Rx: $\leq \pm 20^\circ$	Output load	100mA, 100nF	
Mechanical		Typ. Res. time with 32 elements	90ms	
		Cross Section	12 mm x 16 mm (0.47 in x 0.63 in)	Max. door speed
Max. protection height	2,500 mm (98.5 in)	Status LED RX	Object detected	Red
			No object detected	Green
Housing material	Natural anodized aluminium	Status LED TX	Power OK	Green
Enclosure rating	IP67	Connections Cable and Electrical Connection		
Temperature range	-40°C ... +60°C (-40°F ... +140°F)	Synchronous cable		
		Length	10 m (33 ft)	
		Diameter	Ø 3.5 mm (Ø 0.14 in)	

CHAMBERLAIN LIMITED WARRANTY - Grifco Products

Chamberlain Australia Pty Limited / Chamberlain New Zealand Limited (**Chamberlain**) is committed to manufacturing and supplying high quality goods. As part of this commitment, we seek to provide reliable service and support for our goods and are pleased to provide you, the original purchaser, with this Chamberlain Limited Warranty.

We also provide the following statement as required by the Australian Consumer Law: In Australia, in addition to your rights under this Chamberlain Limited Warranty, our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

Chamberlain's warranty

Chamberlain warrants to the original purchaser of the Grifco product (**Unit**) that:

- 1 The Unit (excluding the electric motor) is free from defects in materials and workmanship for a period of 24 months from the date of purchase.
- 2 The electric motor is free from defects in materials and workmanship for a period of 12 months from the date of purchase.

During the applicable Chamberlain Warranty period, if you are concerned that the Unit or electric motor may be defective, call our service centre on the toll free number below before removing the Unit and a Chamberlain technician will diagnose the problem. Once the problem has been diagnosed, subject to your rights under the Australian Consumer Law with respect to major failures, Chamberlain will provide you with:

- 1 parts for "do-it-yourself" repairs; or
- 2 shipping instructions for a factory repair or replacement.

If a factory repair or replacement is required, provided the defective part or Unit is returned to Chamberlain well-packaged and in accordance with Chamberlain's shipping instructions, Chamberlain will, subject to your rights under the Australian Consumer Law with respect to major failures:

- 1 in relation to the Unit (excluding the electric motor), repair or, at its option where permissible, replace any defective part or Unit (excluding the electric motor) and return it to you at no cost; and
- 2 in relation to the electric motor, replace the electric motor and return it to you at no cost.

Where the Unit has been installed by an authorised installer, you must call them for prompt on-site service. Chamberlain will furnish replacement parts free of charge through the authorised installer. A service fee for on-site service may apply. Repairs and replacement parts provided under this Chamberlain Limited Warranty are provided free of charge and are warranted for the remaining portion of the original warranty period.

This Chamberlain Limited Warranty provides benefits which are in addition to your other rights and remedies as a consumer.

Exclusions

If our service centre determines that a warranty claim has been made in respect of a failure or defect arising under or out of any exclusion detailed below such that the claim is not covered under this Chamberlain Limited Warranty, we may, subject to your other rights and remedies as a consumer, charge you a fee to repair, replace and/or return the Unit to you.

This Chamberlain Limited Warranty does not cover any failure of, or defect in, the Unit due to:

- 1 non-compliance with the instructions regarding installation, operation, maintenance and testing of the Unit or of any product with which the Unit is used;
- 2 any attempt by a person other than an authorised installer to change settings, repair, dismantle, reinstall or move the Unit to another location once it has been installed;
- 3 tampering, neglect, abuse, wear and tear, accident, electrical storm, excessive use or conditions other than normal commercial use;
- 4 use of the Unit in conjunction with controls which have not been supplied, or pre-approved, by Chamberlain;
- 5 problems with, or relating to, the commercial door or commercial door hardware, including but not limited to the door springs, door rollers, door alignment, hinges, guides, slats and drums; or
- 6 problems caused by electrical faults.

If this Chamberlain Limited Warranty does not apply, you may have rights available to you under the Australian Consumer Law.

CHAMBERLAIN LIMITED WARRANTY - Grifco Products

Liability – Australia only

Except as set out in the Australian Consumer Law (being Schedule 2 of the *Competition and Consumer Act 2010*) (as amended, consolidated or replaced):

- 1 all other guarantees, warranties and representations in relation to the Unit or its supply are excluded to the extent that Chamberlain can lawfully exclude them; and
- 2 under no circumstances will Chamberlain be liable for consequential, incidental or special damages arising in connection with the use, or inability to use, the Unit, other than those which were reasonably foreseeable as liable to result from the failure.

Liability – New Zealand only

Except as set out in the *Fair Trading Act 1986* and the *Consumer Guarantees Act 1993* (as amended, consolidated or replaced):

- 1 all other guarantees, warranties and representations in relation to the Unit or its supply are excluded to the extent that Chamberlain can lawfully exclude them; and
- 2 under no circumstances will Chamberlain be liable for consequential, incidental or special damages arising in connection with the use, or inability to use, the Unit, other than those which were reasonably foreseeable as liable to result from the failure.

Note

We request that you retain your sales docket or invoice as proof-of-purchase and attach it to this manual to enable you to establish the date of purchase in the unlikely event of a warranty service being required. Chamberlain reserves the right to change the design and specifications of the Unit without prior notification. Some features or accessories of the Unit may not be available in certain markets or areas. Please check with your distributor.

Chamberlain service centre contact details

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