

Opto-coupler in component housing WAVESERIES

Opto-couplers WAVESERIES

Opto-coupler in WAVEBOX:

- Independent connection technology
 - pluggable connection unit optionally available with screw or tension clamp connection technology
- Fast commissioning and after-sales service
 - pluggable replacement PCBs
- Save wiring
 - cross-connection option at input / output
- Fast switching
 - high frequency output, up to 100 kHz
- Reliable power output
 - short-circuit and overload proof
- Space-saving components
 - 4-channel opto-couplers

WOS 1 5 VDC

negative switching



WOS 1 3.5-15 VDC



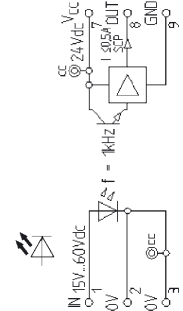
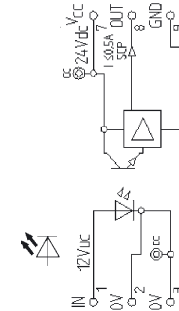
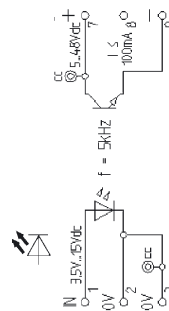
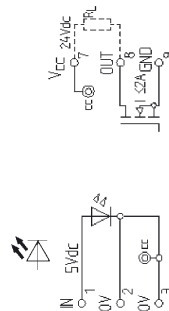
WOS 1 12 VDC



WOS 1 15-60 VDC



Schematic circuit diagram



Ordering data	Type	Cat. No.	Type	Cat. No.	Type	Cat. No.	Type	Cat. No.
Screw connection	WOS 1 5 Vdc	8275430000	WOS 1 3.5-15 Vdc	8275390000	WOS 1 12 Vdc	8275500000	WOS 1 15-60 Vdc	8237730000
Tension clamp connection	WOZ 1	8430030000	WOZ 1	8430040000	WOZ 1	8429990000	WOZ 1	8430090000
Input								
Input voltage	4.0 Vdc... 5 Vdc ...6.0 Vdc		3.5 Vdc...15 Vdc		10 Vdc... 12 Vdc ...14 Vdc		15 Vdc...60 Vdc ¹⁾	
Input current	7.5 mA at 4.0 V 13.5 mA at 5.0 V 19.0 mA at 6.0 V		10.5 mA at 3.5 V 12.5 mA at 5.0 V 25.0 mA at 15 V		15.3 mA ac at 12 V 12.4 mA dc at 12 V		1.4 mA at 15 V 2.5 mA at 24 V 4.1 mA at 48 V ...60 V	
Making threshold	approx.2.2 V		approx.2.5 V		approx.8 V		ca.12 V	
Breaking threshold	approx.2.0 V		approx.1.5 V		approx.7 V		approx.9 V	
Input frequency	100 Hz		5 kHz				1 kHz	
Switch-on delay	100 us		8 us		10 ms ac and 4 ms dc		90 us	
Switch-off delay	1 ms		35 us		20 ms ac and 18 ms dc		250 us	
Status indicator	LED green in input		LED green in input		LED green in output		LED green in output	
Output								
Output current range	negative switching				short-circuit protection		short-circuit protection	
Nominal output current	max. 2 A*		max. 100 mA		10 mA...0.6 A		10 mA...0.6 A	
Output voltage	18 Vdc... 24 Vdc ...30 Vdc		5 Vdc...48 Vdc		max. 500 mA		max. 500 mA	
Response threshold					12 Vdc... 24 Vdc ...28 Vdc		12 Vdc... 24 Vdc ...28 Vdc	
Residual voltage	≤ 300 mV		≤ 1.5 V at 100 mA		typ. 0.7 A ... 1.8 A		typ. 0.7 A ... 1.8 A	
Protection circuit	Varistor		Varistor, integr. free-wh. diode		min. 0.7 A; max. 2.4 A		min.0.7 A; max. 2.4 A	
Voltage supply					≤ 0.5 V, at 500 mA		≤ 0.5 V at 500 mA	
Short-circuit in output	no		no		Polarity protection, varistor		Polarity protection, varistor	
					12Vdc... 24Vdc ...28Vdc		12 Vdc... 24 Vdc ...28 Vdc	
					yes / max. 96 h		yes / max. 96 h	
Temperature								
Operating temperature**	-25 °C...+50 °C rowed		-25 °C...+60 °C rowed		-25 °C...+60 °C rowed		-25 °C...+60 °C rowed	
Storage temperature	-40 °C...+85 °C		-40 °C...+85 °C		-40 °C...+85 °C		-40 °C...+85 °C	
Mechanical data								
Overall width	22.5 mm		22.5 mm		22.5 mm		22.5 mm	
Housing material	Polyamide PA 66		Polyamide PA 66		Polyamide PA 66		Polyamide PA 66	
Approvals	UL/CSA		UL/CSA		UL/CSA		UL/CSA	
Reliable separation according to EN 50 178								
Coordination of insulation according to EN 50 178								
Opto-coupler according to VDE 0884								
Rated voltage	300 V		300 V		300 V		300 V	
Rated impulse voltage	4 kV		4 kV		4 kV		4 kV	
Overvoltage category	III		III		III		III	
Pollution severity	2		2		2		2	
Clearance/creepage path	≥ 5.5 mm		≥ 5.5 mm		≥ 5.5 mm		≥ 5.5 mm	
Accessories, dimensions and connection data see	Page 298 + 308		Page 298 + 308		Page 298 + 308		Page 298 + 308	

* at ambient temperature 20 °C/horizontal installation

¹⁾ **Caution:** Cross-connections may only be used for voltages ≤ **50 Vdc** (extra-low voltage).