

# Lighting Automation with *Astro*<sup>®</sup> using GSM Technology



- Most of the "ASTRO" parameters can be set remotely using SMS queries. I.e. Output mode, Offset Hrs etc, UV, OV settings.
- Relay Output can be override remotely using SMS query.
- Energy Meter Functionality. Parameter like Load current, Supply voltage, Power, Energy can be known remotely.
- With the help of "Auto Error Code Update" following onsite error can be know remotely during output event.
  - Under Voltage
  - Over Voltage
  - Over Current
  - Output actuator short.
  - Load Open

Cat. No.	19D20B00 (ERT 5)	19C20C00
Parameters		
Supply Voltage (≡)	240 VAC (3 Phase, 4 Wire)	240 VAC (1 Phase)
Supply Variation	-30% to +25% (of≡)	
Frequency	50/60 Hz	
Active Phase selection	Yes	
Operating Temperature	-15°C to + 60°C	
GSM Type	Dual band 900 / 1800 GSM	
GPRS Packet data	Class 10 coding scheme	
AT cCommand set Suitability	N. A.	Yes
SMS Type Functionality	Data Call through GSM, SMS	GSM 7.05 & 7.07
SIM Holder	Text, Cell Broadcast	
Antenna	Connected with the product	
Antenna Impedance	50 Ω	
Energy Measurement	Yes	No
Energy Measurement Accuracy	Class 0.5	N. A.
Current Sensing Range	5A	N. A.
CT Ratio	Settable up to 40	N. A.
LED Indications	Tx, Rx, Network, Power, Pulse Out	Tx, Rx, Network, Power, SIM Status
Pulse Out rate	3200 pulses / kWh	N. A.
Auxiliary Output	12 V DC, 200 mA	N. A.
General Port Connectivity		TTL port for connecting Time-switch (Astro) USB through USB interface cable GFDNN1, RS232 through serial interface GFDNN2S, RS485 through TTL-RS485 converter G7XDTR4"
Mounting	Base / DIN Rail	
Enclosure	Flame Retardant UL94-V0	
Dimension (W x H x D) (in mm)	72 X 90 X 67	
Weight (unpacked)	190 g	
Certification		
EMI / EMC		
Harmonic Current Emissions	IEC 61000-3-2	Ed. 3.2 (2009-04) Class A
ESD	IEC 61000-4-2	Ed. 2.0 (2008-12) Level II
Radiated Susceptibility	IEC 61000-4-3	Ed. 3.2 (2010-04) Level III
Electrical Fast Transients	IEC 61000-4-4	Ed. 3.0 (2012-04) Level IV
Surges	IEC 61000-4-5	Ed. 2.0 (2005-11) Level IV
Conducted Susceptibility	IEC 61000-4-6	Ed. 3.0 (2008-10) Level III
Voltage Dips & Interruptions (AC)	IEC 61000-4-11	Ed. 2.0 (2004-03) All 7 Levels
Conducted Emission	CISPR 14-1	Ed. 5.2 (2011-11) Class A
Radiated Emission	CISPR 14-1	Ed. 5.2 (2011-11) Class A
Environmental		
Cold Heat	IEC 60068-2-1	Ed. 6.0 (2007-03)
Dry Heat	IEC 60068-2-2	Ed. 5.0 (2007-07)
Vibration	IEC 60068-2-6	Ed. 7.0 (2007-12) 5g
Repetitive Shock	IEC 60068-2-27	Ed. 4.0 (2008-02) 40g, 6ms
Non-Repetitive Shock	IEC 60068-2-27	Ed. 4.0 (2008-02) 30g, 15ms

Note:

1. ERT5 & ERT1 can measure maximum 5A & 1A current respectively.

2. Maximum current measurement limit for ERT-5 is 200A & for ERT-1 it is 40A.

Ex: 1. For CT selection if current required to be measured is upto 200A then CT of 200:5 A ( CT ratio 40) needs to be used.

