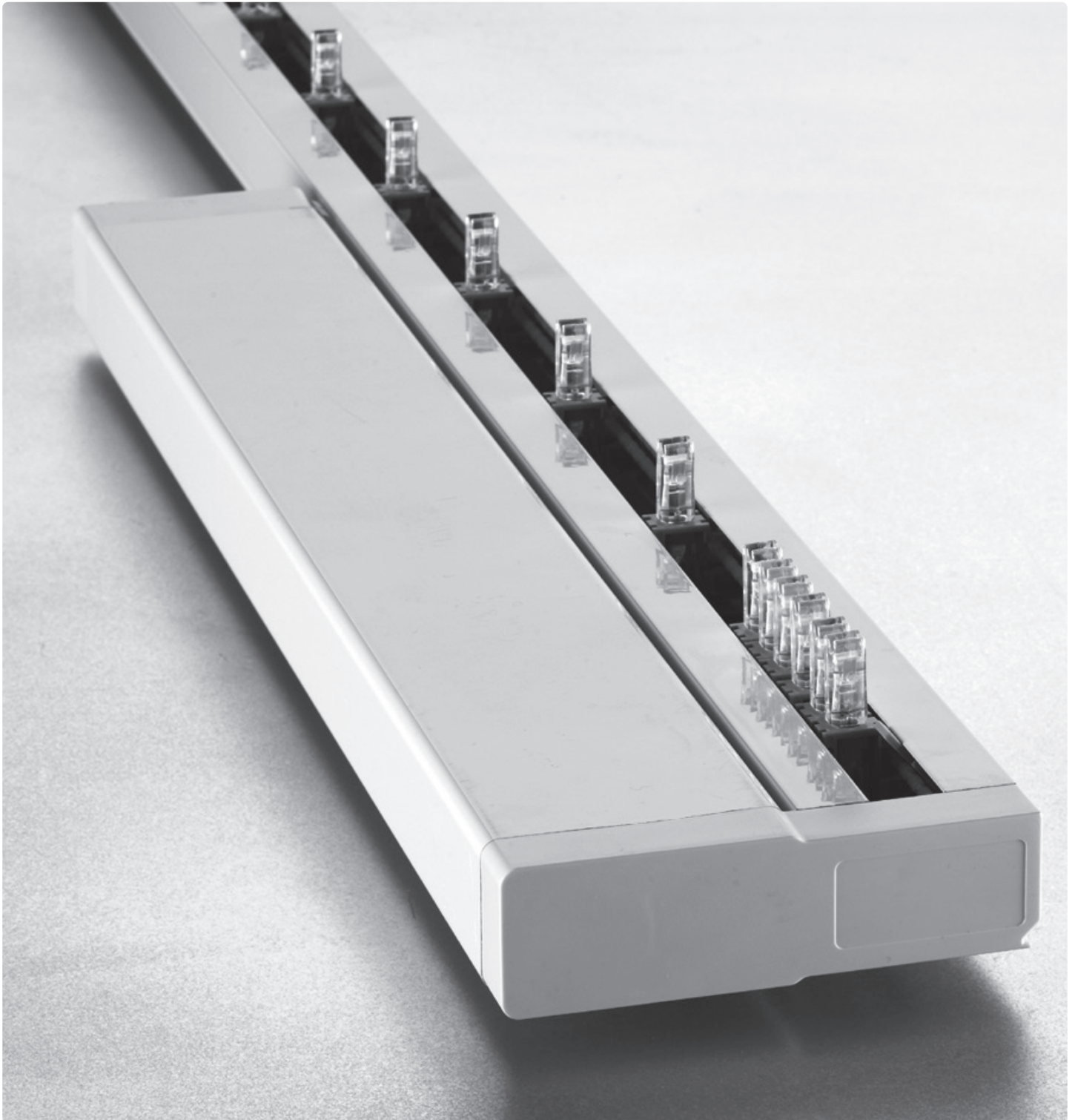


VERTICAL BLINDS

IQ2-Motor Electrical planning



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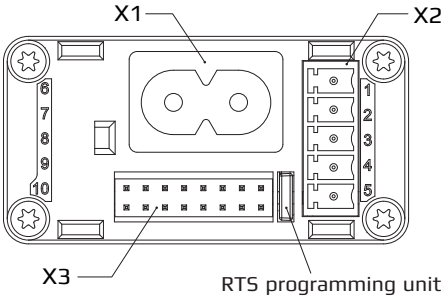
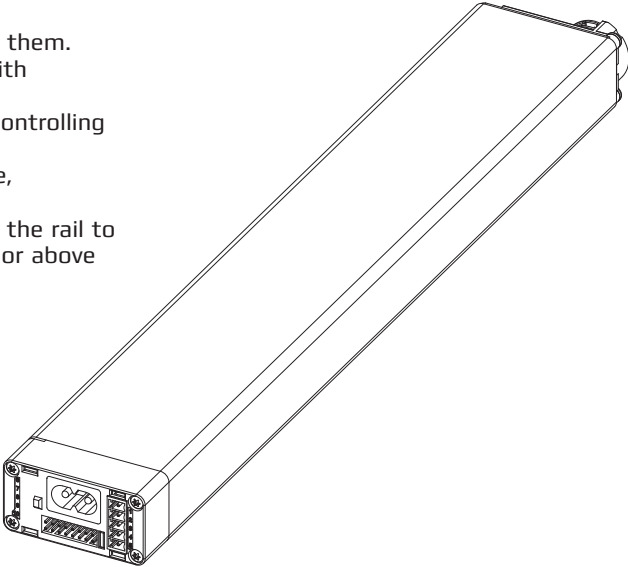
Components – IQ2-Motor

IQ2-100

IQ2-Motor

The IQ2-Motor serves to move the louvres sideways and to tilt them. It is fitted with a “Mono function” so that control elements with 2 switching functions can be used. The IQ2-Motor is optionally available with an RTS module for controlling a drive using a Somfy RTS radio transmitter. Up to 16 transmitters can be programmed into an RTS module, enabling control as a single unit, in a group, or centrally. The motor can be installed using a variety of fasteners behind the rail to the left, behind the rail to the right, above the rail to the left, or above the rail to the right.

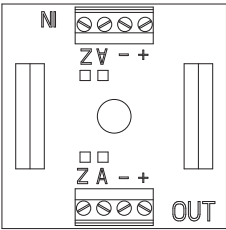
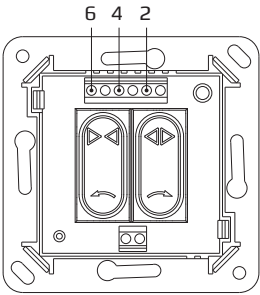
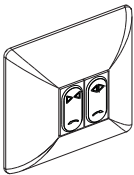
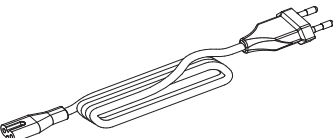
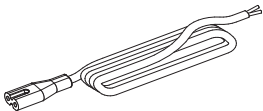
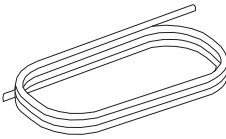
- Voltage supply : 180-264 V AC 50/60 Hz
- Power consumption : max. 0,35 A at 180 V AC
- Starting current : <10 A
- System of protective housing : IP 20
- Index of protection : II 
- Type of current : Low-voltage
- Control voltage : Low-voltage
- Control current : 10 mA
- Tractive power : 80 Ncm on the sprocket
- Travel speed : 5 m/min
- End position sensing : electronically through programming
- Operating temperature : 0-70 °C
- Continuous loading capacity : approx. 10 % on the ON period
- Weight : 690 g
- Dimensions : 53,5 x 27,4 x 400 mm
incl. end caps and cover cap



X1 - Power voltage
X2 - Control signals (CLOSE/OPEN)
X3 - Multifunctional interface

X1		X2				
Pin	Function	Pin	Function	LIYY 4 x 0,14 mm²	J-Y(ST)Y 2 x 2 x 0,8	Comment
L	230 V	1	+ 24 V (max. 80 mA)	WH (white)	RD (red)	Vout
N	230 V	2	GND	BN (brown)	BK (black)	Vout
		3	Coding *			
		4	UNSTACK (><)	GN (green)	WH (white)	Control signal
		5	STACK (<>)	YE (yellow)	YE (yellow)	Control signal

* Pin 3 : Connection X2/1 zu X2/3 = Ground as control signal
No connection = Pole reversal principle (control)

Components – IQ2-Motor		IQ2-103	
<p>Interface module</p> <p>The interface module is needed with the formation of group and central control with more then 15 drive units.</p> <ul style="list-style-type: none">- Voltage supply : 24 V DC (from the drive unit)- Type of current : Low-voltage- Control voltage : 24 V DC- Control current : 12 mA- Operating temperature : 0-70 °C- Dimensions : 42 x 42 x 12 mm			<ul style="list-style-type: none">+ - + 24 V- - GNDA - OPEN travelZ - CLOSE travel
<p>Control switch (surface-mounted)</p> <p>Control switch to operate one or several Vertical Systems.</p> <ul style="list-style-type: none">- Functions : OPEN/CLOSE- Dimensions : 81 x 81 x 10 mm- Colour : white- Connections : 1 x 2 and 1 x 6 screw-type terminals- Connection data : solid 0,14-1,5 mm² flexible 0,1-1,0 mm²- Maximum load : 100 mA <p>▲ IMPORTANT! Max. 10 drive units per control switch.</p>		 	<ul style="list-style-type: none">2 - OPEN travel4 - CLOSE travel6 - GND
<p>Mains cable with Euro flat plug</p> <p>Power supply for the motor.</p> <ul style="list-style-type: none">- Type of connection : Jack to motor; plug in socket- Cable : H03VVH2-F, 2 x 0,75 mm²			
<p>Mains cable without Euro flat plug</p> <p>Power supply for the motor.</p> <ul style="list-style-type: none">- Type of connection : Jack to motor- Cable : H03VVH2-F, 2 x 0,75 mm²			
<p>Control cable</p> <p>Connection between the motor and the control switch with terminal strip.</p> <ul style="list-style-type: none">- Cable : J-Y(ST)Y 2 x 2 x 0,8 (Ø9,0 mm)			<ul style="list-style-type: none">CLOSE - whiteOPEN - yellowGND - black+ 24 V - red

Components – IQ2-Motor

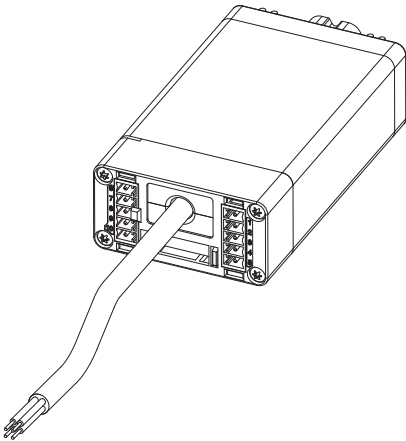
IQ2-105

IQ2-motor switching module 230 V

The 230 V switching module serves to actuate a drive unit with a control voltage of 230 V AC.

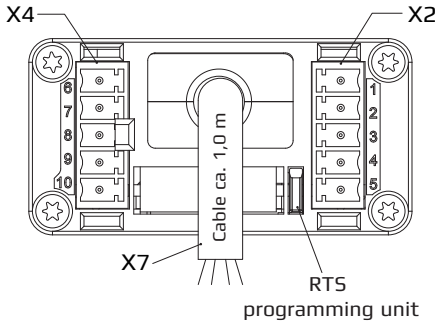
- Voltage supply : 24 V DC (from the drive unit)
- Type of current : Low-voltage
- Control voltage : 230 V AC
- Control current (230 V) : 5 mA
- Control current (24 V) : 10 mA
- Operating temperature : 0-70 °C
- Dimensions : 53,5 x 27,4 x 93,4 mm

X2 - Control signal (CLOSE/OPEN)
X4 - Top and bottom track interface
X7 - Voltage supply / Control signal



X2				
Pin	Function	LIYY 4 x 0,14 mm²	J-Y(ST)Y 2 x 2 x 0,8	Comment
1	+ 24 V (max. 80 mA)	WH (white)	RD (red)	VOUT
2	GND	BN (brown)	BK (black)	VOUT
3	Coding *			
4	UNSTACK (><)	GN (green)	WH (white)	Control signal
5	STACK (<>)	YE (yellow)	YE (yellow)	Control signal

* Pin 3 : Connection X2/1 zu X2/3 = Ground as control signal
No connection = Pole reversal principle (control)



X4				X7			
Pin	Function	Cable	Comment	Pin	Function	Cable	Comment
6	-	-		L1	230 V	BN (brown)	VIN
7	+ 5 V	-		N		BU (blue)	VIN
8	GND	BK (black)		S1	CLOSE	BK (black)	Control signal
9	CAN L	YE (yellow)		S2	OPEN	GY (grey)	Control signal
10	CAN H	WH (white)					

▲ ATTENTION! The switching module 230 V requires a permanent voltage supply!

Components – IQ2-Motor

IQ2-106

IQ2-Motor top and bottom track module

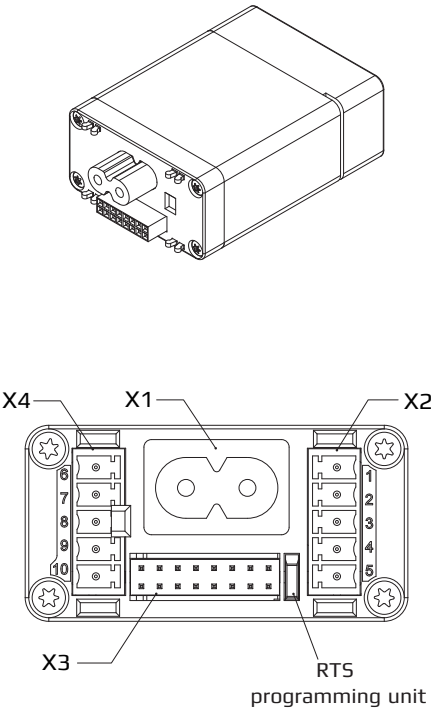
The top and bottom track module serves the connect two drive units in the case of a top and bottom track unit.
It is required once for each drive unit and permits the exchange of data and thus synchronisation between the controls.
The control signals CLOSE/OPEN are only routed to one drive unit!

- Voltage supply : 24 V DC (from the drive unit)
- Type of current : Low-voltage
- Control voltage : Low-voltage
- Control current : 10 mA
- Operating temperature : 0-70 °C
- Weight : 110 g
- Dimensions : 53,5 x 27,4 x 71,4 mm

- X1 - Voltage supply
- X2 - Control signal (CLOSE/OPEN)
- X3 - Multifunctional interface
- X4 - Top and bottom track interface

The control signals CLOSE/OPEN are only routed to one drive unit in the top and bottom track unit. The second drive unit receives pits information via the communications line.

In combination with other control modules, the top and bottom track module is always the first module to be fitted onto the motor.

