

MODULE FOR MOBILE STARTER

Features:

- Load can be made ON / OFF using mobile phone from remote location either by making an IVRS call, missed call or sending SMS to the device.
- Device is suitable for Single Phase and Three Phase supply.
- Device is compatible with SASD, FASD & DOL starters and controllers.
- One Master and two other Master or Monitor numbers can be configured to control and monitor the Load operation.
- Load can be operated in Manual Mode, GSM Auto Mode, Timer Mode, Retentive Timer Mode or Multiple Daily Timer Mode.
- Wire antenna for flexible positioning to get proper signal strength.
- User get information of events like Load ON/OFF, Phase error, Error recovery, Power Fail, Power ON, Phase fail, Contactor pick up fault through SMS and call back from device.
- Anti-theft feature.
- Safe, Secure and Simple to use.

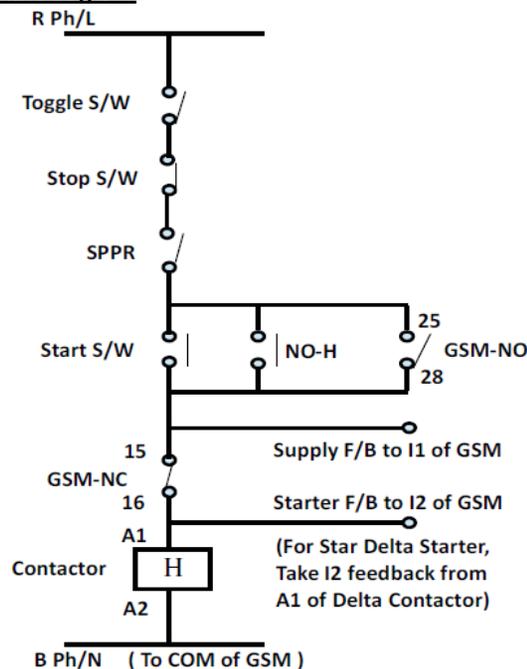
Operation:

GSM modem can be connected to the existing Load starter. User has to simply insert the SIM card in the device & configure master number. Master number can operate the Load by Call or SMS. Master number will receive the SMS of events like Load ON/OFF, Error, Error recovery, Power ON, Power fail, Phase fail and SIM balance through SMS and call back from device.

Important :

- Do not remove SIM card in power on condition.
- Keep Supply Protection Relay (SPPR) in Manual mode only.
- It is recommended to record IMEI number for security & device traceability.
- For proper communication with the device, select the SIM card with good network coverage at the installation location.

Connection Diagram:



SIM Card Insertion & Antenna Fitment :



How to configure Master & Monitor Numbers:

- Step 1:** Insert SIM card in the slot provided and connect Antenna.
Step 2: Power on device & wait for 50 sec. ON (Green) LED will start blinking*, indicating that device is in factory default mode. After every power on, device will take 50 to 80 sec for initialization during which user should wait.
Step 3: Ensure that NW (Network) LED is flashing after every 3 sec. It means device is registered with inserted SIM N/W. If NW LED is blinking faster, it means that the device is not registered with SIM NW & hence not ready for operation.
Step 4: Press the CFG (Configuration) key on the device till CFG (RED) LED starts blinking. The device goes in the configuration mode to configure the master number in the device.
Step 5: CFG LED will blink for 3 min, user should configure the master number within this time.
Step 6: Call the device number, call will be disconnected after 1 to 2 rings.
Step 7: After call gets disconnected, ON LED stops blinking & becomes permanently ON. CFG LED turns OFF. This will indicate that, master number has been configured in the device. User will receive SMS of "ROLE : MASTER".
Step 8: To configure other Master numbers if required, send query 55<Space>Mobile no.1<Space>Mobile no.2 from the master number.
Step 9: After installing device for the first time, set the device clock by sending query "16". User will receive SMS,"TIME : SET , TM : 14.10,01/12/16".
Step 10: If device is connected to single phase supply, then configure device for single phase supply by sending query 18<space>1. User will receive SMS - SUPPLY - 1 PHASE
Step 11: If device is connected in Semi Automatic Star Delta starter then configure the device in SASD system by sending query 77<space>0. User will receive SMS - PANEL : SASD.
Step 12: User should refer the "General SMS Queries" for functional details of the device.
***Note:** In factory default, ON LED will continuously remain ON for approx. 10 sec till super capacitor charging and then start blinking.



