

Klemsan®

MEASTRO

Astronomical Time Relay

MEASTRO is an astonomic time relay which calculates sunrise and sunset times for the given coordinates or city selections and switches the relay contacts on and off to control connected systems without any need of photocells or external sensors. Meastro can be used as digital time relay as well.

- 100 pcs programming memories
- 2x (AgSnO₂) contact
- Automatically calculates sunrise, sunset and prayer times according to the set location.
- Quick and easy programming with MAESTRO-R via infrared communication
- Free programming software
- And with many more features, MAESTRO provides the best solution for you.

Which actions are executed?



Thanks to the MAESTRO **infrared** port and remote control, the program, time, location and prayer information prepared by the computer is transferred within seconds.

MAESTRO **controls** devices connected to relay outputs according to user-programmed hours, sunrise and sunset times.

Street lighting, mosque lighting and air conditioning by controlling the astronomical time clock provides **energy savings**.

It has a total of **100 programming memories** for 2 contacts

With the **user interface software** you can program your program much faster. You can also double your speed with the control that provides infrared data transfer from the device to the controller or from the controller to the device bidirectionally.

It calculates **prayer times** according to the province-district or coordinate information you have set.

Which market are they used frequently?

- Street lighting
- Site lighting
- University and college
- Mosque lighting and conditioning systems.
- Parks, gardens and farm irrigation
- ATM's, shop windows, advertising boards, lighting

Benefits and Advantages

- Fast programming with user interface program and infrared control
- 7 year battery reserve time
- 100 programming memories
- High electromagnetic compatibility (EMC) and maximum resistance to electromagnetic noise
- User-friendly menu structure
- Perfect fit with the modular panel
- High mechanical strength
- Self-extinguishing plastic outer structure

Street Lighting



MEASTRO 221
MEASTRO 321



In open areas such as streets, streets, parks and gardens, in closed areas such as universities, schools and buildings where lighting elements need to be turned on and off in certain periods, MEASTRO astronomical time relay is used independent of human power. Meastro, which calculates the change of the sunrise and sunset time over the next 100 years, saves energy. In addition, different programs according to the days of the week, the lighting system provides periodic control.

Mosque, Site Lighting and Air Conditioning



MEASTRO 321



The MEASTRO astronomical time relay can be used for the programming of periodic running systems such as large air conditioning and lighting in industrial, residential or residential areas.

ATM, Store Showcase, Billboards Lighting



MEASTRO 221
MEASTRO 321



ATMs, showcase, billboards and many more areas are used MEASTRO with the aim of saving energy.

Park, Garden and Field Irrigation



MEASTRO 110
MEASTRO 120
MEASTRO 121
MEASTRO 221
MEASTRO 321



The control of the water pumps to be operated in agricultural areas, park or garden irrigation systems before one or more times a day is determined easily by the programming of the astronomical time relay.

