

## MULTI-FUNCTION TIMERS

PRODUCT	48T100 Multi-Function Timer	48T101 Delayed ON / Interval (One Shot) Timer	AT100 Multi-Function Timer	ST100/ST101 Multi-Function Timer	AT110 Electronic Reset Timer																																																																																												
ORDERING CODE	TYPE SUPPLY VOLTAGE 48T100 - 11 - 230	TYPE SUPPLY VOLTAGE 48T101 - 08 - 230	TYPE SUPPLY VOLTAGE AC/DC RELAY CONTACTS AT100 / 250 A D	TYPE SUPPLY VOLTAGE AC/DC RELAY CONTACTS ST100 / 415 AC S	TYPE SUPPLY VOLTAGE AC/DC RELAY CONTACTS AT110 / 230 A S																																																																																												
FRONT PLATE CONTROLS	<p style="text-align: center;">Supplied with panel-mount bezel</p>	<p style="text-align: center;">Supplied with panel-mount bezel</p>																																																																																															
FEATURES	<ul style="list-style-type: none"> <li>11-pin plug-in (48x48)</li> <li>Six programmable timing functions</li> <li>Time settings from 0.1sec to 100 hrs, in 8 overlapping time ranges</li> <li>Separate Start, Reset &amp; Gate Inputs</li> <li>Polarity Protection on inputs</li> <li>Extra Short Housing</li> <li>High repetitive &amp; setting accuracy</li> <li>Automatic pulse or hold start</li> <li>Power ON and Relay ON LED's</li> <li>Front dial can be used as screwdriver for adjusting settings</li> <li>Microprocessor technology based</li> <li>Flashing Power ON LED when unit is timing</li> <li>DPDT(5A per contact)</li> </ul>	<ul style="list-style-type: none"> <li>8-pin plug-in (48x48)</li> <li>Delayed ON or Interval (one shot) operation</li> <li>Time settings from 0.1sec to 100 hrs, in 8 overlapping time ranges</li> <li>Extra Short Housing</li> <li>High repetitive &amp; setting accuracy</li> <li>Power-up start</li> <li>Power ON and Relay ON LED's</li> <li>Front dial can be used as screwdriver for adjusting settings</li> <li>Microprocessor technology based</li> <li>Flashing Power ON LED when unit is timing</li> <li>DPDT(5A per contact)</li> </ul>	<ul style="list-style-type: none"> <li>DIN rail mount</li> <li>Programmable:                             <ul style="list-style-type: none"> <li>Delayed ON</li> <li>Interval (one shot)</li> <li>Symmetrical Recycling OFF-ON</li> <li>Symmetrical Recycling ON-OFF</li> </ul> </li> <li>Programmable: 18 overlapping time ranges 0.2sec to 100 hrs</li> <li>High repetitive accuracy</li> <li>Time setting on calibrated scale (10% to 100%)</li> <li>Power ON and Relay ON LED's</li> <li>Microprocessor technology incorporated</li> <li>Flashing Power ON LED when unit is timing</li> <li>DPDT (5A per contact)</li> </ul>	<ul style="list-style-type: none"> <li>11-pin plug-in</li> <li>Programmable:                             <ul style="list-style-type: none"> <li>Delayed ON</li> <li>Interval (one shot)</li> <li>Symmetrical Recycling OFF-ON</li> <li>Symmetrical Recycling ON-OFF</li> </ul> </li> <li>Programmable: 6 overlapping time ranges                             <ul style="list-style-type: none"> <li>ST-100: up to 120 sec</li> <li>ST-101: up to 240 min</li> </ul> </li> <li>415V Power supplies available in ST100 &amp; ST101.