

# Digital Time Switch *Crono<sup>®</sup> Pro*

- LCD Display with Green backlight
- Precise time Programming for Daily / Weekly / Pulse switching
- Bar graph showing Daily program
- 50 ON/OFF programs, 10 Holiday Programs
- Settable DST feature & Password protection
- 16A Single and Dual relay outputs
- Two Separate Relay outputs with independent Programming
- 12/24 Hour Display Format
- 6 Years Battery reserve
- Simple reset & Manual Override
- Service / Load hours measurement






## Ordering Information

Cat. No.	Description
WT1SCDS	240 VAC, Digital Time Switch - Crono Pro, 1 C/O
WT2DCDS	110-240 VAC, Digital Time Switch - Crono Pro, 2 C/O
67DDT0	110 - 240 VAC, Digital Time Switch - Crono, 1 C/O
6GHDT0	24 VDC, Digital Time Switch - Crono, 1 C/O
69HDT0	12 VDC, Digital Time Switch - Crono, 1 C/O
67DDT9	110 - 240 VAC, Digital Time Switch - Pulse, 1 C/O
6GHDT9	24 VDC, Digital Time Switch - Pulse, 1 C/O
69HDT9	12 VDC, Digital Time Switch - Pulse, 1 C/O

Note: Digital Time Switch - Crono available with IEC 60730-2-7 approval  
UL approval is not applicable for Crono Pro series

# Digital Time Switch *Crono<sup>®</sup> Pro*



Cat. No.	WT1SCDS ( <i>Crono<sup>®</sup> Pro</i> )	67DDT0 ( <i>Crono<sup>®</sup></i> )
Parameters		
Supply Voltage	240 VAC	110 - 240 VAC
Supply Variation	-20 % to +10%	
Frequency	50/60 Hz	
Power Consumption (Max.)	6 VA	4 VA
Number of Programs	50 Each channel + 10 for Holiday	25 ON/OFF Programs
Minimum Switching Time	1 sec	1 min
Pulse Duration	1 - 59 sec	N A
Number of Operating Modes	5	
Description of Modes	<ul style="list-style-type: none"> <li>• AUTO - Program Run</li> <li>• ON AUTO - Instant ON up to next Auto Event</li> <li>• AUTO OFF - Instant OFF up to next Auto Event</li> <li>• ON - Continuous ON</li> <li>• OFF - Continuous OFF</li> </ul>	
Display	LCD with backlight	
DST	Programmable	
Clock Accuracy	± 0.5 s/day max. over the Operating Temperature range	± 2 s/day max. over the Operating Temperature range
Power Reserve from Factory	6 Years	
Output	Relay Output	1 C/O
	Contact Rating	16 A (NO) & 16 A (NC) @ 240 VAC/24 VDC (Resistive)
	Electrical Life	5x10 <sup>4</sup>
	Mechanical Life	5x10 <sup>4</sup>
Utilization Category	Max switching : 16 A (NO & NC) at 250 VAC, Cos $\phi$ = 1	AC - 15 Rated Voltage (Ue): 120/240 V, Rated Current (Ie): 3/1.5 A
	Min Switching: 10 A (NO & NC) at 250 VAC, Cos $\phi$ = 0.6	DC - 13 Rated Voltage (Ue): 24/125/250 V, Rated Current (Ie): 2.0/0.22/0.11 A
Operating Temperature	-10°C to + 55°C	
Storage Temperature	-20°C to + 70°C	
Humidity (Non Condensing)	95% (Rh)	
LED Indication	Red LED → Relay ON	
Enclosure	Flame Retardant UL94-V0	
Dimension (W x H x D) (in mm)	36 X 90 X 65	
Weight (unpacked) Approx.	110 g	
Mounting	DIN rail	Base / DIN rail
Certification	  	
Degree of Protection	IP 20 for Terminals, IP 40 for Enclosure	

EMI / EMC	
Harmonic Current Emissions	IEC 61000-3-2
ESD	IEC 61000-4-2
Radiated Susceptibility	IEC 61000-4-3
Electrical Fast Transients	IEC 61000-4-4
Surges	IEC 61000-4-5
Conducted Susceptibility	IEC 61000-4-6
Voltage Dips & Interruptions (AC)	IEC 61000-4-11
Conducted Emission	CISPR 14-1
Radiated Emission	CISPR 14-1
Environmental	
Cold Heat	IEC 60068-2-1
Dry Heat	IEC 60068-2-2
Vibration	IEC 60068-2-6
Repetitive Shock	IEC 60068-2-27
Non-Repetitive Shock	IEC 60068-2-27

## Applications

Ideal for Lighting applications like street lighting, Advertising Displays, Glowsigns.  
Also can be used for Air conditioners / Coolers, Geysers, conveyors, pumps etc.

