Metronix ARS 2102

01 Preserve axis configuration

1. **Preserve axis configuration**
2. Inspect supply and brake circuit
3. Reconcile feedback and I/O
4. Commission restrained motion
5. Validate the duty cycle

Work sequence

Save controller parameters and identify the motor, feedback sensor, brake and mechanical transmission. Record limits, homing direction and control authority. Secure the axis and its load before isolating power, especially where gravity can cause movement.

Acceptance condition

The original axis configuration and mechanical safe state are established.

Mains input	1 × 100–230 V AC ±10%, 50–60 Hz
Alternative DC input	60–380 V DC

Feedback consistency: Motor and encoder parameters must describe the actual connected assembly. Preserve direction, pole pairs and offset information during service.

Record the observed condition, test method and result for this stage. Resolve any difference before moving to inspect supply and brake circuit.

Metronix ARS 2102

02 Inspect supply and brake circuit

1 Preserve axis configuration

2 **Inspect supply and brake circuit**

3 Reconcile feedback and I/O

4 Commission restrained motion

5 Validate the duty cycle

Work sequence

Verify mains/DC and separate control-supply assignments. Follow the discharge and absence-of-voltage procedure before handling the power stage. Compare braking resistance and duty with the design and inspect protective earth and shielding.

Acceptance condition

Power, control and regenerative-energy paths match the intended original-controller installation.

Continuous motor current	2.5 A RMS at 230 V AC supply
Peak motor current	5 A RMS for 5 s

Braking energy: Assess deceleration and repeated-cycle energy against the selected resistor and DC-link design, not just the nominal motor power.

Record the observed condition, test method and result for this stage. Resolve any difference before moving to reconcile feedback and i/o.

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03 Reconcile feedback and I/O

1 Preserve axis configuration

2 Inspect supply and brake circuit

3 **Reconcile feedback and I/O**

4 Commission restrained motion

5 Validate the duty cycle

Work sequence

Check resolver or encoder type, supply and pole-pair settings against the actual motor. Restore limit, enable, home and brake connections. Confirm communication and analog scaling before any command can initiate motion.

Acceptance condition

Feedback interpretation and all motion-permission signals agree with the configured axis.

Maximum PWM frequency	13 kHz
Internal brake resistor	165 Ω; 10 W continuous

Thermal envelope: Account for temperature and altitude derating. Preserve cabinet ventilation and motor-cable conditions required by the installation design.

Record the observed condition, test method and result for this stage. Resolve any difference before moving to commission restrained motion.

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04 Commission restrained motion

1 Preserve axis configuration

2 Inspect supply and brake circuit

3 Reconcile feedback and I/O

4 **Commission restrained motion**

5 Validate the duty cycle

Work sequence

Qualified personnel should perform the approved low-risk direction and feedback tests before full motion. Observe current, position and fault indications. Check controlled acceleration and deceleration within the motor and braking limits.

Acceptance condition

Command direction, feedback direction and controlled stopping are consistent without unexpected motion.

CAN interface	CANopen DS301 / DS402; up to 1 Mbaud
External brake continuous power	Up to 250 W; operating voltage ≥460 V

Feedback consistency: Motor and encoder parameters must describe the actual connected assembly. Preserve direction, pole pairs and offset information during service.

Record the observed condition, test method and result for this stage. Resolve any difference before moving to validate the duty cycle.

Metronix ARS 2102

05 Validate the duty cycle

1 Preserve axis configuration

2 Inspect supply and brake circuit

3 Reconcile feedback and I/O

4 Commission restrained motion

5 **Validate the duty cycle**

Work sequence

Run the approved operating profile while monitoring temperature, current and braking behavior. Check homing and limits, then retain accepted settings and fault records. Return control authority to the intended machine controller.

Acceptance condition

The complete axis meets its duty-cycle and stopping requirements with a recoverable configuration.

RS-232 rate	9600–115200 baud
AIN0	±10 V differential; 16 bit

Siemens 6ES7332-5HB01-0AB0

Siemens 6ES7323-1BL00-0AA0

Siemens 6ES7332-5HD01-0AB0

Related products require separate compatibility assessment. Retain the final configuration and signed test outcome.