

A.6 Specifications for the EM222 Digital Output Modules

Table A-6 Specifications for EM222 24 VDC Output and Relay Output Modules

Description Order Number	EM222 24 VDC Output 6ES7222-1BF20-0XA0	EM222 Relay Output 6ES7222-1HF20-0XA0
Physical Size		
Dimensions (W x H x D)	46 x 80 x 62 mm	46 x 80 x 62 mm
Weight	150 g	170 g
Power loss (dissipation)	2 W	2 W
Output Features		
Number of outputs	8 points	8 points
Output type	Solid state-MOSFET	Relay, dry contact
Output Voltage		
Permissible range	20.4 to 28.8 VDC	5 to 30 VDC, or 5 to 250 VAC
Rated value	24 VDC	–
Logic 1 signal at maximum current	20 VDC, minimum	–
Logic 0 signal with 10 K Ω load	0.1 VDC, maximum	–
Output Current		
Logic 1 signal	0.75 A	2.00 A
Number of outputs groups	2	2
Number of outputs on (maximum)	8	8
Per group – horizontal mounting (maximum)	4	4
Per group – vertical mounting (maximum)	4	4
Maximum current per common/group	3 A	8 A
Lamp load	5 W	30 W DC/200 W AC
ON state resistance (contact resistance)	0.3 Ω	0.002 Ω , maximum when new
Leakage current per point	10 μ A, maximum	–
Surge current	8 A for 100 ms, maximum	7 A with contacts closed
Overload protection	No	No
Isolation		
Optical isolation (galvanic)	500 VAC for 1 minute	–
Isolation resistance	–	100 M Ω , minimum when new
Isolation coil to contact	–	1500 VAC for 1 minute
Isolation between open contacts	–	750 VAC for 1 minute
In groups of	4 points	4 points
Inductive Load Clamping		
Repetitive Energy dissipation < 0.5 LI ² x switching rate	1 W, all channels	–
Clamp voltage limits	L+ minus 48 V	–
Output Delay		
Off to On	50 μ s, maximum	–
On to Off	200 μ s, maximum	–
Relay		
Switching delay	–	10 ms, maximum
Lifetime mechanical (no load)	–	10,000,000 open/close cycles
Lifetime contacts at rated load	–	100,000 open/close cycles
Cable Length		
Unshielded	150 m	150 m
Shielded	500 m	500 m
Power Consumption		
From +5 VDC (from I/O bus)	50 mA	40 mA
From L+	–	9 mA per output when ON
L+ coil power voltage range	–	20.4 to 28.8 VDC