Ideal for Siren, Bell applications

# Digital Time Switch *Astro*<sup>®</sup> *Pro*

- LCD Display with Green backlight
- Precise time programming for Astro / Daily / Weekly / Pulse / Cyclic switching
- Latitude / Longitude Database for 45 Countries and 280 cities
- Settable Latitude / Longitude precise to the minute with time zone
- Sunrise/Sunset or Twilight rise/set trigger modes
- Ease of Day selection in Weekly programming
- 50 ON/OFF programs, 10 Holiday Programs
- Settable DST feature & Password protection
- 16A Single and Dual relay outputs
- Two Separate Relay outputs with independent Programming
- 12/24 Hour Display Format
- 6 Years Battery reserve
- Simple Reset & Manual Override
- Service/Load hours measurement





## Ordering Information

Cat. No.	Description
AT1SCDS	240 VAC, Digital Time Switch - Astro Pro+, 1 C/O
AT2DCDS	110-240 VAC, Digital Time Switch - Astro Pro+, 2 C/O
AS1SCDS	240 VAC, Digital Time Switch - Astro Pro, 1 C/O
AS2DCDS	110-240 VAC, Digital Time Switch - Astro Pro, 2 C/O
T2DDT7	110 - 240 VAC, Digital Time Switch - Astro Mini, 1 C/O
T2DDT8	110 - 240 VAC, Digital Time Switch - Astro Mini, 1 C/O (With Pre-defined City codes)