</li> <li>High repetitive accuracy</li> <li>DPDT (5A per contact)</li> </ul>	<ul style="list-style-type: none"> <li>DIN rail mount</li> <li>Programmable:                             <ul style="list-style-type: none"> <li>Delayed ON</li> <li>hold or pulse reset</li> <li>Interval (one shot)</li> <li>hold or pulse reset</li> </ul> </li> <li>Programmable: 18 overlapping time ranges 0.2sec to 100 hrs</li> <li>High repetitive accuracy</li> <li>Time setting on calibrated scale (10% to 100%)</li> <li>Direct interface with DC PNP/NPN sensors</li> <li>High speed electronic reset</li> <li>Power ON and Relay ON LED's</li> <li>Flashing Power ON LED when unit is timing</li> <li>Microprocessor technology incorporated</li> <li>5A SPDT or DPDT avail on special order.</li> </ul>																																																																																												
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TECHNICAL SPECS	<ul style="list-style-type: none"> <li><b>Power Supply:</b> 230(100 to 250) VAC, 24 VAC/DC, 12 VDC Consumption: 3VA (100 to 230 VAC), 2VA (24 VAC), 1W (24 VDC), 1.5W (12 VDC)</li> <li><b>Time Ranges:</b></li> </ul> <table border="1" style="margin-left: 20px;"> <thead> <tr> <th colspan="3">SCALE SETTING</th> </tr> <tr> <th></th> <th>1</th> <th>10</th> </tr> </thead> <tbody> <tr> <td>Sec</td> <td>0.1s to 1s</td> <td>1s to 10s</td> </tr> <tr> <td>Min</td> <td>0.1m to 1m</td> <td>1m to 10m</td> </tr> <tr> <td>Hrs</td> <td>0.1hr to 1hr</td> <td>1hr to 10hrs</td> </tr> <tr> <td>10Hrs</td> <td>1Hr to 10Hrs</td> <td>10Hrs to 100Hrs</td> </tr> </tbody> </table> <ul style="list-style-type: none"> <li><b>Timing Functions:</b> <ul style="list-style-type: none"> <li>Delayed ON, power-up start</li> <li>Symmetrical Recycling (ON or OFF cycle first)</li> <li>Signal ON/OFF Delay</li> <li>Interval operation (hold or pulse start)</li> </ul> </li> <li><b>Inputs:</b> <ul style="list-style-type: none"> <li>Start</li> <li>Gate</li> <li>Reset</li> </ul> </li> </ul>	SCALE SETTING				1	10	Sec	0.1s to 1s	1s to 10s	Min	0.1m to 1m	1m to 10m	Hrs	0.1hr to 1hr	1hr to 10hrs	10Hrs	1Hr to 10Hrs	10Hrs to 100Hrs	<ul style="list-style-type: none"> <li><b>Power Supply:</b> 230(100 to 250) VAC, 24 VAC/DC, 12 VDC Consumption: 3VA (100 to 230 VAC), 2VA (24 VAC), 1W (24 VDC), 1.5W (12 VDC)</li> <li><b>Time Ranges:</b></li> </ul> <table border="1" style="margin-left: 20px;"> <thead> <tr> <th colspan="3">SCALE SETTING</th> </tr> <tr> <th></th> <th>1</th> <th>10</th> </tr> </thead> <tbody> <tr> <td>Sec</td> <td>0.1s to 1s</td> <td>1s to 10s</td> </tr> <tr> <td>Min</td> <td>0.1m to 1m</td> <td>1m to 10m</td> </tr> <tr> <td>Hrs</td> <td>0.1hr to 1hr</td> <td>1hr to 10hrs</td> </tr> <tr> <td>10Hrs</td> <td>1Hr to 10Hrs</td> <td>10Hrs to 100Hrs</td> </tr> </tbody> </table> <ul style="list-style-type: none"> <li><b>Timing Functions:</b> <ul style="list-style-type: none"> <li>Delayed ON, power-up start</li> <li>Interval (one-shot) operation, power-up start</li> </ul> </li> </ul>	SCALE SETTING				1	10	Sec	0.1s to 1s	1s to 10s	Min	0.1m to 1m	1m to 10m	Hrs	0.1hr to 1hr	1hr to 10hrs	10Hrs	1Hr to 10Hrs	10Hrs to 100Hrs	<ul style="list-style-type: none"> <li><b>Power Supply:</b> AC: 22.5mm wide housing: 24, 115, 250(90-250)V, 45mm wide housing: 400(380-415), 525V DC: 22.5mm wide housing: 48, 60, 110V AC/DC: 22.5mm wide housing: 24 (12-24)V</li> <li><b>Time Specification:</b> Setting Accuracy: 5% Repeatability: 0.5%</li> <li><b>Time Ranges:</b></li> </ul> <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Time Scale Selection</th> <th>Time Setting: 10 to 100%</th> <th>Time Range