

XMS-ROTATION

Rotation Travel Speed Control

Product Specification



Rotation Travel Speed Control

AMET is pleased to provide the following product introduction on our stand-alone model of rotation speed controls. These controls are designed to provide quality control of rotational travel devices. In addition, these controls can provide welding sequencing for GMAW, SAW, FCAW, GTAW (TIG) and PAW (plasma) welding arcs.

AMET has a distinct advantage over “conventional” rotation travel controls on the market. AMET uses DSP technology and this technology allows us to precisely verify the actual travel speed to the programmed value. In addition, the operator can program the XMS-Rotation with desired weld length, avoiding the need for adjustable end of weld limit switches.

As standard, AMET offers our Rotation Travel controls in 3 models. One to control motors up to 3/8 hp (300 watt). One to control up to 3/4 hp (600 hp). One to control an external motor amplifier. All models are designed to operate with encoder feedback for precise travel speed control. Please contact AMET if you intend to add this control to a linear system that has no encoder feedback.

The XMS can operate in slave or master mode. In slave mode, the XMS expects to receive a contact closure to start the travel. When the contacts open, the travel will stop after the stop delay times out.

In the Master mode of operation, the XMS will act a simple weld sequencer. The XMS will send out a contact closure to start a weld process. The XMS can be programmed to wait for an arc-on signal in return, or simply start its Start Delay timer. After this count down timer is complete, travel will start. Weld length can be programmed in distance, in time or for an event, such as a limit switch. The operator can also press the stop push button. At this point, the contact closure to the weld process is opened so it can enter its end of weld sequence. The stop delay timer for travel starts as well. Once this timer is finished, travel will stop. After another delay, the rotation travel device can be sent to a home position, which requires a functional home limit switch. In addition, two auxiliary digital outputs can be programmed, which can be used for shield gas and a pneumatic slide for example.

The XMS-Rotation can be supplied with a DC servomotor with encoder feedback. This is an optional feature. AMET needs to know the motor details, including motor frame, horsepower and possibly torque requirements. Previous motor model number and serial number would also be advantageous.

OPTIONAL FEATURES:

1. Servo Motor with encoder
2. Motor Interface Board
3. Home Limit Switch
4. End of Weld Limit Switch
5. Synchronized Drive

Note: For synchronized drive, please contact AMET to discuss exact details of the project.

Purpose/Applications:

XMS-Rotation Travel is typically used for the following reasons:

- I. Better rotation travel control, including speed readout
- II. Programmability and storage – up to 9 programs can be stored in memory
- III. Retro-fit obsolete rotation travel control on an existing system.
- IV. Desire to have simple weld sequence control



Benefits:

Our “stand-alone” rotation travel modules are ideally suited for welding applications for the following reasons:

- Higher quality travel speed requirements. With encoder feedback, we can achieve up to +/- 1% of set speed
- Speed control is critical.
- Weld sequencing is required.
- Digital display of travel speed (Programmed, Actual and Override)
- Ability to override travel based on preset amount in the system configuration
- Ability to configure and calibrate to meet different system demands
- Higher production rates – with available sequencing
- Increase in consistent part production

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AMET'S Stand-Alone Rotation Travel Module uses a single DSP in the control module to monitor and correct the travel speed as required.

The XMS-Rotation includes the operator remote control hand pendant. This pendant allows the operator to set up, program, control and override the travel speed from a convenient location.

The XMS-Rotation consists of an XM control module, loaded with rotation travel speed and weld sequence software, an interconnection cable between control and drive motor, a hand pendant with retractable cord, a ball mount for the hand pendant, and the power cord.



GENERAL SPECIFICATIONS:

Motor Range: 1/15 to 3/8 hp (50 to 300 watt)
3/8 to 3/4 hp (300 to 600 watt)
External Drive – typically used when controlling an external motor amplifier

XMS-Travel Speed: Depends on system motor and gearing

XMS Speed Ratio: Typically better then 100 to 1

Travel Start Delay: 0 to 99.00 seconds

Travel Stop Delay: 0 to 99.00 seconds

Return to Home Dly: 0 to 99.00 seconds

Return to Home: Programmable

Master/Slave Mode: Programmable

Program Storage: 9 programs

Travel Speed Override: Available

Override % Limits: Programmable

Closed-loop: via encoder feedback

Jog Forward/Reverse: Available

Control Dimensions & Mounting Specs:

XMS-Rotation Control:

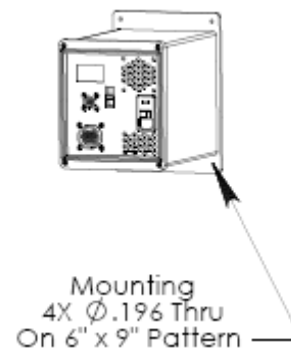
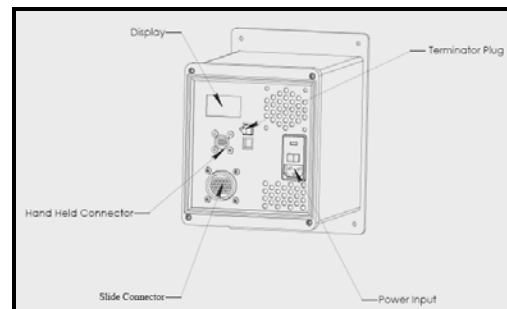
Please contact AMET if additional dimensional information on the above drive assembly is required.

Cable Length – Control to Motor – 15 ft (4.5 m)

Cable Length – Hand Pendant to Control, retractable – 10ft (3M)

Power Cord – 6ft (1.5 M) Business machine connection at Module

Power Requirements: 120/220, 50/60 hz, 1 ph, 500 watt



OPTIONS:

Joystick I/O - Ability to send out contact closure when Up/Down motion is toggled on the joystick on the operator hand pendant.

Customer Interface Box – Recommended when user wants to sequence weld gear and other devices from XMS. Provides convenient integration point for these other devices.