Terminal Details:

	Ø3.5mm	0.54 Nm (6Lb.In) Terminal screw – M2.5
		1 x 0.2....1 mm2 Solid Wire / Single Wire Ferrule.
		2 x 0.2....1 mm2 Insulated Twin Wire Ferrule.
AWG		1 x 24 to 12

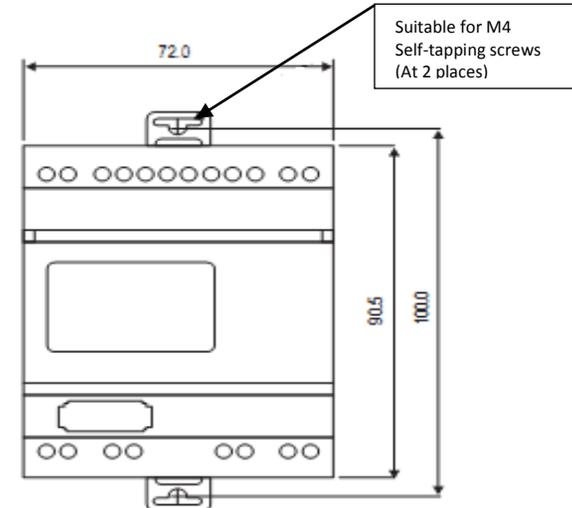
Note:

1. The technical information provided in this document is correct at the time of going to press.
2. Product innovation being a continuous process, we reserve the right to alter specifications without any prior notice.
3. Only qualified persons are authorized to install the GSM modem.

Product Mounting:

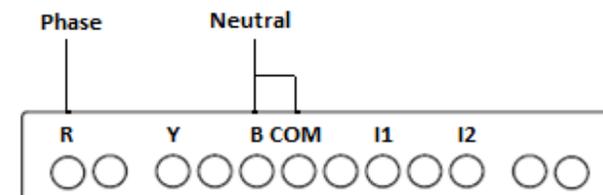
- GSM unit is recommended to mount on DIN Rail.
- GSM unit can be fixed with screw.

GSM unit mounting with screws:



Note : Pull out din clips half way, mount GSM modem using screws.

Single Phase Supply Connection:



Product Specifications:

Catalogue Nos.	26A11AV	26A21AV	
SUPPLY CHARACTERISTICS :			
Supply Voltage	180V AC to 500V AC, 1 Ph /3 Ph-3 wire	85V AC to 265V AC, 1 Ph /3 Ph-3 wire	
Supply Frequency	50 / 60 Hz		
Power Consumption	10VA		
Contact Ratings	Terminal 15 & 16 – NC ,Terminal 25 & 28 – NO, 5A @ 250V AC / 30V DC (Res)		
FUNCTIONAL CHARACTERISTICS :			
LED Indications	LED	INDICATION	DEVICE STATUS
	ON (Green)	ON	Master number configured
		Blinking @ 500 m Sec	GSM modem in factory default mode
	CFG (Red)	Blinking @ 500 m Sec	GSM modem in configuration mode
	N/W (Green)	Flash every 800 m sec	Not registered with N/W
		Flash every 3 sec	Registered with N/W
	I1 & I2 (Yellow)	Both ON	Load ON
		Both OFF	Load OFF
		I1 Blinking @ 500 m Sec	Phase fail
		Both blinking	Power fail indication till super capacitor back up
	Tx/Rx (Green)	Random blinking	Communication between CPU & Modem
		Flash every 400 m Sec	SIM card not detected
Operating Temperature	0°C to +60°C		
GSM CHARACTERISTICS :			
GSM Modem	2G,Quad band 850MHz,900MHz ,1800MHz and 1900MHz.		