Selection: sec, min, hrs</th> </tr> </thead> <tbody> <tr> <td>2</td> <td>0.2 to 2</td> <td>Sec, min, hrs</td> </tr> <tr> <td>5</td> <td>0.5 to 5</td> <td>Sec, min, hrs</td> </tr> <tr> <td>10</td> <td>1 to 10</td> <td>Sec, min, hrs</td> </tr> <tr> <td>20</td> <td>2 to 20</td> <td>Sec, min, hrs</td> </tr> <tr> <td>50</td> <td>5 to 50</td> <td>Sec, min, hrs</td> </tr> <tr> <td>100</td> <td>10 to 100</td> <td>Sec, min, hrs</td> </tr> </tbody> </table> <ul style="list-style-type: none"> <li><b>Timing Functions:</b> <ul style="list-style-type: none"> <li>Delayed ON, power-up start</li> <li>Interval (one-shot) operation, power-up start</li> <li>Symmetrical Recycling (ON or OFF cycle first)</li> </ul> </li> </ul>	Time Scale Selection	Time Setting: 10 to 100%	Time Range Selection: sec, min, hrs	2	0.2 to 2	Sec, min, hrs	5	0.5 to 5	Sec, min, hrs	10	1 to 10	Sec, min, hrs	20	2 to 20	Sec, min, hrs	50	5 to 50	Sec, min, hrs	100	10 to 100	Sec, min, hrs	<ul style="list-style-type: none"> <li><b>Power supply:</b> AC: 250(90-250), 400, 415, 525V ± 15% DC: 48, 60, 110V ±15% Consumption: 30mA AC/DC: 10 - 30V Consumption: 100mA</li> <li><b>Time Ranges</b></li> </ul> <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>ST-100</th> <th>ST-101</th> </tr> </thead> <tbody> <tr> <td>0-1,8 sec</td> <td>0-220 sec</td> </tr> <tr> <td>0-7,5 sec</td> <td>0-7,5 min</td> </tr> <tr> <td>0-15 sec</td> <td>0-15 min</td> </tr> <tr> <td>0-30 sec</td> <td>0-60 min</td> </tr> <tr> <td>0-60 sec</td> <td>0-120min</td> </tr> <tr> <td>0-120sec</td> <td>0-240min</td> </tr> </tbody> </table> <ul style="list-style-type: none"> <li><b>Reset:</b> Power supply to be interrupted for at least 0,5 seconds</li> <li><b>Timing Functions:</b> <ul style="list-style-type: none"> <li>Delayed ON, power-up start</li> <li>Interval (one-shot) operation, power-up start</li> <li>Symmetrical Recycling (ON or OFF cycle first)</li> </ul> </li> </ul>	ST-100	ST-101	0-1,8 sec	0-220 sec	0-7,5 sec	0-7,5 min	0-15 sec	0-15 min	0-30 sec	0-60 min	0-60 sec	0-120min	0-120sec	0-240min	<ul style="list-style-type: none"> <li><b>Power Supply:</b> AC transformer: 22.5mm wide housing: 24, 115, 230(220-240)V, 45mm wide housing: 400(380-415), 525V DC (no isolation): 22.5mm wide housing: 48, 60, 110V AC/DC: 22.5mm wide housing: 24 (12-24)V</li> <li><b>Time Specification:</b> Setting Accuracy: 5% Repeatability: 0.5%</li> <li><b>Time Ranges:</b></li> </ul> <table border="1" style="margin-left: 20px;"> <thead> <tr> <th>Time Scale Selection</th> <th>Time Setting: 10 to 100%</th> <th>Time Range Selection: sec, min, hrs</th> </tr> </thead> <tbody> <tr> <td>2</td> <td>0.2 to 2</td> <td>Sec, min, hrs</td> </tr> <tr> <td>5</td> <td>0.5 to 5</td> <td>Sec, min, hrs</td> </tr> <tr> <td>10</td> <td>1 to 10</td> <td>Sec, min, hrs</td> </tr> <tr> <td>20</td> <td>2 to 20</td> <td>Sec, min, hrs</td> </tr> <tr> <td>50</td> <td>5 to 50</td> <td>Sec, min, hrs</td> </tr> <tr> <td>100</td> <td>10 to 100</td> <td>Sec, min, hrs</td> </tr> </tbody> </table> <ul style="list-style-type: none"> <li><b>Timing Functions:</b> <ul style="list-style-type: none"> <li>Delayed ON (hold or pulse start)</li> <li>Interval (one-shot) operation (hold or pulse start)</li> </ul> </li> </ul>	Time Scale Selection	Time Setting: 10 to 100%	Time Range Selection: sec, min, hrs	2	0.2 to 2	Sec, min, hrs	5	0.5 to 5	Sec, min, hrs	10	1 to 10	Sec, min, hrs	20	2 to 20	Sec, min, hrs	50	5 to 50	Sec, min, hrs	100	10 to 100	Sec, min, hrs
