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Product Information

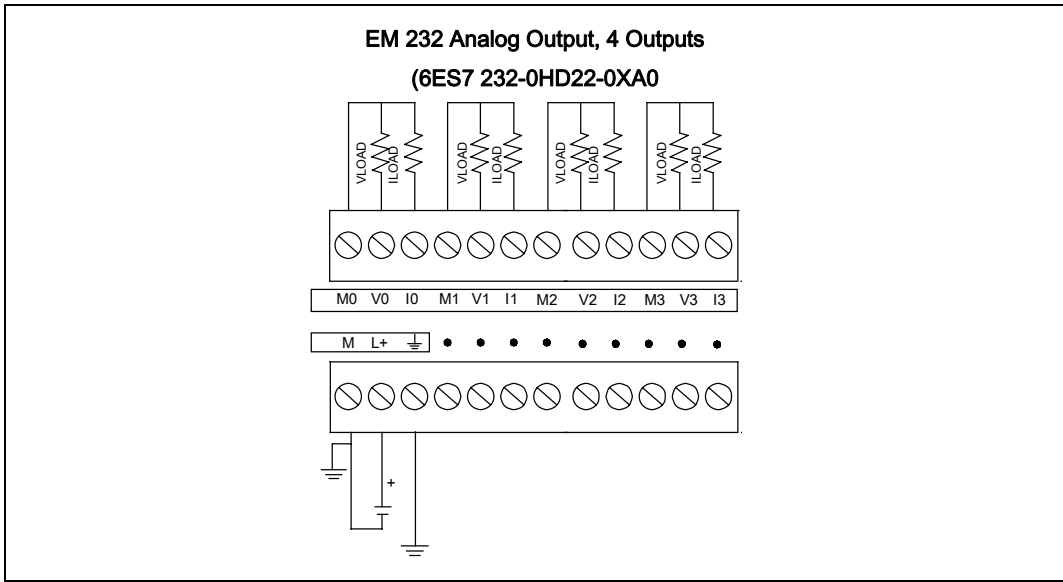
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Analog Expansion Module

EM 232 Analog Output, 4 Outputs

This Product Information contains information about the new EM 232 Analog Output, 4 Outputs expansion module. For more technical information about this module, refer to the S7-200 Programmable Controller System Manual. This manual can be viewed on the STEP 7-Micro/WIN documentation CD, on the Internet at <http://www.siemens.com/S7-200>, or ordered (order number 6ES7 298-8FA24-8BH0).

Description	EM 232 Analog Output, 4 Outputs
Order Number	6ES7 232-0HD22-0XA0
Dimensions (W x H x D)	71.2 mm x 80 mm x 62 mm
Weight	190 g
Dissipation	2 W
VDC requirements +5 VDC + 24 V	20 mA 60 mA (with outputs at 20 mA)
Number of outputs	4
Removable connector	no
Type	Voltage and output
Isolation (field to logic)	None
Signal range Voltage output Current output	± 10 V 0 to 20 mA
Resolution, full-scale Voltage Current	11 bits plus 1 sign bit 11 bits
Data word format Voltage Current	-32000 to +32000 0 to +32000
Accuracy	$\pm 0.5\%$ at 25° C $\pm 2.0\%$ 0° C to 55° C
Setting time Voltage output Current output	100 μ S 2 mS
Maximum drive Voltage output Current output	5000 Ω minimum 500 Ω maximum
LED indicator	One - illuminated if external, 24 VDC is present
24 VDC supply voltage range	20.4 to 28.8 VDC (Class 2, Limited Power, or sensor power from PLC)



Analog LED Indicators

The LED indicators for the analog module are shown below.

LED Indicator	ON	OFF
24 VDC Power Supply Good	No faults	No 24 VDC power

Note

The state of user power is also reported in Special Memory (SM) bits. For more information, see the *S7-200 Programmable Controller System Manual*, Appendix D, SMB8 to SMB21, I/O Module ID and Error Registers.

Installation Guidelines

Use the following guidelines to ensure accuracy and repeatability:

- Ensure that the 24-VDC Sensor Supply is free of noise and is stable.
- Use the shortest possible wires for load connection.
- Use shielded twisted pair wiring.
- Terminate the shield at the module location only.
- Avoid bending the wires into sharp angles.
- Use wireways for wire routing.
- Avoid placing signal wires parallel to high-energy wires. If the two wires must meet, cross them at right angles.