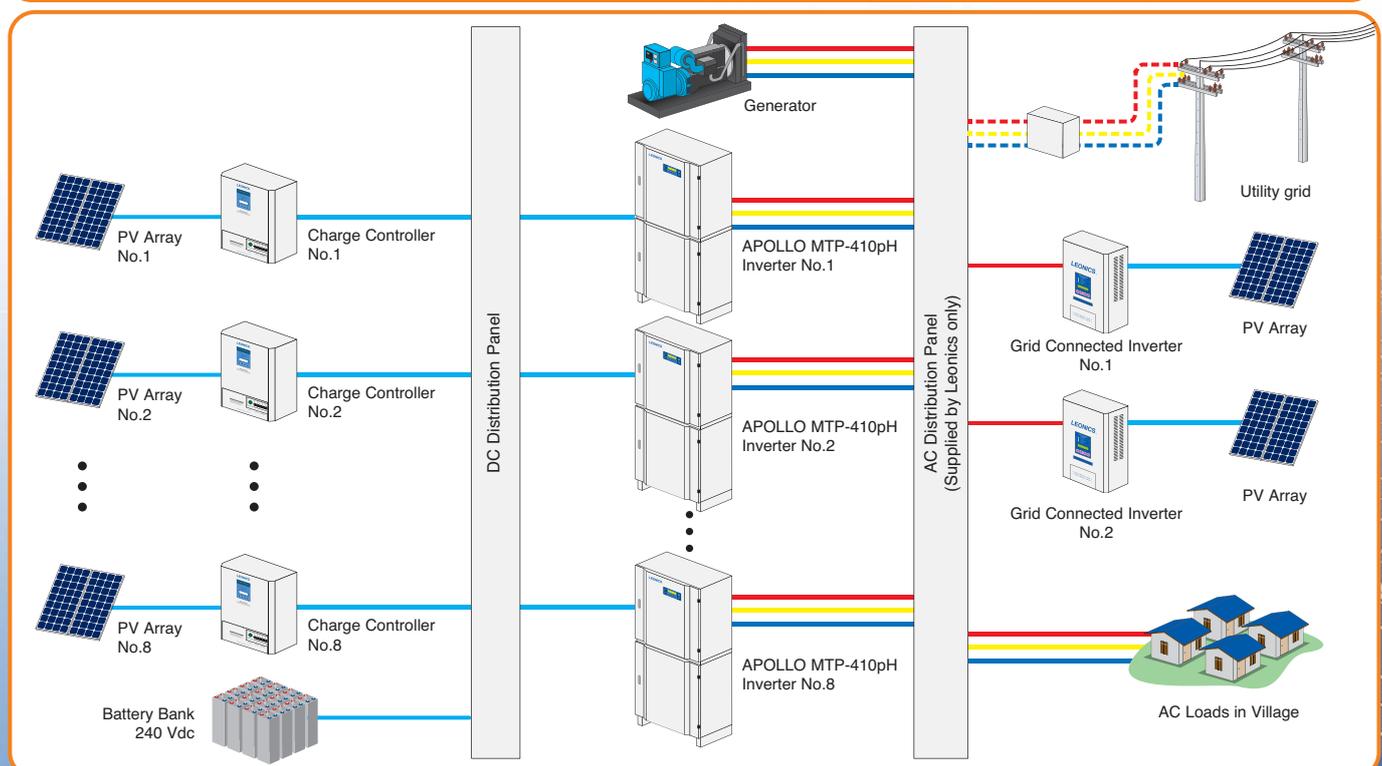
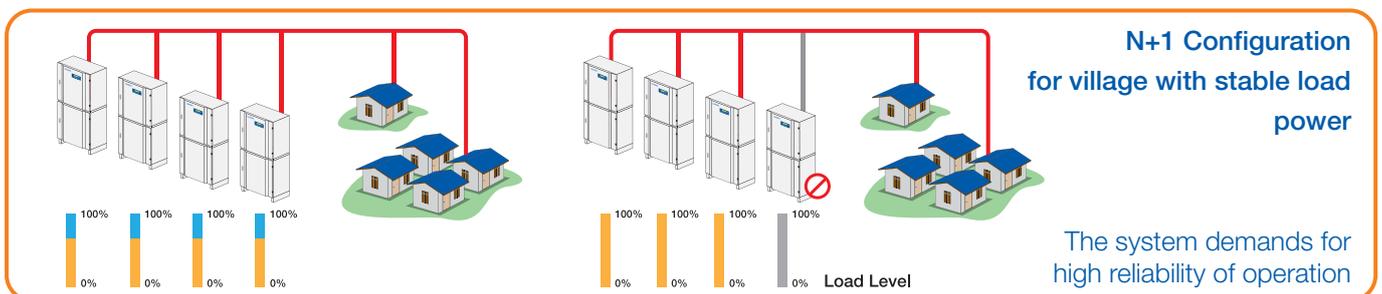