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## MULTI-FN

## STAR-DELTA TIMERS

## ASYMMETRICAL RECYCLING

PRODUCT	ST110/ST111 ST112/ST113 Electronic Reset Timer	AT130 Star-Delta Timer	ST130 Star-Delta Timer	AT200 Asymmetrical Recycling Timer (Twin Timer)	ST200/ST201 ST202/ST203 Asymmetrical Recycling Timers																																																	
ORDERING CODE	<table border="1"> <tr> <td>TYPE</td> <td>SUPPLY VOLTAGE</td> <td>AC/DC</td> <td>RELAY CONTACTS</td> </tr> <tr> <td>ST110</td> <td>240</td> <td>AC</td> <td>S</td> </tr> </table>	TYPE	SUPPLY VOLTAGE	AC/DC	RELAY CONTACTS	ST110	240	AC	S	<table border="1"> <tr> <td>TYPE</td> <td>SUPPLY VOLTAGE</td> <td>AC/DC</td> <td>RELAY CONTACTS</td> </tr> <tr> <td>AT130</td> <td>250</td> <td>A</td> <td>S</td> </tr> </table>	TYPE	SUPPLY VOLTAGE	AC/DC	RELAY CONTACTS	AT130	250	A	S	<table border="1"> <tr> <td>TYPE</td> <td>SUPPLY VOLTAGE</td> <td>AC/DC</td> <td>RELAY CONTACTS</td> </tr> <tr> <td>ST130</td> <td>415</td> <td>AC</td> <td>S</td> </tr> </table>	TYPE	SUPPLY VOLTAGE	AC/DC	RELAY CONTACTS	ST130	415	AC	S	<table border="1"> <tr> <td>TYPE</td> <td>SUPPLY VOLTAGE</td> <td>AC/DC</td> <td>RELAY CONTACTS</td> </tr> <tr> <td>AT200</td> <td>250</td> <td>A</td> <td>D</td> </tr> </table>	TYPE	SUPPLY VOLTAGE	AC/DC	RELAY CONTACTS	AT200	250	A	D	<table border="1"> <tr> <td>TYPE</td> <td>SUPPLY VOLTAGE</td> <td>AC/DC</td> <td>RELAY CONTACTS</td> </tr> <tr> <td>ST200</td> <td>250</td> <td>AC</td> <td>S</td> </tr> </table>	TYPE	SUPPLY VOLTAGE	AC/DC	RELAY CONTACTS	ST200	250	AC	S									
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FEATURES	<ul style="list-style-type: none"> <li>11-pin plug-in</li> <li>Programmable:                             <ul style="list-style-type: none"> <li>Delayed ON hold or pulse reset</li> <li>Interval (one shot) hold or pulse reset</li> </ul> </li> <li>Programmable:                             <ul style="list-style-type: none"> <li>6 overlapping time ranges</li> <li>ST-110: up to 120 sec</li> <li>ST-111: up to 240 min</li> <li>Extended time ranges available up to 200 hrs</li> </ul> </li> <li>High speed electronic reset</li> <li>ST-110/ST-111 interfaces with DC-NPN sensors or limited switches</li> <li>ST-112/ST-113 interfaces with DC-PNP sensors or limited switches</li> <li>High repetitive accuracy</li> <li>10A SPDT or 5A DPDT</li> </ul>	<ul style="list-style-type: none"> <li>DIN rail mount</li> <li>Relay de-energises to "centre-off" position for fail-to-safe operation.</li> <li>Adjustable Star Time Range to 60 sec (versions only adjustable up to 30 sec available on request)</li> <li>Fixed 75 ms pause time to prevent overlap of Star &amp; Delta switching (50 ms version available on request)</li> <li>LED indication of relay output status</li> <li>Two internal SPDT relays with neutral centre position ensure break before make</li> <li>Microprocessor technology incorporated</li> <li>5A relay output</li> </ul>	<ul style="list-style-type: none"> <li>11-pin plug-in</li> <li>Relay de-energises to "centre-off" position for fail-to-safe operation.