Timers
Star Delta
Types DAC01, PAC01

CARLO GAVAZZI


DAC01


PAC01

- Time range (Star): 0.1 to 600 s
- Time range (Star to Delta): 50 to 130 ms
- Knob selection of star time range
- Knob adjustable time setting
- Automatic start
- Repeatability: ≤ 0.2%
- Output: 8 A SPDT relay with neutral centre position
- For mounting on DIN-rail in accordance with DIN/EN 50 022
- 22.5 mm Euronorm housing or 36 mm Plug-in module housing
- LED indication for relay status and power supply ON

Product Description

Star-delta control relay with two adjustable time ranges: Star function (0.1 to 600 s) and star to delta function (50 to 130 ms). For mounting on DIN-rail (DAC 01) on Plug-in (PAC01).

Ordering key

DAC 01 C M24

- Housing
- Function
- Type
- Item number
- Output
- Power Supply

Type Selection

Mounting	Output	Housing	Supply: 24 to 240 VAC/DC	Supply: 380 to 415 VAC
For DIN-rail Plug-in	1 x SPDT	D - 22.5 mm P - Housing	**DAC 01 C M24** **PAC 01 C M24**	**DAC 01 C M40** **PAC 01 C M40**

Time Specifications

Time ranges (star) Knob selectable	0.1 to 1 s 1 to 10 s 6 to 60 s 60 to 600s
Star to delta delay Neutral centre position	50 to 130 ms between star and delta position
Setting accuracy	≤ 5%
Repeatability	≤ 0.2%
Time variation Within rated power supply Within ambient temperature	 ≤ 0.05% ≤ 0.2%
Reset Time and relay	 Power supply interruption ≥ 200 ms

Output Specifications

Output	SPDT relay with neutral centre position
Rated insulation voltage	250 VAC (RMS)
Contact Ratings ($AgSnO_2$) Resistive loads AC 1 DC 12 Small inductive loads AC 15 DC 13	μ 8 A @ 250 VAC 5 A @ 24 VDC 2.5 A @ 250 VAC 2.5 A @ 24 VDC
Mechanical life	≥ 30 x 10^6 operations
Electrical life	≥ 10^5 operations (at 8 A, 250 V, cos φ = 1)
Operating frequency	< 7200 operations/h
Dielectric strength Dielectric voltage Rated impulse withstand voltage	 2 kVAC (RMS) 4 kV (1.2/50μs)

CARLO GAVAZZI

Supply Specifications

Power supply		Overvoltage cat. III
Rated operational voltage through terminals:		(IEC 60664, IEC 60038)
A1 and A2	(DAC01)	
2, 10	(PAC01)	
	M24	24 to 240 VAC/DC +10% -15%, 45 to 65 Hz
	M40:	380 to 415 VAC +10% -15%, 45 to 65 Hz
Voltage interruption		≤ 10 ms
Rated operational power		
M24	AC Supply:	4 VA
	DC Supply:	1.5 W
M40	AC Supply:	13 VA @ 400 VAC, 50 Hz

General Specifications

Power ON delay	≤ 100 ms
Power OFF delay	≤ 100 ms
Indication for	
Power supply ON	LED, green
Output relays ON	LED, yellow (flashing when timing)
Environment	(EN 60529)
Degree of protection	IP 20
Pollution degree	3 (DAC01) ,2 (PAC01) (IEC 60664)
Operating temperature	-20 to 60 °C, R.H. < 95%
Storage temperature	-30 to 80 °C, R.H. < 95%
Housing dimensions	
DIN-rail version	22.5 x 80 x 99.5 mm
Plug-in version	36 x 80 x 94 mm
Weight	Approx 110 g
Screw terminals	DAC01
Tightening torque	Max 0.5 Nm according to IEC EN 60947
Approvals	UL, CSA
CE Marking	Yes
EMC	Electromagnetic Compatibility
Immunity	According to EN 61000-6-2
Emission	According to EN 61000-6-3
Timer Specifications	According to EN 61812-1

Time Setting

Upper knob:
Setting of star time range

Centre knob:
Star time setting on relative scale: 1 to 10 with respect to the chosen range.

Lower knob:
Star to delta time setting (50 to 130 ms)

Mode of Operation

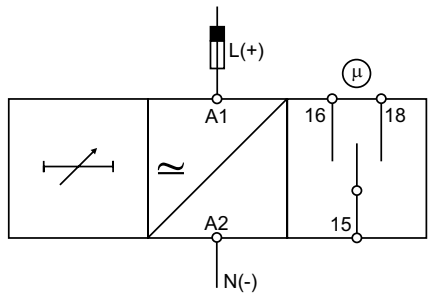
The output relay is normally in the neutral centre position. When the power supply is applied, the relay switches to star position (pin 16 or 4) and the star period starts.

At the end of the set time period, the relay returns to the neutral centre position and the set delay between star and delta position starts. At the end of the star to delta delay (adjustable from 50 to 130 ms), the relay switches in delta position (pin 18 or 3) and does not release until the power supply is interrupted for at least 200 ms.

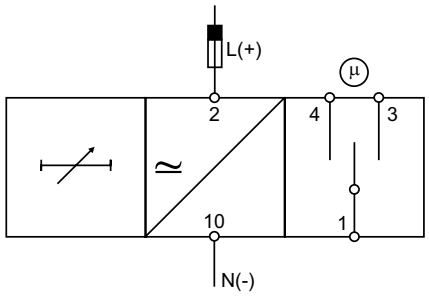
If the power supply is interrupted for more than 200 ms before the star time period has expired, the relay does not operate and the time circuit is set to zero. The relay is ready for a new time period.

Wiring Diagrams

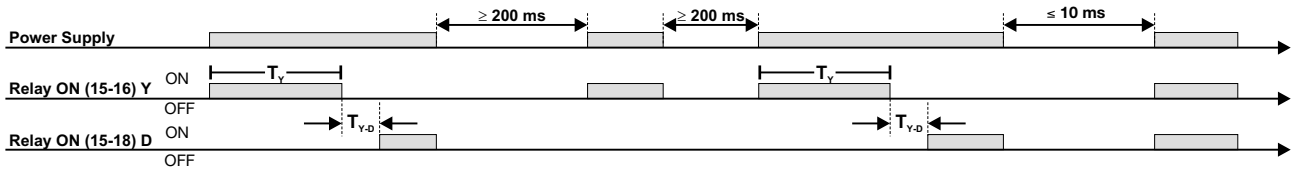
DAC01



PAC01

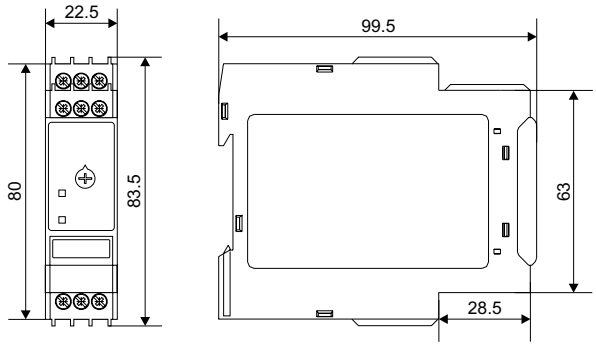


Operation Diagram



Dimensions

DIN-rail



Plug-in