selec

ATS2M1-1-16A-230V
Operating Instructions

OP642-V02

SPECIFICATIONS

SUPPLY	
Voltage	230V AC ± 10%
Frequency	50-60Hz
Power Consumption	Approx. 9 Watts at 252 VAC
Battery Backup	10 years
RELAY OUTPUT	
Type of contact	1C/O (SPDT)
Contact rating (resistive load)	16A(NO) & 16A(NC) @ 250V AC
Contact material	$AgSnO_2$
Max. Switching Current	16A
Electrical life	$5x10^4$ Operations
Mechanical life	$1x10^7$ Operations
FUNCTIONAL	
Operation Period	1 week
Program	Relay ON at calculated Sunset & Relay OFF at calculated Sunrise
Display	Text LCD (Without Backlight)
Character Height	5.07mm(HH:MM) & 3.39mm(SS)
Minimum setting unit	1 second
Clock	12-hr(AM/PM) and 24-hr selection
Keys	5 Keys with 1 recessed reset button
Relay Operating Mode	Auto mode / Permanent Override ON / Permanent Override OFF
RTC accuracy	15 mins a year @ 25ºC
ENVIRONMENTAL	
Temperature Range	Operating : 0º to 50ºC
	Storage : -20º to 70ºC
Humidity	10% to 95% RH
Protection class	II

MECHANICAL	
Mounting	Din rail
Type of connection	Terminal screw-16A rating
No of Terminals	5 (L, N, NO, COM, NC)
Dimensions	60mm x 35mm x 90mm
Type of protection	IP20
Weight	105 g

ORDER CODE INFORMATION

Product	Certification	
	CE	cULus LISTED
ATS2M1-1-16A-230V	—	—
ATS2M1-1-16A-230V-CE	✓	—

SAFETY PRECAUTIONS

All safety related codifications, symbols and instructions that appear In this operating manual or on the equipment must be strictly followed To ensure the safety of the operating personnel as well as the instrument.

If the equipment is not used in manner specified by the manufacturer it might impair the protection provided by the equipment. If there is physical damage to the unit then do not use it.

Read complete instructions prior to installation and operation of the unit.

The timer functions and set program are backed up by a battery. If the life of the battery expires, the display will become irregular or may fail to function. The battery cannot be replaced by the user. Contact your SELEC representative.

Serious injury may occasionally occur due to fire or explosion of a battery, or leakage from a battery. Never attempt to short the positive and negative terminals, recharge, disassemble, deform by applying excessive pressure, or expose the battery to fire.

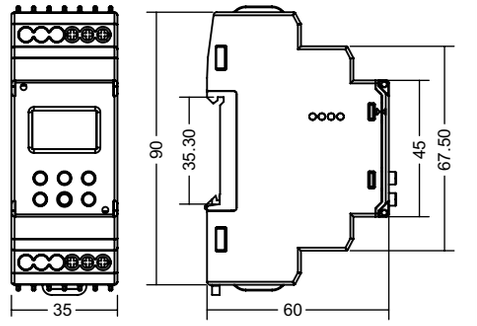
CAUTION :

1. This equipment, being built-in-type, normally becomes a part of main control panel and in such case the terminals do not remain accessible to the end user after Installation and internal wiring.
2. Conductors must not come in contact with the internal Circuitry of the equipment or else it may lead to a safety hazard that may in turn endanger life or cause electrical shock to the operator.
3. Circuit breaker or mains switch must be installed between power source and supply terminals to facilitate power 'ON' or 'OFF' function. However this switch or breaker must be installed in a convenient position normally accessible to the operator.
4. Inductive loads should be equipped with interference supressors like varistors, RC snubbers
5. Use of contactors is recommended if load exceeds the contact rating.

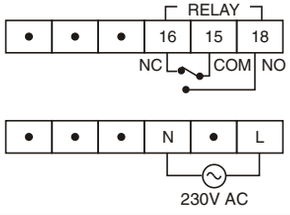
WARNING :

1. To prevent risk of electric shock power supply to the equipment must be kept OFF while doing to the wiring arrangement. Use lugged terminals to Meet M3 screws.
2. Wiring shall be done strictly according to the terminal layout with shortest connections. Conform that all connections are correct.
3. To eleminate electromagnetic interference use of short wire with adequate ratings and twists of the same in equal size shall be made