</li> <li>Adjustable Star Time Range to 60 sec</li> <li>Fixed 75 ms pause time to prevent overlap of Star &amp; Delta switching</li> <li>LED indication of relay output status</li> <li>Two internal DPDT relay method of interlocking ensuring break before make</li> <li>5A relay output</li> </ul>	<ul style="list-style-type: none"> <li>DIN rail mount</li> <li>Programmable:                             <ul style="list-style-type: none"> <li>Asymmetrical Recycling OFF cycle first</li> <li>Asymmetrical Recycling ON cycle first</li> </ul> </li> <li>Programmable:                             <ul style="list-style-type: none"> <li>12 overlapping time ranges 0.2 sec to 4 hrs</li> </ul> </li> <li>High repetitive accuracy</li> <li>Power ON and Relay ON LED's</li> <li>Flashing Power ON LED when unit is timing</li> <li>Microprocessor technology incorporated</li> <li>Separate OFF/ON time range selection</li> <li>DPDT relay (5A per contact)</li> </ul>	<ul style="list-style-type: none"> <li>11-pin plug-in</li> <li>Programmable functions:                             <ul style="list-style-type: none"> <li>Asymmetrical Recycling OFF cycle first</li> <li>Asymmetrical Recycling ON cycle first</li> </ul> </li> <li>Six programmable time ranges up to:                             <table border="1"> <thead> <tr> <th></th> <th>T1</th> <th>T2</th> </tr> </thead> <tbody> <tr> <td>ST-200</td> <td>120s</td> <td>120s</td> </tr> <tr> <td>ST-201</td> <td>120s</td> <td>240m</td> </tr> <tr> <td>ST-202</td> <td>240m</td> <td>240m</td> </tr> <tr> <td>ST-203</td> <td>240m</td> <td>120s</td> </tr> </tbody> </table> </li> <li>Extended time ranges available up to 200 hrs</li> <li>High repetitive accuracy</li> <li>DPDT relay (5A per contact)</li> </ul>		T1	T2	ST-200	120s	120s	ST-201	120s	240m	ST-202	240m	240m	ST-203	240m	120s																																		
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TECHNICAL SPECS	<ul style="list-style-type: none"> <li><b>Power supply</b> AC: 12, 24, 110, 240 (220-240), 400, 415, 525V ± 15% Isolation: 2kV DC: 10 -30V at 100mA, 48, 60, 110V (± 15%) at 30mA No galvanic isolation</li> <li><b>Time Ranges</b> <table border="1"> <thead> <tr> <th>ST-110</th> <th>ST-111</th> </tr> </thead> <tbody> <tr> <td>0-1,8 sec</td> <td>0-220 sec</td> </tr> <tr> <td>0-7,5 sec</td> <td>0-7,5 min</td> </tr> <tr> <td>0-15 sec</td> <td>0-15 min</td> </tr> <tr> <td>0-30 sec</td> <td>0-60 min</td> </tr> <tr> <td>0-60 sec</td> <td>0-120min</td> </tr> <tr> <td>0-120sec</td> <td>0-240min</td> </tr> </tbody> </table>                     available on special order: 6, 12,5 and 25 hours 50, 100, and 200 hours                 </li> <li><b>12VDC Output</b> Voltage tolerance: 10 - 15 VDC Source current: 30mA (max)</li> <li><b>Reset Input</b> Reset time: 2 millisecc. Short circuit current: 1mA Open circuit voltage: 8,2V</li> </ul>	ST-110	ST-111	0-1,8 sec	0-220 sec	0-7,5 sec	0-7,5 min	0-15 sec	0-15 min	0-30 sec	0-60 min	0-60 sec	0-120min	0-120sec	0-240min	<ul style="list-style-type: none"> <li><b>Power Supply:</b> AC: 22,5mm wide housing: 24, 115, 250(90-250)V 45mm wide housing: 400(380-415), 525V DC: 22,5mm wide housing: 48, 60, 110V AC/DC: 22,5mm wide housing: 24 (12-24)V</li> <li><b>Reset</b> Power supply to be interrupted for at least 1 second</li> <li><b>Star Time Adjustment:</b> 0 - 60 seconds 0 - 30 seconds available on special request</li> <li><b>Pause Time:</b> 75 milliseconds 50 milliseconds available on special request</li> </ul>	<ul style="list-style-type: none"> <li><b>Power supply</b> AC: 24, 110, 240 (220-240), 400, 415, 525V ± 15% DC: 10 -30V at 100mA, 48, 60, 110V (± 15%) at 30mA</li> <li><b>Reset</b> Power supply