

# Smart Dupline® Control for DC Rollerblind Motor Type SH2RODC224

CARLO GAVAZZI



- Up/down control for two DC rollerblind motors
- DC power supply
- Relay load 5A
- 2 DIN housing
- LED indication for power supply, dupline® bus, motor up, motor down
- Connection to other cabinet modules via local bus

## Product Description

This is a 2-DIN relay output module to independently control two DC rollerblind motors. It has been developed to be connected to and controlled by the smart-house system controllers. The rollerblind motor is driven

by two relays in series: one to switch the motor ON/OFF and the second one to control the direction UP/DOWN. These two relays are controlled in such a way as to respect the motor timing before any reversing of the motor direction.

## Ordering Key

**SH 2 RO DC 2 24**

smart-house \_\_\_\_\_  
 2-DIN housing \_\_\_\_\_  
 Rollerblind function \_\_\_\_\_  
 DC motor \_\_\_\_\_  
 Outputs number \_\_\_\_\_  
 Power supply \_\_\_\_\_

## Type Selection

Housing	Mounting	Relay load	Relay output	Supply: 15 to 30 VDC
2 DIN	DIN-rail	5A	2 SPST + 2 SPDT relay	<b>SH2RODC224</b>

## Output Specifications

Relay output	2 SPST (R1, R2) + 2 SPDT (R3-R4) relay
Resistive load	DC 13 5 A/24 VDC
Mechanical life	≥ 10 x 10 <sup>6</sup> operations
Electrical life	≥ 1 x 10 <sup>5</sup> operations
Operating frequency	≤ 360 operations/h
Wiring	M+ (M1), M- (M1) output for motor 1, (-), (+) motor supply voltage, M+ (M2), M- (M2) output for motor 2

## Supply Specifications

Power supply	Overvoltage cat. II (IEC 60664-1, par. 4.3.3.2)
Rated operational voltage	15 to 24 VDC ± 20%
Operational voltage range	15 to 30 VDC (ripple included)
Rated operational power	3 W
Protection for reverse polarity	Yes
Connection	2xA1 (+) and 2xA2 (-) (2 pairs of terminals internally connected Max 3A)
Power on delay	Typ. 4 s
Power off delay	≤ 1 s

## Input Specifications

Keypad	For local ON/OFF switching
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## Dupline® Specifications

Voltage	8.2 V
Maximum Dupline® voltage	10 V
Minimum Dupline® voltage	4.5 V
Maximum Dupline® current	1.1 mA

The Dupline® bus is present on the internal bus: the modules can be connected one next to the other without the need of wiring the Dupline® bus. See "Wiring diagram".

## General Specifications

<b>Installation category</b>	Cat. II	<b>Connection</b>	
<b>Dielectric strength</b> Power supply to Dupline®	500 V impulse (1.2/50 µs) 500 V AC for 1 min. (IEC60664-1, TAB. F. 1)	Terminal	12 screw-type max. 1.5 mm <sup>2</sup>
Dupline® to output, power supply to output	6 KV impulse 1.2/50µµs 4 KV AC for 1 min. (IEC60664-1, TAB. A. 1)	Cable cross-section area	0.4 Nm / 0.8 Nm
<b>Address assignment</b>	Automatic: the controller recognises the module through the SIN (Specific Identification Number) that has to be inserted in the SH tool.	Tightening torque	
<b>Fail-safe mode</b>	In case of interruption of the dupline® connection, the output channel will be switched-off	<b>Housing</b>	
<b>Environment</b> Degree of protection Front	IP 50	Dimensions	2 DIN module
Screw terminal	IP 20	Material	Noryl
Pollution degree	2 (IEC 60664-1, par. 4.6.2)	<b>Weight</b>	150 g
Operating temperature	-20° to +50°C (-4° to 122°F)	<b>Approvals</b>	cRUus, according to UL60950
Storage temperature	-50° to +85°C (-58° to 185°F)	<b>UL notes:</b>	Max room temperature: 40°C
Humidity (non-condensing)	20 to 80% RH	A readily accessible disconnecting device must be added in the building installation	
<b>LED's indication</b> Power LED	1 green	<b>CE Marking</b>	Yes
Dupline® LED	1 yellow	<b>EMC</b>	
Motor status	4 red	Immunity	EN 61000-6-2
		- Electrostatic discharge	EN 61000-4-2
		- Radiated radiofrequency	EN 61000-4-3
		- Burst immunity	EN 61000-4-4
		- Surge	EN 61000-4-5
		- Conducted radio frequency	EN 61000-4-6
		- Power frequency magnetic fields	EN 61000-4-8
		- Voltage dips, variations, interruptions	EN 61000-4-11
		Emission	EN 61000-6-3
		- Conducted and radiated emissions	CISPR 22 (EN55022), cl. B
		- Conducted emissions	CISPR 16-2-1 (EN55016-2-1)
		- Radiated emissions	CISPR 16-2-3 (EN55016-2-3)

## Mode of Operation

### Push button

The push button is used for local switching ON/OFF of the output, without the need to connect the bus for test purposes.

The command from the push button will only be recognized if it is kept pressed for more than 1 second: the two outputs will be activated for the whole time the push button is being kept pressed. Once the push button is released, also the outputs are deactivated. Every time the button is pressed, the direction of the motors is

changed, always respecting the reverse delay time.

This rollerblind module is driven by the SH2WEB24 controller to move rollerblinds, sunblinds and shutters. It receives the UP and DOWN command from the SH2WEB24, and then activates the relevant output accordingly. The two outputs are driven independently and can be managed by different rollerblind functions.

The UP/DOWN output remains active for a time known as "running time"

or until another UP/DOWN command is received. Before reversing the movement, the output will remain deactivated for a time called "reverse delay". The reverse delay times are sent to the SH2RODC224 by the SH2WEB24 and can be different for each output. The running time is managed by the controller.

If the tilting function is enabled, the SH2RODC224 will be able to manage the tilting command received from the SH2WEB24. The tilting command can be of two

types: tilting UP and tilting DOWN. Once this command is received, the SH2RODC224 will activate the UP or DOWN output for the tilting time always respecting the reverse delay time.

### Addressing

No addressing is needed since the module is provided with a specific identification number (SIN): the user has only to insert the SIN number in the configuration tool when creating the system configuration.

Number of Rollerblind functions	Emergency stop signal used (Y/N)	Input channels	Output channels
1	N	1	0
1	Y	1	1
2	N	2	0
2	Y	2	2