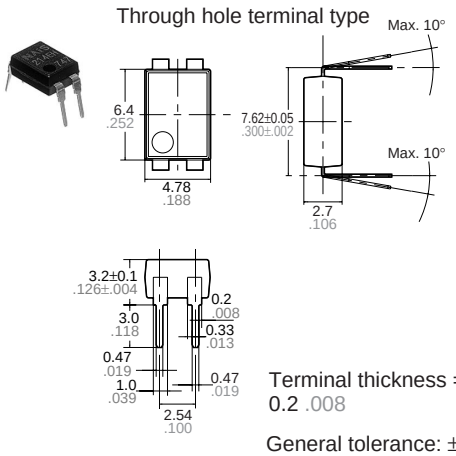
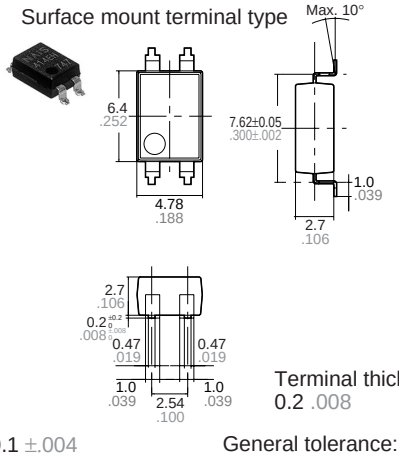
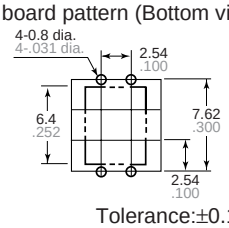
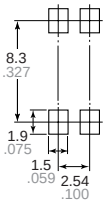
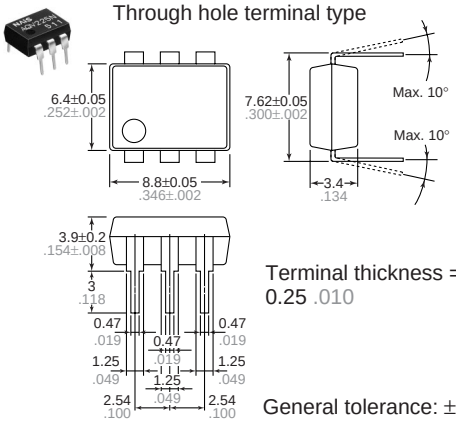
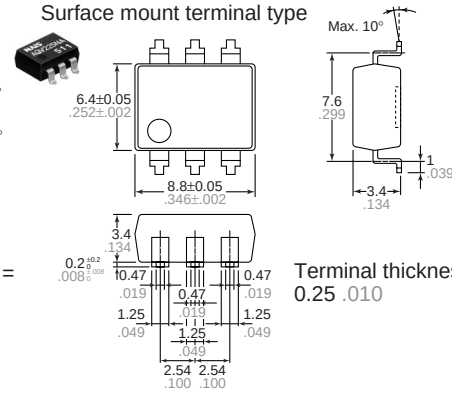
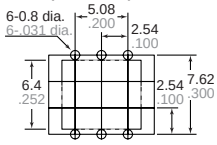
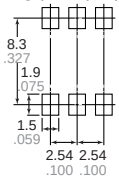
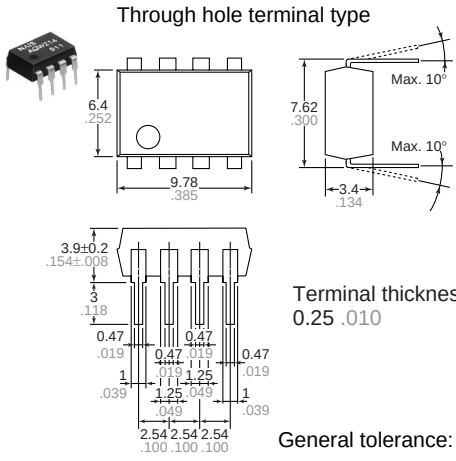
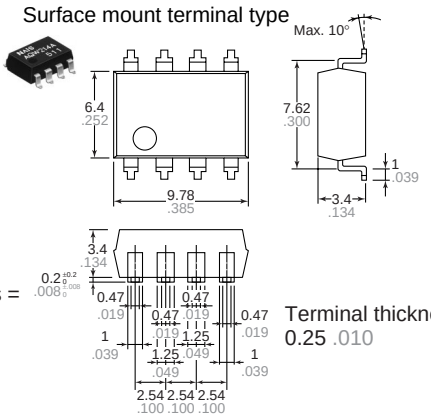
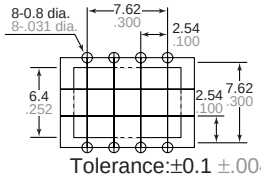
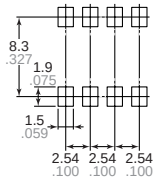
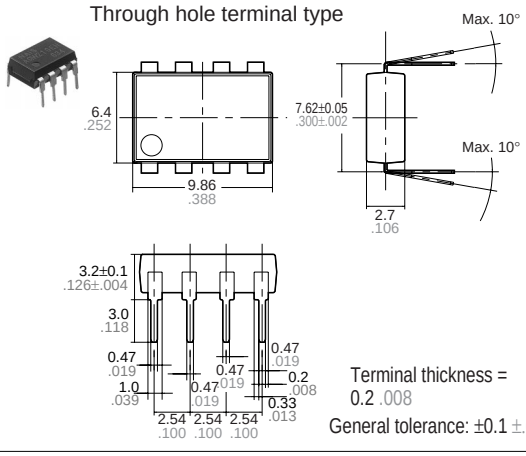
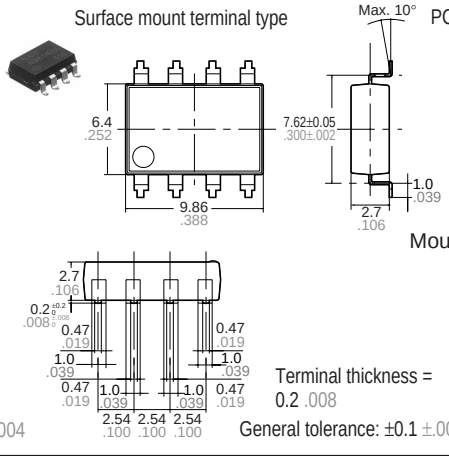
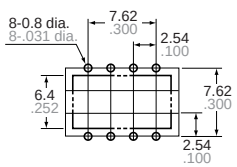
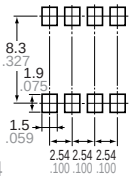
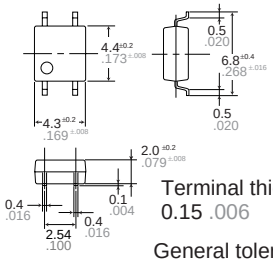
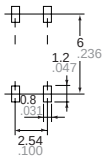
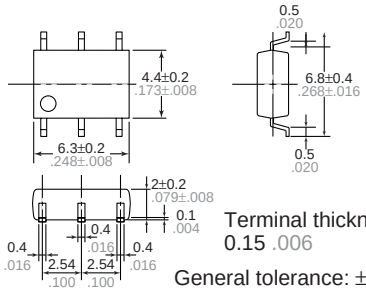
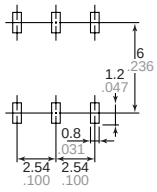
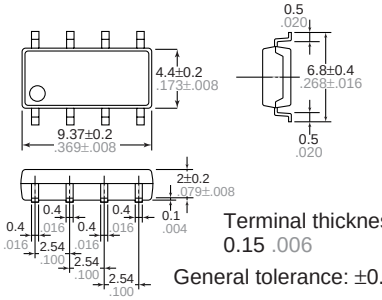
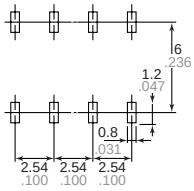
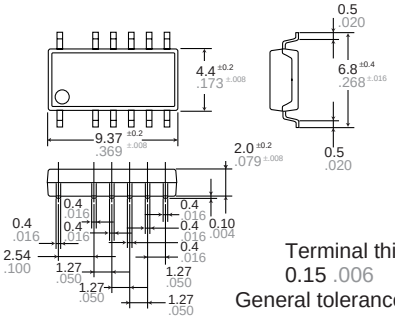
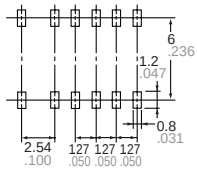
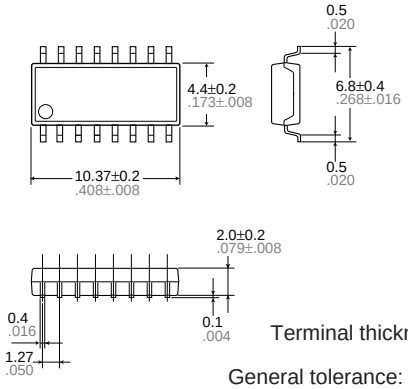
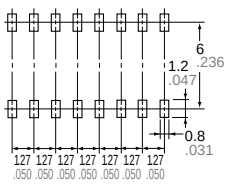
PhotoMOS Relay Dimensions