# Digital Time Switch *Astro*<sup>®</sup> *Pro*



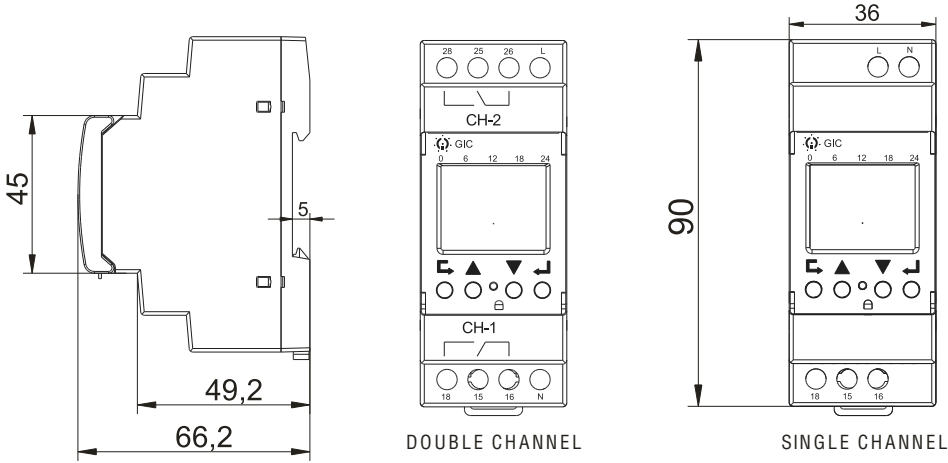
Cat. No.	AT1SCDS ( <i>Astro Pro+</i> )	AS1SCDS ( <i>Astro Pro</i> )	T2DDT7 ( <i>Astro Mini</i> )
Parameters			
Supply Voltage (ϕ)	240 VAC		110 - 240 VAC
Supply Variation	-20 % to +10% (of ϕ)		
Frequency	50/60 Hz		
Power Consumption	6 VA		
Programming	Latitude / Longitude Database for 45 Countries and 280 cities		Based on Latitude/Longitude precise to the minute with time-zone
	Precise time Programming for Daily / Weekly / Pulse / Cyclic switching	NA	NA
Number of Programs	50 Each channel + 10 for Holiday	NA	NA
Trigger Modes	Sunrise/Sunset or Twilight Rise/Set		
Offset	00 to 99 minutes (Programmable)		
OFF Hours	Programmable		
Weekly Off	User Defined		
DST	User Defined		
Number of Operating Modes	5		3
Description of Modes	<ul style="list-style-type: none"> <li>• AUTO - As per user defined program settings</li> <li>• ON AUTO - Instant ON up to next Auto Event</li> <li>• AUTO OFF - Instant OFF up to next Auto Event</li> <li>• ON - Continuous ON</li> <li>• OFF - Continuous OFF</li> </ul>		<ul style="list-style-type: none"> <li>• AUTO - As per user defined program settings</li> <li>• ON AUTO - Instant ON up to next Auto Event</li> <li>• AUTO OFF - Instant OFF up to next Auto Event</li> </ul>
Minimum Switching Time	1 min (1s for Pulse)	1 min	1 min
Display	LCD with backlight		3 Lines Text LCD
Clock Accuracy	± 0.5 s/day max. over the Operating Temperature range		± 2 s/day max. over the Operating Temperature range
Power Reserve from Factory	6 Years		
Output	Relay Output	1 C/O	
	Contact Rating	16 A (NO) & 16 A (NC) @ 240 VAC/24 VDC (Resistive)	16A (NO) & 5A (NC) @ 240 VAC / 24 VDC (Resistive)
	Electrical Life	5x10 <sup>4</sup>	3x10 <sup>4</sup>
	Mechanical Life	5x10 <sup>4</sup>	5x10 <sup>4</sup>
Utilization Category	AC - 15	16 A (NO & NC) at 250 VAC, Cos ϕ = 1	Rated Voltage (Ue): 120/240 V, Rated Current (Ie): 3/1.5 A
	DC - 13	10 A (NO & NC) at 250 VAC, Cos ϕ = 0.6	Rated Voltage (Ue): 24/125/250 V, Rated Current (Ie): 2.0/0.22/0.11 A
Operating Temperature	-15°C to + 55°C		-10 C to + 55 C
Storage Temperature	-20°C to + 70°C		-10 C to + 60 C
Humidity (Non Condensing)	95% (Rh)		
LED Indication	Indication on LCD		Red LED → Relay ON
Enclosure	Flame Retardant UL94-V0		
Dimension (W x H x D) (in mm)	36 X 90 X 65		
Weight (unpacked)	110 g		
Mounting	DIN rail		Base / DIN rail
Certification	 		
Degree of Protection	IP 20 for Terminals, IP 40 for Enclosure		
EMI / EMC			
Harmonic Current Emissions	IEC 61000-3-2	Environmental	
ESD	IEC 61000-4-2	Cold Heat	IEC 60068-2-1
Radiated Susceptibility	IEC 61000-4-3	Dry Heat	IEC 60068-2-2
Electrical Fast Transients	IEC 61000-4-4	Vibration	IEC 60068-2-6
Surges	IEC 61000-4-5	Repetitive Shock	IEC 60068-2-27
Conducted Susceptibility	IEC 61000-4-6	Non-Repetitive Shock	IEC 60068-2-27
Voltage Dips & Interruptions (AC)	IEC 61000-4-11		
Conducted Emission	CISPR 14-1		
Radiated Emission	CISPR 14-1		

## Applications

Street lighting applications in cities, industrial townships, university campuses  
Lighting automation in sports complex, hotels, parks & other outdoor applications.

# Digital Time Switch *Crono*<sup>®</sup> *Pro* & *Astro*<sup>®</sup> *Pro*

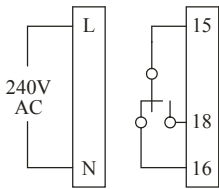
## MOUNTING DIMENSION (mm)



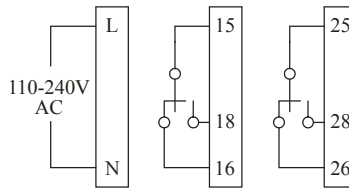
## CONNECTION DIAGRAM

### Digital Time Switch *Crono*<sup>®</sup> *Pro*

#### A) 1 CH Device

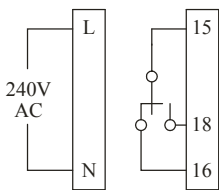


#### B) 2 CH Device

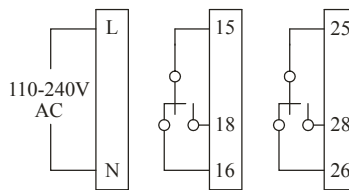


### Digital Time Switch *Astro*<sup>®</sup> *Pro*

#### A) 1 CH Device



#### B) 2 CH Device



## TERMINAL TORQUE & CAPACITY

 Ø 4.5 mm	0.5 N.m (4.4 Lb.in)
	1 x 4.0 mm <sup>2</sup> Solid/Stranded Wire
AWG	26 to 10