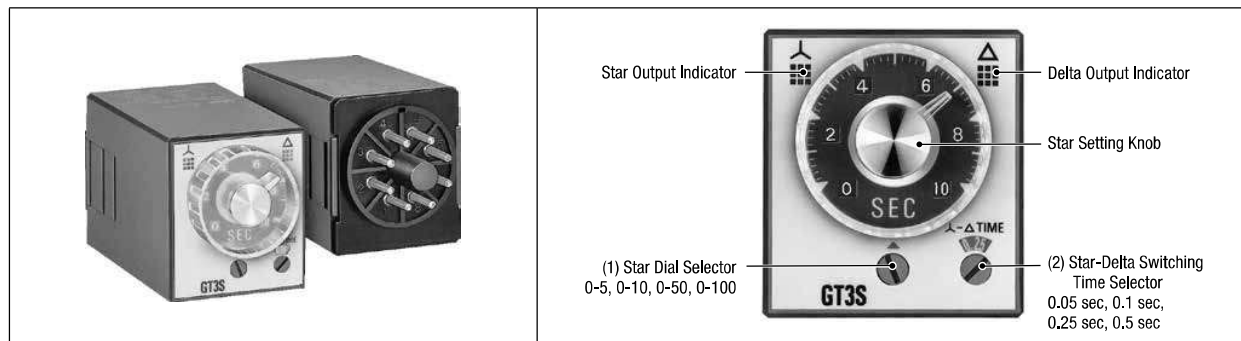


GT3S-1/GT3S-2 (8-Pin)

Star-Delta Output Mode



(1) Operation Mode	Rated Voltage	Time Range	Output	Contact	Part No.
Star-Delta	100 to 240V AC	Star: 0.05 to 100 sec Star-Delta switching time 0.05 sec 0.10 sec 0.25 sec 0.50 sec	250V AC/ 30V DC, 5A (resistive load)	Star: Delayed SPST-NO Delta: Delayed SPST-NO	GT3S-1AF20
				Star: Delayed SPST-NO Delta: Delayed SPST-NO Instantaneous SPST-NO	GT3S-2AF20

Time Ranges

① Star Dial Selector		② Star-Delta Switching Time Selector	
Dial	Time Range	Indication	Time
0 – 5	0.05 sec – 5 sec	0.05	0.05 sec
0 – 10	0.1 sec – 10 sec	0.1	0.1 sec
0 – 50	0.5 sec – 50 sec	0.25	0.25 sec
0 – 100	1 sec – 100 sec	0.5	0.5 sec

Contact Ratings

Rated Load	250V AC/30V DC, 5A (resistive load) 250V AC, 1.5A/30V DC, 2A (inductive load)	
Maximum Switching Power	AC: 1250VA DC: 150W	
Maximum Switching Voltage	250V AC/125V DC	
Maximum Switching Current	5A	
Maximum Switching Frequency	600 operations/hour	
Minimum Applicable Load	5V DC, 100mA (reference value)	
External Protection Element	Fuse 250V, 5A	
Life	Electrical	100,000 operations minimum (rated load)
	Mechanical	20,000,000 operations minimum

General Specifications

Operation System	Solid-state CMOS circuitry	
Operation	Star-delta	
Time Range	Star side: 0.05 sec to 100 sec Star delta switching time: 0.05, 0.1, 0.25, 0.5 sec	
Pollution Degree	2 (IEC60664-1)	
Overvoltage Category	III (IEC60664-1)	
Rated Voltage	100 to 240V AC (50/60Hz)	
Voltage Range	85 to 264V AC (50/60Hz)	
Reset Voltage	Rated Voltage × 10% minimum	
Operating Temperature	–10 to +50°C (no freezing)	
Storage Temperature	–30 to +70°C (no freezing)	
Operating Humidity	35 to 85% RH (no condensation)	
Storage Humidity	35 to 85% RH (no condensation)	
Altitude	0 to 2000m (operation) 0 to 3000m (transportation)	
Reset Time	500 ms maximum	
Repeat Error	±0.2%, ±10 ms (Note)	
Voltage Error	±0.2%, ±30 ms (Note)	
Temperature Error	±0.2%, ±10 ms (Note)	
Setting Error	±10% maximum	
Insulation Resistance	100 MΩ minimum (500V DC megger)	
Dielectric Strength	Between power and output terminals: 2000V AC, 1 minute	
	Between contacts of different poles: 2000V AC, 1 minute	
	Between contacts of the same pole: 1000V AC, 1 minute	
Vibration Resistance	Damage limits/operating extremes: 10 to 55 Hz, amplitude 0.75 mm, 2 hours each in 3 directions	
Shock Resistance	Operating extremes: 98 m/s <sup>2</sup> , Damage limits: 490 m/s <sup>2</sup> , 3 shocks each in 6 directions	
Degree of Protection	IP40 (timer), IP20 (socket) (IEC60529)	
Power Consumption (approx.)	GT3S-1AF20	GT3S-2AF20
	2.3VA (100V AC/60Hz)	2.3VA (100V AC/60Hz)
	4.0VA (200V AC/60Hz)	3.8VA (200V AC/60Hz)
Dimensions	40H × 36W × 72.2D mm	
Weight (approx.)	GT3S-1AF20	GT3S-2AF20
	68g	75g

Note: The largest value becomes the error against a preset value depending on the time range.

Operation Chart

Contact	Internal Connection	Operation Chart																							
GT3S-1 Star : Delayed SPST-NO Delta: Delayed SPST-NO		<table border="1"> <thead> <tr> <th>Item</th> <th>Terminal No.</th> <th>Operation</th> </tr> </thead> <tbody> <tr> <td>Power</td> <td>2-7</td> <td>[Power pulse]</td> </tr> <tr> <td>Star Delayed Contact</td> <td>8-5 (NO)</td> <td>[Delayed ON at T1, OFF at T1]</td> </tr> <tr> <td>Delta Delayed Contact</td> <td>8-6 (NO)</td> <td>[Delayed ON at T2, OFF at T3]</td> </tr> <tr> <td rowspan="2">Indicator</td> <td>Star</td> <td>[ON at T1, OFF at T1]</td> </tr> <tr> <td>Delta</td> <td>[ON at T2, OFF at T3]</td> </tr> <tr> <td>Set Time</td> <td></td> <td>T<sub>1</sub>    T<sub>2</sub>    T<sub>3</sub></td> </tr> </tbody> </table> <p>The star delayed contact goes on when power is turned on and goes off after a set time for the star contact (T<sub>1</sub>).</p> <p>The delta contact goes on after star-delta switching time (T<sub>2</sub>) and goes off when power is turned off.</p> <ul style="list-style-type: none"> <li>• T<sub>1</sub> = Star ON time (Set Time), T<sub>2</sub> = Star-delta swithing time, T<sub>3</sub> = Star ON time</li> </ul>	Item	Terminal No.	Operation	Power	2-7	[Power pulse]	Star Delayed Contact	8-5 (NO)	[Delayed ON at T1, OFF at T1]	Delta Delayed Contact	8-6 (NO)	[Delayed ON at T2, OFF at T3]	Indicator	Star	[ON at T1, OFF at T1]	Delta	[ON at T2, OFF at T3]	Set Time		T <sub>1</sub> T <sub>2</sub> T <sub>3</sub>			
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