to be interrupted for at least 1 second</li> <li><b>Star Time Adjustment:</b> 0 - 60 seconds</li> <li><b>Pause Time:</b> 75 milliseconds</li> </ul>	<ul style="list-style-type: none"> <li><b>Power Supply:</b> AC: 22,5mm wide housing: 24, 115, 250(90-250)V 45mm wide housing: 400(380-415), 525V DC: 22,5mm wide housing: 48, 60, 110V AC/DC: 22,5mm wide housing: 24 (12-24)V</li> <li><b>Time Specification:</b> Setting Accuracy: 5% Repeatability: 0.5%</li> <li><b>Time Ranges:</b> <table border="1"> <thead> <tr> <th>Time Scale Selection</th> <th>Time Setting: 10 to 100%</th> <th>Time Unit Selection:</th> </tr> </thead> <tbody> <tr> <td>2</td> <td>0.2 to 2</td> <td>Sec or min</td> </tr> <tr> <td>6</td> <td>0.6 to 6</td> <td>Sec or min</td> </tr> <tr> <td>20</td> <td>2 to 20</td> <td>Sec or min</td> </tr> <tr> <td>60</td> <td>6 to 60</td> <td>Sec or min</td> </tr> <tr> <td>120</td> <td>12 to 120</td> <td>Sec or min</td> </tr> <tr> <td>240</td> <td>24 to 240</td> <td>Sec or min</td> </tr> </tbody> </table> </li> <li><b>Timing Functions:</b> - Asymmetrical Recycling, ON cycle first - Asymmetrical Recycling, OFF cycle first</li> </ul>	Time Scale Selection	Time Setting: 10 to 100%	Time Unit Selection:	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	<ul style="list-style-type: none"> <li><b>Power supply:</b> AC: 24, 110, 250 (90-250), 400, 415, 525V ± 15% DC: 10 -30V at 100mA, 48, 60, 110V (± 15%) at 30mA</li> <li><b>Time Ranges</b> <table border="1"> <thead> <tr> <th>Short</th> <th>Long</th> </tr> </thead> <tbody> <tr> <td>0-1,8 sec</td> <td>0-220 sec</td> </tr> <tr> <td>0-7,5 sec</td> <td>0-7,5 min</td> </tr> <tr> <td>0-15 sec</td> <td>0-15 min</td> </tr> <tr> <td>0-30 sec</td> <td>0-60 min</td> </tr> <tr> <td>0-60 sec</td> <td>0-120min</td> </tr> <tr> <td>0-120sec</td> <td>0-240min</td> </tr> </tbody> </table>                     Extended time ranges available on special order: 6, 12,5 and 25 hours 50, 100, and 200 hours                 </li> <li><b>Reset</b> Power supply to be interrupted for at least 0,5 seconds</li> </ul>	Short	Long	0-1,8 sec	0-220 sec	0-7,5 sec	0-7,5 min	0-15 sec	0-15 min	0-30 sec	0-60 min	0-60 sec	0-120min	0-120sec	0-240min
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## /TWIN TIMERS SPECIAL FUNCTION TIMERS SOCKETS FOR TIMERS

<b>ST210</b> Multi-Function Asymmetrical Reset Timer	<b>ST300/ST301</b> No Power Delayed Off Timer (True Delay OFF)	<b>AT500</b> Multi-Start Attempt Unit	<b>ST500</b> Multi-Start Attempt Unit	<b>S2-B</b> Socket for 8 pin timers	<b>S3-B</b> Socket for 11 pin timers																												
TYPE: ST210 SUPPLY VOLTAGE: 240 AC/DC: AC RELAY CONTACTS: S	TYPE: ST300 SUPPLY VOLTAGE: 240 AC/DC: AC RELAY CONTACTS: S	TYPE: AT500 SUPPLY VOLTAGE: 024 AC/DC: E RELAY CONTACTS: S	TYPE: ST500 SUPPLY VOLTAGE: 30 AC/DC: V RELAY CONTACTS: S	S2-B	S3-B																												
<ul style="list-style-type: none"> <li>● 11-pin plug-in</li> <li>● ON and OFF period independently adjustable</li> <li>● Six programmable reset functions:                             <ul style="list-style-type: none"> <li>- Pulse reset</li> <li>- Hold reset</li> <li>- Pulse and hold reset</li> <li>- Power on and pulse reset</li> <li>- Power on and hold reset</li> <li>- Power on, pulse and hold reset</li> </ul> </li> <li>● Six programmable overlapping time ranges up to 120 sec</li> <li>● Direct interface with DC-NPN