



ELECTRONIC TIMERS

Type	Electronic Reset Timer	Star-Delta Timer	Star-Delta Timer	Unequal Cycling Timer	Unequal Cycling Timer																																																
Code	AT110	ST130	AT130	ST200/ST201/ST202/ST203	AT200																																																
Features	<ul style="list-style-type: none"> Programmable functions: Delayed ON, Interval (one shot), both with hold or pulse reset 18 overlapping programmable time ranges from 0,2 seconds to 100 hours, achieved by: <ul style="list-style-type: none"> 3 programmable time ranges: seconds, minutes, hours 6 programmable time scales for each of 3 time ranges Time Setting on calibrated scale(10 -100%) High speed electronic reset and high repetitive accuracy Direct interface with DC three-wire NPN/PNP sensors, with reset input for either PNP or NPN in the same unit Power ON, Relay ON and reset LED's Flashing Power ON LED when unit is timing Microprocessor technology incorporated 5A SPDT or DPDT relay output 	<ul style="list-style-type: none"> Relay de-energises to "centre-off" position for failsafe operation Adjustable time range of 0-60 seconds Incorporates 75 millisecond pause time to prevent overlapping of Star and Delta switching LED indication of relay output status, i.e.: Star or Delta mode Two relay method for interlocking of contacts ensuring break before make 5A relay output Rated for continuous operation 	<ul style="list-style-type: none"> Relay de-energises to "centre-off" position for failsafe operation Adjustable Star Time range of up to 60 seconds Fixed 75/50 millisecond pause time to prevent overlapping of Star and Delta switching LED indication of relay output status i.e. Star or Delta mode Two SPDT relays with neutral centre position ensure break before make Microprocessor technology incorporated 5A SPDT relay output Rated for continuous operation 	<ul style="list-style-type: none"> Programmable OFF-cycle first or ON-cycle first Programmable in 6 overlapping time ranges Extended time ranges available up to 25 hours or 200 hours on special order Separate off/on time adjustment on calibrated scale, 0-100% High repetitive accuracy 5A DPDT relay output (10A SPDT offered on request) <table border="1"> <tr> <td>Timer</td> <td>T1</td> <td>T2</td> </tr> <tr> <td>ST200</td> <td>A</td> <td>A</td> </tr> <tr> <td>ST201</td> <td>A</td> <td>B</td> </tr> <tr> <td>ST202</td> <td>B</td> <td>B</td> </tr> <tr> <td>ST203</td> <td>B</td> <td>A</td> </tr> </table>	Timer	T1	T2	ST200	A	A	ST201	A	B	ST202	B	B	ST203	B	A	<ul style="list-style-type: none"> Programmable for either OFF cycle first or ON-cycle first 12 overlapping programmable time ranges from 0,2 seconds to 4 hours High repetitive accuracy Power ON and Relay ON LED's Flashing Power ON LED when unit is timing (flash rate increases when relay is about to switch) Microprocessor technology incorporated 5A SPDT or DPDT relay output. Separate OFF/ON time range selection and time adjustments on calibrated scales, 0-100% Link Y1/Y2 to Y3 for minutes Link Y3 to Y4 for "On" first 																																	
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Specifications	<p>POWER SUPPLY AC: Supply voltage: 12, 24,115, 230, 400, 525V 2kV Galvanic isolation Power Consumption: 2VA (approx) Tolerance: ±15% DC: Supply Voltage: 48, 60, 110V Power Consumption: 30mA (approx) Tolerance: ±15% AC/DC: Supply Voltage: 12/24V Power Consumption: 100mA (approx) Tolerance: ±15%</p> <p>RESET INPUT Input type: NPN Sensor, PNP Sensor, Potential free contact Minimum Pulse width: 4ms Open circuit Voltage: <5, 6V</p> <p>HOUSING 250V and below: 22,5mm width Above 250V: 45mm width</p> <p>RELAY Relay Options: (250, 5A)SPDT or DPDT</p> <p>DC OUTPUT Voltage tolerance: 10-24V Source Current: 10mA Setting Accuracy: 5% Repeatability: 0,5%</p> <p>TIME RANGES (STANDARD) 2: 0,2 to 2 sec, min or