

SICOTRA-F



***METRO TRAIN ELECTRICAL BRAKING DIGITAL
CONTROLLER***



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1. GENERAL

SICOTRA-F is a digital equipment microprocessor-based what drives electrical braking of the metro train according to DC traction machine's dynamic braking characteristic. The system replaces the electromechanical braking controller with camshaft, and the driving servomotor what fit up metro train.

2. OPERATION PRINCIPLE

SICOTRA-F achieves in programmable logic the braking command of the metro train on the preset characteristic, under the SACVAM control.

The equipment processes the input signals received from SACVAM and send the output signals to contactors' coils for the electrical braking command.

SICOTRA-F confirms that the main braking commands to SACVAM was achieved.

3. TECHNICAL FEATURES

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POWER SUPPLY: $24V_{cc}(0.7U_N...1.25U_N)$;

POWER SUPPLY CONTACTOR'S COILS: $110V_{cc}(0.7U_N...1.3U_N)$;

INPUTS:

- 2 digital signals from SACVAM;

OUTPUTS:

- 3 feedback digital signals to SACVAM, according to the breaking controller position;
- 8 relay static outputs to the contactor's coils of breaking scheme; the static relay outputs are protected to short circuit.

STATIC RELAY CHARACTERISTIC:

- Floating channel designed for bootstrap operation. Fully operational to +500V;
- Undervoltage lockout;
- Current detection and limiting loop to limit driven power transistor current;
- Error lead indicates fault conditions and programs shutdown time
- Output in phase with input.

Environmental conditions:

- Operating temperature: $-25^{\circ}C...+70^{\circ}C$;
- Relative humidity: max 93%(+/-3%) at $25^{\circ}C(+/-3^{\circ}C)$;
- Vibration and shock: according IEC 571;

4. TECHNICAL SPECIFICATION:

CS 105/1999, approved by METROREX and AFER (Romanian Railway Authority).