

Euclid™ Lifting Magnet Controllers

4295

Resistor Type Automatic Discharge

Specifications 4295 • March 2004 • Replaces July 1990

Features

- Front-Wired Front-Removable components.
- Mechanically interlocked "LIFT" and "DROP" contactors.
- Permanently connected discharge path completely independent from the line.
- High-Thermal capacity resistor discharge path.
- Peak magnet induced voltage limited to under 900 volts.
- Long electrical contact life.
- Minimum Maintenance.
- Dribble feature - Standard.
- Ventilated NEMA 3R Enclosure.

Description

The Euclid Type 4295 Magnet Controllers incorporate heavy duty time proven components arranged to provide optimum control of your lifting magnets.

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

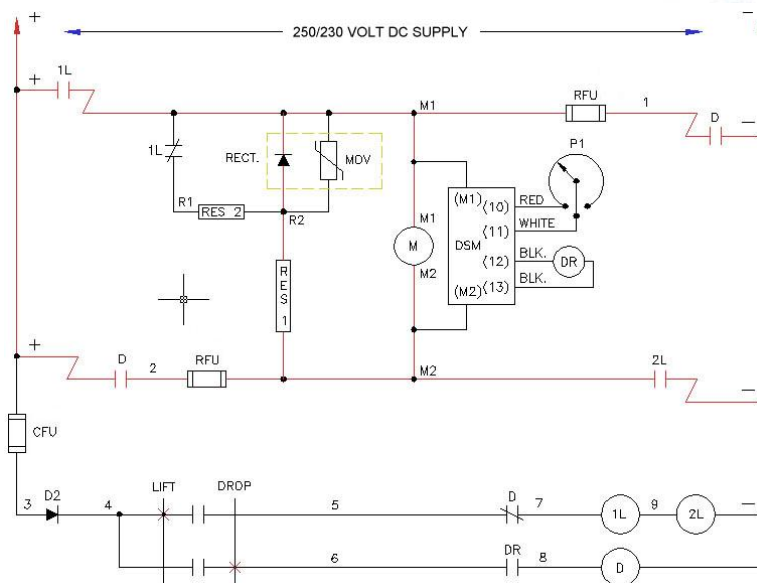
Automatic Discharge Type Controllers

The Euclid Type 4295 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 (1L+2L) open. The stored magnet energy is dissipated in the discharge resistor. When the discharge voltage declines to approximately 300 volts, the discharge sensor module (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 (DR) and drop contactor (D) are de-energized.

Type Controllers

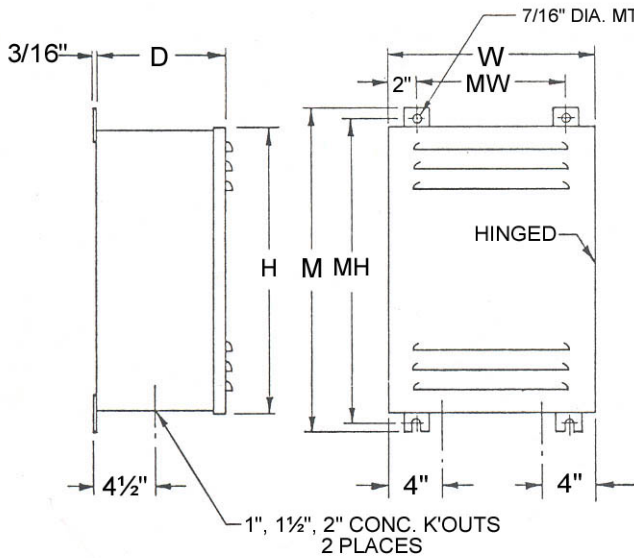
The Euclid Type 4295 Lifting Magnet Controllers are suited for many uses from light scrap handling to the handling of heavy billets of plates. It may be used with all types and makes of dc lifting magnets.