hrs 5: 0,5 to 5 sec, min or hrs 10: 1 to 10 sec, min or hrs 20: 2 to 20 sec, min or hrs 50: 5 to 50 sec, min or hrs 100: 10 to 100 sec, min or hrs</p>	<p>POWER SUPPLY AC: Supply voltage: 48, 60, 115, 230, 400, 415, 525V ±15% Power consumption: 3VA (approx), 6VA for 415, 525V (approx) AC Reactive: Supply voltage: 230V (90-250V) DC: Supply voltage: 10-30V AC/DC, 48, 60, 110V DC ±10% Isolation: no galvanic isolation Power consumption: 100mA for 10-30V AC/DC, 30mA for higher ranges</p> <p>RESET Power supply to be interrupted for at least 1 second</p> <p>TIME SETTINGS 0 - 60 seconds adjustable</p> <p>PAUSE TIMER Approximately 75 milliseconds ±10%</p>	<p>POWER SUPPLY AC Transformer: Supply Voltage: 12, 24, 115, 230, 400, 525V ±15% 2kV galvanic isolation Power consumption: 2VA, 6VA (approx) AC Reactive: Supply voltage: 230V (90-250V) Power consumption: 100mA DC: Supply voltage: 48, 60, 110V Power Consumption: 30mA ±15% AC/DC: Supply voltage: 12/24V Power consumption; 100mA ±15%</p> <p>HOUSING 250V and below: 22,5mm width Above 250V: 45mm width</p> <p>RELAY: Relay Options (250V, 5A): SPDT (1x SPST for Delta and 1x SPST for Star)</p> <p>RESET Power supply to be interrupted for at least 1 second</p> <p>PAUSE TIME 75 milliseconds</p> <table border="1"> <tr> <th colspan="2">STAR TIME ADJUSTMENT</th> </tr> <tr> <th>SPDT</th> <th>FUNCTION</th> </tr> <tr> <td>S1</td> <td>60s Delay / 75ms Pause</td> </tr> <tr> <td>S2</td> <td>30s Delay / 75ms Pause</td> </tr> <tr> <td>S3</td> <td>60s Delay / 50ms Pause</td> </tr> <tr> <td>S4</td> <td>30s Delay / 50ms Pause</td> </tr> </table>	STAR TIME ADJUSTMENT		SPDT	FUNCTION	S1	60s Delay / 75ms Pause	S2	30s Delay / 75ms Pause	S3	60s Delay / 50ms Pause	S4	30s Delay / 50ms Pause	<p>POWER SUPPLY AC: Supply voltage: 230, 400, 415, 525V ±15% AC Reactive: Supply voltage: 230V (90-250V) Power consumption: 3VA, 6VA for 415, 525V (approx) DC: Supply voltage: 48, 60, 110V DC ±15% Power consumption: 30mA AC/DC: Supply voltage: 10-30V AC/DC. Power consumption: 100mA</p> <p>RESET Power supply to be interrupted for at least 0,5 seconds Extended time ranges available on special order: 6, 12,5, 25, 50, 100 and 200 hours</p> <table border="1"> <tr> <th colspan="2">A</th> </tr> <tr> <th>Switch Position</th> <th>Time Ranges</th> </tr> <tr> <td>1</td> <td>- Up to 1,8s</td> </tr> <tr> <td>2</td> <td>- Up to 7,5s</td> </tr> <tr> <td>3</td> <td>- Up to 15s</td> </tr> <tr> <td>4</td> <td>- Up to 30s</td> </tr> <tr> <td>5</td> <td>- Up to 60s</td> </tr> <tr> <td>6</td> <td>- Up to 120s</td> </tr> </table> <table border="1"> <tr> <th colspan="2">B</th> </tr> <tr> <td>7</td> <td>- Up to 220s</td> </tr> <tr> <td>8</td> <td>- Up to 7,5m</td> </tr> <tr> <td>9</td> <td>- Up to 15m</td> </tr> <tr> <td>10</td> <td>- Up to 60m</td> </tr> <tr> <td>11</td> <td>- Up to 120m</td> </tr> <tr> <td>12</td> <td>- Up to 240m</td> </tr> </table>	A		Switch Position	Time Ranges	1	- Up to 1,8s	2	- Up to 7,5s	3	- Up to 15s	4	- Up to 30s	5	- Up to 60s	6	- Up to 120s	B		7	- Up to 220s	8	- Up to 7,5m	9	- Up to 15m	10	- Up to 60m	11	- Up to 120m	12	- Up to 240m	<p>POWER SUPPLY AC: Supply voltage: 12, 24, 115, 230, 400, 525V 2kV Galvanic isolation Power Consumption: 2VA, 6VA (approx) Tolerance: ±15% AC Reactive: Supply voltage: 230V (90-250V) Power Consumption: 100mA DC: Supply Voltage: 48, 60, 110V Power consumption: 30mA Tolerance: ±15% AC/DC: Supply voltage: 12/24V Power consumption: 100mA Tolerance: ±15%</p> <p>HOUSING 250V and below: 22,5mm width Above: 45mm width</p> <p>RELAY Relay options (250V, 5A): SPDT, DPDT</p> <p>TIME SPECIFICATION Setting Accuracy 5% Repeatability 0.5%</p> <p>TIME RANGES (STANDARD) 2: 0,2 to 2 sec or min 6: 0,6 to 6 sec or min 20: 2 to 20 sec or min 60: 6 to 60 sec or min 120: 12 to 120 sec or min 240: 24 to 240 sec or min</p>						
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