

FIRMWARE AND HARDWARE

Firmware 4.15c

Standard Firmware for OEM and Legend Series SmartMotors

RS232 & RS485 Communication

RS485 Line Data Control
Printing to a COM Channel
Reporting COM Channel Protocol

Input/Output

Software Selectable I/O Commands
Analog Input, Digital Input, and Digital Output
I/O initialization
Motor I/O Connector types

Motion Modes

Mode Follow with Ratio & Offset
Mode Step and Direction
Mode Step with Ratio
Mode Cam
Coordinated Motion

Additions From Past Firmware Release

Directional Limit and Limit Trigger High/Low
Addition of Coordinated Motion

Programming Language

Variables-Variable and Arrays Names
Initializing Variables and Arrays
Control Flow

Creating Motion

Position Mode, Velocity Mode and Torque Mode
Integral Brake Commands
External Encoder & Primary Encoder Commands
Gravity Constant
Directional Limit Inputs
Motor and Load Protection

Firmware "PLUS"

Optional Firmware for OEM and Legend Series SmartMotors
**Consult factory for other firmware options*

PLUS greatly increases performance in applications such as: traverse-and-take-up, material transport, automatic reversal on soft limit, specialized coil winding and lapping of materials, and high-speed material inspection scanning.

New Fault Handler

Motor protection must be reset via ZS or a specific command
Protection fault
- Ends the running program or
- Call a specific subroutine on interrupt

Overtravel Limit Control

Positive and Negative Software Limits
Hardware and Software Limits are directional and active-high asserted.

Mode of Operation

Mode-Torque-Brake (MTB) allows smooth deceleration of loads
MTB default mode
MTB draws no additional current from the power supply

CAM Mode Extensions

Relative CAM Mode
Configurable Dwell
CAM Index out for position triggering

Output Option

Automatic external brake-control

Input Option

Separate interrupt handler on edge triggering

Reverse Shaft Rotation Option

** Note: To order, add "-PLS" to the standard SM part number*

HARDWARE

DE - Drive Enable

The DE option allows the OEM and Legend Series controller and drive-amplifier to be powered from separate 24-48 VDC power supplies.

- Controller can be powered from a standard 24 VDC supply
- Position will not be lost on loss-of-drive-power
- No need to re-home
- Load surges will not cause power surge on controller
- Standard battery options are made simpler

** Note: To order, add "-DE" to the standard SM part number*