MECHANICAL INSTALLATION



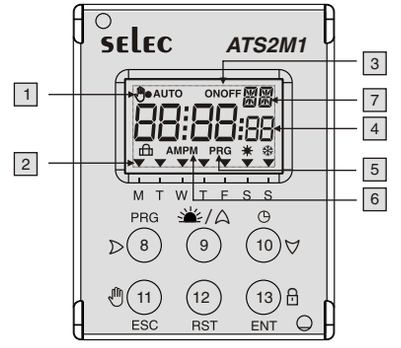
TERMINAL CONNECTIONS



OPERATION FUNCTIONS

FUNCTION	DESCRIPTION
Adjusting Clock	Allows current date & time settings through day, hrs (24-hr indication and 12-hr indication), minutes, seconds settings
Setting Latitude, Longitude & Timezone	Allows user to set Latitude & Longitude of his location and Timezone as per UDT standards Shows first digit as; Latitude : 0 for North & - for South Longitude : 0 for East & - for West
Summer/Winter Daylight Shift	Allows user to select Daylight shift due to Summer and Winter as below: NA : No shift in time EURO : +1hr (Last Sunday of March) -1hr (Last Sunday of October) USA : +1hr (2nd Sunday of March) -1hr (1st Sunday of November) BRL : +1hr (3rd Sunday of October) -1hr (3rd Sunday of February) AUS : +1hr (1st Sunday of October) -1hr (1st Sunday of April) MEX : +1hr (1st Sunday of April) -1hr (Last Sunday of October) MIEA : +1hr (Last Friday of March) -1hr (Last Friday of October) User can select whichever option applies to his location from above.
Sunrise & Sunset Timings (Twilight Settings)	Allows user to view present day's Sunrise & Sunset timings and to give offset in those timings if required Offset Range : - 59 to + 59 minutes Shows on display; POS : for +ve offset (adds minutes) NEG : for -ve offset (subtracts minutes)
Day of Week Operation	Allows user to select on which day of week to operate Astro-Time Switch function.
Permanent Override ON / Permanent Override OFF	Allows the output to be forcibly turned ON/OFF regardless of the control output setting.
Off Hours Feature	Allows user to select time between Sunset to Sunrise i.e. during night when relay can be switched OFF Below indicates; ON : Start time for Off Hours when relay will be turned OFF. OFF : Stop time for Off Hours when relay will be turned ON.
Keypad Lock	Allows all keys (i.e. settings) to get Locked / Unlocked using single ENT key pressed 3 times.