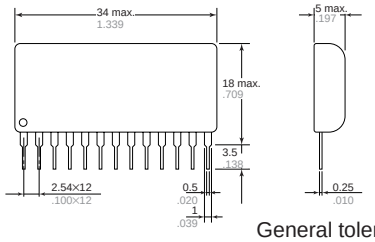
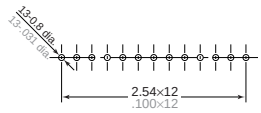
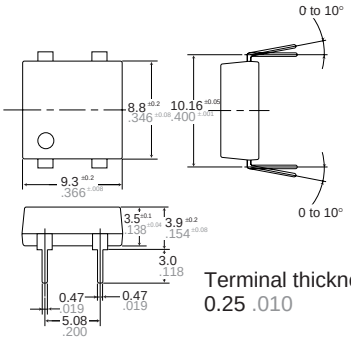
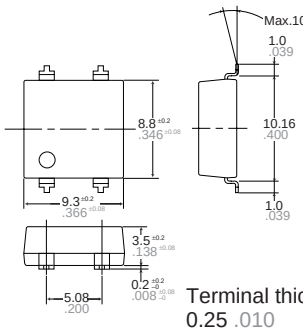
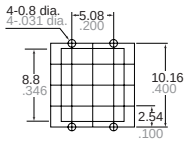
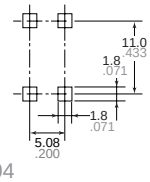
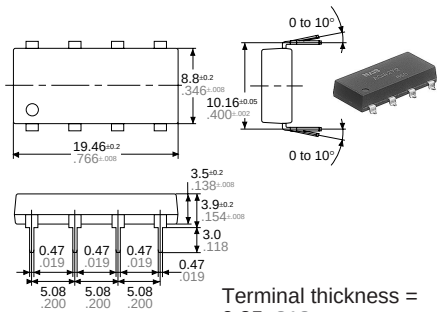
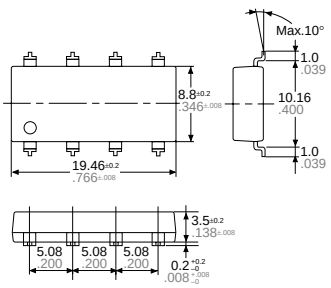
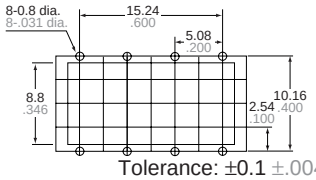
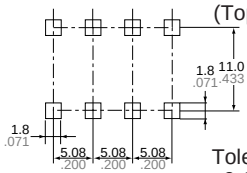
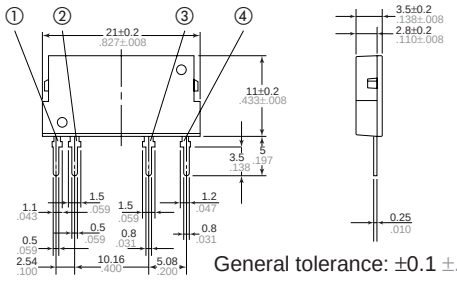
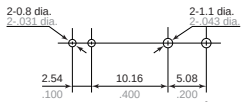
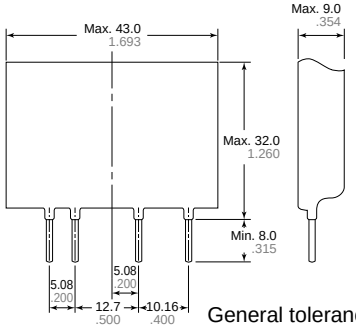
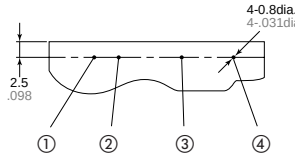
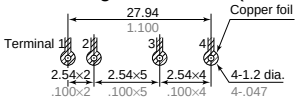
mm inch