sensors</li> <li>● High speed electronic reset</li> <li>● High repetitive accuracy</li> <li>● 10A SPDT or 5A DPDT</li> </ul>	<ul style="list-style-type: none"> <li>● 11-pin plug-in</li> <li>● Delayed release after power failure</li> <li>● Programmable: six overlapping time ranges                             <ul style="list-style-type: none"> <li>ST-300: up to 120 sec</li> <li>ST-301: up to 240 min</li> </ul> </li> <li>● Internal NiCd battery back-up on ST-301</li> <li>● High repetitive accuracy</li> <li>● 10A SPDT or 5A DPDT relay output</li> </ul>	<ul style="list-style-type: none"> <li>● DIN rail mount</li> <li>● Application: Repeated starting attempts of standby generator sets, with failure output alarm</li> <li>● Programmable number of start attempts: 3 to 8</li> <li>● Adjustable cranking time: 1 to 20 seconds</li> <li>● Adjustable pause time: 1 to 20 seconds</li> <li>● Other time ranges available on special request</li> <li>● Start failure alarm output</li> <li>● Wide supply voltage range: 10 to 30V DC</li> <li>● 5A SPDT x 2</li> </ul>	<ul style="list-style-type: none"> <li>● 11-pin plug-in</li> <li>● Application: Repeated starting attempts of standby generator sets, with failure output alarm</li> <li>● Programmable number of start attempts: 3 to 8</li> <li>● Adjustable cranking time: 1 to 10 seconds</li> <li>● Pause time = cranking time set</li> <li>● Other time ranges available on special request</li> <li>● Start failure alarm output</li> <li>● Wide supply voltage range: 10 to 30V DC</li> <li>● 5A SPDT x 2</li> </ul>	<ul style="list-style-type: none"> <li>● DIN rail mount</li> <li>● Unique retainer clip securing module to socket - protects against vibration</li> <li>● High stacking density</li> <li>● All connections in line on the same level</li> <li>● Self opening terminal sleeve with pressure plate</li> <li>● Shrouding of terminals</li> <li>● Suitable for DIN-rail, C-rail or panel mounting</li> <li>● Terminals for testing of wiring</li> <li>● Protection class: IP20</li> <li>● UL recognised, SEV, CSA, NEMKO and FEMKO approved and Lloyd's certified</li> </ul>	<ul style="list-style-type: none"> <li>● DIN rail mount</li> <li>● Unique retainer clip securing module to socket - protects against vibration</li> <li>● High stacking density</li> <li>● All connections in line on the same level</li> <li>● Self opening terminal sleeve with pressure plate</li> <li>● Shrouding of terminals</li> <li>● Suitable for DIN-rail, C-rail or panel mounting</li> <li>● Terminals for testing of wiring</li> <li>● Protection class: IP20</li> <li>● UL recognised, SEV, CSA, NEMKO and FEMKO approved and Lloyd's certified</li> </ul>																												
<ul style="list-style-type: none"> <li>● Power supply:                             <ul style="list-style-type: none"> <li>AC: 250 (90-250), 400, 415, 525V ± 15%</li> <li>DC: 48, 60, 110V ± 15%</li> <li>Consumption: 30mA</li> <li>AC/DC: 10 - 30V</li> <li>Consumption: 100mA</li> <li>No galvanic isolation</li> </ul> </li> <li>● Time Ranges                             <table border="1" data-bbox="143 1713 223 1859"> <tr><th colspan="2">ST-210</th></tr> <tr><td>0-1,8 sec</td><td></td></tr> <tr><td>0-7,5 sec</td><td></td></tr> <tr><td>0-15 sec</td><td></td></tr> <tr><td>0-30 sec</td><td></td></tr> <tr><td>0-60 sec</td><td></td></tr> <tr><td>0-120sec</td><td></td></tr> </table> </li> <li>● 12VDC Output                             <ul style="list-style-type: none"> <li>Voltage tolerance: 10-15V DC</li> <li>Source current: 30mA (max.)