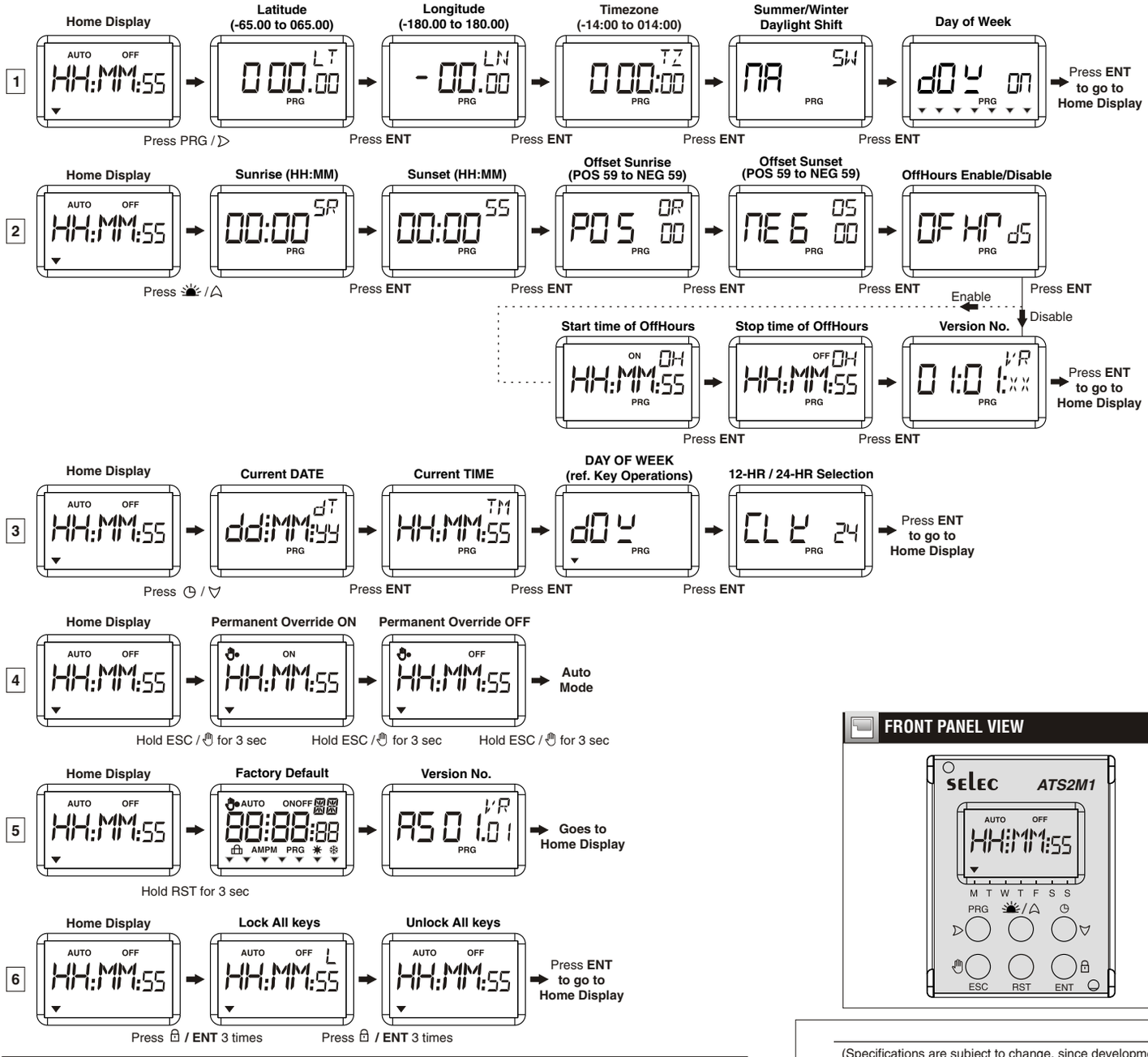
FRONT PANEL DESCRIPTION



1	Auto : Automatic mode ● : Permanent override
2	Day of Week indication
3	Relay ON/OFF indication
4	Hours/minutes/seconds indication (HH:MM:SS)
5	PRG Mode indication (when in programming mode only)
6	AM/PM Indication
7	LB → Lock All & Battery mode L → Lock All & Auxiliary mode B → Unlock All & Battery mode
8	PRG Key - to enter into Location settings (Shift right key - in Programming mode)
9	Key - to enter into Sunrise/set view & offset adjust settings (Increment key - in Programming mode)
10	Key - to enter into Clock settings (Decrement key - in Programming mode)
11	Key - Long Press to change Auto/Manual mode (Escape key - in Programming mode)
12	RST Key - to reset unit to factory default
13	Key - to Lock/Unlock all Keys on 3 times consecutive press (Enter key - in Programming mode)

SETTING THE ATS2M1-1-16A-230V PARAMETER

NOTE : To change parameters values use " ▷ / △ / ▽ " ; To set value use "ENT" ; To come out of programming use "ESC"



IMPORTANT NOTES

1) It is mandatory to edit Location & clock settings as per user's location to get correct sunrise & sunset.
2) Make sure of Lock status & Override status before entering into settings.
3) On Factory default (RST), all parameters gets reset to Default values as mentioned in Default value table.

FRONT PANEL VIEW

DEFAULT VALUES

Location Settings	
Latitude (Mumbai - India)	0 19.07 (19.07˚N)
Longitude (Mumbai - India)	0 72.88 (72.88˚E)
Timezone (India)	0 05:30 (UDT: +5.5 Hr)
Summer/Winter Shift (India)	NA (no DST found)
Day of Week (Work on)	All week days
Offset (Twilight) Settings	
Offset Sunrise	POS 00 (no offset)
Offset Sunset	POS 00 (no offset)

KEY OPERATIONS

To Enter Programming	Press key
Set Co-ordinates and Timezone	PRG / ▷
Set Clock – Current Date &Time	◷ / ▽
View Sunset-Sunrise & Set offset	☀ / △
Factory Default	RST
Lock/Unlock all keys (Settings Locked)	🔒 / ENT press 3 times
Run Mode	Press key
Mode Select- Switch mode between a) Auto b) Permanent Override ON c) Permanent Override OFF	✋ / ESC Press & hold key for 3 sec
To Modify Parameter in PRG	Press key
To modify parametric values.	▷ / △ / ▽
To Modify Day of Week.	▷ - Select DOW △ / ▽ - Toggle OnOff
Program Out	ESC Key or on 30s key inactivity.
To confirm selection / programming.	ENT Key

ERROR NOTIFICATIONS

Below errors occur at second's place on Home Display when wrong value is entered

Err	Type	Valid Range
E1	Latitude Out of Range Error	-65.00 to 065.00
E2	Longitude Out of Range Error	-180.00 to 180.00
E3	Timezone Out of Range Error	-14:00 to 014:00
E4	Month Out of Range Error	01 to 12
E5	Date Out of Range Error	01 to 31
E6	OffHours Out of Range Error	Sunset to Sunrise

(Specifications are subject to change, since development is a continuous process.)