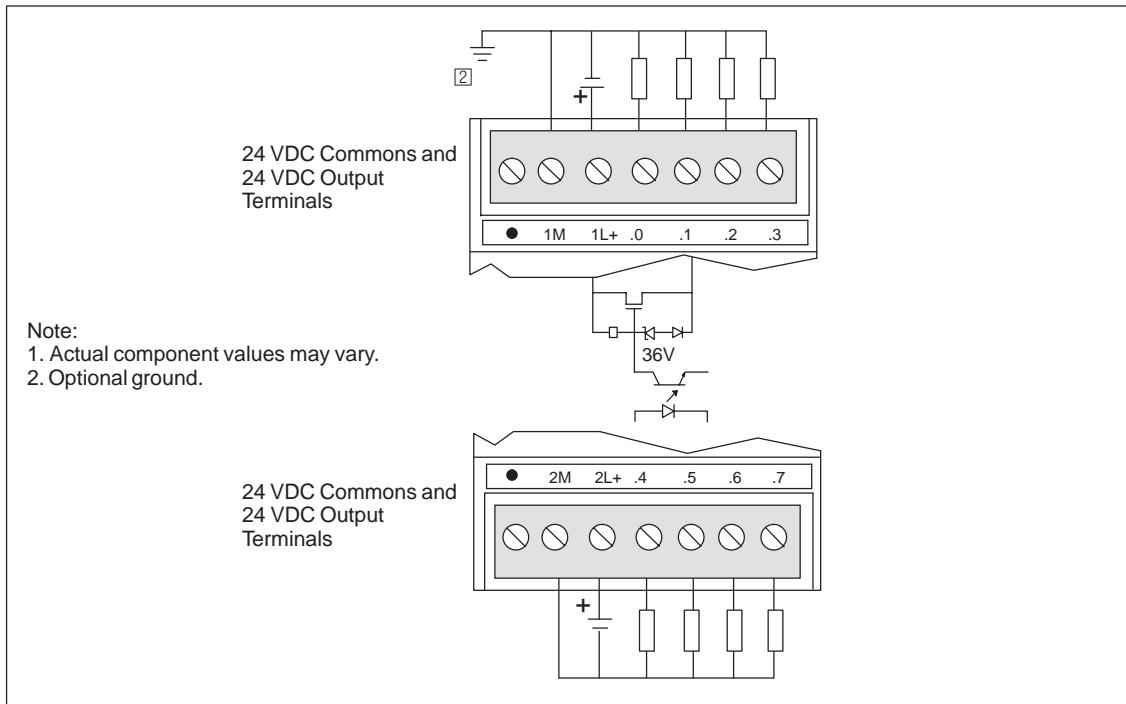


Figure A-9 Connector Terminal Identification for EM222 Digital Output 8 x 24 VDC

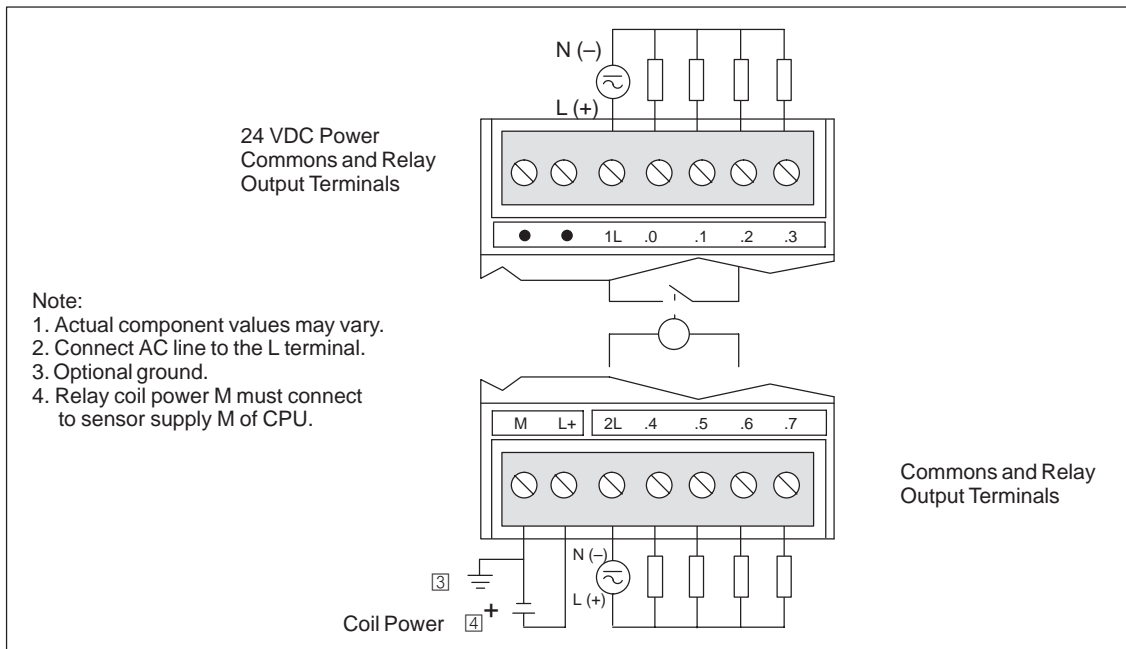


Figure A-10 Connector Terminal Identification for EM222 Digital Output 8 x Relay