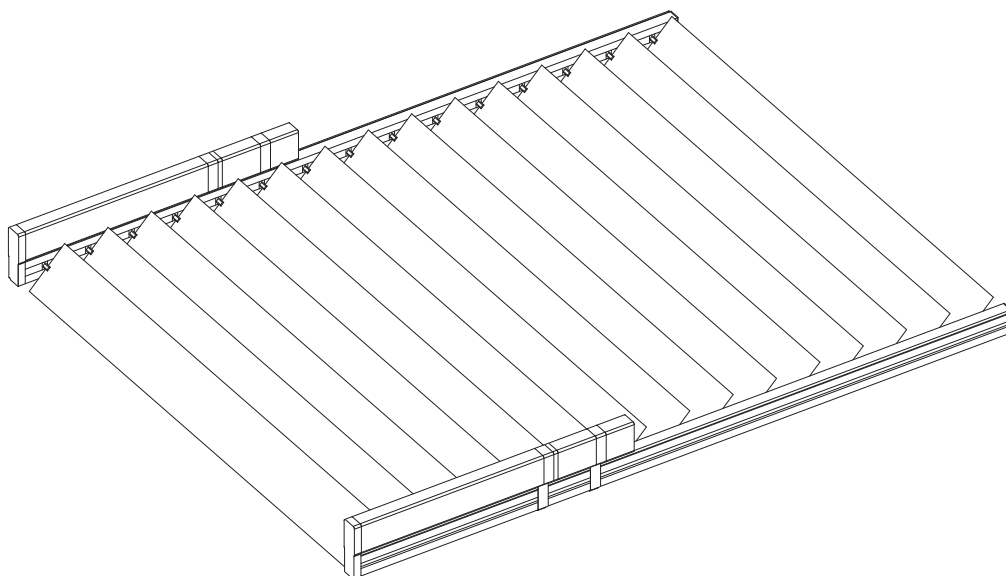


X1		X2					X4			
Pin	Function	Pin	Function	LIYY 4 x 0,14 mm²	J-Y(ST)Y 2 x 2 x 0,8	Comment	Pin	Function	Cable	Comment
L	230 V	1	+ 24 V (max. 80 mA)	WH (white)	RD (red)	V _{OUT}	6	-	-	
N	230 V	2	GND	BN (brown)	BK (black)	V _{OUT}	7	+ 5 V	-	
		3	Coding *				8	GND	BK (black)	
		4	UNSTACK (><)	GN (green)	WH (white)	Control signal	9	CAN L	YE (yellow)	
		5	STACK (<>)	YE (yellow)	YE (yellow)	Control signal	10	CAN H	WH (white)	

* Pin 3 : Connection X2/1 zu X2/3 = Ground as control signal
No connection = Pole reversal principle (control)

Operating instructions – Top and bottom track – IQ2-Motor

IQ2-150



General:

In top and bottom track systems, each track is fitted with a motor. A synchronisation facility ensures that the motors run at the same speed.

So that an interchange of data can be carried out between the motors via a serial interface, the motors are fitted with a module and connected via a cable.

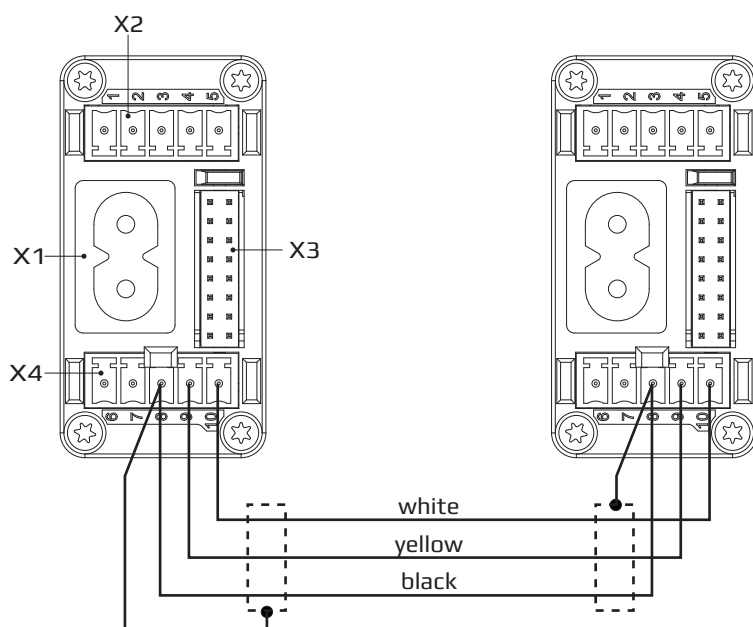
The operating elements such as e. g. control switch, timer and remote control must be connected only to 1 motor.

Motor features:

- Guaranteed parallel running of the hanging
- 180° tilt only possible when the hanging is closed
- Automatic opening of the louvres on sideways travel
- Instant stop of the motors:
 - on interruption of the power supply to a motor,
 - on interruption of the data cable,
 - on too great a difference between the tracks during sideways travel,
 - on stiff running caused by outside influences.

Terminal assignment:

Cable: J-Y(ST)Y 2 x 2 x 0,8 Ø9,0 mm

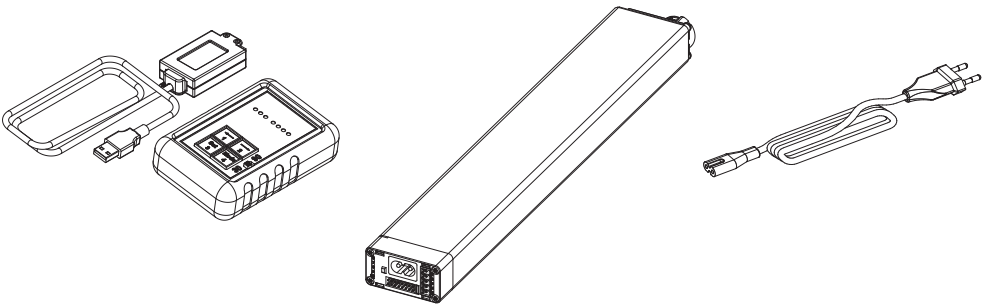


Program end positions – IQ2-Motor

IQ2-160 a

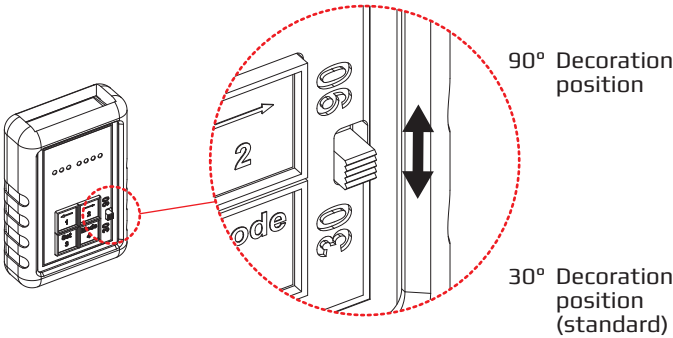
Required components:

- Programming unit IQ2
- IQ2-Motor
- Mains cable



Pre-adjustment

With the Switch "30/90" you can decide which decoration position is used while setting the end positions.



Plug in power cord

The drive must output a sequence of signals via the beeper as a start-up message.

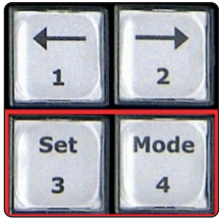


Attach the programming keypad

The green LED must be illuminated (communication with drive).

There is no communication if the green LED is blinking (fault in the CAN).

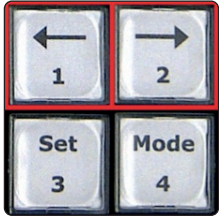
If there is no response from the green LED, there is a problem with the power supply (+5V from the drive).



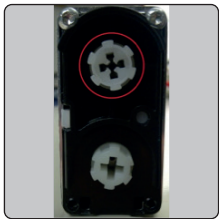
Press the Set & Mode keys together and hold for approximately 3 seconds

The drive confirms programming mode by a signal sequence (– – • •).
The first red LED illuminates, and the first yellow LED blinks rapidly.

If no command (close/open) is executed, the drive issues a signal sequence every 10 seconds (– –).
After 1 min. without a command, programming mode is exited automatically.



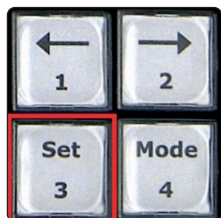
The buttons → and ← can be used to operate the traversing motor



Move the traversing motor to the desired position (individual louvres)

Program end positions – IQ2-Motor

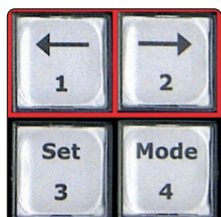
IQ2-160 b



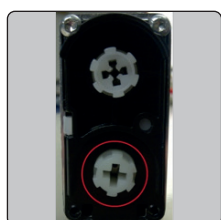
Keep the Set button depressed for approximately 2 seconds

The "CLOSED" position is assumed and the drive issues a confirmation signal (•).

When the button is released, the first yellow LED illuminates, and the second yellow LED starts blinking rapidly.



The → and ← buttons can be used to operate the tilting motor



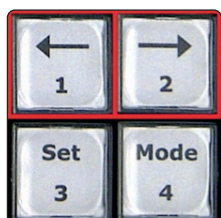
Move the tilting motor to the desired position (turn to 0°)



Keep the Set button depressed for approximately 2 seconds

The "0°" position is assumed and the drive issues a confirmation signal (••).

When the button is released, the second yellow LED illuminates, and the third yellow LED starts blinking rapidly.



The buttons → and ← can be used to operate the tilting motor

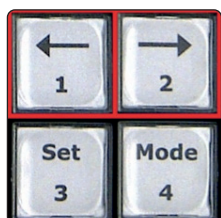
Move the tilting motor to the desired position (louvres in package)



Keep the Set button depressed for approximately 2 seconds

The "180°" position is assumed and the drive issues a signal to confirm (•••), the tilting motor rotates 30°/90° back and the third yellow LED illuminates.

When the button is released, the fourth yellow LED starts blinking rapidly.



The buttons → and ← can be used to operate the traversing motor

Move the traversing motor to the desired position (louvres in package)



Keep the Set button depressed for approximately 2 seconds

The "open" position is assumed and the drive issues a signal to confirm (••••).

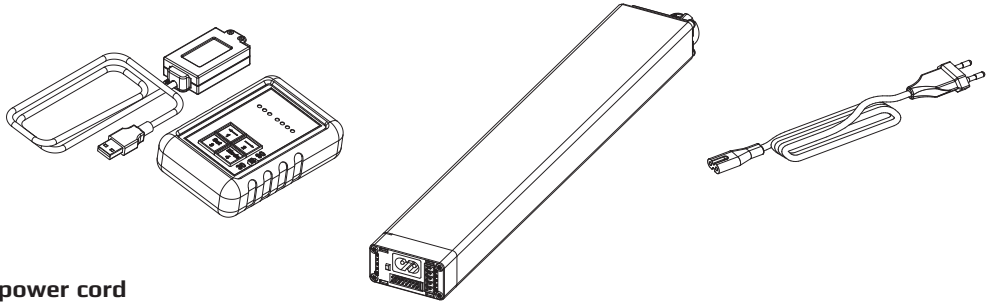
The first red LED and the yellow LEDs are turned back off.

Configure options – IQ2-Motor

IQ2-161 a

Required components:

- Programming unit IQ2
- IQ2-Motor
- Mains cable



Plug in power cord

The drive must output a sequence of signals via the beeper as a start-up message.

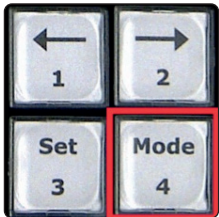


Attach the programming keypad

The green LED must be illuminated (communication with drive).

There is no communication if the green LED is blinking (fault in the CAN).

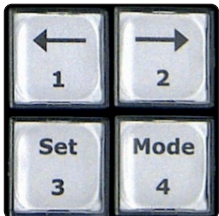
If there is no response from the green LED, there is a problem with the power supply (+5V from the drive).



Keep the Mode button depressed for approximately 2 seconds

The red 2 LED will start blinking, and Options page 1 is displayed.

If no command is executed, the drive will issue a signal sequence (– –) every 10 seconds to remind you that you are in programming mode.



The given option (1, 2, 3, 4) can be switched on or off by quickly pressing one of the buttons.
(Display via LEDs Yellow 1 to Yellow 4)

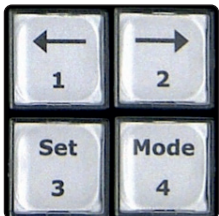


Confirm and hold the Mode button for approximately 2 seconds

This brings up page 2 of the Options (it is possible to switch back in the same way).

The LED Red 2 begins double-blinking, and Options page 2 is displayed.

If no command is executed, the drive will issue a signal sequence (– –) every 10 seconds to remind you that you are in programming mode.



The given option (1, 2, 3, 4) can be switched on or off by quickly pressing one of the buttons.
(Display via LEDs Yellow 1 to Yellow 4)



Keep the Set button depressed for approximately 2 seconds

The LEDs Red 2 and Yellow 1 to Yellow 4 are deactivated, and the configured options are saved in the drive.

Configure options – IQ2-Motor		IQ2-161 b	
Options Page 1			
Yellow 1	Off	Self-retaining operation with short keystroke	
	On	Self-retaining operation with long keystroke	
Yellow 2	Off	Decoration position only adjustable using programming keypad	
	On	Decoration position also adjustable using control button	
Yellow 3	Off	Decoration position adjustable in the range 30° - 150°	
	On	Decoration position adjustable in the range 0° - 180°	
Yellow 4	Off	Intermediate stop only adjustable using programming button	
	On	Intermediate stop also adjustable using control button	
Options Page 2			
Yellow 1	Off	Self-retaining operation deactivated	
	On	Self-retaining operation activated (proceeds as configured in Option 1 / page 1)	
Yellow 2	Off		
	On		
Yellow 3	Off		
	On		
Yellow 4	Off		
	On		

Operation instruction – IQ2-Motor

IQ2-170

The IQ2-motor is fitted with 4 functions.

Open the hanging, close the hanging, tilt the louvres left (anti-clockwise) and tilt the louvres right (clockwise). These functions are controlled by two operating buttons.

Function:

„CLOSE travel“ (►◄)

Short press on the button (half a second):

The louvres rotate and then the louvre hanging closes, after which the tilting function closes.

„OPEN travel“ (◄►)

Short press on the button (half a second):

The louvres rotate and then the louvre hanging travels in the direction of the louvre pack.

„Tilting“

Hold down the button:

The louvres rotate into the desired position to the left or to right (0° - 180°).

Operation:

Run the louvre hanging to form a pack

1. Completely close the louvre hanging:
Short press on the “OPEN travel” button: The louvres rotate to 180° (louvres completely closed) then rotate back to the decor position, and then they travel in the direction of the louvre pack.
2. The louvre hanging is not completely closed:
Press short the “OPEN travel” button: The louvres rotate into the decor position and then they travel in the direction of the louvre pack.

Close the louvre hanging (singly)

1. The louvre hanging is not completely closed:
Short press on the “CLOSE travel” button: The louvres rotate into the decor position and then the louvre hanging closes, after which the tilting function closes.
2. The louvre hanging is singly and in the decor position:
Press short the “CLOSE travel” button: The louvres rotate anti-clockwise to 180° and the tilting movement stops automatically.

Tilting the louvres

1. Louvre hanging closed:
The louvres can be tilted from 0 - 180° with the aid of holding down the “OPEN travel” or “CLOSE travel” button.
2. Louvre hanging failed to close:
Within the two decorative effect positions the louvres can be tilted with the aid of the “OPEN travel” and “CLOSE travel” buttons. When one of the decorative effect positions has been reached, the louvres stop for a half second before they travel in the direction of the louvre pack or rather close the louvre hanging (singly).

Additional functions:

Standard decor position

If the desired angle of the louvres has been set with the louvres closed, the user presses both buttons simultaneously for 3 seconds. The drive unit accepts the current angle and indicates this with an audible signal (1 x short).