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Website : www.selec.com I Email : sales@selec.com

CO-ORDINATES AND TIMEZONE INFORMATION FOR ATS2M1-1-16A-230V (Please Refer Page 4 of operating instruction for important notes)

INDIA (TIMEZONE : + 5:30)

State	City	Latitude	Longitude
ANDAMAN & NICOBAR	PORT BLAIR	11.62° N	92.73° E
ANDHRA PRADESH	ANANTAPUR	14.68° N	77.60° E
	VISAKHAPATNAM	17.68° N	83.22° E
ARUNACHAL PRADESH	ITANAGAR	27.08° N	93.61° E
ASSAM	GUWAHATI	26.14° N	91.74° E
BIHAR	PATNA	25.59° N	85.14° E
CHANDIGARH	CHANDIGARH	30.73° N	76.78° E
CHHATTISGARH	RAIPUR	21.25° N	81.63° E
DADRA & NAGAR HAVELI	SILVASSA	20.28° N	73.01° E
DAMAN & DIU	DAMAN	20.43° N	72.84° E
DELHI	DELHI	28.70° N	77.10° E
GOA	PANAJI	15.49° N	73.83° E
GUJARAT	GANDHINAGAR	23.22° N	72.64° E
	AHEMADABAD	23.02° N	72.57° E
	SURAT	21.17° N	72.83° E
	VEDODARA	22.31° N	73.18° E
	RAJKOT	22.30° N	70.80° E
HARYANA	GURGAON	28.46° N	77.03° E
HIMACHAL PRADESH	SHIMLA	31.11° N	77.17° E
JAMMU & KASHMIR	SRINAGAR	34.08° N	74.80° E
JHARKHAND	RANCHI	23.34° N	85.31° E
KARNATAKA	BANGALURU	12.97° N	77.59° E
KERALA	THIRUVANANTHAPURAM	08.52° N	76.94° E
LAKSHADWEEP	KAVARATTI	10.56° N	72.64° E
MADHYA PRADESH	BHOPAL	23.26° N	77.41° E
	INDORE	22.72° N	75.86° E
MAHARASHTRA	MUMBAI	19.08° N	72.88° E
	PUNE	18.52° N	73.86° E
	NASHIK	19.99° N	73.79° E
	AURANGABAD	19.88° N	75.34° E
	NAGPUR	21.15° N	79.09° E
MANIPUR	IMPHAL	24.82° N	93.94° E
MEGHALAYA	SHILLONG	25.58° N	91.89° E
MIZORAM	AIZAWL	23.73° N	92.72° E
NAGALAND	KOHIMA	25.66° N	94.11° E
ODISSA	BHUBANESWAR	20.29° N	85.82° E
PUDUCHERRY	PUDUCHERRY	11.91° N	79.81° E
PUNJAB	LUDHIANA	30.90° N	75.86° E
	AMRITSAR	31.63° N	74.87° E
RAJASTHAN	JAIPUR	26.91° N	75.79° E
SIKKIM	GANGTOK	27.34° N	88.61° E
TAMIL NADU	CHENNAI	13.08° N	80.27° E
	COIMBATORE	11.02° N	76.96° E
TELANGANA	HYDERABAD	17.38° N	78.49° E
TRIPURA	AGARTALA	23.83° N	91.29° E
UTTAR PRADESH	LUCKNOW	26.85° N	80.95° E
	GHAZIABAD	28.67° N	77.45° E
UTTARAKHAND	DEHRA DUN	30.32° N	78.03° E
WEST BENGAL	KOLKATA	22.57° N	88.36° E