</li> </ul> </li> <li>● Reset Input                             <ul style="list-style-type: none"> <li>Reset time: 6ms</li> <li>Short circuit current: 2mA</li> <li>Open circuit voltage: 8,2V</li> </ul> </li> </ul>	ST-210		0-1,8 sec		0-7,5 sec		0-15 sec		0-30 sec		0-60 sec		0-120sec		<ul style="list-style-type: none"> <li>● Power supply                             <ul style="list-style-type: none"> <li>AC: 240 (220-240)V</li> <li>400, 415, 525V ± 15%</li> <li>DC: 12, 24, 48, 60, 110V ± 15%</li> <li>Consumption: 100mA for 12, 24V</li> <li>30mA for higher ranges</li> </ul> </li> <li>● Time Ranges                             <table border="1" data-bbox="367 1736 526 1881"> <tr><th>ST-300</th><th>ST-301</th></tr> <tr><td>0-1,8 sec</td><td>0-220 sec</td></tr> <tr><td>0-7,5 sec</td><td>0-7,5 min</td></tr> <tr><td>0-15 sec</td><td>0-15 min</td></tr> <tr><td>0-30 sec</td><td>0-60 min</td></tr> <tr><td>0-60 sec</td><td>0-120min</td></tr> <tr><td>0-120sec</td><td>0-240min</td></tr> </table> </li> <li>● Reset                             <ul style="list-style-type: none"> <li>Power supply to be interrupted for at least 0,5 seconds</li> </ul> </li> </ul>	ST-300	ST-301	0-1,8 sec	0-220 sec	0-7,5 sec	0-7,5 min	0-15 sec	0-15 min	0-30 sec	0-60 min	0-60 sec	0-120min	0-120sec	0-240min	<ul style="list-style-type: none"> <li>● Power Supply:                             <ul style="list-style-type: none"> <li>100 to 250VAC</li> <li>24 VAC/DC</li> <li>12 VDC</li> </ul> </li> <li>● Starter Relay: 5A/250VAC SPDT</li> <li>● Alarm Relay: 5A/250VAC SPDT</li> <li>● Number of start attempts: 3, 4, 5, 6, 7 or 8</li> <li>● Duration of start attempts: adjustable from 1 to 20 seconds</li> <li>● Duration of pause between start attempts: adjustable from 1 to 20 seconds</li> </ul>	<ul style="list-style-type: none"> <li>● Supply voltage                             <ul style="list-style-type: none"> <li>AC: 240 (220-240)V</li> <li>400, 415, 525V ± 15%</li> <li>DC: 48, 60, 110V ± 15%</li> <li>AC/DC: 30 (10-30)V</li> </ul> </li> <li>● Starter Relay: 10A/250VAC SPDT</li> <li>● Alarm Relay: 10A/250VAC SPDT</li> <li>● Number of start attempts: 3, 4, 5, 6, 7 or 8</li> <li>● Duration of start attempts: adjustable from 1 to 10 seconds</li> <li>● Duration of pause between start attempts: equal to start time set</li> </ul>	<ul style="list-style-type: none"> <li>● Nominal load: 10A/300V</li> <li>● Dielectric strength (adjacent screws): 2.5kV</li> <li>● Dielectric strength (screws / rail): 2.5kV</li> <li>● Max screw torque: 1.2Nm</li> <li>● Screw dimensions: M3, Pozzi</li> <li>● Wire in-lets capacity:                             <ul style="list-style-type: none"> <li>Solid wire: 4mm<sup>2</sup> or 2 x 2.25 mm<sup>2</sup></li> <li>Multi core: 22 - 14 AWG</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>● Nominal load: 10A/250V</li> <li>● Dielectric strength (adjacent screws): 2.5kV</li> <li>● Dielectric strength (screws / rail): 2.5kV</li> <li>● Max screw torque: 1.2Nm</li> <li>● Screw dimensions: M3, Pozzi</li> <li>● Wire in-lets capacity:                             <ul style="list-style-type: none"> <li>Solid wire: 4mm<sup>2</sup> or 2 x 2.25 mm<sup>2</sup></li> <li>Multi core: 22 - 14 AWG</li> </ul> </li> </ul>
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