If the set angle lies outside of the range from 30-150 degrees the setting will not be accepted.

If the tilt angle lies within in the range from 85-95 degrees, the standard decor position is deleted and this is indicated by a signal (1 x short, 1 x long).

Intermediate stop

Once the desired position set between the end position (however at least 10 cm away from both end positions), the user presses both buttons simultaneously for 3 seconds.

The drive unit accepts the current position and indicates this with an audible signal. If the position lies within an invalid range, this is indicated to the user by an audible signal (1 x short).

If the position is in a range within 10 cm far from on end position, the intermediate stop is deleted and this is indicated by a signal (3 x long).

Programming instructions – Program/depr. RTS – IQ2-Motor

IQ2-180

Programming steps:

1. Start programming mode

Press the RTS programming keypad for 2 seconds to start programming mode, triggering the signal (1 x long - pause - 2 x short)

If end positions have already been programmed, the louvres will move briefly.

Or

Press the programming button on a recognised radio transmitter for 2 seconds, and the signal will be actuated (1 x long - pause - 2 x short)

If end positions have already been programmed, the louvres will move briefly.

2. Programming an RTS radio transmitter

On a radio transmitter that is not yet recognised, hold the programming button for 0.5 seconds to trigger the signal (1 x long - pause - 1 x short - 1 x short).

If end positions have already been programmed, the louvres will move briefly. Programming mode is exited.

3. Deprogramming a radio transmitter

Hold the programming button on a recognised radio transmitter (but not the one the programming mode was started with) for 0.5 seconds, and the signal will be triggered (1 x long - pause - 1 x long - 1 x short).

If end positions have already been programmed, the louvres will move briefly.

In the event of faulty programming, programming mode will be exited, and the signal will be triggered (1 x long - pause - 2 x long).

4. Abort programming mode

Press the RTS programming button for 0.5 seconds to abort programming mode.

The signal will be triggered (1 x long - pause - 2 x long).

If end positions have already been programmed, the louvres will move briefly.

5. MY Position

Hold the MY button for 5 seconds on a recognized RTS transmitter to either save or delete a position of the drive.

If the drive is in a new position, it will be saved as MY position, and the signal will be triggered

(1 x long - pause - 1 x short - 1 x long).

If the drive is in the MY position (actuated via the MY function) the position will be deleted by the save procedure, and the signal will be triggered (1 x long - pause - 1 x long - 1 x short).

Briefly press the MY button for 0.5 seconds to move automatically to the saved position.

6. Deletion of all the settings

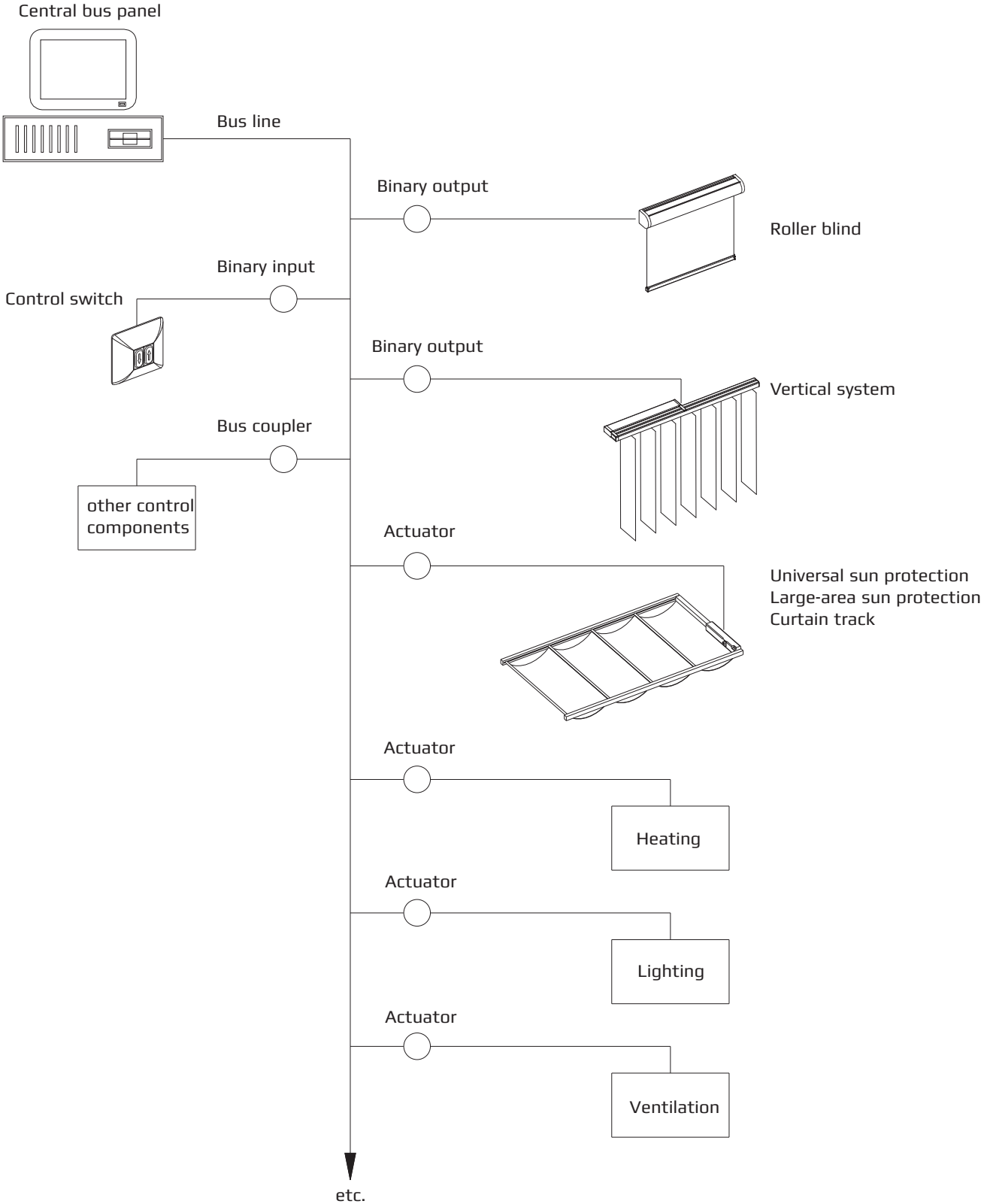
Press the RTS programming button for approx. 12 seconds to delete all settings.

The signal will be triggered (1 x long - pause - 2 x short - pause - 1 x long - pause - 1 x long - 1 x short - pause - 1 x long - pause - 1 x long - 1 x short).

General – Bus system

IQ2-200

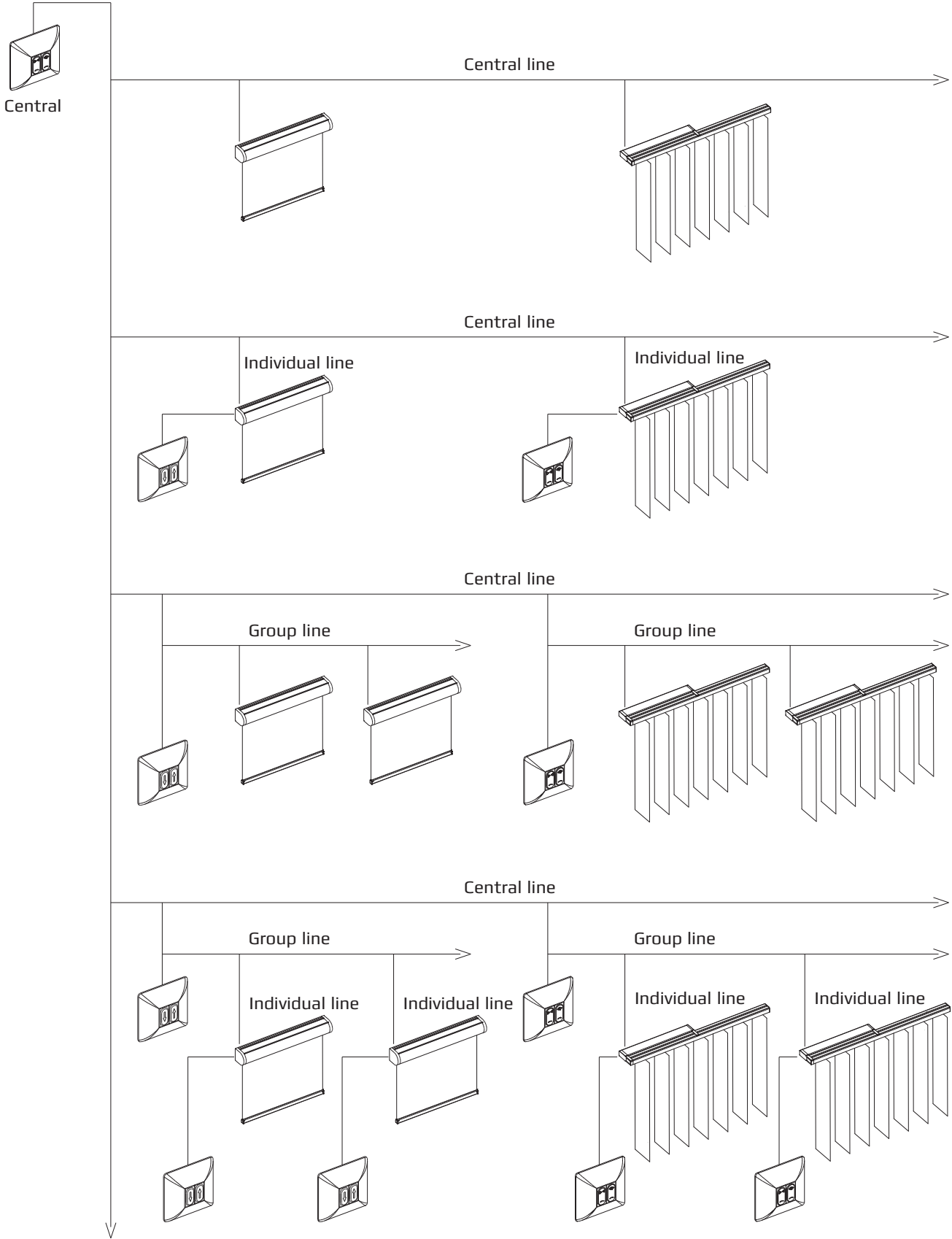
The motor system can be integrated into all commonly used bus or central controls.
Make sure that the corresponding switched actuators or binary outputs are used as well as the applicable bus couplers or binary inputs.
A combination via the large number of control possibilities is shown in schematic form in the diagram below.



General – Standard

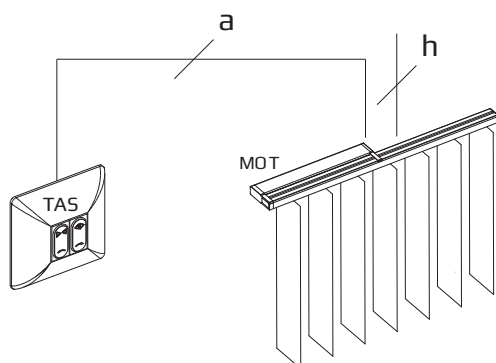
IQ2-201

Below is an overview showing what possible variations can be achieved with our motor system. The combination of Roller Blinds and Vertical Systems can be seen clearly from this diagram. With the large number of control possibilities as well as individual, group or central controls it is possible to set up all individual circuitry variants.



Individual control – IQ2-Motor

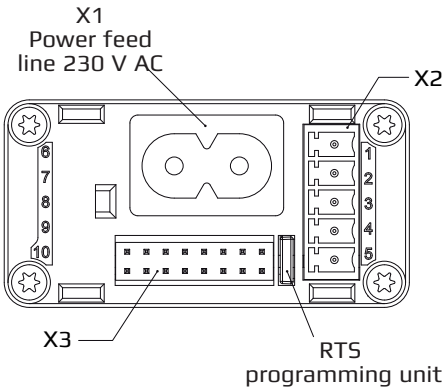
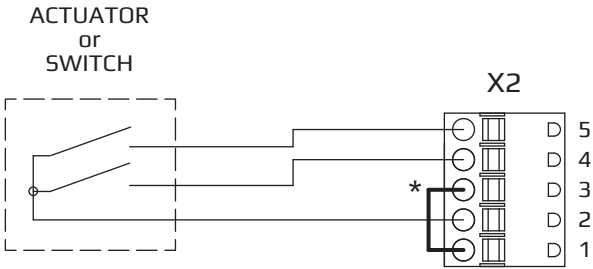
IQ2-300 a



- MOT – IQ2-Motor
- TAS – Control switch (surface-mounted)
- a – J-Y(ST)Y 2 x 2 x 0,8
- h – Power feed line 230 V AC

Wiring – Individual control – IQ2-Motor

IQ2-300 b



Power consumption per drive: 10 mA

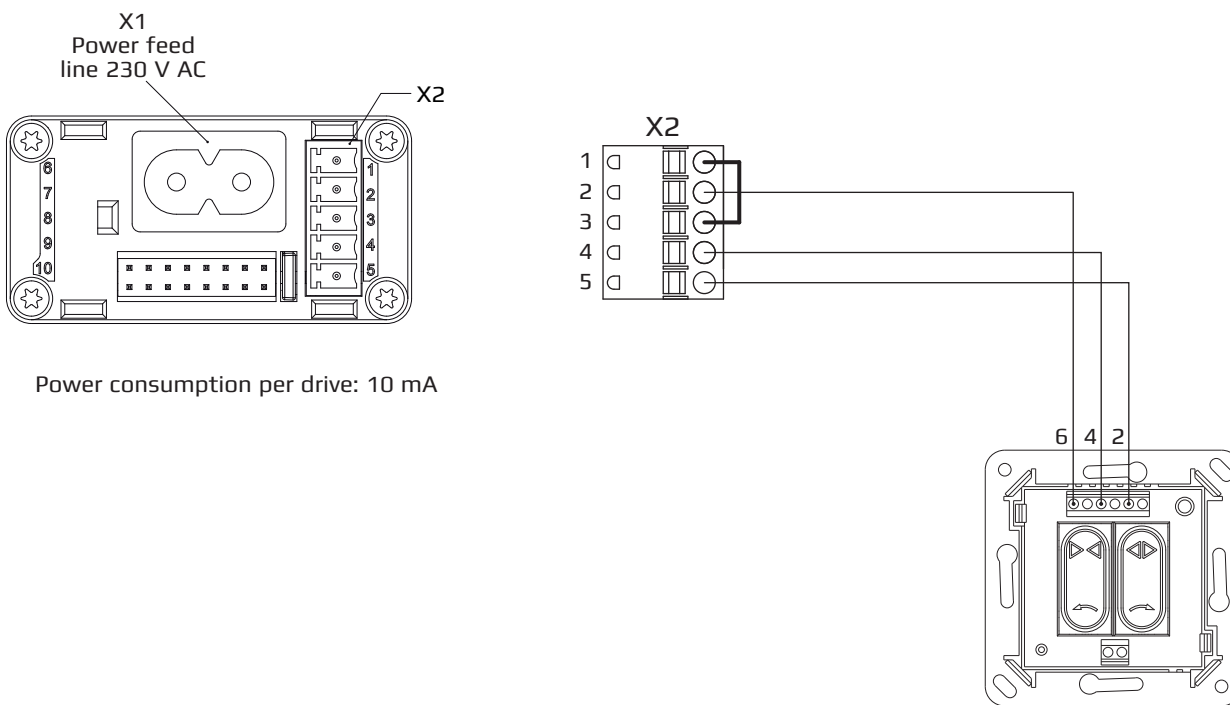
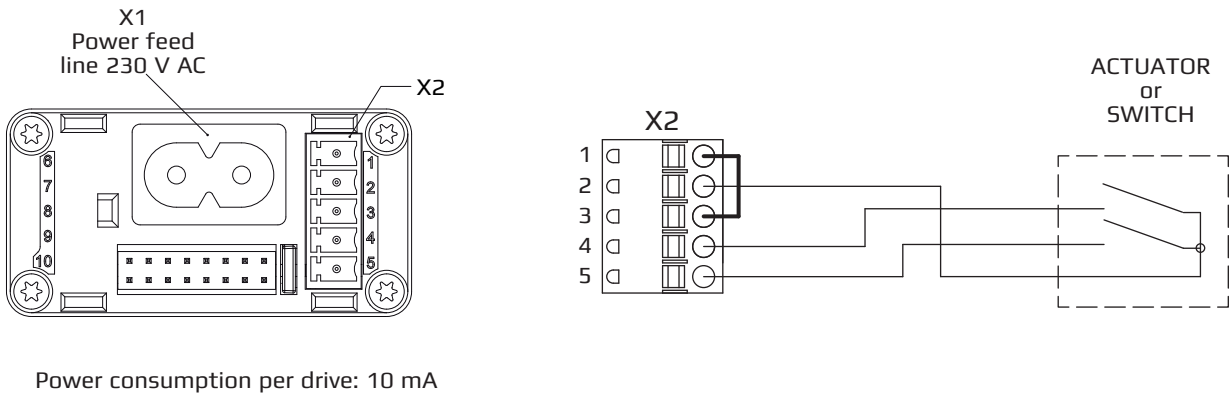
X1		X2				
Pin	Function	Pin	Function	LIYY 4 x 0,14 mm²	J-Y(ST)Y 2 x 2 x 0,8	Comment
L	230 V	1	+ 24 V (max. 80 mA)	WH (white)	RD (red)	V _{OUT}
N	230 V	2	GND	BN (brown)	BK (black)	V _{OUT}
		3	Coding *			
		4	UNSTACK (><)	GN (green)	WH (white)	Control signal
		5	STACK (<>)	YE (yellow)	YE (yellow)	Control signal

