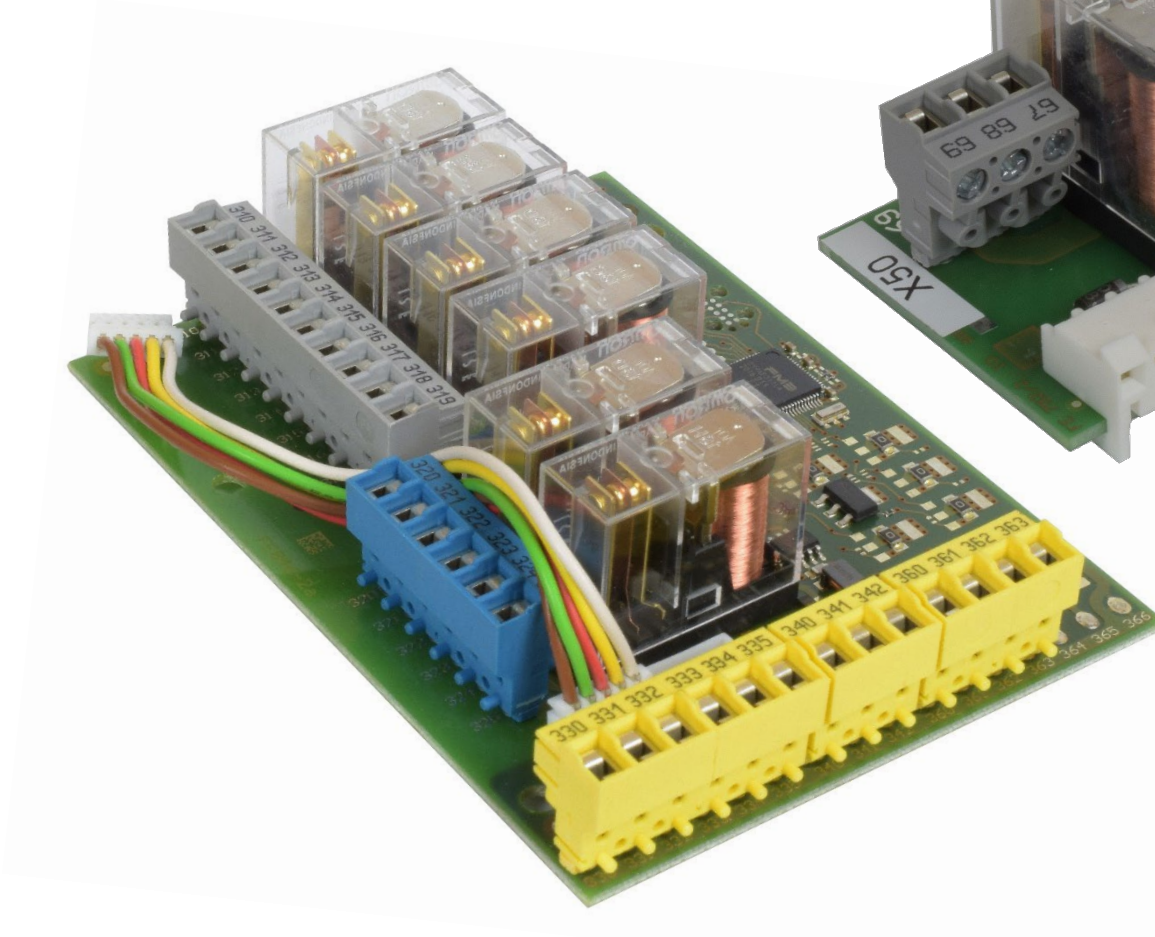




RELAY EXPANSION MODULE MANUAL

PART 1 of 1



D-Drive Wall Controller

Plug In Relay Expansion Module Manual for D-Drive Wall Controller

Variable Speed / Inverter models DDI-07, DDI-12 and DDI-15

This manual should be read in conjunction with Installation Manual D-Drive Wall Control Manual (D-M-ACG-100)