ASIA / RUSIA / MIDDLE EAST

Country/State	Timezone	Latitude	Longitude
AFGHANISTAN (KABUL)	TZ : + 4:30	34.53° N	69.17° E
BANGLADESH (DHAKA)	TZ : + 6:00	23.71° N	90.41° E
BAHRAIN (MANAMA)	TZ : + 3:00	26.22° N	50.58° E
BHUTAN (THIMPHU)	TZ : + 6:00	27.31° N	89.45° E
BRUNEI (BANDAR SERI BEGAWAN)	TZ : + 8:00	04.90° N	114.93° E
CAMBODIA (PHNOM PENH)	TZ : + 7:00	11.56° N	104.92° E
CHINA (BEIJING)	TZ : + 8:00	39.90° N	116.41° E
CHINA (HONG-KONG)	TZ : + 8:00	22.39° N	114.11° E
CHINA (SHANGHAI)	TZ : + 8:00	31.23° N	121.47° E
IRAN (TEHRAN)	TZ : + 3:30	35.69° N	51.42° E
IRAQ (BAGHDAD)	TZ : + 3:00	33.34° N	44.40° E
INDONESIA (BALI)	TZ : + 7:00	08.34° S	115.09° E
INDONESIA (JAKARTA)	TZ : + 7:00	06.22° S	106.85° E
ISRAEL (JERUSALEM) *6	TZ : + 2:00	31.77° N	35.22° E

ASIA / RUSIA / MIDDLE EAST

Country/State	Timezone	Latitude	Longitude
JAPAN (TOKYO)	TZ : + 9:00	35.69° N	139.69° E
JORDAN (AMMAN) *6	TZ : + 2:00	31.95° N	35.95° E
KUWAIT (KUWAIT CITY)	TZ : + 3:00	29.33° N	48.08° E
MALDIV (MALE)	TZ : + 5:00	04.00° N	73.28° E
MALAYSIA (KUALA LUMPUR)	TZ : + 8:00	03.13° N	101.68° E
MYANMAR (NAY PYI DAW)	TZ : + 6:30	19.75° N	96.13° E
NEPAL (KATHMANDU)	TZ : + 5:45	27.70° N	85.32° E
OMAN (MUSCAT)	TZ : + 4:00	23.61° N	58.59° E
PAKISTAN (ISLAMABAD)	TZ : + 5:00	33.73° N	73.09° E
PAKISTAN (KARACHI)	TZ : + 5:00	24.86° N	67.01° E
PAKISTAN (LAHORE)	TZ : + 5:00	31.55° N	74.36° E
PHILIPPINES (MANILA)	TZ : + 8:00	14.59° N	120.98° E
QATAR (DOHA)	TZ : + 3:00	25.28° N	51.52° E
RUSSIA (MOSCOW)	TZ : + 4:00	55.75° N	37.62° E
RUSSIA (SAINT PETERSBURG)	TZ : + 4:00	59.89° N	30.26° E
SAUDI ARABIA (RIYADH)	TZ : + 3:00	21.52° N	39.22° E
SOUTH KOREA (BUSAN)	TZ : + 9:00	35.10° N	129.04° E
SOUTH KOREA (SEOL)	TZ : + 9:00	37.57° N	126.98° E
SRI LANKA (COLOMBO)	TZ : + 6:00	6.93° N	79.86° E
SYRIA (DAMASCUS) *6	TZ : + 2:00	33.51° N	36.29° E
TAJIKISTAN (DUSHANBE)	TZ : + 5:00	38.33° N	68°48° E
TAIWAN (TAIPEI)	TZ : + 8:00	25.05° N	121.53° E
THAILAND (BANGKOK)	TZ : + 7:00	13.75° N	100.50° E
TURKEY (ISTANBUL)	TZ : + 2:00	41.01° N	28.95° E
TURKMENISTAN (ASHGABAT)	TZ : + 5:00	38.00° N	57.50° E
UAE (ABUDHABI)	TZ : + 4:00	24.47° N	54.37° E
UAE (DUBAI)	TZ : + 4:00	25.26° N	55.31° E
UZBEKISTAN (TASHKENT)	TZ : + 5:00	41.20° N	69.10° E
VIETNAM (HA NOI)	TZ : + 7:00	14.05° N	108.27° E

AUSTRALIA

Country/State	Timezone	Latitude	Longitude
AUSTRALIA (CANBERRA) *4	TZ : + 10:00	35.28° S	149.13° E
AUSTRALIA (TASMANIA) *4	TZ : + 10:00	23.71° N	90.41° E
AUSTRALIA (DARWIN) *4	TZ : + 8:00	26.22° N	50.58° E
AUSTRALIA (PERTH) *4	TZ : + 8:00	23.71° N	90.41° E