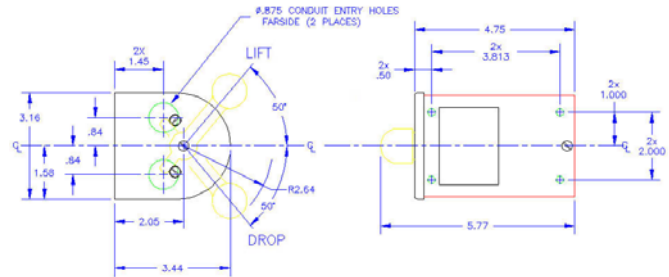
SYMBOL	FUNCTION	SYMBOL	FUNCTION
DR	DROP RELAY	MOV	SURGE SUPPRESSOR
P1	POTENTIOMETER	RES1	DISCHARGE RESISTOR
CFU	CONTROL FUSE	RES2	FORCING RESISTOR (IF USED)
RFU	DROP FUSES	DSM	DISCHARGE SENSOR MODULE
D2	DIODE	D	DROP CONTACTOR
D1	RECTIFIER, MAGNET DISCHARGE PATH	1L, 2L	LIFT CONTACTOR



APPROXIMATE DIMENSIONS & WEIGHTS
DO NOT USE FOR CONSTRUCTION PURPOSES



CABINET OUTLINE SIZE 1, 2, 3 & 4



J2M4215

Full Voltage Controllers

CONTROLLER SIZE	W	H	D	M	MW	MH	NET WT.
1C	16.37"	12.00"	11.00"	14.00"	9.50"	12.64"	Consult Factory
1	16.12"	21.90"	10.00"	24.25"	11.50"	23.00"	
3	19.12"	27.90"	14.25"	30.25"	14.50"	29.00"	
4	19.12"	27.90"	14.25"	30.25"	14.50"	29.00"	

FULL VOLTAGE MANUAL DISCHARGE TYPE

Size	System Voltage	Control Voltage	Magnet Current	Part Number	Min Cold Magnet Ohms	Max Cold Magnet Ohm
1C	300 max.	12	7.0 - 13	91911-005	19.23	32.86
1C	300 max.	24	7.0 - 13	91911-XXX	19.23	32.86
1C	300 max.	12	13 - 25	91911-006	10.00	17.69
1C	300 max.	24	13 - 25	91911-XXX	10.00	17.69
1	230/250	230/250	7.0 - 13	91843-202	19.23	32.86
1	230/250	230/250	13 - 25	91813-202	10.00	17.69
1	300 max.	24	13 - 25	91915-004	10.00	17.69
1	300 max.	12	13 - 25	91915-002	10.00	17.69
2	230/250	230/250	25 - 50	91814-202	5.00	9.20
2	300 max.	24	25 - 50	91877-202	5.00	9.20
2	300 max.	12	25 - 50	91877-XXX	5.00	9.20
3A	230/250	230/250	50 - 85	91815-202	2.94	4.60
3A	300 max.	24	50 - 85	91880-202	2.94	4.60
3A	300 max.	12	50 - 85	91880-XXX	2.94	4.60
3B	230/250	230/250	85 - 130	91816-202	1.92	2.71
3B	300 max.	24	85 - 130	91863-202	1.92	2.71
3B	300 max.	12	85 - 130	91863-XXX	1.92	2.71
4	230/250	230/250	130 - 175	91817-202	1.43	1.77
4	300 max.	24	130 - 175	91861-202	1.43	1.77
4	300 max.	12	130 - 175	91861-XXX	1.43	1.77

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

PILOT DEVICES & ACCESSORIES ADDITIONS FOR MAGNET CONTROLLER

DESCRIPTION	PART NUMBER
"Lift-Drop" NEMA 1 enclosed Master Switch (Standard for Euclid Lifting Magnet Controllers)	J2M4215
"Lift-Drop" NEMA 3R enclosed Master Switch	Consult Factory
Type 4211, Catalog #4211-125MISX1 "Lift-Drop" NEMA 1 Surface Mounting Master Switch	4211-99848-001
Type 4211, Catalog #4211-125MIFX1 "Lift-Drop" NEMA 1 Flush Mounting Master Switch	4211-99848-002
Type 4216, Catalog #SWPBC-MX1 "Lift-Drop" NEMA 4 Maintained Type Surface Mounting Push Button Station	Consult Factory

These Pilot Devices are arranged to permit "Dribbling" when used with Euclid Magnet Controllers.

HOW TO ORDER
Refer to Price List 4295

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|--|---|
| 1. Specify Magnet Operating Circuit, COLD. | 3. Magnet controller Pilot Devices and Accessories are additions. |
| 2. Size of Controller & Voltage | 4. Order by Part Number |



Hubbell Industrial Controls, Inc.

A subsidiary of Hubbell Incorporated

4301 Cheyenne Dr., Archdale, NC. 27262

Telephone (336) 434-2800 • FAX (336) 434-2803

http://www.hubbell-icd.com

Sales@hubbell-icd.com