Type	Dimensions
AQY21 AQY41 Series	Through hole terminal type  Terminal thickness = 0.2 .008 General tolerance: ±0.1 ±.004 Surface mount terminal type  Terminal thickness = 0.2 .008 General tolerance: ±0.1 ±.004 PC board pattern (Bottom view)  Tolerance:±0.1 ±.004 Mounting pad (Top view)  Tolerance: ±0.1 ±.004
AQV10 AQV20 AQV21 AQV22 AQV23 AQV25 AQV41 AQV45 Series	Through hole terminal type  Terminal thickness = 0.25 .010 General tolerance: ±0.1 ±.004 Surface mount terminal type  Terminal thickness = 0.25 .010 General tolerance: ±0.1 ±.004 PC board pattern (Bottom view)  Tolerance:±0.1 ±.004 Recommended mounting pad (Top view) 
AQW21 AQW22 AQW25 AQW41 AQW45 AQW61 AQW65 Series	Through hole terminal type  Terminal thickness = 0.25 .010 General tolerance: ±0.1 ±.004 Surface mount terminal type  Terminal thickness = 0.25 .010 General tolerance: ±0.1 ±.004 PC board pattern (Bottom view)  Tolerance:±0.1 ±.004 Recommended mounting pad (Top view) 
AQW21❍EH AQW21❍HL AQW41❍EH AQW61❍EH Series	Through hole terminal type  Terminal thickness = 0.2 .008 General tolerance: ±0.1 ±.004 Surface mount terminal type  Terminal thickness = 0.2 .008 General tolerance: ±0.1 ±.004 PC board pattern (Bottom view)  Tolerance:±0.1 ±.004 Mounting pad (Top view)  Tolerance: ±0.1 ±.004

