


## Connecting the shutter

Our technicians are in principal not authorised to connect any electrical devices to the in-house network. The connection has to be completed by a licensed electrical company.

	<p>The electrical connection of the roller shutter and the control unit must only be completed by skilled electricians in compliance with the enclosed connecting diagram and the national and international legal regulations, e.g. DIN EN 60335-1 (VDE 0700-1), DIN EN 60335-2-97, DIN EN 60204-1 (VDE 0113-1) etc. Furthermore the regulations of the local electric utility, the Employer's Liability Insurance Association and the Accident Prevention Regulation have to be strictly followed.</p> <p>The roller shutter and the control unit can only be connected to an in-house network which is equipped with a ground fault circuit interrupter.</p>
---	---

## Connecting Diagram

### Description of the drives

Roller shutter plug-in drives are drive systems with a built in asynchronous condenser motor, a final position switch, break and gear.

The condenser is not a starting capacitor but an operating capacitor. Within the starting torque the drive is taking 2,5times of the nominal current. Please consider this for the installation.

### Connecting diagram of the individual control system

The connecting diagrams shown on the right apply to an easy operation of the drives via switch or button without automatic function.

If using an automatic control unit please refer to the connecting data plan which is enclosed to the unit.

### Colour scale for the connecting cables

1	blue	Neutral conductor N
2	black	Phase direction of rotation 1
3	brown	Phase direction of rotation 2
4	yellow-green	Equipment grounding conductor PE

### Improper types of connection!

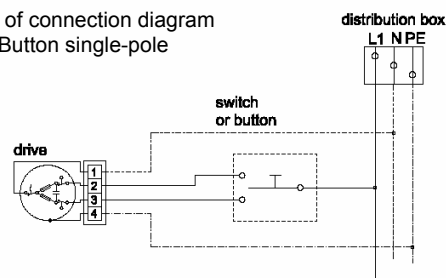
#### - Switches or connections, which allow a concurrent up and down command

A simultaneous given phase will lead to a short-circuit of the condenser and to a mutual induction in the windings. Therefore only electrical or mechanical locked switches (no light switches) and their corresponding control systems should be used.

#### - Parallel connection for several drives.

Because the running times of the different drives are never the same the parallel connection leads to an inverse voltage via the same control wire (the system never switches off) and to a destruction of the end position switches. Therefore a separate contact has to be provided for each drive and each running direction, i.e. by a 2-pole button (for 2 drives), group control, cut-off relay or a central resp. peripheral control.

Principle of connection diagram  
Switch / Button single-pole



Principle of connection diagram  
Switch / Button 2-pole  
for 2 drives