* Pin 3 : Connection X2/1 zu X2/3 = Ground as control signal
No connection = Pole reversal principle (control)

Wiring – Individual control – IQ2-Motor

IQ2-300 c

Ground as control signal (Potential-free)



X1		X2				
Pin	Function	Pin	Function	LIYY 4 x 0,14 mm²	J-Y(ST)Y 2 x 2 x 0,8	Comment
L	230 V	1	+ 24 V (max. 80 mA)	WH (white)	RD (red)	V _{OUT}
N	230 V	2	GND	BN (brown)	BK (black)	V _{OUT}
		3	Coding *			
		4	UNSTACK (><)	GN (green)	WH (white)	Control signal
		5	STACK (<>)	YE (yellow)	YE (yellow)	Control signal

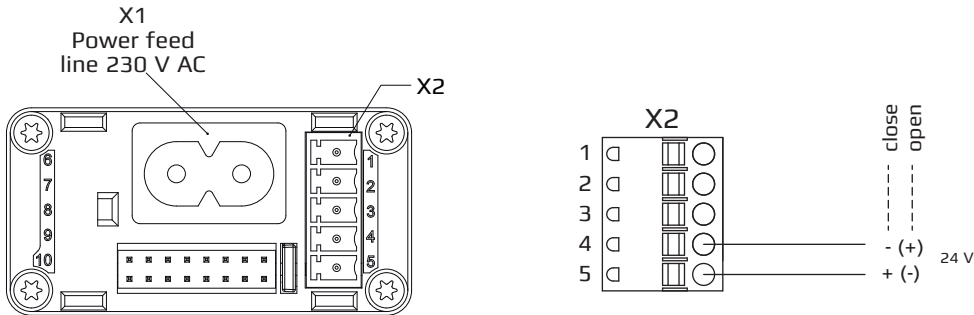
* Pin 3 : Connection X2/1 zu X2/3 = Ground as control signal
No connection = Pole reversal principle (control)

Wiring – Individual control – IQ2-Motor

IQ2-300 d

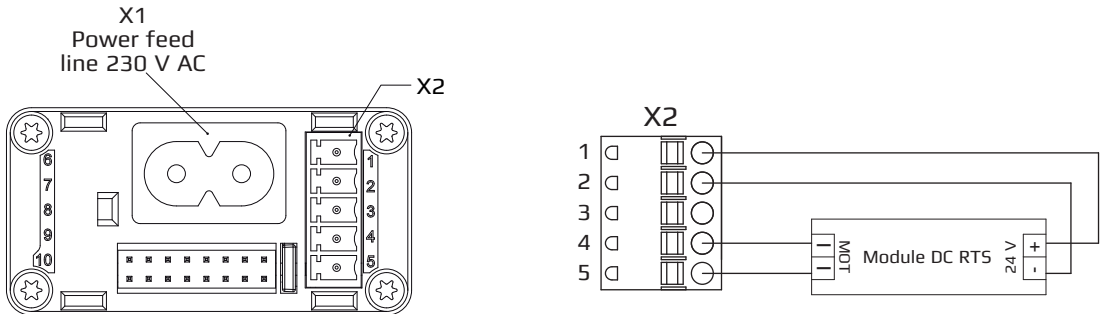
Pole reversal principle (control)

Polarity



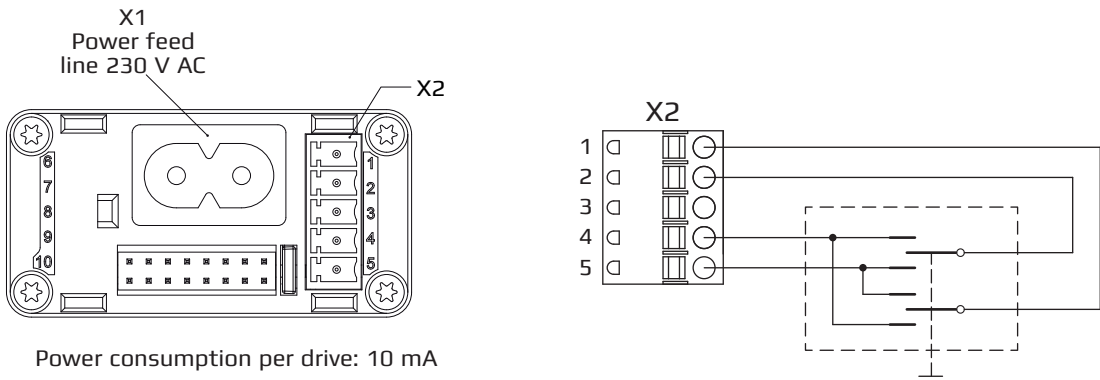
Power consumption per drive: 10 mA

Radio control receiver - module DC RTS



Power consumption per drive: 10 mA

Pole reversal switch (sample)



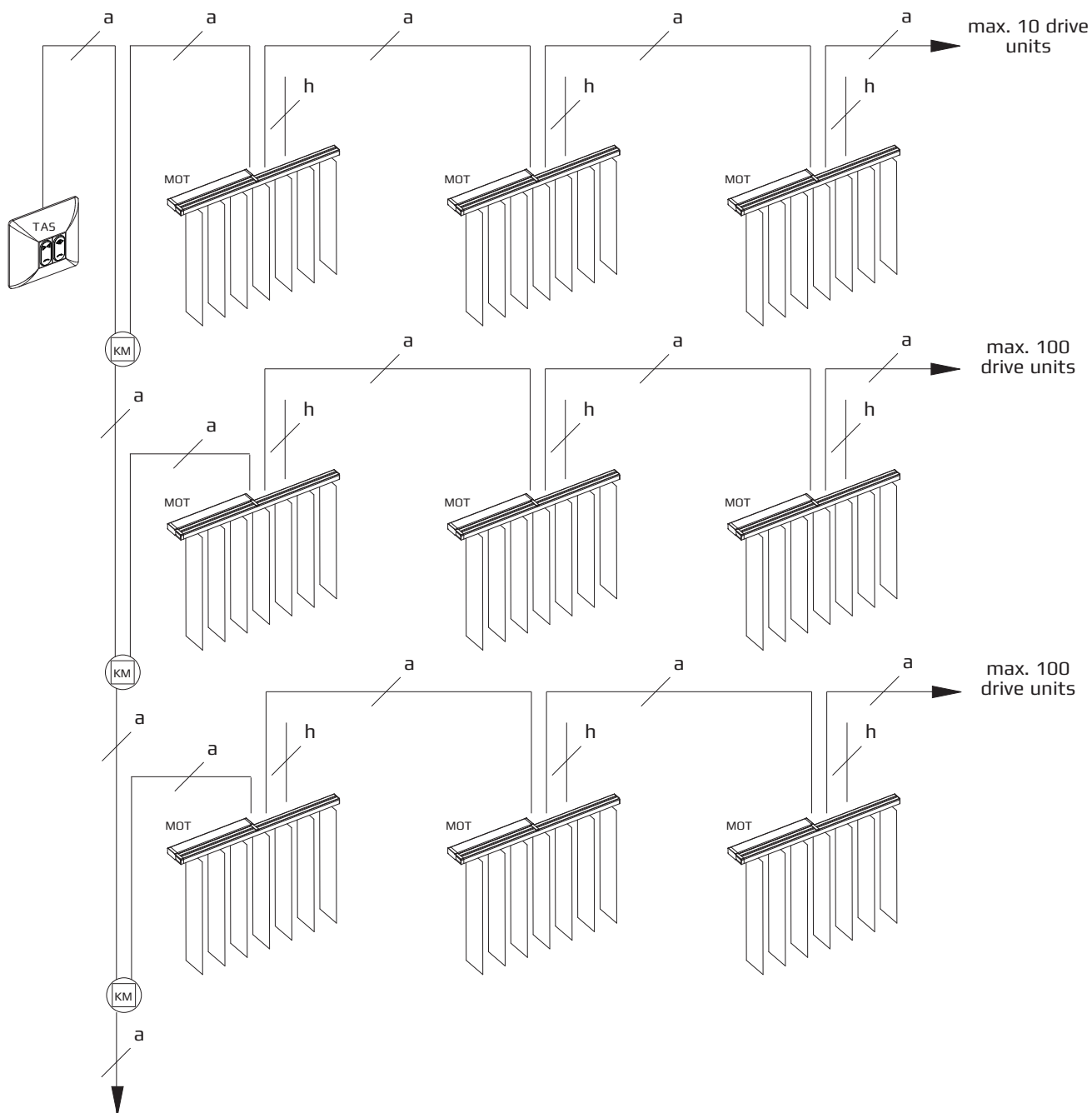
Power consumption per drive: 10 mA

X1		X2				
Pin	Function	Pin	Function	LIYY 4 x 0,14 mm²	J-Y(ST)Y 2 x 2 x 0,8	Comment
L	230 V	1	+ 24 V (max. 80 mA)	WH (white)	RD (red)	Vout
N	230 V	2	GND	BN (brown)	BK (black)	Vout
		3	Coding *			
		4	UNSTACK (><)	GN (green)	WH (white)	Control signal
		5	STACK (<>)	YE (yellow)	YE (yellow)	Control signal

* Pin 3 : Connection X2/1 zu X2/3 = Ground as control signal
No connection = Pole reversal principle (control)

Group control – IQ2-Motor

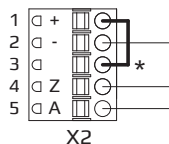
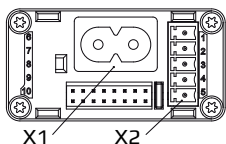
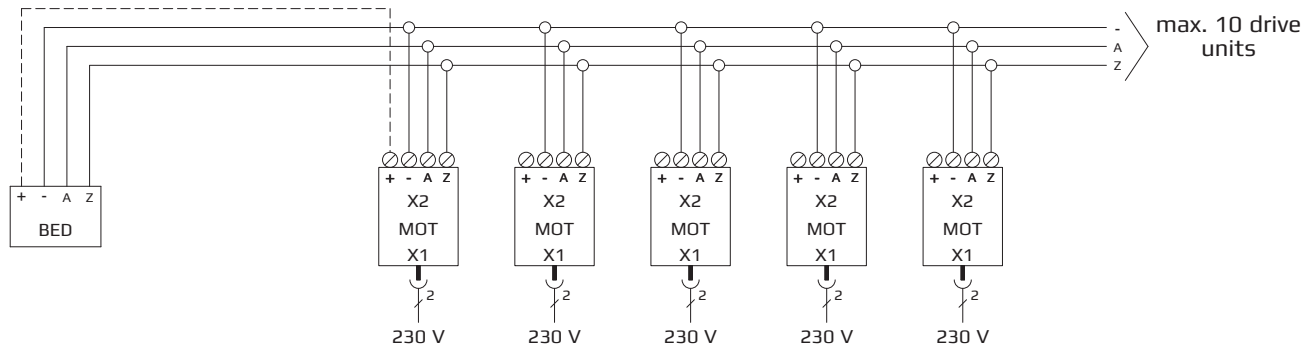
IQ2-301 a



- KM – Interface module
- MOT – IQ2-Motor
- TAS – Control switch (surface-mounted)
- a – J-Y(ST)Y 2 x 2 x 0,8
- h – Power feed line 230 V AC

Wiring – Group control – IQ2-Motor

IQ2-301 b

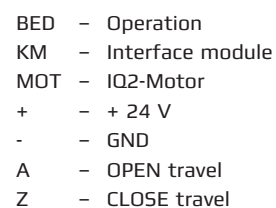


X1		X2				
Pin	Function	Pin	Function	LIYY 4 x 0,14 mm²	J-Y(ST)Y 2 x 2 x 0,8	Comment
L	230 V	1	+ 24 V (max. 80 mA)	WH (white)	RD (red)	V _{OUT}
N	230 V	2	GND	BN (brown)	BK (black)	V _{OUT}
		3	Coding *			
		4	UNSTACK (><)	GN (green)	WH (white)	Control signal
		5	STACK (<>)	YE (yellow)	YE (yellow)	Control signal

* Pin 3 : Connection X2/1 zu X2/3 = Ground as control signal
No connection = Pole reversal principle (control)

BED – Operation
MOT – IQ2-Motor
+ – + 24 V
- – GND
A – OPEN travel
Z – CLOSE travel

.... + It is only allowed to connect the line if infrared remote control and a solar detector are fitted!