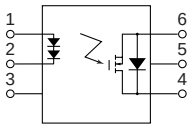
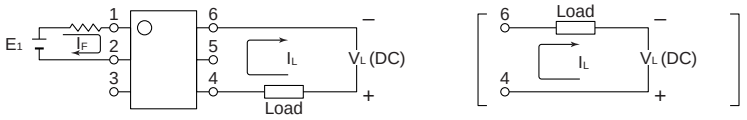
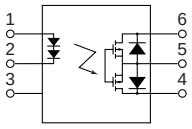
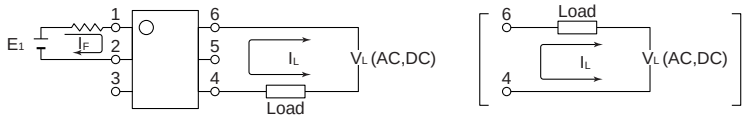
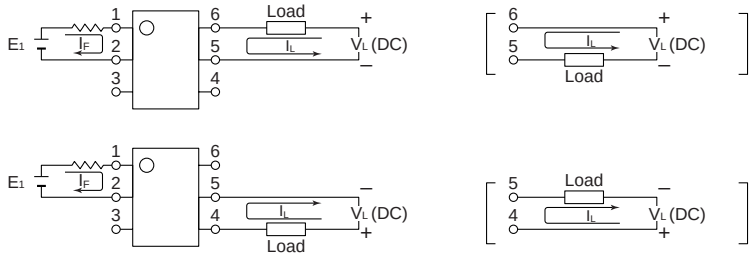
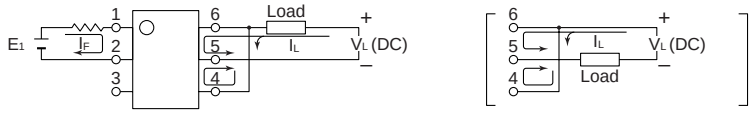
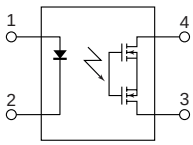
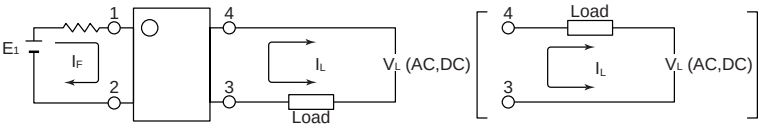
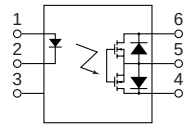
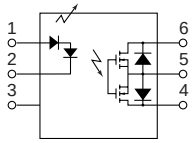
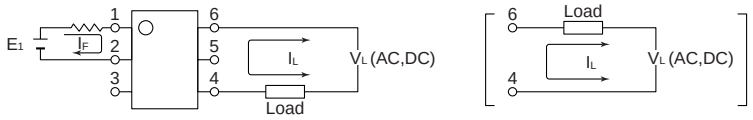
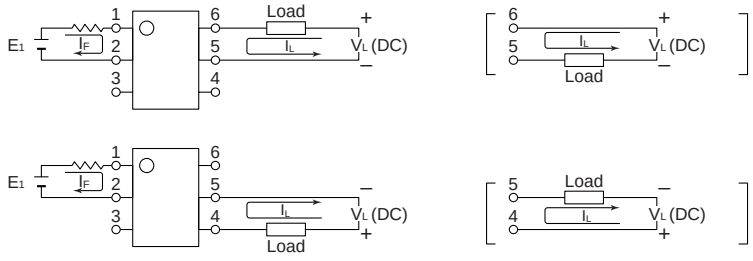
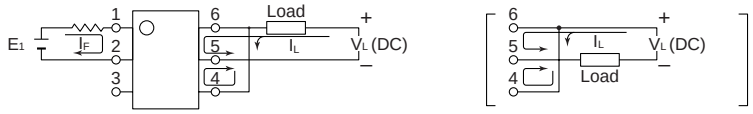
mm inch

Type	Dimensions
AQY21(SOP) AQY22(SOP) AQY41(SOP) Series	  Terminal thickness = 0.15 .006 General tolerance: ±0.1 ±.004 Recommended mounting pad (Top view)  Tolerance: ±0.1 ±.004
AQV21(SOP) AQV22(SOP) AQV41(SOP) Series	  Terminal thickness = 0.15 .006 General tolerance: ±0.1 ±.004 Recommended mounting pad (Top view)  Tolerance: ±0.1 ±.004
AQW21(SOP) AQW61(SOP) Series	  Terminal thickness = 0.15 .006 General tolerance: ±0.1 ±.004 Recommended mounting pad (Top view)  Tolerance: ±0.1 ±.004
AQW21❍T2S (SOP) Series	  Terminal thickness = 0.15 .006 General tolerance: ±0.1 ±.004 Recommended mounting pad (Top view)  Tolerance: ±0.1 ±.004
AQS21(SOP) AQS22(SOP) AQS61(SOP) Series	  Terminal thickness = 0.15 .006 General tolerance: ±0.1 ±.004 Recommended mounting pad (Top view)  Tolerance:±0.1 ±.004

