

Lifting Magnet Controllers

Type 4292 Compact Controller for Scrap Yards

Specification/Price List • January 2021, Replaces May 2010

4292

Description

The Type 4292 Yardmaster Controllers incorporated heavy-duty time proven components arranged to provide optimum control of your lifting magnets.

A mechanically rugged high thermal capacity discharge varistor assembly is permanently connected in parallel with the magnet and provides a safe discharge path for the stored magnetic energy. With Yardmaster magnet controllers, induced voltage cannot return to the line, permitting rectified power supplies to be used without the added expense of special protective loads or bypass circuits.

Application

The Type 4292 Yardmaster Controllers are suited for many uses from light scrap handling to the handling of heavy billets or plates. It may be used with all types and makes of DC lifting magnets.

YARDMASTER



Features

- Automatic Discharge
- Rated 250 VDC @ 5-100 amps
- Front-Wired Front-Removable components
- Mechanically interlocked "Lift" and "Drop" NEMA rated mill duty contactors
- Permanently connected 700V discharge path completely independent from the line that protects magnet and generator
- High-Thermal capacity varistor discharge path
- Peak magnet induced voltage limited to under 700 Volts
- Long electrical contact life
- Minimum Maintenance
- Dribble control - Standard
- Ventilated indoor/outdoor NEMA 3R enclosure

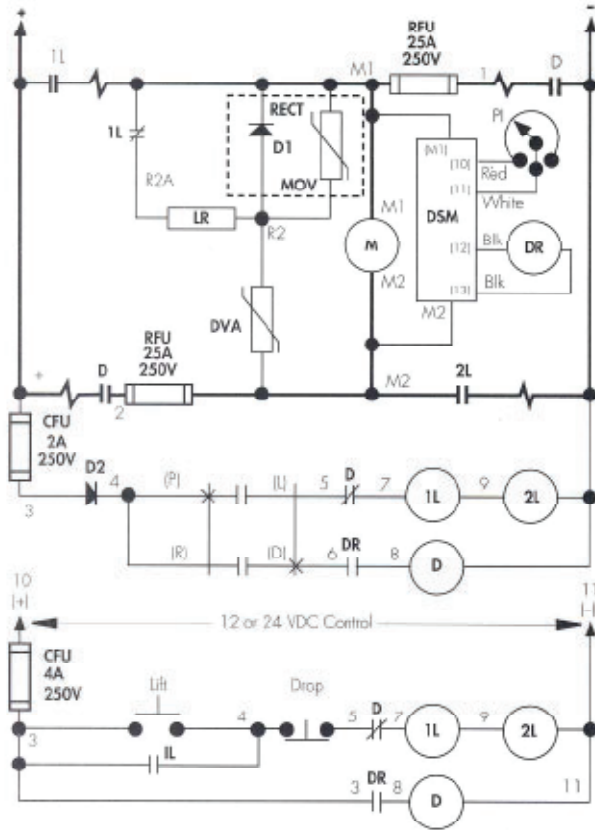


Automatic Discharge Type Controllers

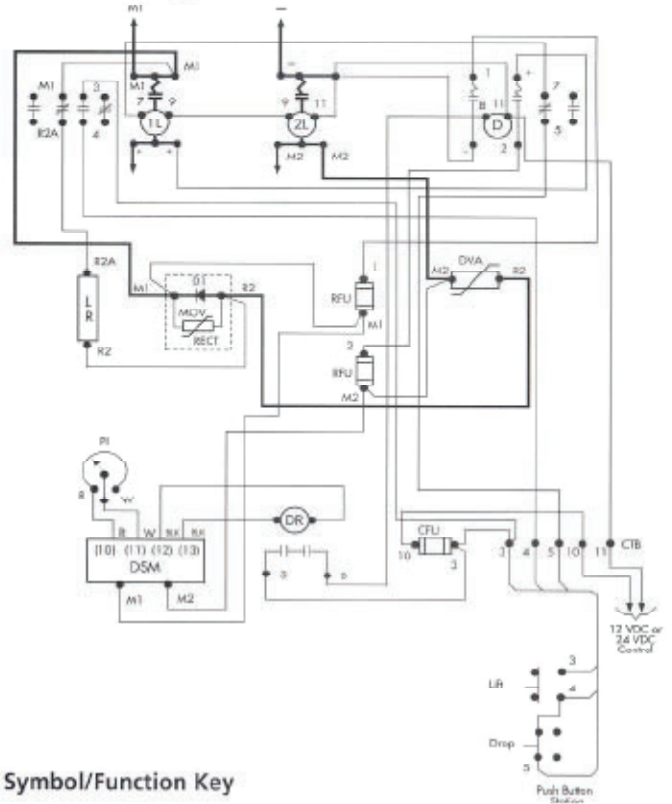
The Type 4292 Yardmaster Automatic Discharge Type Lifting Magnet Controller provides a fast and clean release of magnet loads by applying full voltage reverse current to the magnet. The full voltage reverse current feature permits the operator to promptly return for another lift.

The drop contactor is under the control of the operator's Master Switch and the discharge sensor module (DSM). When the operator's Master Switch signals the magnet controller to drop the load, the "Lift" contactors (L) open. The stored magnet energy is dissipated in the discharge varistor. When the discharge voltage declines to approximately 300V, the DSM energizes the drop relay (DR) which in turn enables the drop contactor (D) to close applying full voltage reverse current to the magnet and begin the adjustable time reverse current cycle. After the completion of the timed reverse cycle the drop relay and drop contactor are deenergized.

Schematic Diagram



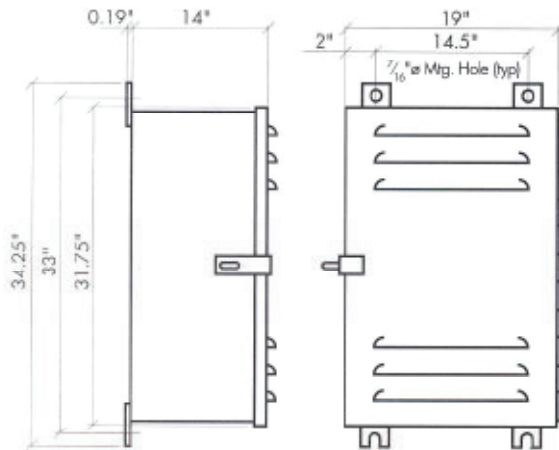
Panel Layout



Symbol/Function Key

LR	Limiting Resistor	P1	Potentiometer Assembly
D2	Control Circuit Diode	DR	Drop Relay
DVA ...	Discharge Varistor Assembly	DSM	Discharge Sensor Module
TB1	Control Terminal Board	D	Drop Contractor
CFU	Control Fuse	1L	Lift Contactor
RFU	Drop Fuse	2L	Lift Contactor
RECT	Rectifier/MOV Assembly		

Cabinet Dimensions



approximate shipping weight 150 lbs.

Model Numbers & Prices

Part Number	Control Circuit Voltage	List Price
Sch. KD		
HC91883202	230 VDC	\$16,800
HC91883204	24 VDC	\$16,800
HC91883206	12 VDC	\$16,800
Sch. ET		
HCTA4215	Master Switch for 230 VDC Operation	\$1,350

Controller ampacity is based on being used with a 50% duty magnet in a 40° C ambient.



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