2. For CT selection if current required to be measured is upto 40A then CT of 40:1 A ( CT ratio 40) needs to be used.

## ORDERING INFORMATION

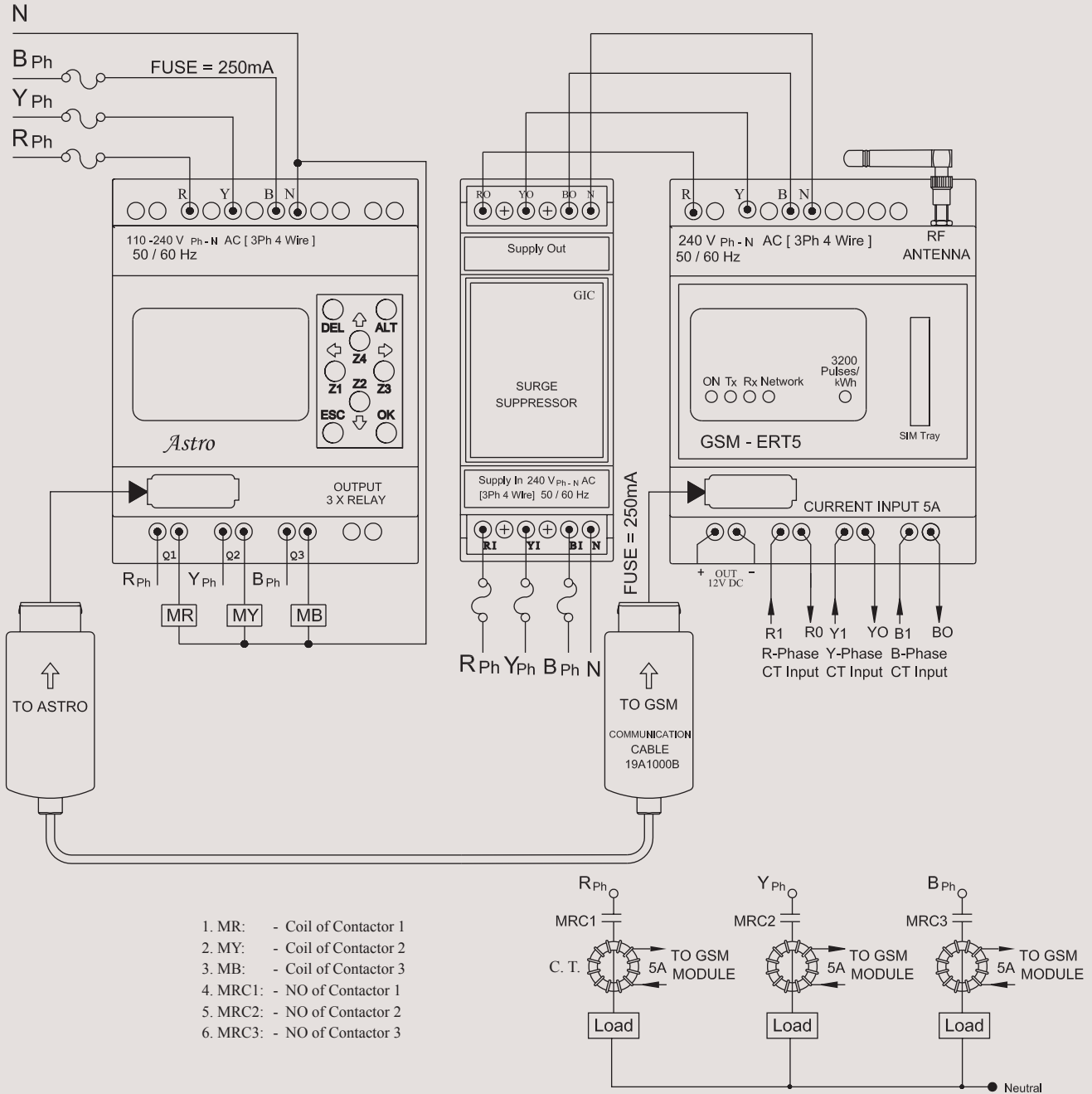
Cat. No.	Description
19D2000C	Surge Suppressor
19D20B00	Astro GSM Module (GSM-ERT5), Remote Side
19C20C00	Astro GSM Module (GSM-RT), PC side
19A1000B	Communication Cable (TTL-TTL) between Astro & GSM Module
TGDDT6	Windows based application software for Astro

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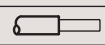
- Maximum 5 valid users can access the system remotely, using GSM functionality.
- To avoid Remote module's SIM theft, "SIM PIN" facility can be enabled remotely using SMS query.
- To avoid changes in system configuration by unauthorized user amongst valid users, important SMS queries are provided with "MODULE PIN" lock.
- Device supports for 12 to 14 digit mobile number. i.e. (10 Digit Mobile number + 2/3/4 digit country code).



## CONNECTION DIAGRAM



## TERMINAL TORQUE & CAPACITY

 Ø 3.5...5.0 mm	Torque - 1.1 N.m (10 Lb.in) Terminal screw - M3.5
	Solid Wire - 2 X 0.2...2.5 mm <sup>2</sup>
AWG	1 X 24 to 10