Frequently Asked Questions (FAQs):

- 1. What is Timer mode & Daily Timer mode?**
Ans : In Timer Mode, user can switch ON the Load for a specified duration for that day only.
 In Daily Timer mode, user can program the Load ON and OFF time in a day, based on device clock. Once daily timer is enabled, every day Load will be ON and OFF as per programmed time. ON and OFF time is in 24 hour format. In Timer mode as well as Daily Timer mode, user can switch OFF the Load by call or SMS as per need.
- 2. What is Auto Mode?**
Ans : If Load is made ON in Auto mode by 66 1 query and Power fails or phase error occurs during Load ON condition, then Load will turn ON automatically after power resumption or error recovery.
- 3. What is Anti-theft feature?**
Ans : In event of unauthorized access to Device, if someone attempts to configure his number as Master, then all old configured numbers receive SMS of New Master number configuration.
- 4. What is meaning of “CHECK I1 FOR RECOVERY” in error SMS?**
Ans : This SMS indicates that device is not getting I1 feedback. As I1 feedback is important to check error recovery, device can not send recovery SMS. User need to fix the problem if there is any loose connection or wire damage.
- 5. What is meaning of “CONTACTOR PICKUP FAULT” and “I2 F/B OPEN” in error SMS?**
Ans : User will receive “CONTACTOR PICKUP FAULT” SMS, if contactor do not pick up due to low voltage or loose wiring connection in Panel .User will receive “I2 F/B OPEN” SMS,if device do not receive I2 feedback .On receiving this SMS , User need to fix the problem if there is any loose connection or wire damage.
- 6. What is meaning of SMS “PHASE FAIL” and “PH ERROR/MANUAL OFF”?**
Ans : User will receive “PHASE FAIL” SMS in the event of single phasing whereas User will receive “PHASE ERROR/MANUAL OFF” SMS, if Load turns OFF due to phase fail , phase reverse ,phase imbalance in supply or if Load is switched OFF manually.
- 7. How new Master number can be configured if already old master number present in Device?**
Ans : To configure new master number, user need to put device in configuration mode by pressing CFG Key till red LED starts blinking.Then either send 44 query from new number with last 4 digits of old Master number as a password .All old settings will remain as it is. **OR** Make a call from new number to device. All previous setting will be set to factory default.
 After new number configuration, previous all numbers are removed.

General SMS Queries : (To be sent only from Configured numbers to Device number)

