

ROLL-UP FREIGHT DOOR

Background

Most warehouses have a number of loading docks, each with a roll-up door. Depending on the weather, level of activity and size of the trucks and forklifts being used, those roll-up doors need to be opened to a specific height or closed completely. Usually the door is controlled by some sort of sprocket and chain mechanism. It is impractical, especially for large warehouse operations, to manually reposition the doors for different size trucks or different weather conditions. This situation just begs for some sort of automated, or even semi-automated solution.

Solution

By fitting the roll-up mechanism with a gearmotor and providing position feedback on the motor shaft, it's possible to raise or lower the door precisely to any location from fully open to fully closed. A simple keypad or touchscreen HMI could be programmed to indicate the desired door height, while the position feedback sensor (in this case the TCW4 would be ideal) can count the shaft revolutions of the motor needed to achieve the desired height. One person could attend to several different load docks simultaneously quite easily with just a push of a button or a simple keypad entry.

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RECOMMENDED PRODUCTS

Reference on Diagram	Product	Type	Features	Function	Brand
1	 TCW4 Series	Hall effect rotary position sensor	<ul style="list-style-type: none"> • Compact • Well sealed • Multi-turn absolute 	Position monitoring and control	BEI Sensors



DIAGRAM



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