mm inch

Type	Dimensions
AQX21·44 Series	  PC board pattern (Bottom view)  Tolerance: ±0.1 ±.004 General tolerance: ±0.5 ±.020
AQY27 Series	Through hole terminal type   Terminal thickness = 0.25 .010 General tolerance: ±0.1 ±.004 Surface mount terminal type   Terminal thickness = 0.25 .010 General tolerance: ±0.1 ±.004 PC board pattern (Bottom view)  Tolerance: ±0.1 ±.004 Recommended mounting pad (Top view)  Tolerance: ±0.1 ±.004
AQW27 Series	Through hole terminal type   Terminal thickness = 0.25 .010 General tolerance: ±0.1 ±.004 Surface mount terminal type  Terminal thickness = 0.25 .010 General tolerance: ±0.1 ±.004 PC board pattern (Bottom view)  Tolerance: ±0.1 ±.004 Recommended mounting pad (Top view)  Tolerance: ±0.1 ±.004
AQZ10 AQZ20 AQZ40 Series	  General tolerance: ±0.1 ±.004 PC board pattern (Bottom view)  Tolerance: ±0.1 ±.004 AC/DC type ① Input: DC– ② Input: DC+ ③ Output: DC or AC ④ Output: DC or AC DC type ① Input: DC– ② Input: DC+ ③ Output: DC– ④ Output: DC+
AQZ26 Series	  General tolerance ±0.5 ±.020  ① Input: DC – ② Input: DC + ③ Output : AC or DC ④ Output : AC or DC Mounting hole location(Bottom view)  Pitch tolerance: ±0.1 ±.004

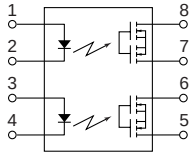
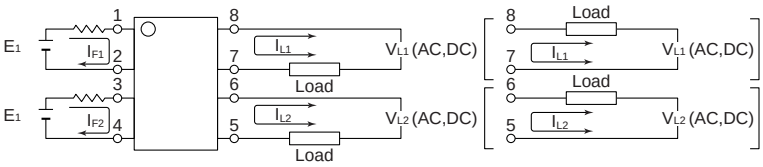
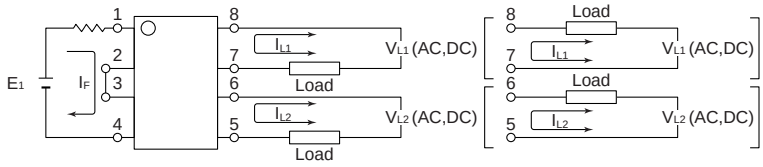
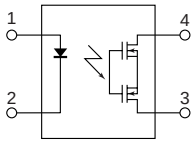
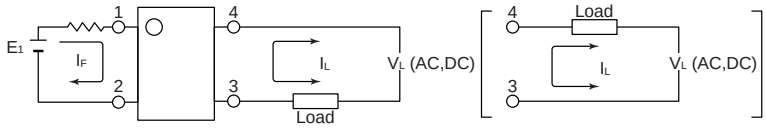
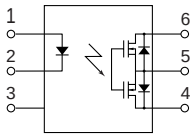
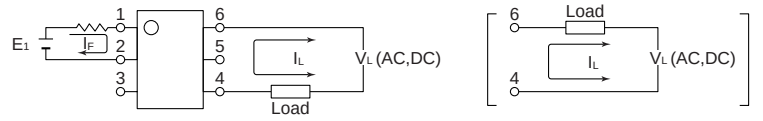
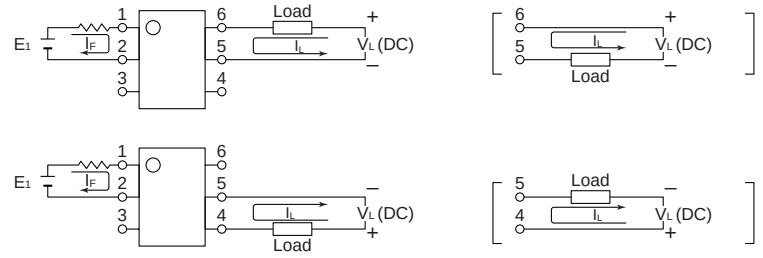
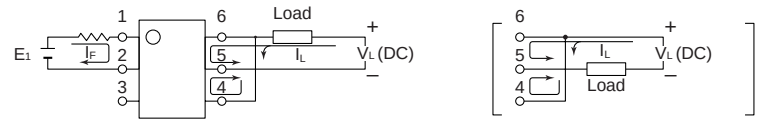
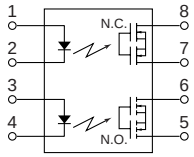
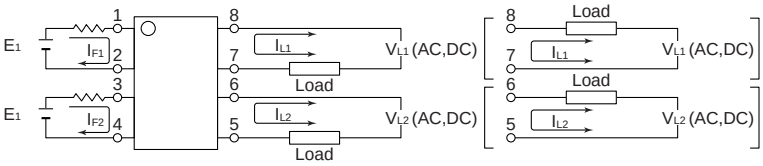
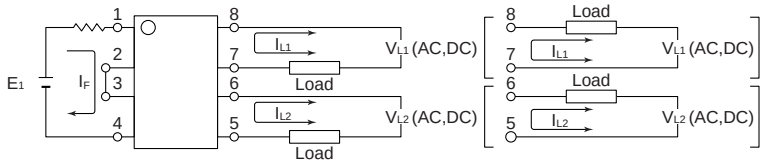
PhotoMOS Relay Schematic and Wiring Diagrams