IQ2-301 c

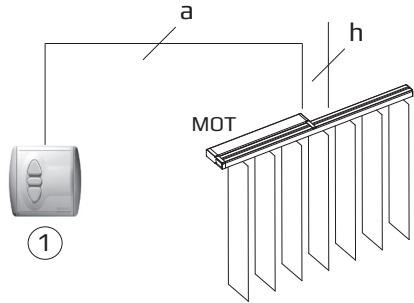
Version 28-06-2023

Individual control - Centralis IB – IQ2-Motor

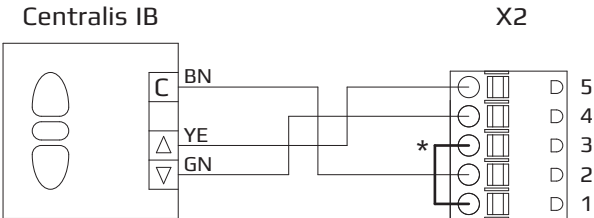
IQ2-400

Voltage supply from motor

Electrical planning



Electrical connection diagrams



X1		X2				
Pin	Function	Pin	Function	LIYY 4 x 0,14 mm²	J-Y(ST)Y 2 x 2 x 0,8	Comment
L	230 V	1	+ 24 V (max. 80 mA)	WH (white)	RD (red)	V _{OUT}
N	230 V	2	GND	BN (brown)	BK (black)	V _{OUT}
		3	Coding *			
		4	UNSTACK (><)	GN (green)	WH (white)	Control signal
		5	STACK (<>)	YE (yellow)	YE (yellow)	Control signal

* Pin 3 : Connection X2/1 zu X2/3 = Ground as control signal
No connection = Pole reversal principle (control)

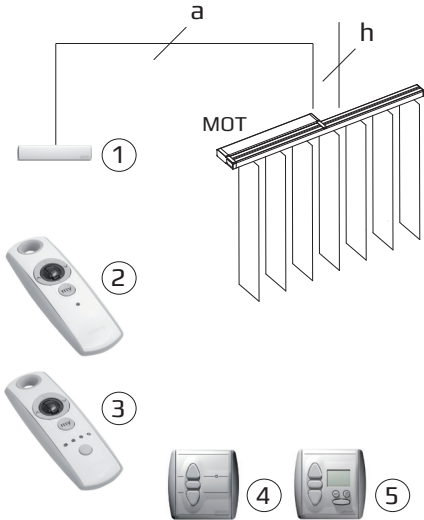
- ① - Centralis IB, push button central control
- MOT - IQ2-Motor
- a - J-Y(ST)Y 2 x 2 x 0,8
- h - Power feed line 230 V AC

Individual control - Modul DC RTS – IQ2-Motor

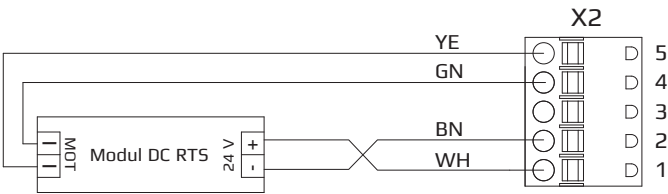
IQ2-401

Voltage supply from motor

Electrical planning



Electrical connection diagrams



Hinweis: Keine Sonderfunktion (z.B. Modulis oder MY Funktion) möglich.

X1		X2			
Pin	Function	Pin	Function	LIYY 4 x 0,14 mm²	J-Y(ST)Y 2 x 2 x 0,8
L	230 V	1	+ 24 V (max. 80 mA)	WH (white)	RD (red)
N	230 V	2	GND	BN (brown)	BK (black)
		3	Coding *		
		4	UNSTACK (><)	GN (green)	WH (white)
		5	STACK (<>)	YE (yellow)	YE (yellow)

* Pin 3 : Connection X2/1 zu X2/3 = Ground as control signal
No connection = Pole reversal principle (control)

- ① - Modul DC RTS, wireless receiver
- ② - Telis 1 RTS, 1-chan wireless hand transmitter
- ③ - Telis 4 RTS, 4-chan wireless hand transmitter
- ④ - Centralis RTS, wireless wall transmitter, 1-chan
- ⑤ - Chronis RTS, wireless program time control
- ⑤ - Chronis RTS L, wireless program time control with solar automatic

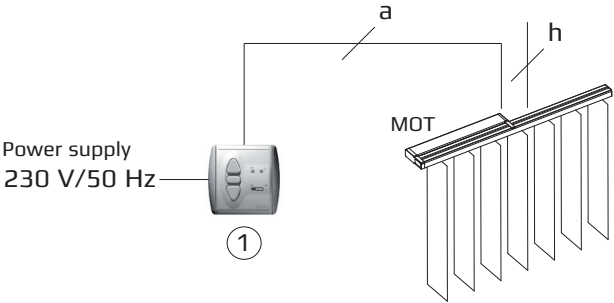
MOT – IQ2-Motor
a – J-Y(ST)Y 2 x 2 x 0,8
h – Power feed line 230 V AC

Individual control - Soliris IB – IQ2-Motor

IQ2-402

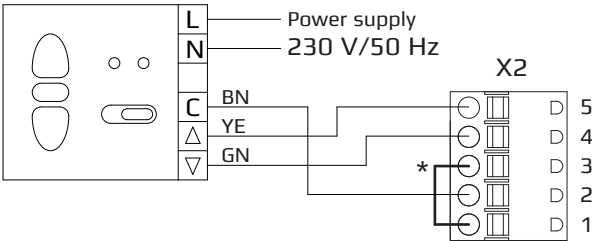
Voltage supply from motor

Electrical planning



Electrical connection diagrams

Soliris IB Sonne



X1		X2			
Pin	Function	Pin	Function	LIYY 4 x 0,14 mm²	J-Y(ST)Y 2 x 2 x 0,8
L	230 V	1	+ 24 V (max. 80 mA)	WH (white)	RD (red)
N	230 V	2	GND	BN (brown)	BK (black)
		3	Coding *		
		4	UNSTACK (><)	GN (green)	WH (white)
		5	STACK (<>)	YE (yellow)	YE (yellow)

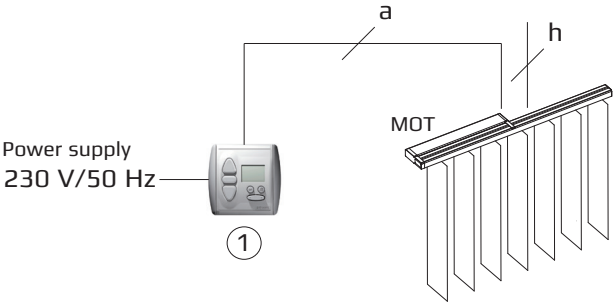
* Pin 3 : Connection X2/1 zu X2/3 = Ground as control signal
No connection = Pole reversal principle (control)

- ① – Soliris IB Sonne,
solar automatic with window sensor (inside)
- MOT – IQ2-Motor
- a – J-Y(ST)Y 2 x 2 x 0,8
- h – Power feed line 230 V AC

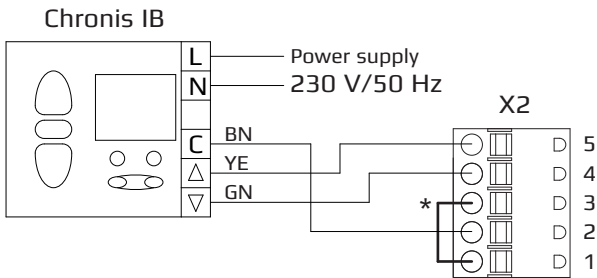
Individual control - Chronis IB – IQ2-Motor

IQ2-403

Electrical planning



Electrical connection diagrams



X1		X2			
Pin	Function	Pin	Function	LIYY 4 x 0,14 mm²	J-Y(ST)Y 2 x 2 x 0,8
L	230 V	1	+ 24 V (max. 80 mA)	WH (white)	RD (red)
N	230 V	2	GND	BN (brown)	BK (black)
		3	Coding *		
		4	UNSTACK (><)	GN (green)	WH (white)
		5	STACK (<>)	YE (yellow)	YE (yellow)

* Pin 3 : Connection X2/1 zu X2/3 = Ground as control signal
No connection = Pole reversal principle (control)

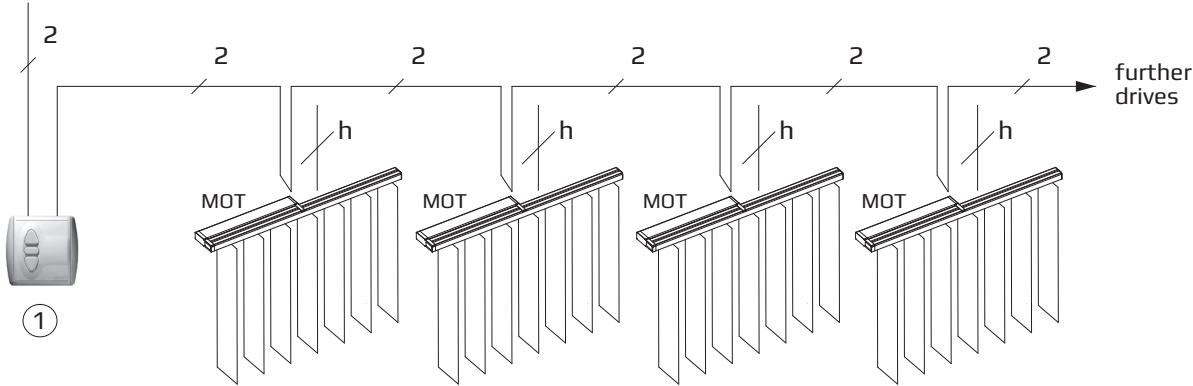
- ① - Chronis IB, program time control
- ① - Chronis IB L, program time control with solar automatic
- MOT - IQ2-Motor
- a - J-Y(ST)Y 2 x 2 x 0,8
- h - Power feed line 230 V AC

Group control - Inis DC Rollo – IQ2-Motor

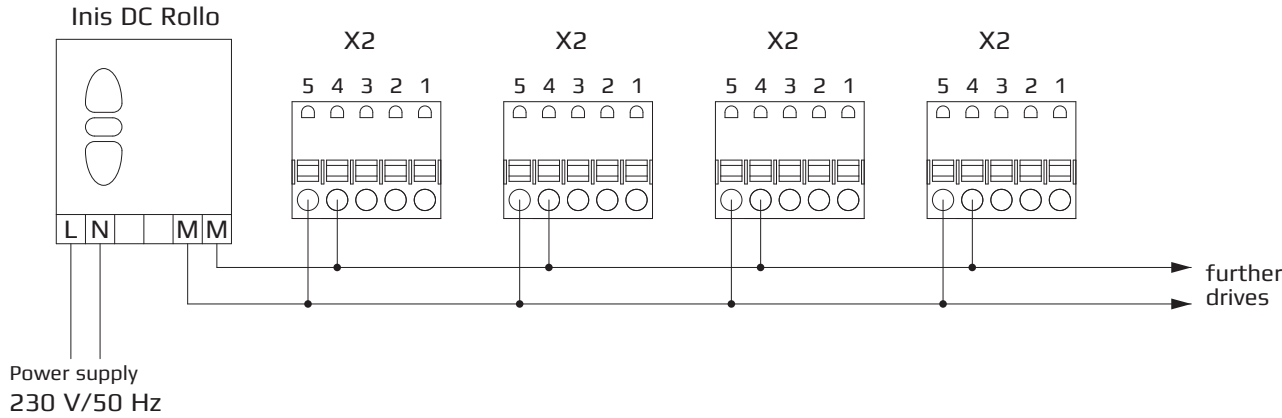
IQ2-404

Electrical planning

Power supply
230 V/50 Hz



Electrical connection diagrams



X1		X2			
Pin	Function	Pin	Function	LIYY 4 x 0,14 mm²	J-Y(ST)Y 2 x 2 x 0,8
L	230 V	1	+ 24 V (max. 80 mA)	WH (white)	RD (red)
N	230 V	2	GND	BN (brown)	BK (black)
		3	Coding *		
		4	UNSTACK (><)	GN (green)	WH (white)
		5	STACK (<>)	YE (yellow)	YE (yellow)

* Pin 3 : Connection X2/1 zu X2/3 = Ground as control signal
No connection = Pole reversal principle (control)

- ① – Inis DC Rollo,
switch with integrated power pack
- MOT – IQ2-Motor
- a – J-Y(ST)Y 2 x 2 x 0,8
- h – Power feed line 230 V AC

Group control - Modul DC RTS – IQ2-Motor

IQ2-405

Voltage supply from power pack

Electrical planning

24 V DC
Power supply
230 V/50 Hz

①
②
③
④
⑤

MOT

h

2

2

2

2

2

2

further drives

Electrical connection diagrams

Power supply
230 V/50 Hz
24 V DC

Modul DC RTS
24 V

X2

5 4 3 2 1

X2

5 4 3 2 1

X2

5 4 3 2 1

X2

5 4 3 2 1

MOT

h

further drives

Somfy power packs – UPS 10
Transformer with plug
GPS 30
GPS 100
Power 2,5 DC

General power packs – 24 V DC
Ripple <48%

X1		X2				
Pin	Function	Pin	Function	LIYY 4 x 0,14 mm²	J-Y(ST)Y 2 x 2 x 0,8	Comment
L	230 V	1	+ 24 V (max. 80 mA)	WH (white)	RD (red)	VOUT
N	230 V	2	GND	BN (brown)	BK (black)	VOUT
		3	Coding *			
		4	UNSTACK (><)	GN (green)	WH (white)	Control signal
		5	STACK (<>)	YE (yellow)	YE (yellow)	Control signal

* Pin 3 : Connection X2/1 zu X2/3 = Ground as control signal
No connection = Pole reversal principle (control)

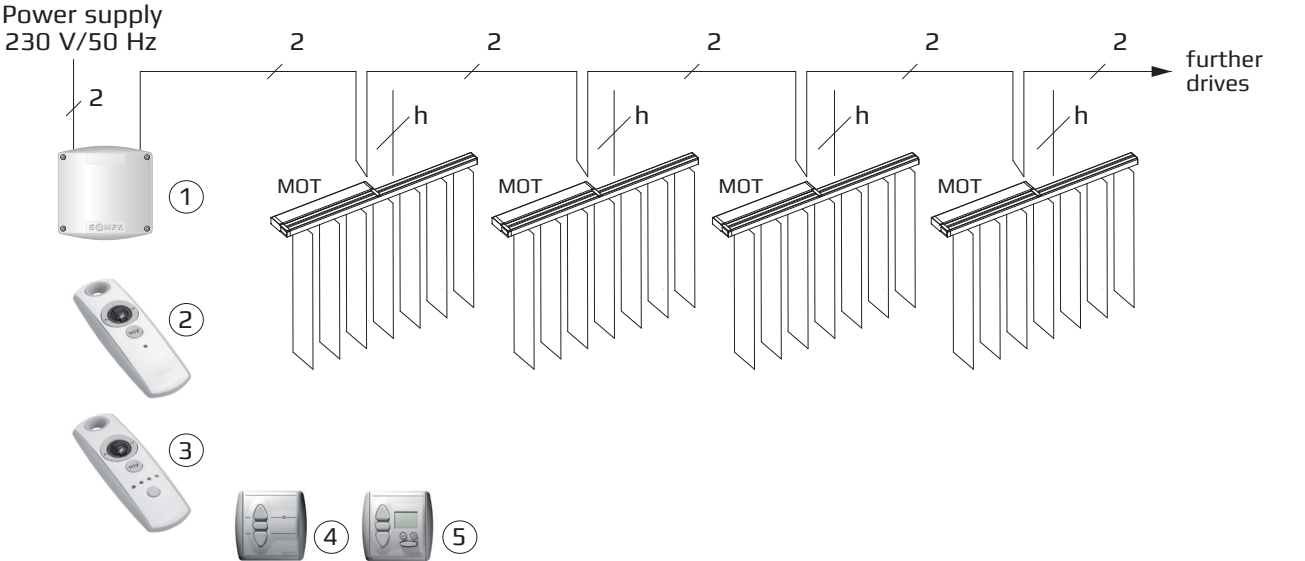
① – Module DC RTS, wireless receiver
② – Telis 1 RTS, 1-chan wireless hand transmitter
③ – Telis 4 RTS, 4-chan wireless hand transmitter
④ – Centralis RTS, wireless wall transmitter, 1-chan
⑤ – Chronis RTS, wireless program time control
⑤ – Chronis RTS L, wireless program time control w/ solar automatic