AFRICA

Country/State	Timezone	Latitude	Longitude
ALGERIA (ALGIERS)	TZ : + 1:00	31.77° N	35.22° E
BOTSWANA (GABORONE)	TZ : + 2:00	24.45° S	25.57° E
EGYPT (CAIRO)	TZ : + 2:00	30.06° N	31.25° E
ETHIOPIA (ADDIS ABABA)	TZ : + 3:00	09.02° N	38.75° E
GHANA (ACCRA)	TZ : + 0:00	05.56° N	00.20° W
KENYA (NAKURU)	TZ : + 3:00	00.28° S	36.07° E
LIBYA (TRIPOLI)	TZ : + 2:00	32.88° N	13.19° E
MADAGASCAR (ANTANANARIVO)	TZ : + 3:00	18.55° S	47.31° E
MADAGASCAR (FIANARANTSOA)	TZ : + 3:00	21.45° S	47.09° E
MAURITIUS (PORT LOUIS)	TZ : + 4:00	20.16° S	57.50° E
MOROCCO (OUJDA)	TZ : + 0:00	34.68° N	01.91° W
NAMIBIA (WINDHOEK)	TZ : + 2:00	22.56° S	17.08° E
NIGERIA (KANO)	TZ : + 1:00	12.00° N	08.52° E
SOUTH AFRICA (CAPE TOWN)	TZ : + 2:00	33.93° S	18.42° E
SUDAN (KHARTOUM)	TZ : + 3:00	15.55° N	32.53° E
TANZANIA (DAR ES SALAAM)	TZ : + 3:00	06.82° S	39.27° E
UGANDA (KAMPALA)	TZ : + 3:00	00.32° N	32.58° E
ZIMBABWE (HARARE)	TZ : + 2:00	17.83° S	31.05° E
ZAMBIA (LUSAKA)	TZ : + 2:00	15.28° S	28.16° E

EUROPE

Country/State	Timezone	Latitude	Longitude
AUSTRIA (VIENNA) *1	TZ : + 1:00	48.21° N	16.37° E
BELGIUM (BRUSSELS) *1	TZ : + 1:00	50.85° N	04.35° E
BULGARIA (SOFIA) *1	TZ : +2:00	42.40° N	23.20° E

