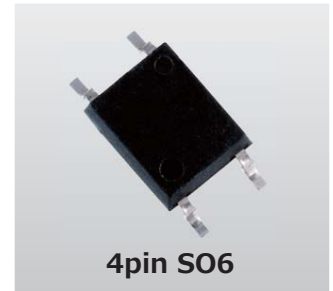


60 V/0.7 A photorelay in 4pin SO6 package for factory automation and other industrial applications

“TLP176AM” is a photorelay with an OFF-state output terminal voltage rating of 60 V and an ON-state current rating of 0.7 A, using the 4pin SO6 package suitable for factory automation and other industrial applications.

TLP176AM incorporates MOSFETs fabricated with the latest U-MOSIX process, and supports an ON-state current of up to 0.7 A. In addition, it has improved characteristics (such as ON-state current and isolation voltage) over the conventional product TLP172A, and can be used as a direct replacement. It also has improved ESD immunity compared to the conventional product TLP172AM.

TLP176AM is suitable for use as a replacement for 1-Form-A mechanical relays—replacing mechanical relays with photorelays helps to improve system reliability and reduce the space required for relays and relay drivers. As TLP176AM has a rated operating temperature of up to 110 °C (max), it is also easier to allow for a temperature margin in system-level thermal design.



Features

- 4pin SO6 package
- Absolute maximum ratings: OFF-state output terminal voltage 60 V, ON-state current 0.7 A, 2.1 A (pulsed), Operating temperature -40 to 110 °C
- Improved ESD immunity

Applications

- Industrial equipment (PLC, I/O interface, etc.)
- Building automation systems (HVAC^[1], etc.)
- Semiconductor testers
- Security equipment
- Replacement of mechanical relays (AC 24 to 32 V system, DC 24 to 48 V system)



PLC

Product Specifications

(@T_a=25 °C)

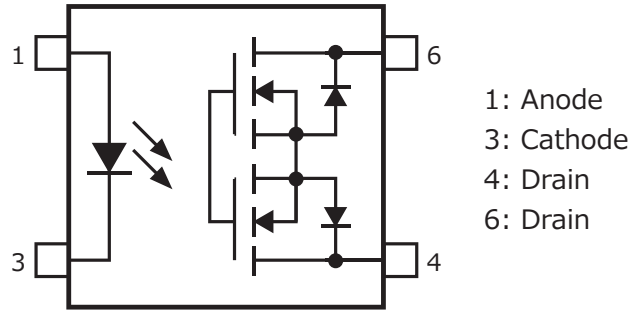
Part number	Package	Absolute maximum ratings				Trigger LED current I _{FT} max (mA)	ON-state resistance R _{ON} max (Ω)	Turn-on time t _{ON} max (ms)	Turn-off time t _{OFF} max (ms)	Isolation voltage BV _s min (V _{rms})	Contact
		OFF-state output terminal voltage V _{OFF} (V)	ON-state current I _{ON} (A)	ON-state current (pulsed) I _{ONP} (A)	Operating temperature T _{opr} (°C)						
TLP176AM ^[2]	4pin SO6	60	0.7	2.1	-40 to 110	3	2	3	0.5	3750	1-Form-A
TLP172AM			0.5	1.5				2			

Notes:

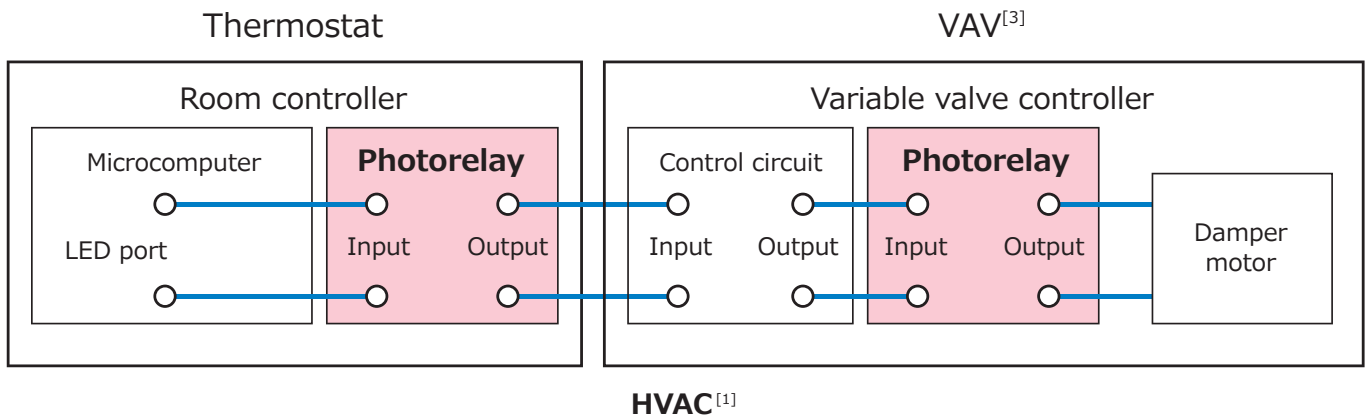
[1] HVAC (Heating, Ventilation, and Air Conditioning)

[2] New products

Pin Assignment



Application Circuit Example



Notes:

[3] VAV (Variable Air Volume)

The application circuits shown in this document are provided for reference purposes only. Thorough evaluation is required, especially at the mass-production design stage. Toshiba Electronic Devices & Storage Corporation does not grant any license to any industrial property rights by providing these examples of application circuits.

Before creating and producing designs and using, customers must also refer to and comply with the latest versions of all relevant information of this document and the instructions for the application that Product will be used with or for.

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