MOT – IQ2-Motor
h – Power feed line 230 V AC

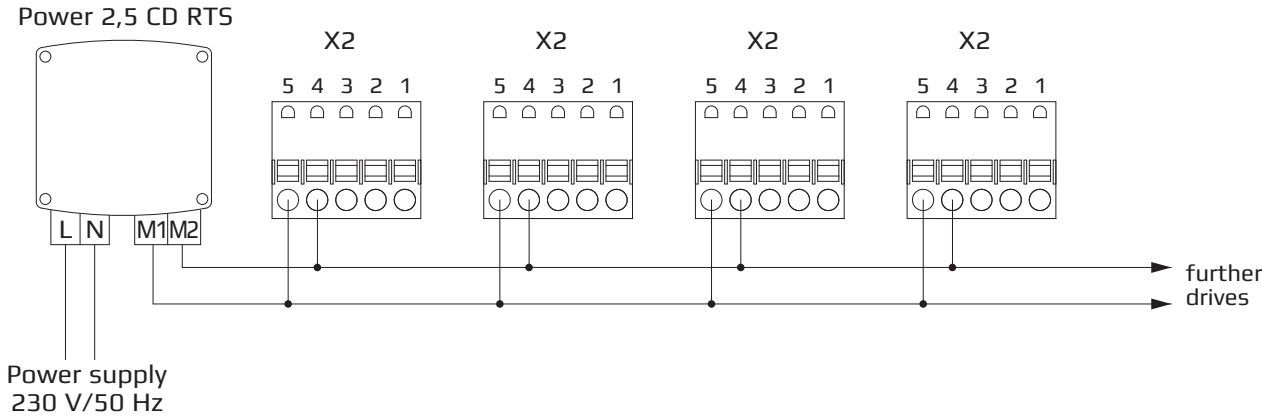
Group control - Power 2,5 DC RTS – IQ2-Motor

IQ2-406

Electrical planning



Electrical connection diagrams



X1		X2			
Pin	Function	Pin	Function	LIYY 4 x 0,14 mm²	J-Y(ST)Y 2 x 2 x 0,8
L	230 V	1	+ 24 V (max. 80 mA)	WH (white)	RD (red)
N	230 V	2	GND	BN (brown)	BK (black)
		3	Coding *		
		4	UNSTACK (><)	GN (green)	WH (white)
		5	STACK (<>)	YE (yellow)	YE (yellow)

* Pin 3 : Connection X2/1 zu X2/3 = Ground as control signal
No connection = Pole reversal principle (control)

- ① - Power 2,5 DC RTS, group remote control
- ② - Telis 1 RTS, 1-chan wireless hand transmitter
- ③ - Telis 4 RTS, 4-chan wireless hand transmitter
- ④ - Centralis RTS, wireless wall transmitter, 1-chan
- ⑤ - Chronis RTS, wireless program time control
- ⑤ - Chronis RTS L, wireless program time control with solar automatic

MOT - IQ2-Motor
h - Power feed line 230 V AC

IQ2-407

The diagram illustrates a 24V DC power distribution system. A power supply (24 V DC, 230 V/50 Hz) is connected to a main distribution rail (labeled '2'). This rail branches out to three lighting fixtures, each consisting of a Motorized Output Transformer (MOT) and a series of light tubes (labeled 'h'). The fixtures are connected to the main rail via individual distribution lines (labeled '2'). The system is designed to be expandable, with a dashed line indicating further drives can be added. The main rail is also connected to a series of control elements (labeled '1', '2', '3', '4') via a dashed line, which are further connected to a central DC bus (labeled '3') and then to further Centralis DC IB or Control elements.

24 V DC

230 V/50 Hz

Centralis DC IB Rollo

Centralis IB

Soliris IB Sonne

Chronis IB

further drives

further Centralis DC IB or Control elements

Somfy power packs - UP5 10
Transformer w/ plug
GPS 30
GPS 100
Power 2,5 DC

Power supply 230 V/50 Hz

Power supply 230 V/50 Hz

X1		X2				
Pin	Function	Pin	Function	LIYY 4 x 0,14 mm ²	J-Y(ST)Y 2 x 2 x 0,8	Comment
L	230 V	1	+ 24 V (max. 80 mA)	WH (white)	RD (red)	V _{OUT}
N	230 V	2	GND	BN (brown)	BK (black)	V _{OUT}
		3	Coding *			
		4	UNSTACK (><)	GN (green)	WH (white)	Control signal
		5	STACK (<>)	YE (yellow)	YE (yellow)	Control signal

* Pin 3 : Connection X2/1 zu X2/3 = Ground as control signal
 No connection = Pole reversal principle (control)

① - Centralis DC IB Rollo, motor control device

② - Centralis IB, push button central control

③ - Soliris IB Sonne, solar automatic with window sensor (inside)

④ - Chronis IB, program time control

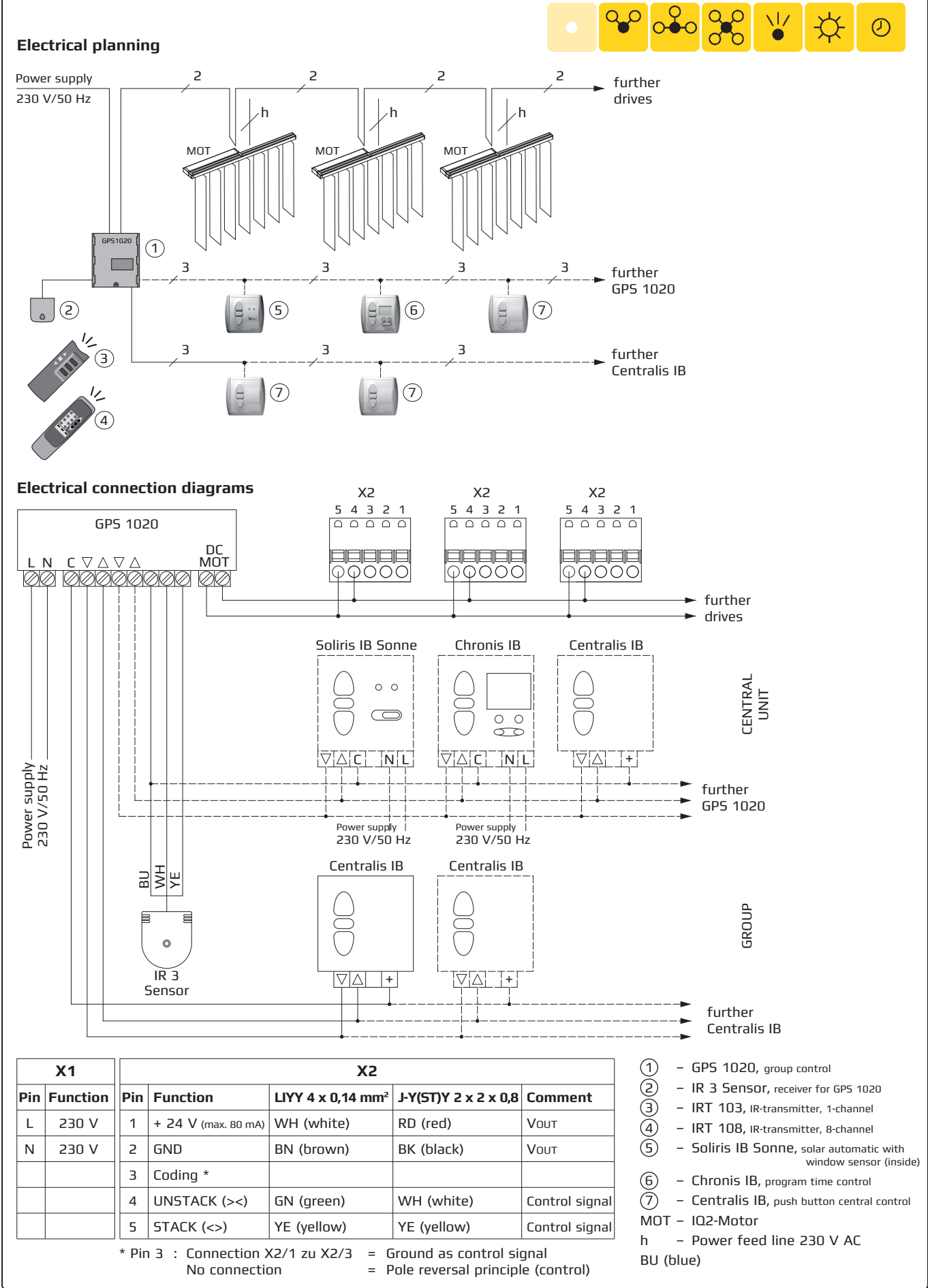
⑤ - Chronis IB L, program time control with solar automatic

MOT - IQ2-Motor

h - Power feed line 230 V AC

Group control - GPS 1020 – IQ2-Motor

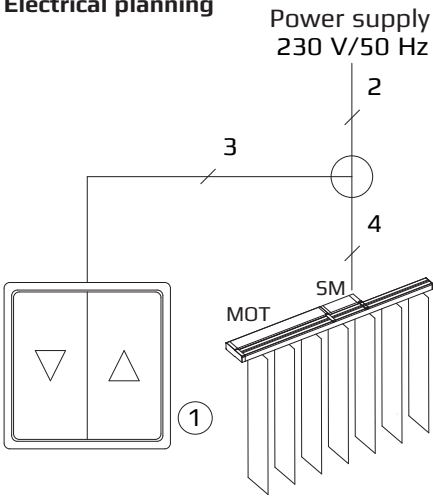
IQ2-408



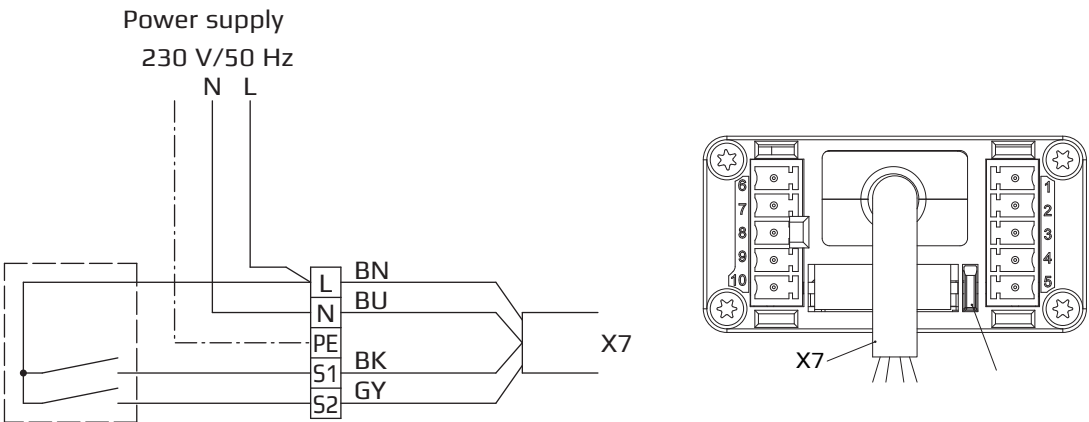
Individual control - Push button – IQ2-Motor

IQ2-500

Electrical planning



Electrical connection diagrams



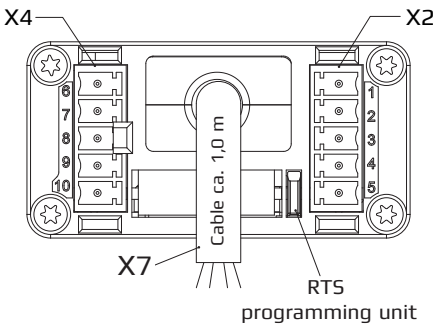
Control current per drive unit/function: 5 mA

ATTENTION!
The drive unit requires a permanent voltage supply!

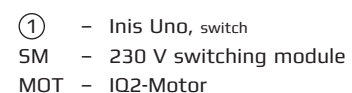
Switches (push button) with a mutual interlock must be used!

If a push button (switch) without a mutual interlock is used, programming of the drive is possible.

X7			
Pin	Function	Cable	Comment
L1	230 V	BN (brown)	V _{IN}
N		BU (blue)	V _{IN}
S1	CLOSE	BK (black)	Control signal
S2	OPEN	GY (grey)	Control signal



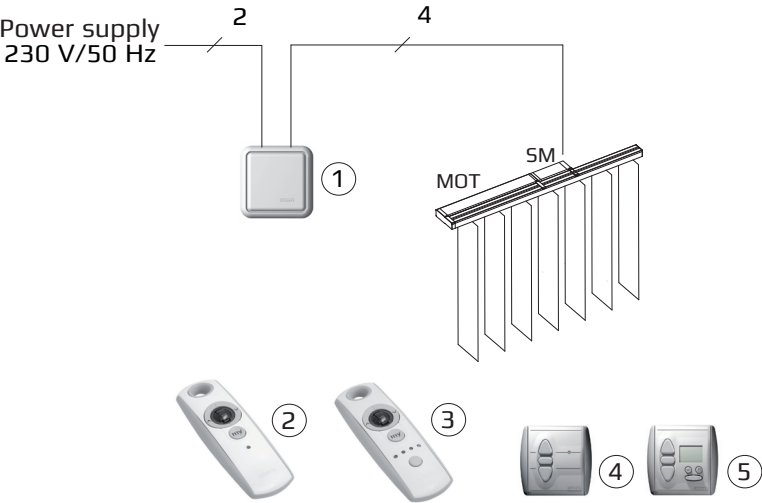
- ① - Push button/switch
- SM - 230 V switching module
- MOT - IQ2-Motor

IQ2-501

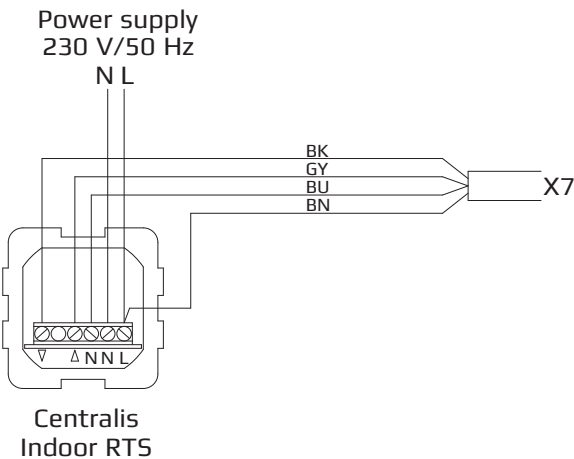
Individual control - Centralis Indoor RTS – IQ2-Motor

IQ2-502

Electrical planning



Electrical connection diagrams



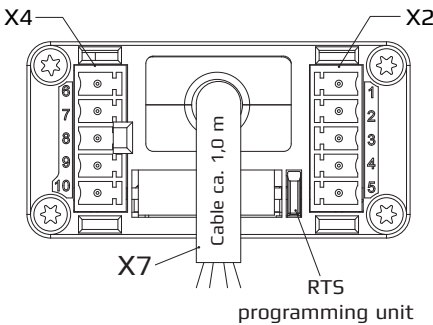
Control current per drive unit/function: 5 mA

ATTENTION!
The drive unit requires a permanent voltage supply!

Switches (push button) with a mutual interlock must be used!

If a push button (switch) without a mutual interlock is used, programming of the drive is possible.