Chamberlain Australia Pty Ltd
Unit 1, 75 Epping Road
North Ryde NSW 2113
Ph: 1800 GRIFCO
www.grifco.com.au

Chamberlain New Zealand Ltd
17B Arrenway Drive
Rosedale 0623 Auckland
Ph: 0800 653 667
www.grifco.co.nz

D-M-ACG-122_A



GRIFCO[®]

1. Safety Warnings



WARNING: THESE ARE IMPORTANT SAFETY INSTRUCTIONS
FOLLOW ALL INSTRUCTIONS AS INCORRECT INSTALLATION
CAN LEAD TO SEVERE INJURY OR DEATH
SAVE these instructions

These Relay Expansion Modules have 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.

This document is the installation manual for the Relay Expansion Modules for the D-Drive Operator Wall Controller. The following warnings are to be considered when completing a system installation or maintenance.



WARNING

Mechanical

When you see this Safety Symbol 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.

- Sticking or binding doors must be repaired. Commercial doors, door springs, pulleys, brackets and their hardware are under extreme tension and can cause serious personal injury. Do not attempt to loosen, move or adjust them. Call for commercial door service.
- Do not wear rings, watches or loose clothing while installing or servicing a commercial door operator.
- To avoid serious personal injury from entanglement, remove all ropes connected to the commercial door before installing the door operator.
- After the installation a final test of the full function of the system and the full function of the safety devices must be done.
- When operating a biased-off switch, make sure that other persons are kept away.
- The operator cannot be used with a driven part incorporating a wicket door (unless the operator cannot be operated with the wicket door open).
- Operator may become hot during operation. Appropriate clearance and/or shielding should be supplied by the installer to ensure any cabling, wiring and/or other items cannot come in contact with the operator. If temperature rise exceeds 50°C all fixed wiring insulation must be protected, for example, by insulating sleeving having an appropriate temperature rating.
- Do not allow children to play with operator wall controls or remote controls. Keep remote controls away from children.
- Permanently fasten all supplied labels adjacent to the wall control as a convenient reference and reminder of safe operating procedures.
- Disengage all existing commercial door locks to avoid damage to commercial door. Install the wall control (or any additional push buttons) in a location where the commercial door is visible during operation. Do not allow children to operate push button(s) or remote transmitter(s). Serious personal injury from a closing commercial door may result from misuse of the operator.
- Activate operator only when the door is in full view, free of obstructions and operator is properly adjusted. No one should enter or leave the building while the door is in motion.
- The actuating member of a biased-off switch is to be located within direct sight of the door but away from moving parts. Unless it is key operated, it is to be installed at a minimum height of 1500mm and not accessible to the public.
- 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.
- 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.
- Use the operator for its intended purpose. This product is for indoor use only.
- Automatic Drive - Keep away from the area of the door as it may operate unexpectedly.
- Ensure that entrapment when operating the door in the open direction is avoided.
- If the operator is installed at a height less than 2.5 metres from floor level or any other level from which the operator can be accessed (e.g. mezzanine) the installer is responsible to fit guards as appropriate to prevent access to moving mechanisms to reduce risk of entrapment.



WARNING

Electrical

When you see this Safety Symbol 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 electric shock.

- If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons to avoid a hazard.
- Installation and wiring must comply with local building and electrical codes. Connect the power supply cord only to properly earthed mains.
- 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 operator before making repairs or removing covers.



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 operator if you do not comply with the cautionary statements that accompany it.

2. Contents


- 1. Safety Warnings 2
- 2. Contents 3
- 3. General Information..... 4
- 4. Schematic Drawings..... 4
 - 4.1. Single Relay Module DDEB-1R..... 4
 - 4.2. Six Relay Module DDEB-6R..... 4
- 5. Specifications 5
- 6. Installation..... 6
 - 6.1. Single Relay Module DDEB-1R..... 6
 - 6.2. Six Relay Module DDEB-6R..... 6
- 7. Relay Output Configuration 7

3. General Information

Grifco offers Relay Expansion Module options for use with the D-Drive Inverter Controllers DDI-07, DDI-12, and DDI-15.