SMS QUERY	ACTION
Functional Queries	
Voice Call (IVRS)	When call is made to device, recorded voice guide the User to operate the Load. (Factory set)
Missed Call	If Master number disables Voice call (IVRS) feature by 41<space>0 query, then User can operate the Load by Missed Call mode. When User call device, then device cut the call after 3-4 rings to make Load ON and cut the call after 5-6 rings to make Load OFF.
00	After receiving SMS 00, device turn OFF the Load.
11<space>0	After receiving SMS 11 0, device turn ON the Load.
11<space>HH<space>MM (Timer Mode)	After receiving this query, Load is turned ON in timer mode till specified end time. Here HH indicates Hour and MM indicates Minutes. E.g. after receiving 11 00 30 query,Load is turned ON till next 30 minutes. In Timer mode, error and power fail duration is not compensated. Load can be operated in timer mode from min 1 min to max 23.59 Hrs.
21<space>HH<space>MM (Retentive Timer Mode)	After receiving this query, Load is turned ON in Ret. timer mode for set time. Here HH indicates Hour and MM indicates Minutes. E.g. after receiving 21 00 30 query,Load is turned ON for 30 minutes. In Ret. Timer mode, error and power fail duration is compensated. Load can be operated in Ret. Timer mode from min 1 min to max 23.59 Hrs.
22<space>HH.MM<space>HH.MM (Daily Timer Mode)	After receiving this query,device make Load ON and OFF as per set time on daily basis.Here HH indicates Hour and MM indicates Minutes. Load ON and OFF time can be set in 24 Hrs format only. Master number can set min 1 and max 4 daily timers. E.g. If master send query 22 10.30 12,then device daily make Load ON at 10.30AM and OFF at 12PM. If master want to operate 4 daily timers, then send query e.g. 22 9 11.30,11.35 13.45,15 16,17.30 19 After receiving this query,Load turns ON and OFF 4 times a day as per set time. There should be 1 min difference between 2 daily timers.
22	After receiving this query from Master number , daily timer settings are disabled.
23	After receiving this query,User get to know, for how many hours Load was ON since installation of the device. Only Master number can reset hour meter to zero by sending query 23<space>0.
41<space>0 or 1	0 – To disable Voice call(IVRS) and enable Missed call mode 1 – To enable Voice call(IVRS) and disable Missed call mode (Factory Set)
42<space>0 or 1	0 – To disable Call back from device (Factory Set) / 1 – To enable Call back from device
43<space>0 or 1	0 – To stop receiving Event SMS from Device. / 1 – To start receiving Event SMS from Device. (Factory Set)
66<space>1	To make Load ON in Auto mode.
66<space>0	To make Load OFF only if it is ON in Auto mode.
97	To know System settings.
98	To know daily timer settings.
99	To know current status of Load.
INFO	To know all frequently used queries.
Configuration Queries	
15<space>0,balance code	After receiving this query , User get balance information. Balance code need to be correctly set. E.g. 15 0,*121# (*12# is balance code. It changes as per Service provider)
15<space>1,balance code	After receiving this query , User get balance information automatically after every 16 to 20 th SMS.
16	After receiving this query, Device time will be set as per time of Master’s SIM Network .
17	To know configured master & other master / monitor numbers.
18<space>1 or 3	1 -To configure with 1 PH Supply / 3 - To configure with 3 PH Supply (Factory Set).
44<space>xxxx (xxxx indicates last four digit of previous master number)	To replace the previous master number with new one, send query 44<space>xxxx from a new number which is to be configured as Master. (Note: 1.Before sending this query first press configuration key on device till CFG LED starts blinking 2. After this query, previously stored other master/monitor numbers will be deleted & new numbers need to be configured)
50<space>0 to 5	Master number can configure SPP ON delay in the Device by sending query 50. If actual SPP ON Delay is set at 30 sec , then Master number should send query 50<space>0 , similarly 50<space>1 for 1 min ON delay and upto 5 minutes in multiple of 1 minute. The default setting in the device is of 5 minutes.
55<space>First number<space>Second number	By sending this query Master number can configure 2 other Master numbers with device. Other Master numbers can also turn ON and OFF Load by call or SMS. OR Master number can configure 2 Monitor numbers by suffixing letter M to mobile numbers in 55 query .(e.g 55<space>xxxxxxxxxM). Monitor numbers can only receive event SMS from device. To change the numbers ,Master can resend 55 query with new numbers which are to be configured. (Note: While entering numbers, ensure that correct number is entered. Numbers can be verified by sending 17 query).
55	To remove other master /monitor numbers, send only 55 query to device from Master number.
77<space>0 or 1	0 -To configure with SASD starter / 1 - To configure with DOL/FASD starter (Factory Set).
Troubleshooting / Security Queries	
12	To check network range
13	To know IMEI number and F/W version of the device.

**NOTE : 1) Other Master numbers have access to call and queries 00, 11, 12, 13,17,21,23,44, 66, 97,98 ,99 and info.
 2) Monitor numbers have access to queries 12, 13,17,21,23,44, 97,98,99 and info.**