Type	Schematic	Output configuration	Load	Connection	Wiring diagram
AQV10 Series	 Terminal 3 cannot be used, since it is in the internal circuit of the relay.	1a	DC	A	
AQV20 Series	 Terminal 3 cannot be used, since it is in the internal circuit of the relay.	1a	AC/DC	A	
			DC	B*	
			DC	C	
AQY21 AQY21(SOP) AQY22(SOP) AQY27 Series		1a	AC/DC	—	
AQV21 AQV21(SOP) AQV22 AQV22(SOP) AQV23 AQV25 AQV210HL Series	  (AQV254R) Terminal 3 cannot be used, since it is in the internal circuit of the relay.	1a	AC/DC	A	
			DC	B*	
			DC	C	

*Can be also connected as 2 Form A type. (However, the sum of the continuous load current should not exceed the absolute maximum rating.)

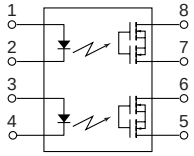
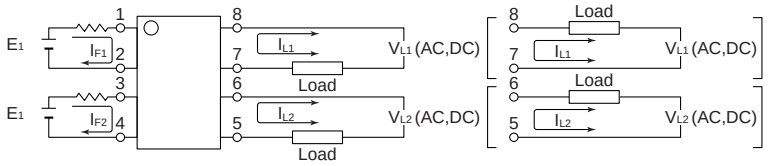
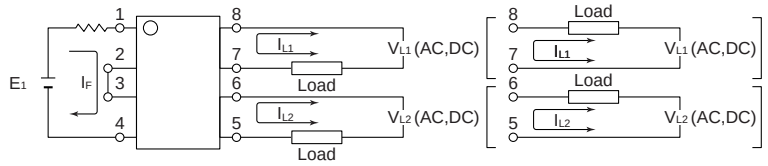
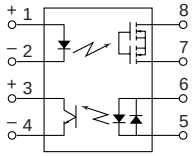
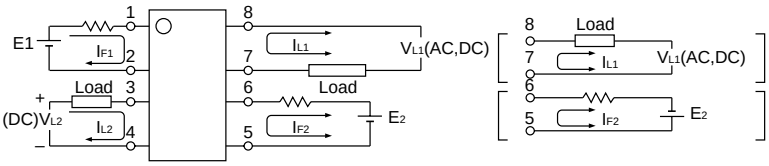
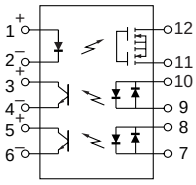
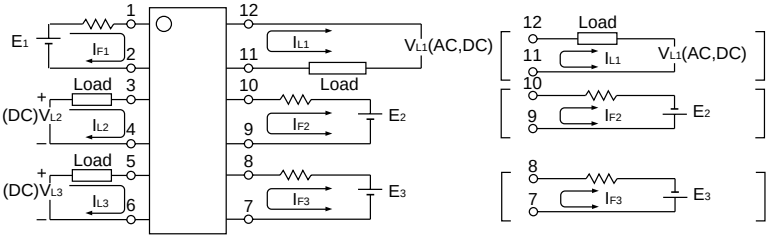
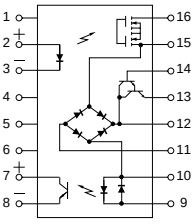
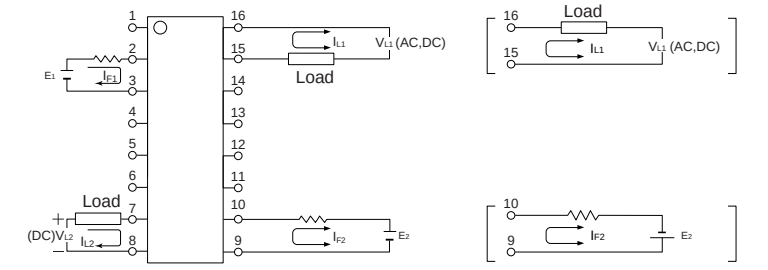
Notes: 1. E_1: Power source at input side; V_{IN}: Input voltage; I_F: LED forward current; I_{IN}: Input current; V_L: Load voltage; I_L: Load current; R: Current limit resistor.

