

MS332 Synchronous Controller



Features:

- Compatible with all variable-speed drives
- Keypad/display menus and features
- Setup, calibration and diagnostic utilities
- Special features including pulse per index measurement and averaging
- Master, ratio-follower, and index-follower modes
- Multiple set-points
- Switch-input functions
- NPN-output functions
- Serial Modbus communications



Description

The MS332 is a powerful and versatile tool for building numerous closed-loop processes. Closed-loop control capabilities include speed and phase control, electronic line shaft/gearing, event synchronization, and bi-directional control. The MS332 accepts quadrature encoder signals and almost any type of index/event sensor signal. The controller also provides the encoder/sensor power, which makes the MS332 ideal for new or existing systems. The MS332 supplies an isolated 0 ± 10 VDC speed reference signal to the drive, making it compatible with virtually any variable speed drive (AC, DC, or servo).

Operating Modes

Index Follower

- The MS332 automatically phases the feedback and lead event pulses to precisely synchronize events.
- Dissimilar encoders and shaft speeds work together without error.
- Feedback, lead, and event-pulse signals input to the MS332.

- Event pulses are commonly generated by proximity and photoelectric sensors, although other sources may be used.
- The follower phase set-point may be entered or determined by advancing/retarding the set-point on-the-fly.

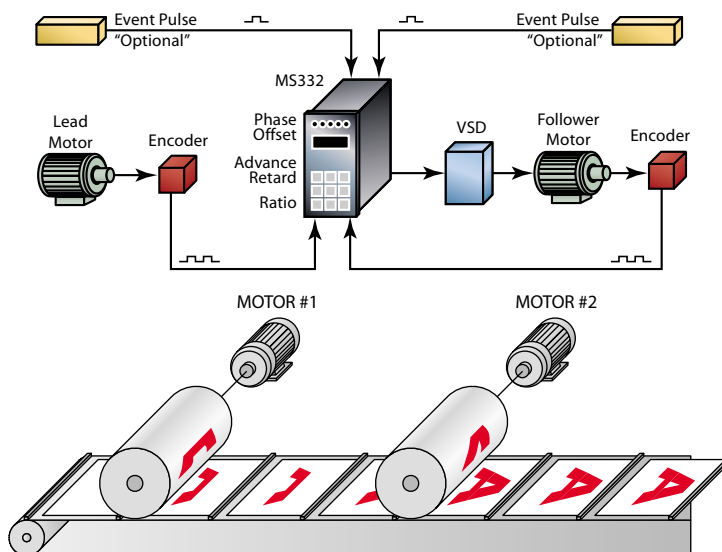
Ratio Follower

- The MS332 achieves true electronic gearing by precisely setting follower ratio to master speed, resulting in zero cumulative error.
- Dissimilar encoders and shaft speeds work together without error.
- Feedback and lead signals input to the MS332.
- The user enters the follower/master speed ratio and may change it on-the-fly.

Master

- The MS332 maintains the desired set-point speed.
- Feedback signal inputs to the MS332.
- The user may easily change the set point by entering the desired new value into the front panel keypad.

Application Diagrams

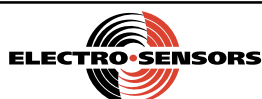


Free Catalog and Application Assistance:

1-800-328-6170

ISO9001:2000

6111 Blue Circle Drive, Minnetonka, MN 55343 USA



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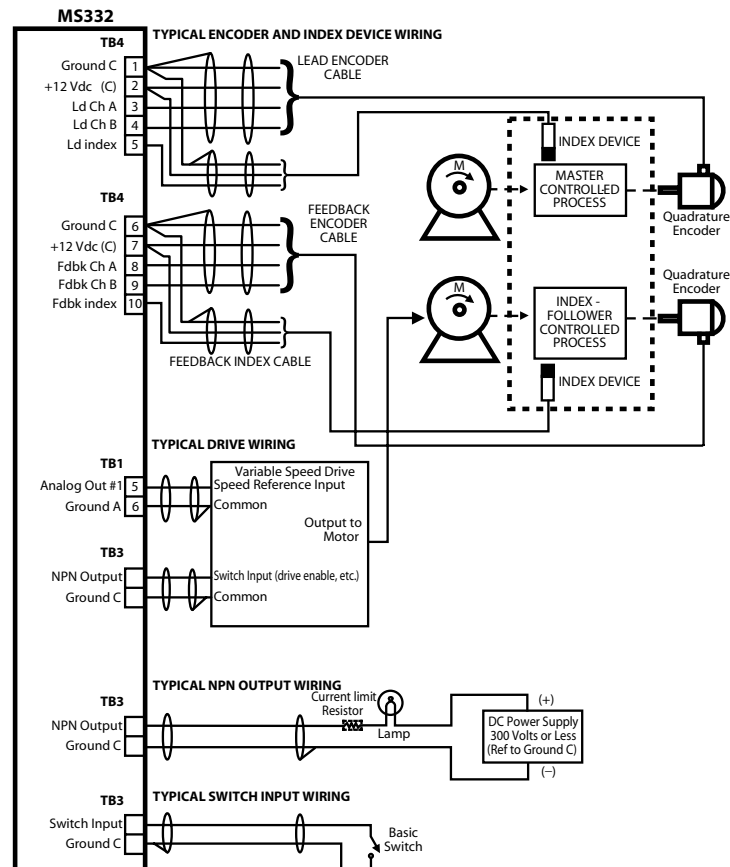
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Electro-Sensors, Inc.
MS332 Synchronous Controller

Wiring Diagram



Specifications

Input Power:

Voltage 115/230 Vac, 50/60 Hz

Sensor Inputs:

Sensor Supply 12 Vdc @ 300mA max.
 Sensor Compatibility Single-ended NPN, PNP, line-driver,
 TTL, CMOS
 Trigger Levels 2 V (logic low), 3 V (logic high)
 Encoder Type Quadrature incremental
 Encoder Frequency 1 Hz - 70 kHz

Analog Output:

Type Isolated, 0 ± 11.5 V
 Resolution Signed 12 bits (8192 steps)
 Calibration Digital (no pots)

Transistor Outputs:

Quantity, Type 4, Open-collector NPN
 Rating 0.625 W (max.), 300 V (max.)
 Assignable Functions Numerous alarms and indicators

Switch Inputs:

Quantity, Type 8, Shorting (pull to gnd C)
 Assignable Functions Setpoint, mode, parameter &
 diagnostic selects; special functions

Serial Communications:

Protocol Modbus RTU
 Data Types 16/32-bit integer, 32-bit float
 Baud Rates 300 - 19,200
 Electrical Isolated RS485, 2- or 4-wire

Operational:

Accuracy Zero cumulative error (follower)
 0.01% of speed set-point (master)
 Loop Response 1,024 times per second
 Operating Modes Event-synch (index) and ratio
 follower, master
 Set Points 4 per operating mode

Mechanical/Environmental:

Operating Temperature 0° - 70° C (32° - 158° F)
 Keypad NEMA 4
 Electrical Connections Removable terminal plugs
 Panel Cutout Dimensions 2.6" W x 4.3" H

Specifications subject to change without notice.

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