

Photoelectrics Amplifier Type S1425

CARLO GAVAZZI



- Amplifier relay for photoelectric switches
- Sensitivity automatically adjusted
- Modulated and synchronized light
- 2 selectable frequencies on rotary switch
- Break switching function
- Supply voltage: 24 VDC, 24 VAC, 115 VAC, 230 VAC
- Output 8 A/250 V SPDT relay and 30 mA NPN
- LED-indications for relay, power limit and power supply ON
- Plug-in module

Product Description

Amplifier relay for photoelectric switches types MOFR and MOFT. "S-System" plug-in housing. Autoadjusted sensitivity and power limit alarm

output (NPN). 2 frequencies for modulated light selectable on rotary switch. Break switching function on relay output.

Ordering Key

S 1425 156 724

Type _____
 Special function _____
 Output type _____
 Voltage supply _____

Type Selection

Ordering no.
Supply: 24 VDC

S 1425 156 724

Ordering no.
Supply: 24 VAC

S 1425 156 024

Ordering no.
Supply: 115 VAC

S 1425 156 115

Ordering no.
Supply: 230 VAC

S 1425 156 230

Output Specifications

Switching function	
Contact output current (1&3)	
Continuous AC (I_a) AC1	8 A/250 VAC ohmic load
Continuous DC (I_a) DC1	8 A/24 VDC ohmic load
Contact life mechanical	30 x 10 ⁶ operations
Contact life electrical	2,5 x 10 ⁵ operations
Rated insulation voltage (U_i)	250 VAC (contact/electronics)
Dielectric strength	
Dielectric voltage	2 kVAC (rms)
Rated impulse withstand volt.	4 kV (1.2/50 μ s)
NPN Output (Pin 9)	
Continuous (I_a)	30 mA/30 VDC
Short-time (I)	50 mA/30 VDC

Supply Specifications

Power supply AC types (U_B)	Overvoltage cat. III (IEC 60664)
Rated operational voltage through pins 2 & 10	230 230 VAC \pm 15%, 45 to 65 Hz
	115 115 VAC \pm 15%, 45 to 65 Hz
	024 24 VAC \pm 15%, 45 to 65 Hz
Voltage interruption	\leq 40 ms
Rated insulation voltage (U_i)	250 VAC (cont./elect.)
Rated impulse withstand volt.	4 kV (1.2/50 μ s)
Dielectric voltage	\geq 2.0 kVAC (rms)
Power supply DC types (U_B)	
Rated operational volt. 724	
Pin 2 positive & pin 10 negative	24 VDC \pm 15%
Rated insulation voltage (U_i)	None
Rated impulse withstand volt.	800 V (1.2/50 ms)
Dielectric voltage	None
Rated operational power	
AC supply	5 VA @ 230 VAC
DC supply	3 W @ 24 VDC

General Specifications

Transmitter	Pins 5 & 7 (pin 7 negative)
Supply voltage (open loop)	8V square wave
Current	≤ 200 mA short-circuit protected
Output resistance	27 Ω
Receiver	Pins 6 & 8 (pin 8 negative)
Supply voltage (open loop)	8 VDC
Short-circuit current	18 mA
Input resistance	470 Ω
Modulating frequency	
Transmitter	
Frequency A	Approx. 5 kHz
Frequency B	Approx. 3 kHz
Operating frequency (f)	10 Hz
Response time (output) (at 80% damping)	
OFF-ON (t_{ON})	Max. 150 ms
ON-OFF (t_{OFF})	Max. 50 ms
Auto-adjust time constant	1,8 s
Power ON delay	Approx. 0.6 s
Output function	Break switching
Indication	
Supply ON	LED, green
Output ON	LED, yellow
Power limit	LED, red
Environment	
Installation category	II (IEC 60664)
Degree of protection	IP 20 (IEC 60529, 60947-1)
Pollution degree	II (IEC 60664/60664A, 60947-1)
Operating temperature	-20° to +50°C (-4° to +122°F)
Storage temperature	-50° to +85°C (-58° to +185°F)
Weight	
AC supply	200 g
DC supply	125 g
CE-marking	Yes

Mode of Operation

S 1425 has a constant output level on pins 5-7. The regulator on the receiver (pins 6-8) keeps a constant amplitude on the input to the PLL device. Therefore a slow damping of the signal will not change the status of the relay. A fast damping of the signal (approx. 80%) will change the status of the relay (beam interrupted). If the damping is maintained, the regulator will increase the amplitude on the PLL device, and normal function is obtained.

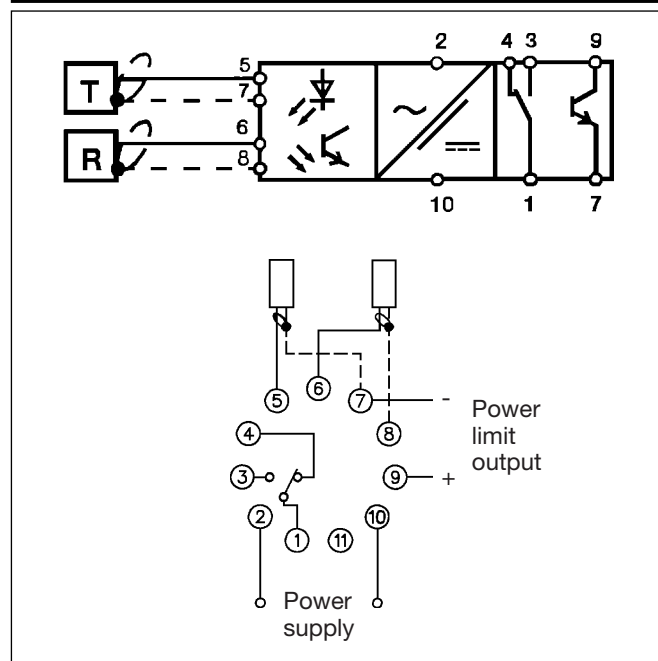
To achieve optimum performance by the auto-adjust system, the following operating ranges must be obtained:

MOFT5:
Distance approx. 1 to 2.5 m

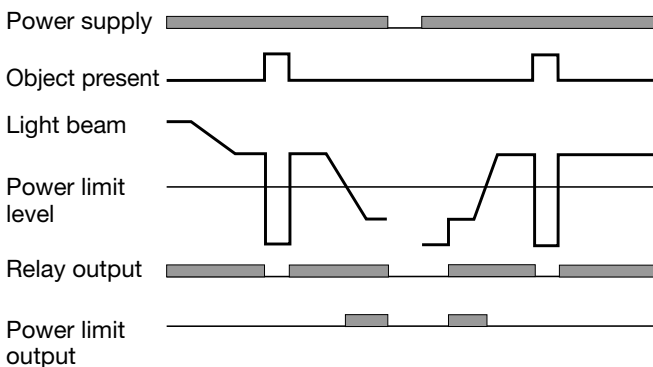
MOFT20:
Distance approx. 2.5 to 7 m

MOFT50:
Distance approx. 7 to 20 m

Wiring Diagrams



Operation Diagram



Accessories

- 11 pole circular socket S111, S111A, S411, ZPD11
- Socket cover for S111 BB1
- Socket cover for S411 BB4
- Hold down spring HF
- Mounting rack SM13
- Front panel mounting bezel FRS2
- Potentiometer knob lock PL1

Delivery Contents

- Amplifier
- **Packaging:** styropor box