2. Method of connecting the load at the output is divided into 3 types.

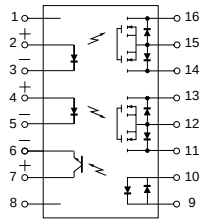
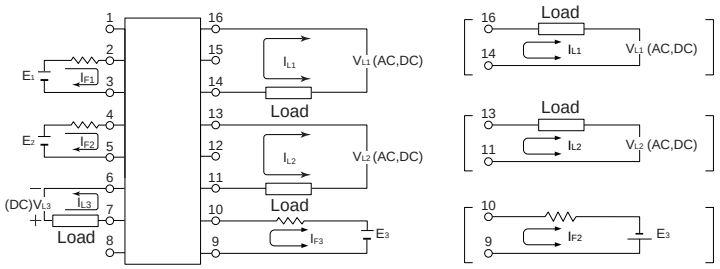
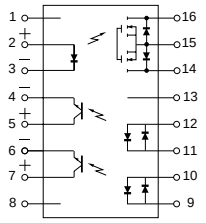
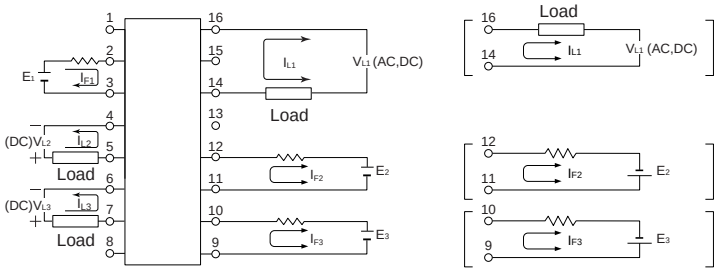
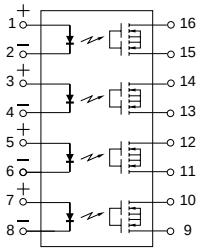
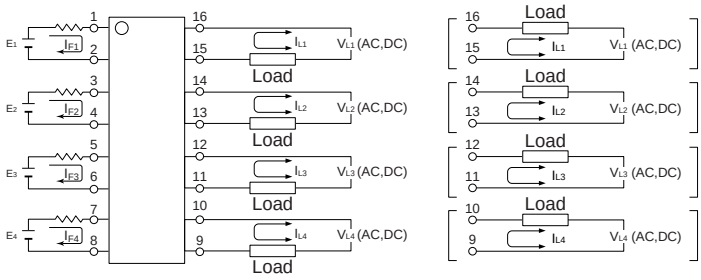
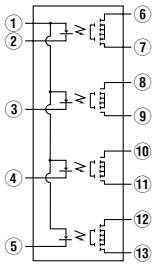
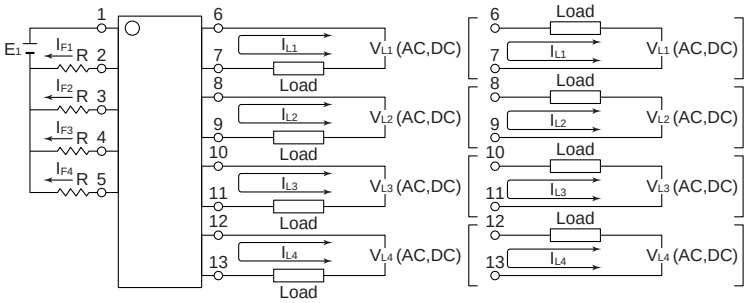
Type	Schematic	Output configuration	Load	Connection	Wiring diagram
AQW21 AQW21(SOP) AQW22 AQW25 AQW27 Series		2a	AC/DC	—	(1) Two independent 1 Form A use  (2) 2 Form A use 
AQY41 AQY41(SOP) Series		1b	AC/DC	—	
AQV41 AQV41(SOP) AQV45 Series	 Terminal 3 cannot be used, since it is in the internal circuit of the relay.	1b	AC/DC	A	
			DC	B**	
			DC	C	
AQW61 AQW65 Series		1a1b	AC/DC	—	(1) Two independent 1 Form A & 1 Form B use  (2) 1 Form A 1 Form B use 

**Can be also connected as 2 Form B type. (However, the sum of the continuous load current should not exceed the absolute maximum rating.)

