ELECTRIC HOIST VARIABLE FREQUENCY CONTROL SYSTEM

CM ET ENTERTAINMENT TECHNOLOGY

LODESTAR® D8+ TÜV SÜD 认证

VD3000 VECTOR VARIABLE FREQUENCY DRIVER

● One-to-one design of variable frequency driver and electric hoist adopted, driver unit and control unit fully integrated in the VD3000, high-speed Ethernet cable communication used between drivers in the overall control system, power supplies connected in the manner of bus-basd connection using standard European 32A×5PIN×6mm^2 cables;

● Built-in high-performance vector frequency converter, multiple closed-loop adjustment mode to realize smooth and stable speed regulation andhover function at zero speed, positioning accuracy less than 1mm;

●Thedual encoder interface allowing access to two increments or one increment and one absolute value encoder, accuracy and reliability of position feedback ensured;

● Weighing interface, real-time monitoring of changes of equipment weight, providing overload and underload protection for equipment;

● Standard fixtures fitting for a variety of TRUSS connections;

● Standard local control panel and LED display, which can realize setting, modification and monitoring of parameters;

●The standard heavy duty connector transmits the brake signal, limit signal and encoder signal of the motor to the VD3000 for calculating and processing to realize closed-loop feedback;

● Support remote control and used with the MCC001 system console;

LC001 LODE CELL

●The LC001 is a weighing sensor composed of a shackle and an integrated LED display, allowing users to check the weight of the lifting point and set the protection function from time to time;

● An integrated designed of the shackle, sensor and processor realizes easier installation and usage;

● 5:1 safety factors;

● XLR 4PIN used for communication, supports single-point or bus-based connections; single-path support reaching up to 25 units;

● Support external analog output 4-20mA and XLR 3PIN;

● Power supply: 24VDC;

● The shackle model design means no loss of headroom, with keyhole model available;

48CH PDES

● Power supply connected via a 5-way standard POWERLOCK single-pole connector. Methods of power supply: TN-C or TN-S, rated supply voltage: 380-400VAC (L1+L2+L3+N+PE).

● 8×32A three-phase and 2x16A single-phase independent Ceeform socket switch, 1.5KW electric hoist with a recommended capacity if 1-48 units; if exceeded, only one set of power supply system is added;

●XLR5PIN integrated emergency stop (bypass) interface, XLR 3PIN integrated emergency stop (cascade connection) interface; integrated emergency stop button;

● Configuring Schneider circuit breakers and leakage protection devices to protect the safety of the system at all times;

● 2-way Ethernet interface, led by EtherCON RJ45, It can be led out to the MCC001 system console through 2-way fiber interface (single mode, dual core). The 7-way EtherCAT interface data is output to the VD3000 vector variable frequency drive at a communication speed of 100Mbps. Short overall operating cycle, and all slave stations are scanned every 1ms. Time synchronization provides uniform running time for all slave stations, with time differences between the slave stations less than 1 μs;
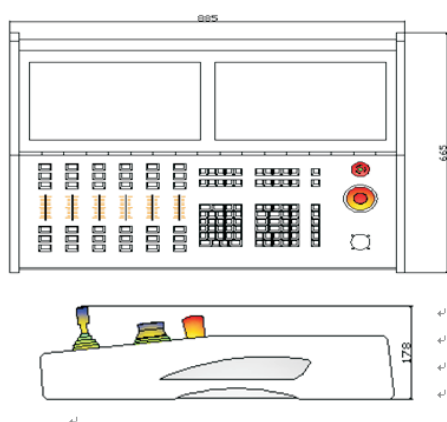

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MCC001 PRODUCT FEATURES

Dual 17-inch touch screen man-machine interface for monitoring and operation; equipped with integration of multiple interfaces including Ethernet, fiber andUSBetc, network console equipped with emergency stop button and 3D mouse, Simultaneous operation of 6 sets of scenes at the Multifunctional panel realized. Support DMX512 communication protocol

PRODUCT INTRODUCTION

The MCC001 system console is suitable for a variety of applications requiring complex motion control, such as mobile concerts, theaters, stadiums, studios, hotel malls, etc. With main functions as follows:

● High-speed Ethernet communication with fiber optic interface, built-in DMX512 communication interface and the capacity to receive commands from the lighting console;

● Multiple closed-loop control is adopted to realize the hovering start function of the hoist at zero speed. The brake can be turned on before starting the hoist to make the hoist be in the zero-speed hover state, and then the device is started by the Lift/Fall button, so that the device starts smoothly without jitter. The minimum accuracy of editing position is 0.1mm, the minimum time precision is 0.01s, and the overall positioning accuracy of the system is less than 1mm. The more intuitive 3D mouse modeling interface andMultifunctional operation zone allows realization of quick programming, calling, switching, etc.; The LCD touch screen can monitor and adjust the speed, position, load, limit, time and other information of hoist at all time.

● The system features the function of out-of-step protection and automatic adjustment during synchronization, as well as one-way manual backup, which can realize backup function through manual backup device when the computer fails.

● The system features a wide array of modes including performance mode and preview mode, all of which allowing setting of system parameters such as soft limit, zero clearing position, and current position.

● Safety emergency stop device equipped to ensure safe parking when emergency occurs during the operation of the hoist.

CC001 Dimensions
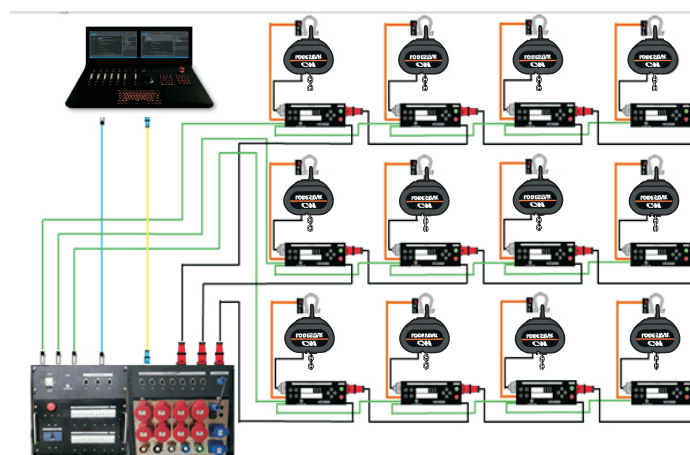
Connection Diagram

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