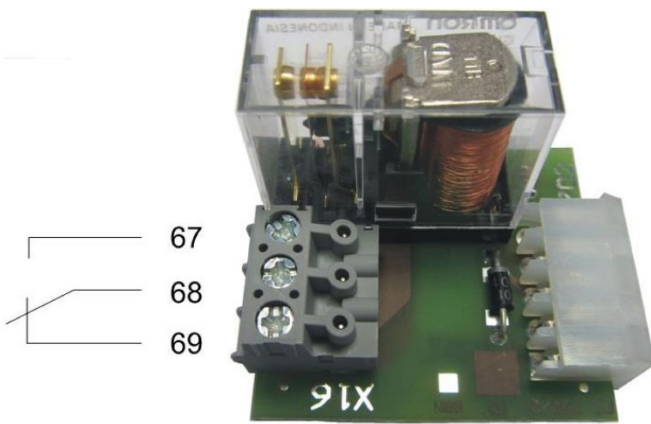
These provide an additional 1 or 6 relay outputs, dependant on model.

The modules can be used on D-Drive Wall Controller Variable Speed / Inverter Controllers DDI-07, DDI-12 and DDI-15.

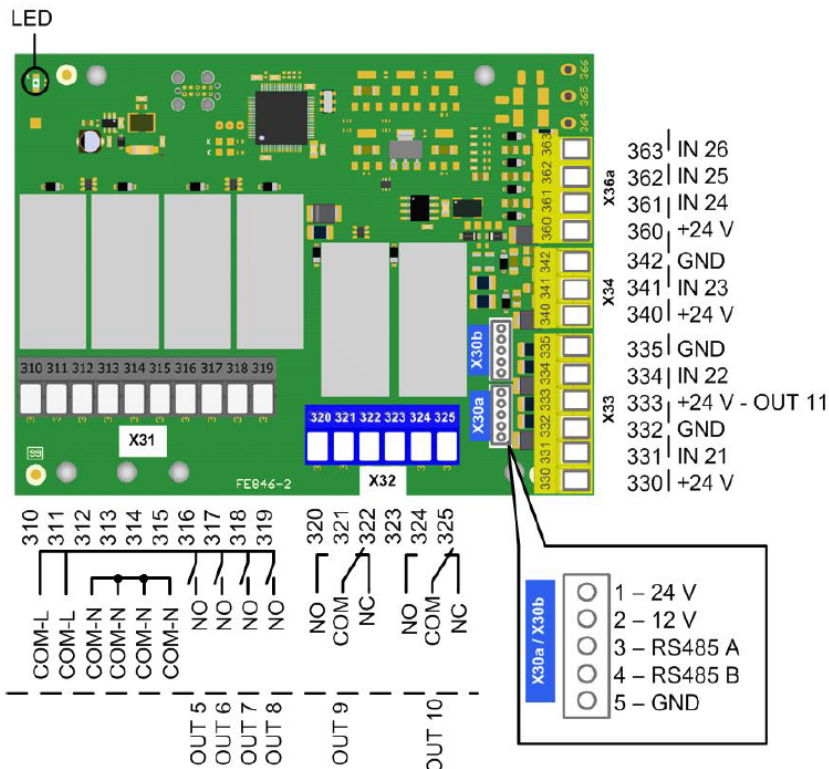
	<h2>CAUTION</h2>	<p>Use only 75 °C copper cable to connect to the expansion board.</p>
---	------------------	---