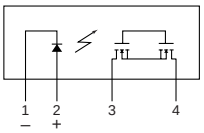
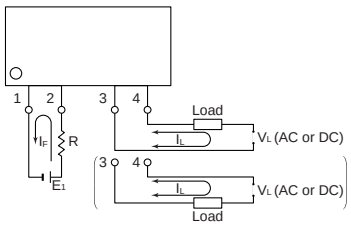
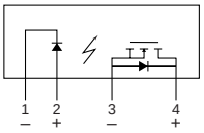
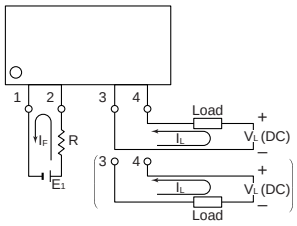
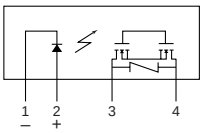
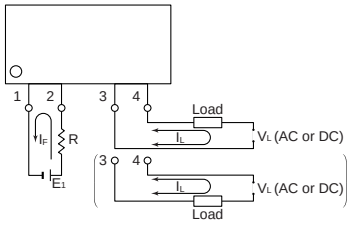
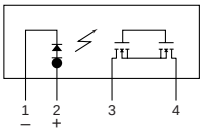
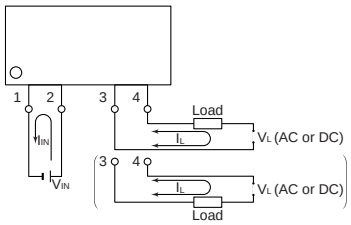
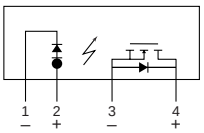
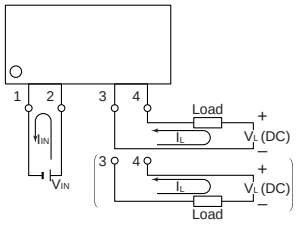
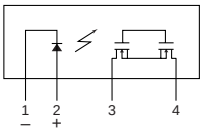
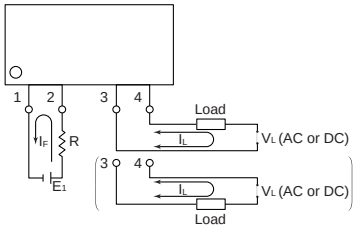
Notes: 1. E_1: Power source at input side; V_{IN}: Input voltage; I_F: LED forward current; I_{IN}: Input current; V_L: Load voltage; I_L: Load current; R: Current limit resistor.
2. Method of connecting the load at the output is divided into 3 types.

Type	Schematic	Output configu-ration	Load	Con-nection	Wiring diagram
AQW41 AQW45 Series		2b	AC/DC	—	(1) Two independent 1 Form B use  (2) 2 Form B use 
AQW21❍TS (SOP) Series	 Relay portion (1,2,7,8 pins) Detector portion (3,4,5,6 pins)	Relay portion 1a Detector portion 1a	Relay portion AC/DC Detector portion DC	—	
AQW21❍T2S (SOP) Series	 Relay portion (1,2,11,12 pins) Detector portion (3,4,9,10 pins) (5,6,7,8 pins)	Relay portion 1a Detector portion 2a	Relay portion AC/DC Detector portion DC	—	
AQS210PS Series	 Relay portion (2,3,15,16 pins) Detector portion (7,8,9,10 pins) Bridge rectifier portion (10,11,12,15 pins) Darlington portion (12,13,14 pins)	Relay portion 1a Detector portion 1a	Relay portion AC/DC Detector portion DC	—	

Notes: 1. E_1: Power source at input side; V_{IN}: Input voltage; I_F: LED forward current; I_{IN}: Input current; V_L: Load voltage; I_L: Load current; R: Current limit resistor.
2. Method of connecting the load at the output is divided into 3 types.

Type	Schematic	Output configu-ration	Load	Con-nection	Wiring diagram
AQS210TS AQS610TS Series	 Relay portion (2,3,14,15,16 pins) (4,5,11,12,13 pins) Detector portion (6,7,9,10 pins)	Relay portion 2a Detector portion 1a	Relay portion AC/DC Detector portion DC	—	
AQS210T2S Series	 Relay portion (2,3,14,15,16 pins) Detector portion (4,5,11,12 pins) (6,7,9,10 pins)	Relay portion 1a Detector portion 2a	Relay portion AC/DC Detector portion DC	—	
AQS225S		4a	AC/DC	—	
AQX21○44 Series (Multi-channel type)	 ① Input Common: DC+ ② Input 1: DC– ③ Input 2: DC– ④ Input 3: DC– ⑤ Input 4: DC– ⑥ Output 1 (N.O.): DC or AC ⑦ Output 1 (N.O.): DC or AC ⑧ Output 2 (N.O.): DC or AC ⑨ Output 2 (N.O.): DC or AC ⑩ Output 3 (N.O.): DC or AC ⑪ Output 3 (N.O.): DC or AC ⑫ Output 4 (N.O.): DC or AC ⑬ Output 4 (N.O.): DC or AC	4a	AC/DC	—	

Notes: 1. E_1: Power source at input side; V_{IN}: Input voltage; I_F: LED forward current; I_{IN}: Input current; V_L: Load voltage; I_L: Load current; R: Current limit resistor.
2. Method of connecting the load at the output is divided into 3 types.

Type	Schematic	Output configu-ration	Load	Con-nection	Wiring diagram
AQZ20 AQZ26 Series		1a	AC/DC	—	
AQZ10 Series		1a	DC	—	
AQZ20❍V Series		1a	AC/DC	—	
AQZ20❍D Series		1a	AC/DC	—	
AQZ10❍D Series		1a	DC	—	
AQZ40 Series		1b	AC/DC	—	

Notes: 1. E_1: Power source at input side; V_{IN}: Input voltage; I_F: LED forward current; I_{IN}: Input current; V_L: Load voltage; I_L: Load current; R: Current limit resistor.
2. Method of connecting the load at the output is divided into 3 types.