Digital Timer



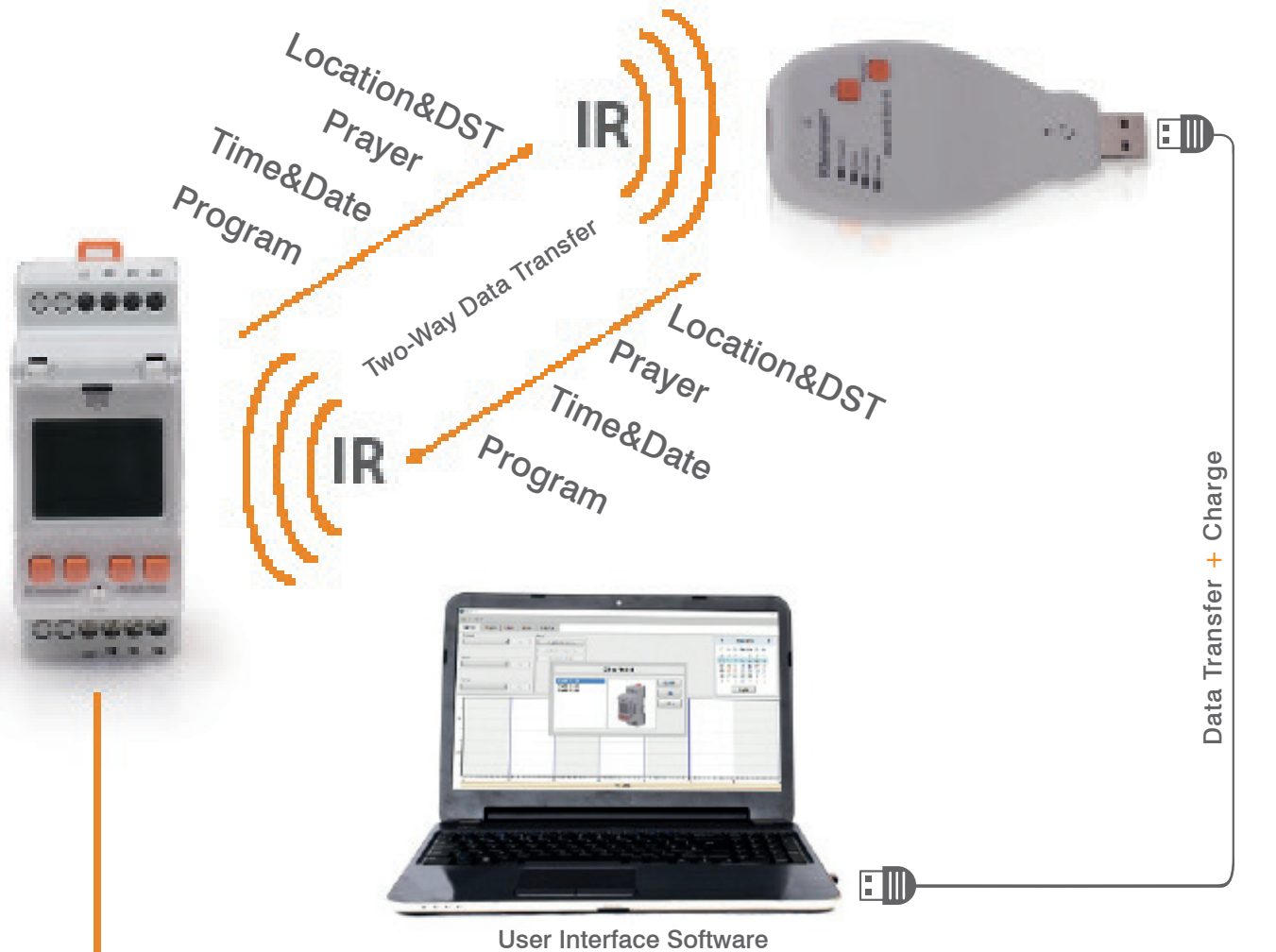
MEASTRO 110
MEASTRO 210



MAESTRO also has models that are independent of the astronomical time, and can only be used as digital time relays on the days and times set by the user.

MAESTRO-R (Infrared Controller)

By uploading the data generated by the user interface program to the infrared data transfer controller, the program, time, location and prayer data can be transferred to the device separately. The program, clock, location and prayer data in the device memory can be transferred to the remote control. In this way, the time spent to transfer the program from one device to another is reduced. The data which is taken from the device to the controller is transferred to the desired device within the seconds and the time saving is achieved.



Street Lighting



**ATM, Store Showcase,
Billboards
Lighting**









**Mosque, Site Lighting
and Air Conditioning**



**Park, Garden and Field
Irrigation**



Order Numbers and Technical Specifications

 <p>MEASTRO - R</p> <p>Order Number: 270 720</p>					
Device Model	Meastro 121	Meastro 221	Meastro 321	Meastro 110	Meastro 120
Order Number	270 702	270 703	270 704	270 700	270 701
Mounting Type	Rail mount	Rail mount	Rail mount	Rail mount	Rail mount
Digital Program	✓	✓	✓	✓	✓
Astronomical Program	-	✓	✓	-	-
Prayer Program	-	-	✓	-	-
Relay number	2	2	2	1	2
Infrared	✓	✓	✓	-	-
Supply Voltage	165-265VAC			165-265VAC	
Supply Terminals	A1-A2			A1-A2	
Relay number	2X (AgSnO ₂)			1X(AgSnO ₂)	2X (AgSnO ₂)
Maximum Switching Current	16A/250VAC			16A/250VAC	
Power Consumption	AC Max. 11 VA			AC Max. 11 VA	
Accuracy	1 sec/day			1 sec/day	
Renewal Time	0,5sec			0,5sec	
Display Type	LCD			LCD	
Screen Size	1.5"			1.5"	
Number of Programs	100			100	
Battery Reserve Time	7 years			7 years	
Protection Class (CAT)	IP20			IP20	
Operating Temperature	-20 °C..+70 °C			-20 °C..+70 °C	
Storage Temperature	-30 °C..+80 °C			-30 °C..+80 °C	
Relative Humidity (Non-condensing)	Max. 95%			Max. 95%	
Mounting	Rail			Rail	
Weight	126,4 gr			126,4 gr	
DST setting	Automatic			Automatic	
IR distance	550 mm			-	

Wiring Diagram and Dimensions