4. Schematic Drawings

4.1. Single Relay Module DDEB-1R




4.2. Six Relay Module DDEB-6R



5. Specifications

	DDEB-1R	DDEB-6R
Dimensions (LxWxH)	30 x 36 x 43 mm	112 x 8 x 30 mm
Connection	1 x MOLEX-Socket strip to M2A	1 x 5 Pin Ribbon Cable to X30a
Operating Temperature	-20°C to +50°C	-20°C to +50°C
Storage Temperature	-20°C to +70°C	-20°C to +70°C
Power Consumption	25mA	(without relays and outputs) Max. 2W
Weight	27g	150g
Relay Contact (general)	min. 10 mA* max. 230 VAC / 3 A	min. 10 mA* max. 230 VAC / 3 A
Inputs	N/A	24 VDC / typ. 15 mA max. 26 VDC / 20 mA All inputs must be connected potential-free or: < 4 V: inactive for logical 0 > 16 V: active for logical 1 min. duration of input control commands: > 100 ms
Relay Output	Normally open contact with common COM port. Max. 230 VAC / 3 A in total are allowed.	Relays OUT 5 – OUT 8: Normally open contact with common COM port. Max. 230 VAC / 3 A in total are allowed. Relays OUT 9 – OUT 10: Changeover contact free of potential. The same switching voltage must be used for both relays!
Digital Output	N/A	OUT 11: 1 x 24 V min. 10 mA* max. 100 mA normally open, +24 V switching

	CAUTION	Contacts which have been used once for power switching can no longer switch extra-low voltage
---	----------------	---

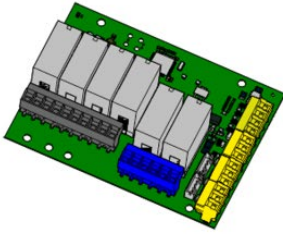








6. Installation

6.1. Single Relay Module DDEB-1R

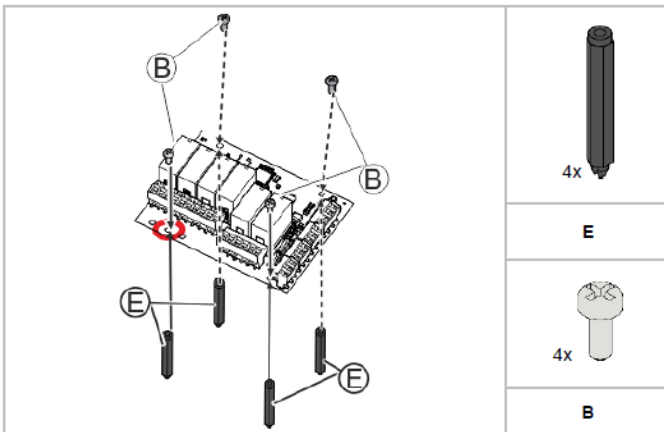
Plug the White MOLEX connector on the relay module onto the M2A Header connector of the DDI-07, DDI-12 or DDI-15.

6.2. Six Relay Module DDEB-6R

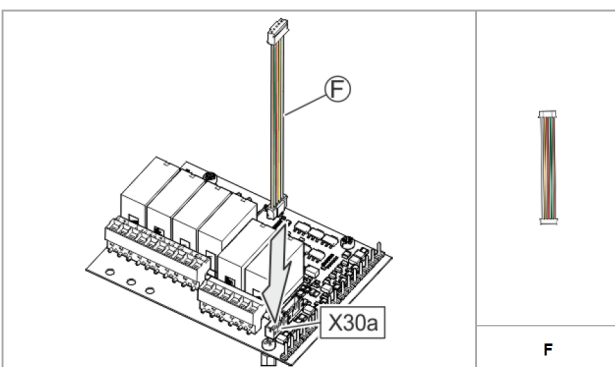
Parts provided in the kit are shown below.

A	1x 	B 4x M3x8 	F 1x 120 mm 
		C 2x M2,5x8 	G 2x 10 mm 
		D 4x 25 mm 	H 2x 18 mm 
		E 4x 40 mm 	I 1x 25 mm 

1. Mount the 4 spacers (E) on the expansion board using the 4 screws (B) (shown below)



2. Connect one end of the cable (F) to the connection X30a on the relay module. Connect other end of cable (F) to the connection X30a on the DDI-07, DDI-12 or DDI-15 controller circuit board.



