



Youngstown® Power Limit Switch



Class 6170 Power Limit Switch

Youngstown® Power Limit Switch for AC and DC Cranes

Originally introduced in the 1920's, the Youngstown® Power Limit Switch was the world's first high-power interrupting device built to limit over-travel for crane hoisting operations. EC&M's rugged mill-duty power limit switch continues to be 100% fabricated and assembled at the company's manufacturing facility in St. Matthews, SC.

Helps Protect Employees and Best Meets OSHA Requirements

The Youngstown® Power Limit Switch best meets OSHA requirements (OSHA 1910.179(g)(5)(iv)) for hoist over-travel because of the motor power circuit connection that will directly disconnect the motor if the limit switch is tripped. Switches are operated by the crane hoist hook block and do not require additional devices to remove power from the motor.

Limits Over-Travel on Crane Hoist Drives

Youngstown® Power Limit Switches are used on crane hoist drives to limit over-travel in the hoisting direction. 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.

EC&M's Youngstown® Power Limit Switches

Six Simplex Sizes Available in Ratings

- 1 HP to 500 HP at 230 volts DC
- 1 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
- Optional conduit connection boxes
- 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 Manufacturing Company, LLC

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- EC&M has 100 years of crane control experience

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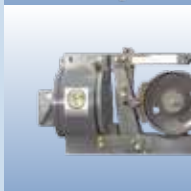
DC/AC
Electromechanical
and Electronic
Crane Control



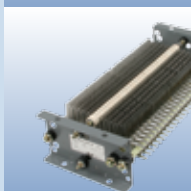
Contactors,
Relays and
Master Switches



Brakes and
Limit Switches



Power Resistors,
Replacement Parts
and OEM Kits



EC&M — For All Your Crane Control Needs

Let EC&M's "Crane Gang" minimize your down-time and increase your up-time with best-in-the-industry application expertise and time tested products. From AC and DC drive control systems, to traditional AC and DC electromechanical contactor control, EC&M offers the most complete line of crane control products available.

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