## APOLLO MTP-410pH

### Three Phase Bidirectional Parallel Inverter



- High efficiency bidirectional inverter with built-in output transformer
  - Capable to use with multiple renewable energy sources in both DC coupling and AC coupling such as PV panel, wind turbine generator and micro hydro generator
  - Generator connected signal when the generator provide as other energy source of the system
  - Separate DC Bus for multiple source charging
  - No master unit required
  - Expandable power by adding inverter from 1 to 8 units without master controller
  - Digital input to select operation between inverter mode or charge mode
  - Capable to interact with utility grid line (option)
  - IP41 protection enclosure
  - ISO 9001 and ISO 14001 certified factory
- Parallel configuration up to 8 units of inverter
  - Capable to operate in N+1 redundancy configuration for very high reliability in remote area



## APOLLO MTP-410pH series Three Phase Bidirectional Parallel Inverter

MODEL		MTP-412FpH	MTP-413FpH	MTP-414FpH	MTP-415FpH
RATED POWER		15 kVA / 15 kW	25 kVA / 25 kW	30 kVA / 30 kW	45 kVA / 45 kW
BATTERY	Nominal Voltage	240 Vdc			
	Maximum charging current	43 A	72 A	84 A	125 A
AC SOURCE (GRID LINE OR GENERATOR)	Recommended generator power	23 kVA	38 kVA	45 kVA	68 kVA
	Voltage	380 / 400 / 415 Vac (L-L), 220 / 230 / 240 Vac (L-N)			
	Phase	Three phase			
	Frequency	50 / 60 Hz $\pm$ 3 Hz			
	Max. AC current (for charge mode)	22.7 A	37.9 A	45.4 A	68.2 A
	Start / stop generator	Relay dry contact 10 A (ACC contact)			
AC OUTPUT	Voltage	380 / 400 / 415 Vac (L-L), 220 / 230 / 240 Vac (L-N)			
	Voltage regulation	$\pm$ 3% (steady load), < 7% at 100% step load within 0.1 sec.			
	Phase	Three phase			
	Frequency	50 / 60 Hz $\pm$ 0.1%			
	Wave form	Pure sine wave			
	Total harmonic distortion	total < 3%			
	Maximum surge current	200%			
	Maximum AC current	22.7 A	37.9 A	45.4 A	68.2 A
ISOLATION	Galvanic isolation	yes			
EFFICIENCY	Inverter peak efficiency	> 96%			
PROTECTION		Over current, over load, short circuit, over temperature, over voltage, under voltage			
	Battery temperature sensor	option			
DIGITAL INPUT SIGNAL		Auxillary inverter circuit breaker, Auxillary generator circuit breaker, Auxillary Bypass circuit breaker / Load transfer switch			
INDICATOR	LED	Stand by/Run, AC, Full battery/Low battery, Alarm			
	LCD display	Inverter (voltage, current, frequency, power, reactive power), AC Bus (voltage, frequency), Battery (voltage, current, state of charge(%)), External DC charging current, Charging status, Battery charging voltage set points, Equalization charge date, Heat sink temperature, Battery temperature (option), Today AC inverter energy (input / output), Today DC inverter energy (input / output), Accumlated AC inverter energy (input / output), Accumlated DC inverter energy (input / output), System status, Load transfer switch signal status, Digital input signal, status, Time, Date, Data and Event log			
AUDIABLE ALARM	Buzzer	Low battery, inverter fault, overload, short circuit, over temperature			
COOLING		Automatic cooling fan			
ENVIRONMENT	Temperature	0 - 45°C			
	Relative humidity	0 - 95 % (Non - condensing)			
DESIGN	Standard	IEC 61683, AS/NZS 3100:2009			
REGULATION	Enclosure	IP41			
DIMENSION (W x H x D) in cm	Control unit	80 x 80 x 65			
	Transformer unit	80 x 103 x 65			
WEIGHT (Approximate in kg)	Control unit	106 kg	124 kg	124 kg	127 kg
	Transformer unit	247 kg	251 kg	256 kg	335 kg

Continuous product development is our commitment. In that manner, the above specifications may be changed without prior notice.



Control Unit



Transformer Unit

Authorized Distributor

LEO ELECTRONICS CO.,LTD.

27, 29 Soi Bangna-Trad Rd 34, Bangna Tai, Bangna, Bangkok 10260 THAILAND  
Tel. 0-2746-9500, 0-2746-8708 Fax. 0-2746-8712 e-mail : RNE@leonics.com

▪ www.leonics.com ▪

Authorized Dealer