3. Activate the expansion board via the controller by setting parameter P.800 to 8.

7. Relay Output Configuration

To configure an output of the controller to the onboard and plug-in Relay Modules, navigate to the appropriate P.70x setting (where 'x' is the number of the Output to be configured) and change the saved setting to an option in the table below:

Setting	Description
0000	Output deactivated
0001	Continuously turned on
0101	Door is Open The message depends on the logical status of the door
0103	Door is Open The message depends on the logical status of the door
0201	Door is Closed The message depends on the logical status of the door
0203	Door is Closed The message depends on the logical status of the door
0401	There is no error
0501	Courtyard light function, switched ON during opening and closing with 10 s switch off delay after closing.
0601	Passing on detector channel 1
0602	Passing on detector channel 2
0605	Synchronous control OPEN, signal duration 0.5 seconds. The output is active during opening, in End position OPEN and during locking in end open position.
0606	Synchronous control CLOSE, signal duration 0.5 seconds. The output is active during Closing, in End position Close and during locking in end position close.
0607	Synchronous control STOP, signal duration 0.5 seconds. The output is active when the door is not moving, no end position is approached and no locking in any end position is active.
0612	Passing on leaving detector 1
0613	Passing on leaving detector 2
0630	Forwarding Brake
0634	Forwarding, of an low Battery from the WiCab mobile Unit
0659	F.363: forwarding disturbance of the internal safety edge.
0660	Forwarding: maximum number of trips of the safety edges has been exceeded.
0665	Forwarding detector channel 3
0666	Forwarding detector channel 4
0701	Flashing during opening and closing
0703	Switched on during Opening and Closing
0801	Active during opening and closing and during active pre-warning / clearance time.
1001	Locking second door
1002	Locking second door, 1 s switch off delay
1101	Magnet voltage in end position CLOSE The N.C. contact of the relay has to be used
1102	Magnet voltage during Closing and in end position CLOSE

Setting	Description
1201	Green traffic light on inside of door
1210	Green traffic light on outside of door
1220	Red traffic light on inside of door 1
1221	Flashing red traffic light on inside of door 1
1222	Red traffic light on inside of door 2
1223	Flashing red traffic light on inside of door 2
1224	Red traffic light on inside of door
1232	Red traffic light on inside
1233	Red traffic light on inside, inverted
1250	Red traffic light on outside of door 1, flashing during clearance time
1251	Flashing red traffic light on outside of door 1
1252	Red traffic light on outside of door 2
1253	Flashing red traffic light on outside of door 2
1255	Red traffic light on outside of door
1263	Red traffic light on outside
1264	Red traffic light on outside, inverted
1295	Green traffic light, flashing during pre-warning / clearance time, ON in end position OPEN
1298	Direction dependent red traffic light. On for opening and closing movement. Off when CLOSED and when OPEN. Flashes during evacuation time
12AD	Direction-independent traffic light, flashing during clearing time, switched on during OPEN and CLOSE movement, flashing during stop
1601	Airlock OPEN
1701	Testing in end position close
1801	Counting + The function is only possible with detectors 1 and 2. At first you have to activate the + loop and then the - loop.
1901	Counting – The function is only possible with detectors 1 and 2. At first you have to activate the - loop and then the + loop.
2001	Warning light 1, always ON if door is not closed.
2101	Warning light 2, switched ON during closing
2201	Active green traffic light, ON in end position OPEN until a close command is given or detector 2 gets active.
2301	Active green traffic light, ON in end position OPEN until a close command is given or detector 1 gets active.
2501	Testing in end position OPEN
2601	Emergency opening test
3201	Output function brake
3202	Output function brake (N.C., output turned)

Chamberlain Australia Pty Ltd
Unit 1, 75 Epping Road
North Ryde NSW 2113
Ph: 1800 GRIFCO

Chamberlain New Zealand Ltd
17B Arrenway Drive
Rosedale 0623 Auckland
Ph: 0800 653 667
www.grifco.co.nz

GRIFCO®

