

Protection Against Overhoisting



Crane Control Class 6170

Youngstown® Power Limit Switches for AC and DC Cranes

Youngstown® Power Limit Switches were the world's first high-power interrupting devices built to limit overtravel for crane hoisting operations. Years of experience with electric crane applications, combined with sound engineering and manufacturing experience went into their design.

Helps Protect Employees and Best Meets OSHA Requirements

Youngstown® Power Limit Switches best meet OSHA requirements (OSHA 1910.179(g)(5)(iv)) for hoist overtravel because they are connected in the motor power circuit and directly disconnect the motor. These switches are operated by the crane hoist hook block and do not require the operation of additional devices to remove power from the motor.

Limits Overtravel on Crane Hoist Drives

Youngstown® Power Limit Switches are used on crane hoist drives to limit overtravel in the hoisting direction. Below is an example of a typical operation:

- Hook block lifts the suspended weight
- Gravity-operated arm moves downward
- Double Pole, double throw power contacts are activated
- Power is removed from the motor and the magnetic holding brake is set
- On DC motor hoists, a dynamic braking motor circuit is simultaneously established to provide electrical as well as mechanical braking.

Youngstown® Power Limit Switches

Six Simplex Sizes Available in Ratings

- 26 HP to 500 HP at 230 volts DC
- 50 HP to 400 HP at 460 volts AC

Advantages

- Operated by crane hoist hook block
- Interrupts hoist motor current directly
- Quick make and quick break contacts
- Short reset travel between tripped and run positions
- Automatic gravity return reset mechanism
- Sealed bearings – no lubrication required
- Right hand or left hand operating arm
- Standard straight operating arm or 90° operating arm
- Conduit connection boxes (optional)
- Optional control contacts for drive applications

Applications

- All crane hoist applications

Maximum HP – Crane Rating			
DC		AC	
230 V	550 V	230 V	460 V/575 V
Simplex			
26	25	25	50
50	50	50	100
100	100	100	200
200	200	200	400
500	660
Duplex			
2-100	2-100	2-100	2-200
2-200	2-200	2-200	2-400
2-500	2-660



The Electric Controller and
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