X7			
Pin	Function	Cable	Comment
L1	230 V	BN (brown)	V _{IN}
N		BU (blue)	V _{IN}
S1	CLOSE	BK (black)	Control signal
S2	OPEN	GY (grey)	Control signal

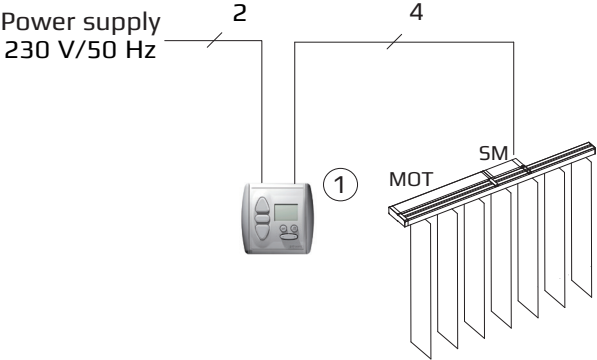


- ① - Centralis Indoor RTS, wireless receiver
- ② - Telis 1 RTS, 1-chan wireless hand transmitter
- ③ - Telis 4 RTS, 4-chan wireless hand transmitter
- ④ - Centralis RTS, wireless wall transmitter, 1-chan
- ⑤ - Chronis RTS, wireless program time control
- ⑤ - Chronis RTS L, wireless program time control with solar automatic
- SM - 230 V switching module
- MOT - IQ2-Motor

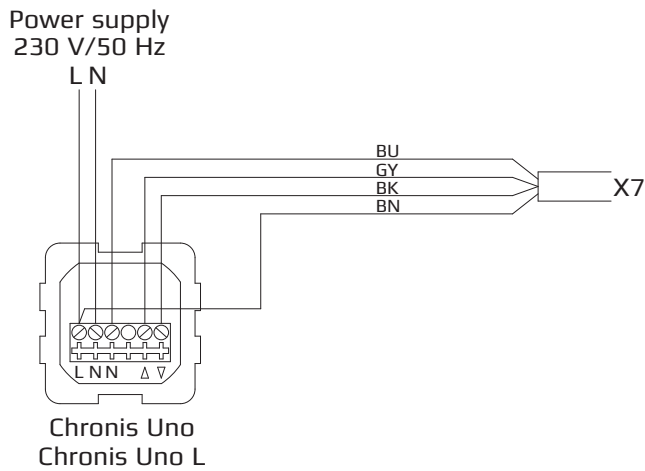
Individual control - Chronis Uno (L) – IQ2-Motor

IQ2-503

Electrical planning



Electrical connection diagrams



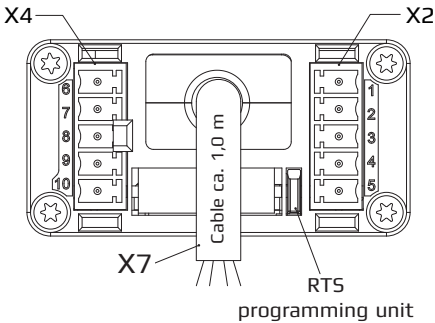
Control current per drive unit/function: 5 mA

ATTENTION!
The drive unit requires a permanent voltage supply!

Switches (push button) with a mutual interlock must be used!

If a push button (switch) without a mutual interlock is used, programming of the drive is possible.

X7			
Pin	Function	Cable	Comment
L1	230 V	BN (brown)	V _{IN}
N		BU (blue)	V _{IN}
S1	CLOSE	BK (black)	Control signal
S2	OPEN	GY (grey)	Control signal

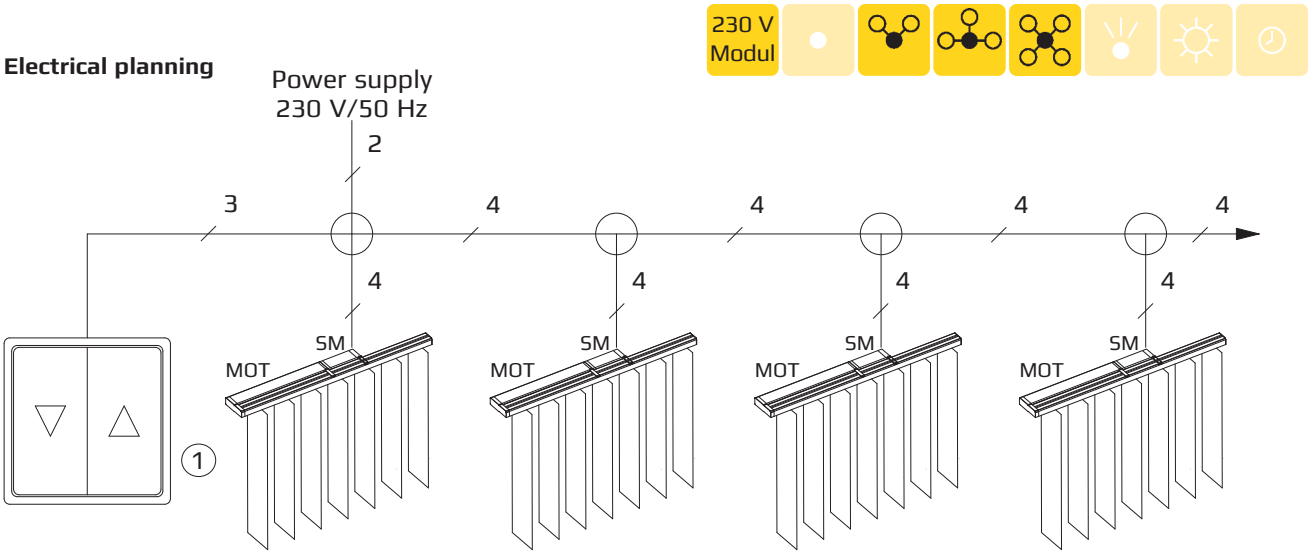


- ① - Chronis Uno, program time control
- ① - Chronis Uno L, program time control with solar automatic
- SM - 230 V switching module
- MOT - IQ2-Motor

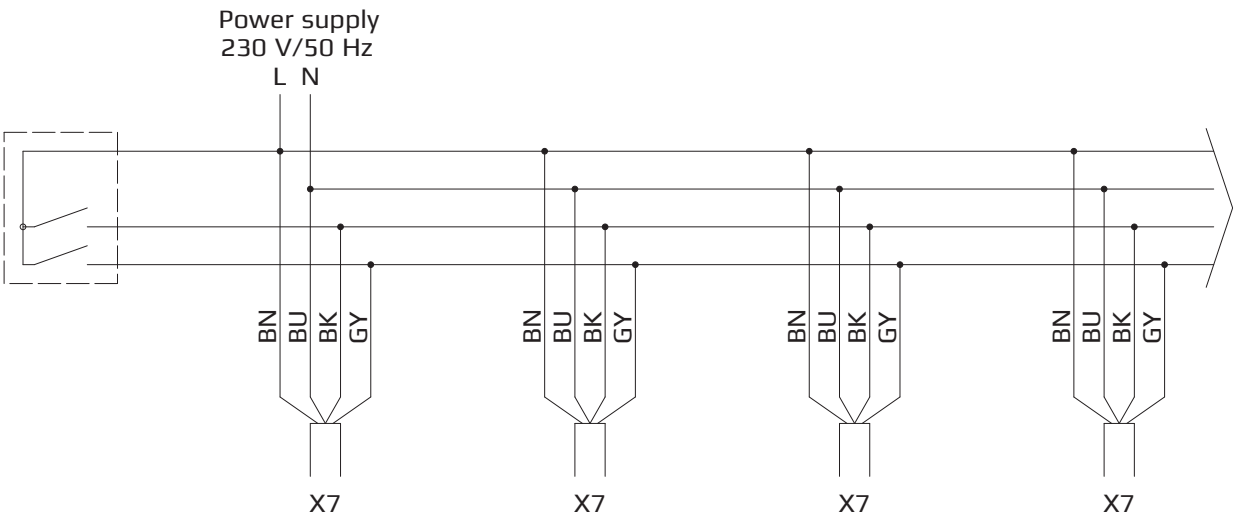
Group control - Push button – IQ2-Motor

IQ2-504

Electrical planning



Electrical connection diagrams



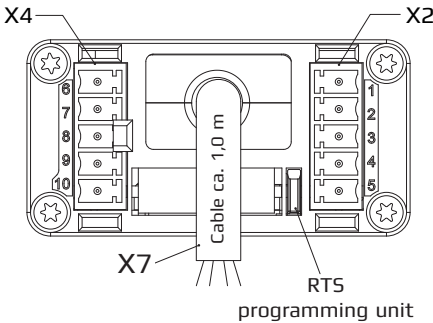
Control current per drive unit/function: 5 mA

ATTENTION!
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Switches (push button) with a mutual interlock must be used!

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Pin	Function	Cable	Comment
L1	230 V	BN (brown)	V _{IN}
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S2	OPEN	GY (grey)	Control signal



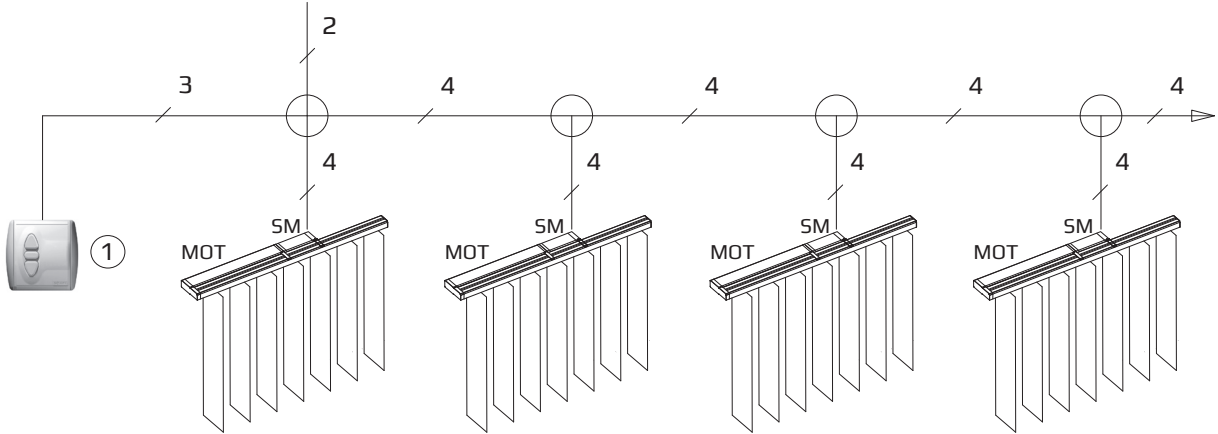
- ① – Push button/switch
SM – 230 V switching module
MOT – IQ2-Motor

Group control - Inis Uno – IQ2-Motor

IQ2-505

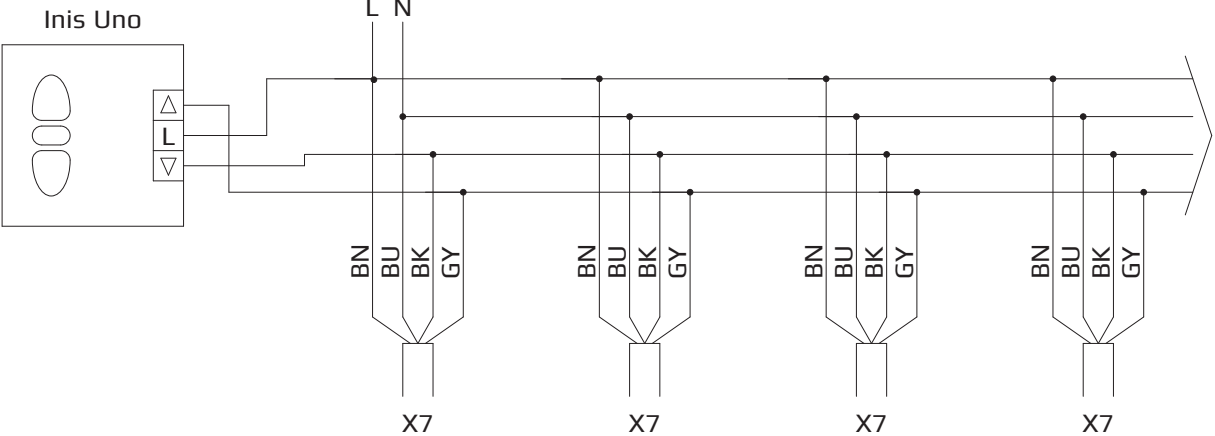
Electrical planning

Power supply
230 V/50 Hz



Electrical connection diagrams

Power supply
230 V/50 Hz



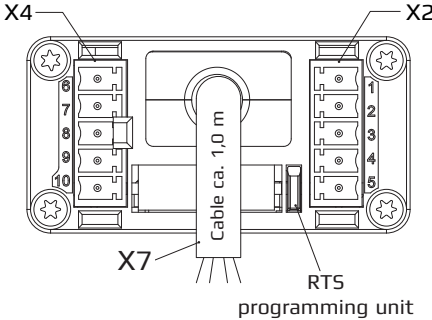
Control current per drive unit/function: 5 mA

ATTENTION!
The drive unit requires a permanent voltage supply!

Switches (push button) with a mutual interlock must be used!

If a push button (switch) without a mutual interlock is used, programming of the drive is possible.