EUROPE

Country/State	Timezone	Latitude	Longitude
CROATIA (ZAGREB) *1	TZ : +1:00	45.50° N	15.58° E
CYPRUS (NICOSIA) *1	TZ : + 2:00	35.10° N	33.25° E
CZECH REPUBLIC (BRNO) *1	TZ : +1:00	49.19° N	16.60° E
CZECH REPUBLIC (MOST) *1	TZ : +1:00	50.50° N	13.60° E
CZECH REPUBLIC (PRAGUE) *1	TZ : + 1:00	50.09° N	14.42° E
ENGLAND (BIRMINGHAM) *1	TZ : 0:00	52.48° N	01.90° W
ENGLAND (BRISTOL) *1	TZ : 0:00	51.28° N	02.35° W
ENGLAND (EDINBURGH) *1	TZ : 0:00	55.95° N	03.19° W
ENGLAND (LEEDS) *1	TZ : 0:00	53.45° N	01,30° W
ENGLAND (LONDON) *1	TZ : 0:00	51.51° N	00,13° W
ENGLAND (LIVERPOOL) *1	TZ : 0:00	53.41° N	02.98° W
ENGLAND (MANCHESTER) *1	TZ : 0:00	53.48° N	02.24° W
ENGLAND (NEWCASTLE) *1	TZ : 0:00	54.97° N	01,61° W
ENGLAND (PLYMOUTH) *1	TZ : 0:00	50.25° N	04,50° W
ENGLAND (SOUTHAMPTON) *1	TZ : 0:00	51.51° N	01.61° W
FINLAND (HELSINKI) *1	TZ : + 2:00	60.17° N	24.94° E
FRANCE (BORDEAUX) *1	TZ : +1:00	44.30° N	00.31° W
FRANCE (LYON) *1	TZ : +1:00	45.45° N	04,50° E
FRANCE (PARIS) *1	TZ : + 1:00	48.85° N	02.35° W
FRANCE (MARSEILLE) *1	TZ : +1:00	43.20° N	05.20° E
GERMANY (BERLIN) *1	TZ : + 1:00	52.52° N	13.41° E
GERMANY (BREMEN) *1	TZ : +1:00	50.50° N	08.49° E
GERMANY (ERFURT) *1	TZ : +1:00	50.59° N	11.20° E
GERMANY (FRANKFURT) *1	TZ : +1:00	51.70° N	08,41° E
GERMANY (HAMBURG) *1	TZ : +1:00	55.33° N	10.20° E
GERMANY (STUTTGART) *1	TZ : +1:00	48.47° N	09.11° E
GERMANY (MUNICH) *1	TZ : +1:00	48.80° N	11.35° E
GERMANY (KIEL) *1	TZ : +1:00	54.20° N	10,80° E
GREECE (ATHENS) *1	TZ : +2:00	37.98° N	23.72° E
HUNGARY (BUDAPEST) *1	TZ : + 1:00	47.49° N	19.04° E
ICELAND (AKUREYRI) *1	TZ : 0:00	65.68° N	18.12° W
ICELAND (SELFOSS) *1	TZ : 0:00	63.93° N	21.0° W
ICELAND (AKRANES) *1	TZ : 0:00	64.32° N	22.07° W
ICELAND (REYKJAVIK) *1	TZ : 0:00	64,10° N	21.57° E
IRELAND (DUBLIN) *1	TZ : 0:00	53.33° N	06,25° W
ITALY (MILANO) *1	TZ : +1:00	45.27° N	09.10° E
ITALY (NAPLES) *1	TZ : +1:00	40.50° N	14.15° E
ITALY (ROMA) *1	TZ : + 1:00	41.89° N	12.48° E
ITALY (VENICE) *1	TZ : +1:00	45,26° N	12,20° E
NETHERLAND (AMSTERDAM) *1	TZ : + 1:00	52.37° N	04.89° E
NORTHERN IRELAND (BELFAST) *1	TZ : 0:00	54.37° N	05.56° W
NORWAY (HAMMERFEST) *1	TZ : +1:00	70.38° N	23.38° E
NORWAY (OSLO) *1	TZ : + 1:00	59,91° N	10,75° E
POLAND (KATOWICE) *1	TZ : +1:00	50.26° N	19.02° E
POLAND (KIELCE) *1	TZ : +1:00	50.86° N	20,62° E
POLAND (MALBORK) *1	TZ : +1:00	54.03° N	19.03° E
POLAND (RADOM) *1	TZ : +1:00	51.40° N	21.14° E
POLAND (SZCZECIN) *1	TZ : +1:00	53.42° N	14.55° E
POLAND (WARSAW) *1	TZ : + 1:00	52.23° N	21,01° E
PORTUGAL (AVEIRO) *1	TZ : 0:00	40.64° N	08.65° W
PORTUGAL (LISBON) *1	TZ : 0:00	38.72° N	09.13° W
PORTUGAL (OPORTO) *1	TZ : 0:00	41.15° N	08.61° W
ROMANIA (BUCHAREST) *1	TZ : + 2:00	44,43° N	26,11° E
SCOTLAND (ABERDEEN) *1	TZ : 0:00	57.90° N	02.90° W
SCOTLAND (GLASGOW) *1	TZ : 0:00	55.50° N	04.15° W
SERBIA (BELGRADE) *1	TZ : +1:00	44.52° N	20.32° E
SLOVENIA (LJUBLJANA) *1	TZ : + 1:00	46.04° N	14.33° E
SPAIN (BILBAO) *1	TZ : +1:00	43.26° N	2.935° E
SPAIN (CARTAGENA) *1	TZ : +1:00	37,62° N	00,99° W
SPAIN (GRANADA) *1	TZ : +1:00	37.17° N	03.59° W
SPAIN (MADRID) *1	TZ : + 1:00	40.42° N	03.70° W
SPAIN (SANTIAGO DE COMPOSTELA) *1	TZ : +1:00	42.87° N	08.54° W
SPAIN (VALENCIA) *1	TZ : +1:00	39.46° N	0.376° E
SWEDEN (STOCKHOLM) *1	TZ : + 1:00	59.33° N	18,07° E
SWITZERLAND (ZURICH) *1	TZ : + 1:00	47.37° N	08.55° E
UKRAINE (KIEV) *1	TZ : + 2:00	50.45° N	30.52° E
YUGOSLAVIA (BELGRADE) *1	TZ : + 1:00	44.50° N	20.37° E

