

OMNIPULSE™ DSD

DC Digital Control



Magnetek—the premier provider of innovative power control and delivery systems for the overhead material handling industry—brings you a superior DC control for crane, hoist and heavy moveable structure applications. We've combined Magnetek's highly successful DC drive technology, used to power over 25,000 elevator drives worldwide, with our extensive crane and hoist application experience, to bring you a state-of-the-art, fully programmable DC digital drive. The OmniPulse DSD improves safety and reliability in your facility while minimizing downtime and maximizing the performance of your DC shunt wound motor.

A BETTER SOLUTION TO CONTROL DC SHUNT WOUND MOTORS

- Most competitive DC drives offer you a one-size-fits-all solution to your application—and are difficult to use and hard to program
- OmniPulse DSD was developed specifically to control DC shunt wound bridge, trolley and hoist motors—and they're easy to install and program
- The patented OmniPulse DSD microprocessor digital logic controller delivers precise, repeatable AC in/DC out control—and its solid-state operation means less maintenance
- Magnetek has more power control application experience than any company in the crane and hoist industry—trust the experts
- Our experienced application engineers will implement cost-effective control solutions that suit your application, to meet and exceed your expectations

SUPERIOR FEATURES, SUPERIOR RESULTS

The fully programmable OmniPulse DSD offers many of the same advanced safety and troubleshooting features built into our proven IMPULSE® AC Drives, like:

- UltraLift™—higher speeds with light loads
- MicroSpeed™—precise speed control minimizes load swing during operation
- Load Float—hold a load aloft at zero speed
- Torque Proving at Start/Stop—monitors brake function
- End of Travel Limits—slow down and stop inputs

OmniPulse DSD Controls are available in component form or in panels that can be custom designed to meet your specifications. DSD also interfaces with IMPULSE®• Link 4.1 Basic or WDS (wired or wireless), offering remote parameter operation and diagnostic capabilities.

OPTIONAL KEYPAD

- Keypad has programmable operating features and computer diagnostics, allowing the operator to customize crane, hoist or heavy moveable structure performance
- Display menus provide rapid access to operating status, features and diagnostics
- 2 line x 16 character LCD display
- Fault-detection and safety circuits record last 16 faults that may occur and protect motors from dangerous operating conditions
- Status is clearly displayed, providing fast diagnosis and repair of almost any problem



SAFETY ADVANTAGES

- Safe Operating Windows™ reduces the possibility of programming unsafe parameters
- Motor and control protection circuits
- Utilizes inputs from upper limit switches

RELIABILITY ADVANTAGES

- Undervoltage protection
- Saves last 16 faults, automatic reset or external fault reset
- Reduced mechanical stress
- Microprocessor based built-in monitoring and diagnostics
- Increased reliability over older technology
- Built for harsh operating environments



PERFORMANCE ADVANTAGES

- Traverse Motion—programmable, analog or multi-step speed reference
- Hoist Motion—programmable, analog or multi-step speed reference
- Maximum motor torque from startup to full speed
- Smooth load starting
- Programmable smooth acceleration from minimum to maximum speed
- Programmable smooth deceleration to creep-speed and stop
- Built-in Auto Tune—self tunes to motor, faster startup; vital for modernization installations
- Inching control for exact load placement
- Built-in motor overload protection

RATINGS

- Input: 230/460 Vac, 3 PH., +/-10%, 48 to 62 Hz (600 Vac available—Consult Factory)
- 150% of rated current for 2 minutes
- 200% of rated current for 10 seconds
- 1000:1 speed range with encoder (hoist)
- 20:1 speed range (traverse) of current limit

Rated HP*	Continuous Output Current Rating	Maximum Output Current for 5 Sec.	Field Current Range
15	25 A	62.5 A	0.2 A to 40.0 A
30	50 A	125 A	
60	100 A	250 A	
125	190 A	475 A	
200	300 A	750 A	
300	440 A	1100 A	
400	580 A	1450 A	
600	870 A	2175 A	
800	1270 A	3175 A	

SPECIFICATIONS

- Modbus RTU, RS-232
- Built-in current limiting line fuses
- Four quadrant regenerative drive
- Current regulated shunt field
- 11 digital inputs
- 3 relay outputs, 4 digital outputs
- 2 programmable analog inputs (0-10 Vdc, +/-10 Vdc)
- 2 programmable analog outputs (0-10 Vdc, +/-10 Vdc)
- 2 line, 16 character portable programmer and display
- Operating temperature: -10°C (14°F) to 55°C (130°F)
- CSA listed
- Made in USA

* Approximate HP is at 500 VDC

For more information contact Magnetek Material Handling or your local Magnetek Sales Representative.



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