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Pin	Function	Cable	Comment
L1	230 V	BN (brown)	V _{IN}
N		BU (blue)	V _{IN}
S1	CLOSE	BK (black)	Control signal
S2	OPEN	GY (grey)	Control signal

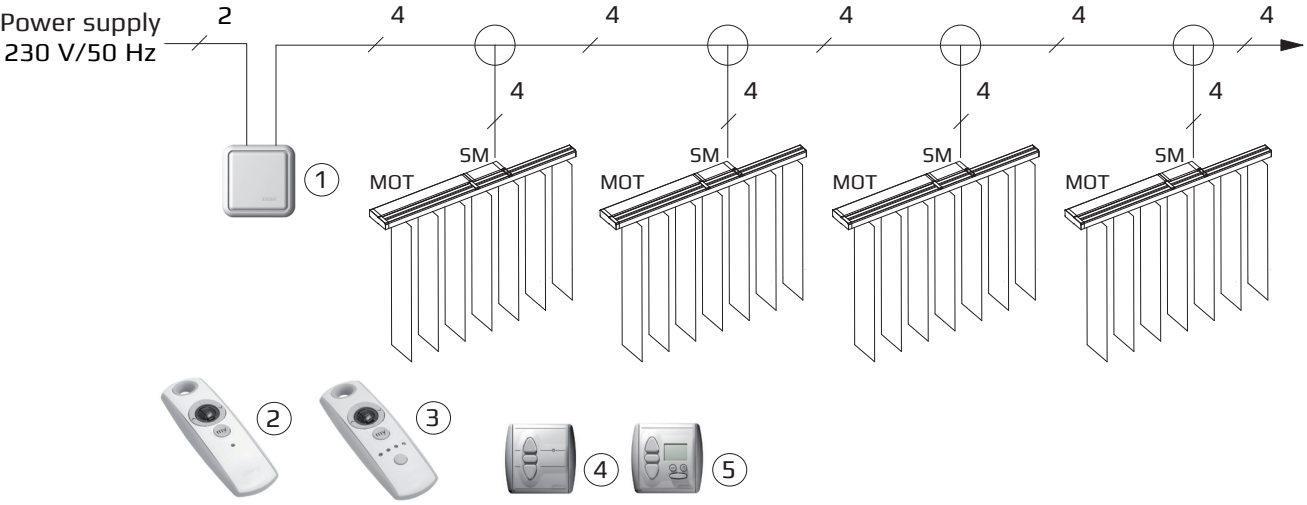


- ① - Inis Uno, switch
- SM - 230 V switching module
- MOT - IQ2-Motor

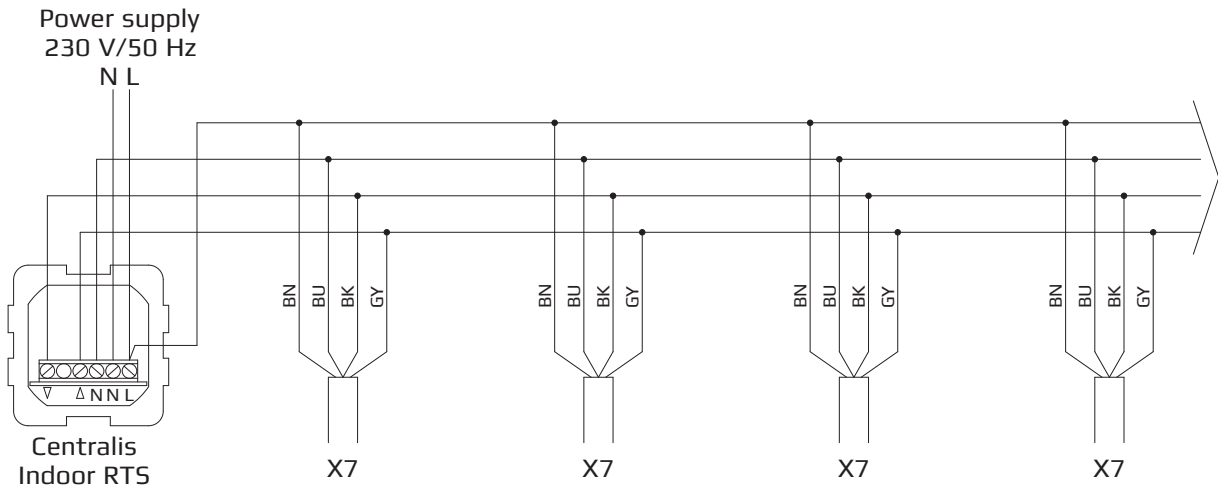
Group control - Centralis Indoor RTS – IQ2-Motor

IQ2-506

Electrical planning



Electrical connection diagrams



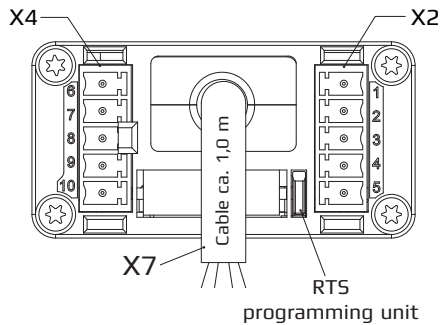
Control current per drive unit/function: 5 mA

ATTENTION!
The drive unit requires a permanent voltage supply!

Switches (push button) with a mutual interlock must be used!

If a push button (switch) without a mutual interlock is used, programming of the drive is possible.

X7			
Pin	Function	Cable	Comment
L1	230 V	BN (brown)	V _{IN}
N		BU (blue)	V _{IN}
S1	CLOSE	BK (black)	Control signal
S2		GY (grey)	Control signal

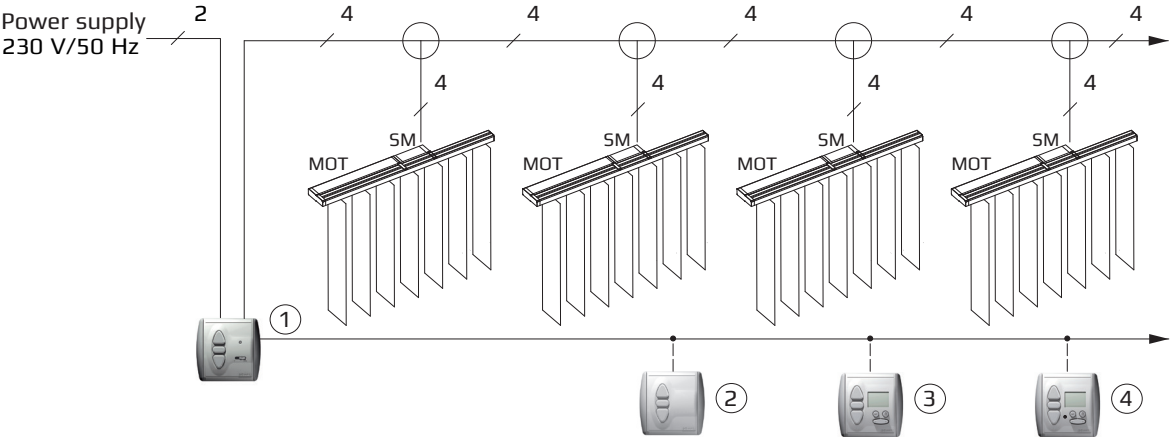


- ① - Centralis Indoor RTS, Wireless receiver
- ② - Telis 1 RTS, 1-chan wireless hand transmitter
- ③ - Telis 4 RTS, 4-chan wireless hand transmitter
- ④ - Centralis RTS, wireless wall transmitter, 1-chan
- ⑤ - Chronis RTS, wireless program time control
- ⑤ - Chronis RTS L, wireless program time control with solar automatic
- SM - 230 V switching module
- MOT - IQ2-Motor

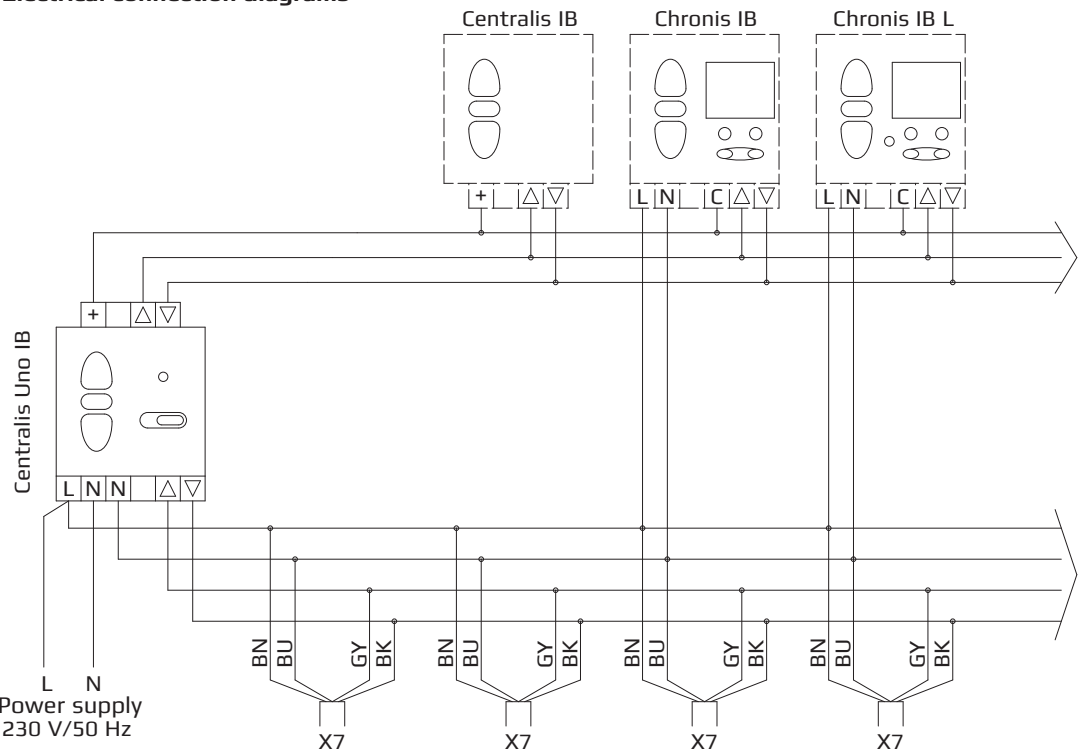
Group control - Centralis Uno IB – IQ2-Motor

IQ2-507

Electrical planning



Electrical connection diagrams



Control current per drive unit/function: 5 mA

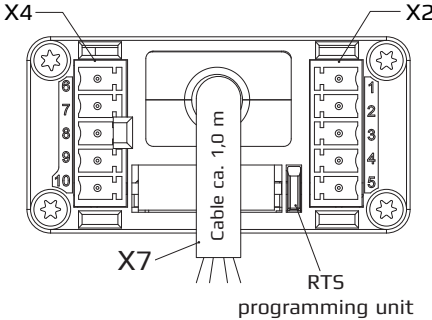
ATTENTION!

The drive unit requires a permanent voltage supply!

Switches (push button) with a mutual interlock must be used!

If a push button (switch) without a mutual interlock is used, programming of the drive is possible.

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Pin	Function	Cable	Comment
L1	230 V	BN (brown)	V _{IN}
N		BU (blue)	V _{IN}
S1	CLOSE	BK (black)	Control signal
S2	OPEN	GY (grey)	Control signal

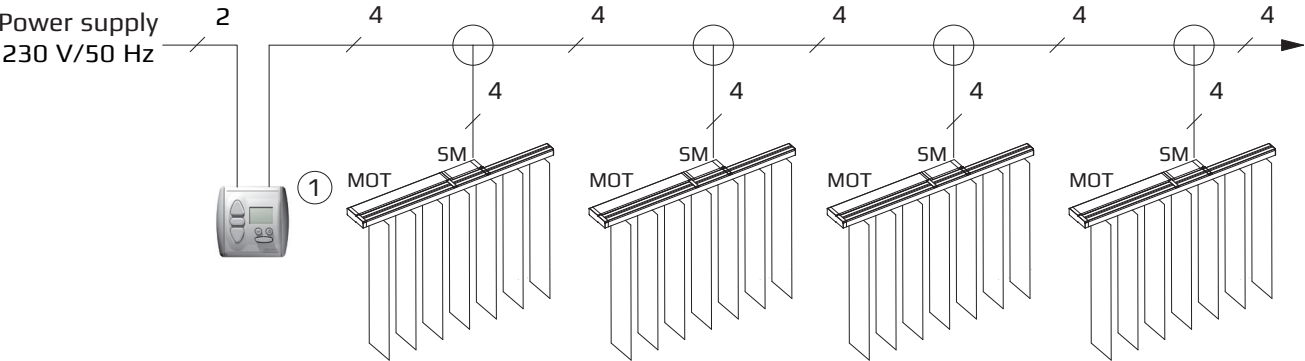


- ① - Centralis Uno IB, motor control device
- ② - Centralis IB, push button central control
- ③ - Chronis IB, program time control
- ④ - Chronis IB L, program time control with solar automatic
- SM - 230 V switching module
- MOT - IQ2-Motor

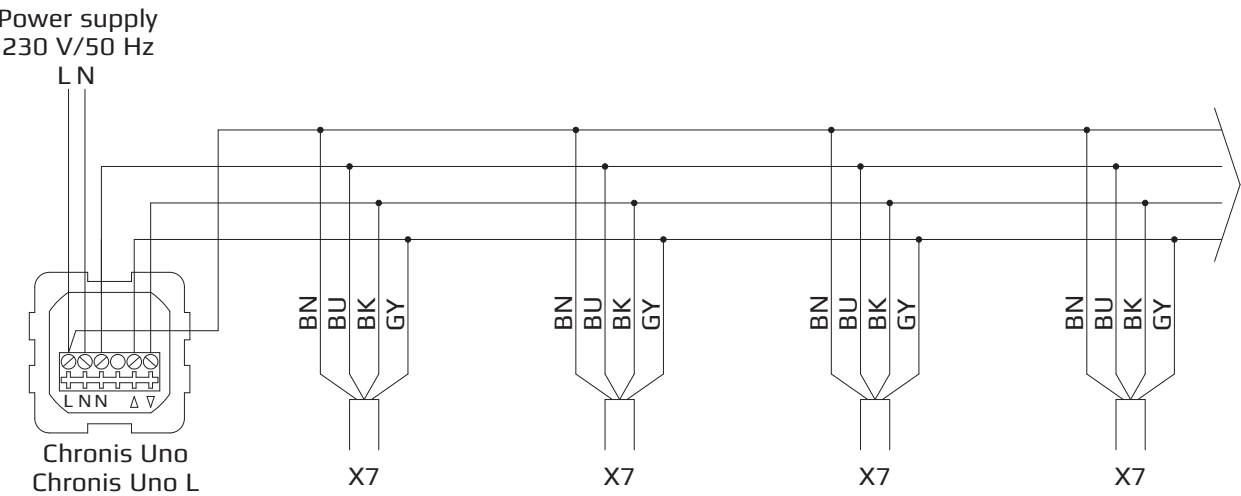
Group control - Chronis Uno (L) – IQ2-Motor

IQ2-508

Electrical planning



Electrical connection diagrams



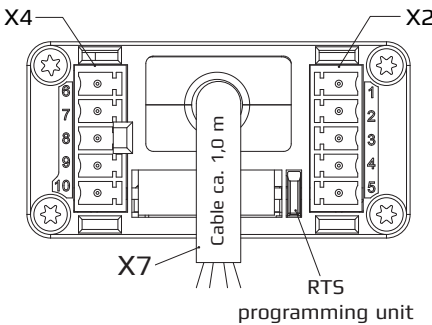
Control current per drive unit/function: 5 mA

ATTENTION!
The drive unit requires a permanent voltage supply!







Switches (push button) with a mutual interlock must be used!

If a push button (switch) without a mutual interlock is used, programming of the drive is possible.

X7			
Pin	Function	Cable	Comment
L1	230 V	BN (brown)	V _{IN}
N		BU (blue)	V _{IN}
S1	CLOSE	BK (black)	Control signal
S2	OPEN	GY (grey)	Control signal



- ① - Chronis Uno, program time control
- ① - Chronis Uno L, program time control with solar automatic
- SM - 230 V switching module
- MOT - IQ2-Motor

Legend – IQ2-Motor		IQ2-600
	Individual control	<p>Customer's need: A blind should be controlled separate.</p> <p>Solution: Just 1 motor is mounted on the control spot.</p>
	Small group control	<p>Customer's need: Several blinds should be controlled in common as a small group. E. g. 3 blinds in a bay window.</p> <p>Solution: Several blinds are mounted directly on the control spot. Thereby note the max. number of motors per control spot.</p>
	Group control	<p>Customer's need: More than 4 blinds should be controlled as a group. Single control is not required.</p> <p>Solution: Application of the group control GPS 1020 where all the motors are mounted to. The control happens over connected push button or automatic device.</p>
	Central control	<p>Customer's need: All blinds should be controlled by the control spot. This could happen via push button or automatic device. Central control happens if necessary additional to the single-, small group-, or group control.</p> <p>Solution: The appropriated control devices are triggered by a central control spot.</p>
	Remote control	<p>Customer's need: The blinds should be triggered by a hand transmitter.</p> <p>Solution: Application of a IR-receiver and transmitter.</p>
	Solar automatic	<p>Customer's need: It should also be possible to open and close the systems automatically when nobody is there depending on the incident sunshine or depending on shadow or twilight.</p> <p>Solution: Application of the solar automatic.</p>
	Program time control	<p>Customer's need: It should also be possible to open and close the systems automatically according to a weekly programme or depending on the times of sunrise and sunset.</p> <p>Solution: Application of the program time control.</p>
	Switching module 230 V	<p>The 230 V switching module serves to actuate a drive unit with a control voltage of 230 V AC.</p>



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