CO-ORDINATES AND TIMEZONE INFORMATION FOR ATS2M1-1-16A-230V

AMERICA (SOUTH & NORTH)

Country/State	Timezone	Latitude	Longitude
ARGENTINA (BUENOS AIRES)	TZ : - 3:00	34.61° S	58.38° W
BAHAMAS (NASSAU) *2	TZ : - 5:00	25.05° N	77.20° W
BARBADOS (BRIDGETOWN)	TZ : - 4:00	13.05° N	59.30° W
BRAZIL (BRASILIA) *3	TZ : - 3:00	15.78° N	47.93° W
BRITISH VIRGIN ISLANDS (ROAD TOWN)	TZ : - 4:00	18.27° N	64.37° W
CANADA (OTTAWA) *2	TZ : - 5:00	45.41° N	75.69° W
CANADA (VANCOUVER) *2	TZ : - 8:00	49.25° N	123.12° W
CHILE (SANTIAGO)	TZ : - 3:00	33.24° S	70.40° W
COLOMBIA (BOGOTA)	TZ : - 5:00	04.71° N	74.07° W
COSTA RICA (SAN JOSE)	TZ : - 6:00	09.55° N	84.02° W
CUBA (HAVANA) *2	TZ : - 5:00	23.08° N	82.22° W
DOMINICA (ROSEAU)	TZ : - 4:00	15.20° N	61.24° W
ECUADER (GUAYAQUIL)	TZ : - 5:00	02.10° S	79.56° W
ECUADOR (QUITO)	TZ : - 5:00	00.23° S	78.53° W
GREENLAND (NUUK)	TZ : - 3:00	64.01° N	51.35° W
JAMAICA (KINGSTON)	TZ : - 5:00	18.00° N	76.50° W
MEXICO (MEXICO CITY) *5	TZ : - 6:00	19.43° N	99.13° W
PANAMA (PANAMA)	TZ : - 5:00	09.00° N	79.25° W
PARAGUAY (ASUNCION)	TZ : - 4:00	25.10° S	57.30° W
PERU (LIMA)	TZ : - 5:00	12.00° S	77.00° W
PUERTO RICO (SAN JUAN)	TZ : - 4:00	18.28° N	66.07° W
URUGUAY (MONTEVIDEO)	TZ : - 3:00	34.50° S	56.34° W
USA (NEW YORK CITY) *2	TZ : - 5:00	40.71° N	74.01° W
USA (WASHINGTON DC) *2	TZ : - 5:00	38.89° N	77.04° W
USA (DALLAS) *2	TZ : - 6:00	32.78° N	96.81° W
USA (CHICAGO) *2	TZ : - 6:00	41.85° N	87.65° W
USA (DENVER) *2	TZ : - 7:00	39.74° N	104.98° W
USA (LOS ANGELES) *2	TZ : - 8:00	34.05° N	118.24° W
USA (LAS VEGAS) *2	TZ : - 8:00	36.17° N	115.14° W
USA (TEXAS) *2	TZ : - 7:00	31.96° N	99.90° W
USA (BOSTON) *2	TZ : - 5:00	42.36° N	71.05° W
VENEZUELA (CARACAS)	TZ : - 4:30	10.30° N	66.55° W

IMPORTANT NOTES:

1. **Enter 0 for North / East and - for South / West on Latitude and Longitude pages also keep Daylight Shift on SW page "NA" for all except below marked countries**
2. **Select SW as EURO : for European countries,**
   USA : for North American countries, BRL : for Brazil & nearby countries,
   AUS: Australian countries, MEX : Mexico & nearby countries,
   MIEA : Middle East countries
3. ***1 : SW = EURO : On Last Sunday of March +1 Hr in Timezone and on last Sunday of October -1 Hr**
   ***2 : SW = USA : On 2nd Sunday of March +1 Hr in Timezone and on 1st Sunday of November -1 Hr**
   ***3 : SW = BRL : On 3rd Sunday of October +1 Hr in Timezone and on 3rd Sunday of February -1 Hr**
   ***4 : SW = AUS : On 1st Sunday of October +1 Hr in Timezone and on 1st Sunday of April -1 Hr**
   ***5 : SW = MEX : On 1st Sunday of April +1 Hr in Timezone and on last Sunday of October -1 Hr**
   ***6 : SW = MIEA : On last Friday of March +1 Hr in Timezone and on last Friday of October -1 Hr**
4. **Enter +1hr in Timezone if SW is not NA and date lies in above mentioned period for any of 6 above given categories.**