

Operate **THREE** phase machinery From your **SINGLE** phase power supply



With a **POLYPHAZ** converter

Rotary phase converters

Features

- **High efficiency, 98.5%**, tested by Water Dept of Western Australia
- **NO** harmonic losses to allow for.
- Floating pole rotaries R & HR models
- VolTTrak, FaulTrak standard R & HR
- **SiteNet**, enabled
- Single or multiple three phase loads
- 3 Year Warranty
- Vermin Proof, sealed cabinets & forced cooling

Benefits

- No input line chokes required, No output line chokes required.
- No requirement to modify equipment.
- **Field serviceable**, as specified by govt authorities.
- **Field adaptable**, via H.M.I panel, as specified by govt authorities



C-Tick approved **N10944**

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Description

The **POLYPHAZ** converter represents a cost effective solution to operate three phase equipment from your single phase power supply. For more than 20years the **POLYPHAZ** converter has been recognised for its innovative design from both power utilities & equipment manufactures & formed a front line piece of equipment of hundreds of successful rural and remote ventures from woodworking & metalworking businesses to some of the largest dairy farms & wineries throughout Australia & overseas .

VOLTRAK balanced output voltage. controlled every 20 milliseconds



VOLTRAK system

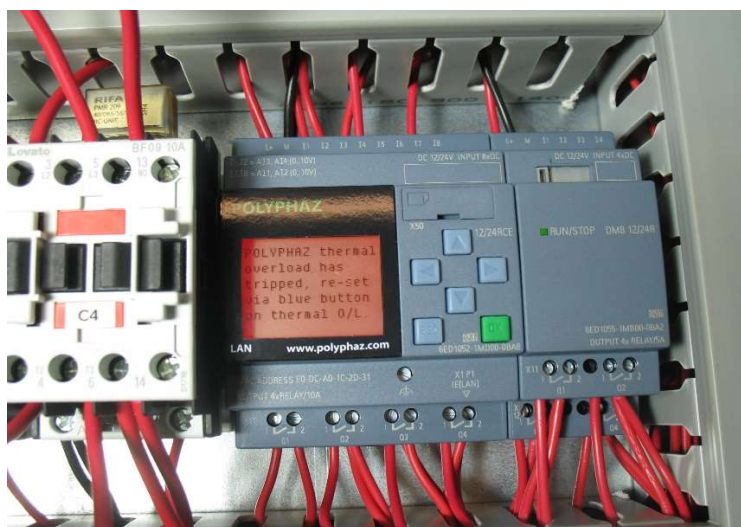


2 x 11KW, 1 x 7.5KW pump compressors powered by **POLYPHAZ**

The **VOLTRAK** system monitors the output supply to maintain a balanced three phase output to meet the demands of modern three phase equipment, no matter how the load varies.

FAULTRAK Text display feature

In most cases our rotary converters are used in some remote areas so we understand that correct installation, maintenance & accurate fault diagnosis all form part of long term trouble free operation. To achieve this, we have developed the **FaultTrak** system.



Eliminates the guesswork when something goes wrong.

www.polyphaz.com

PERFORMANCE BY DESIGN

VERMIN PROOF

Designed to keep vermin out

Vermin can do a lot of damage in an electrical control cabinet that's why we used sealed cabinets & forced air cooling



Forced air cooling



sealed cabinets

EASE OF MAINTENANCE

**positively earthed
& easily replaced**

Little things that you may not notice at first but will prove vital down the track, like securely mounted key components, not cable tied but fixed securely to not only provide the required positive earth but ease of replacement.



Simple component replacement

POSITIVE PROTECTION

**thermal overloads fitted ALL
models as required by AS3000**

Positive rotary protection can only be achieved by a bi-metal thermal overload.



Thermal overload protection ALL models

PERFORMANCE BY DESIGN

FIELD SERVICEABLE

Integrated controllers make life easier for the manufacturer but you only have ONE option when ONE of the component fails. Take it back to the manufacturer.

The **POLYPHAZ** converter incorporates: capacitor switching, power supply, microprocessor, transducer **separately** making field service a reality. * As specified by major O.E.M, s and govt authorities.

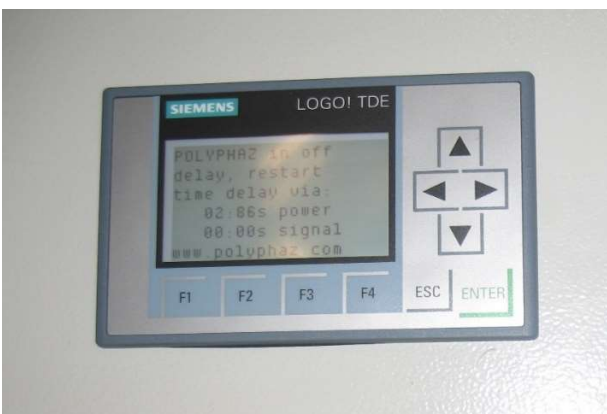


Access to 16 protection parameters

SITE CONDITION ADAPTABLE

We don't believe in the philosophy of "**One size fits all**" with regards to controllers, site conditions and field applications can vary and may need to be adapted to suit the application or field conditions at time of installation or years down the track and in some cases program variations, all possible with the VoltTrak system.

For applications with untrained operators restricting access to live components is best practice, clearer fault display and easier parameter modifications. * As specified by major O.E.Ms and govt authorities



FaultTrakX, standard on **HR** converters door panel operator access panel.



High spec power capacitors standard with **R** & **HR** converters

PERFORMANCE BY DESIGN

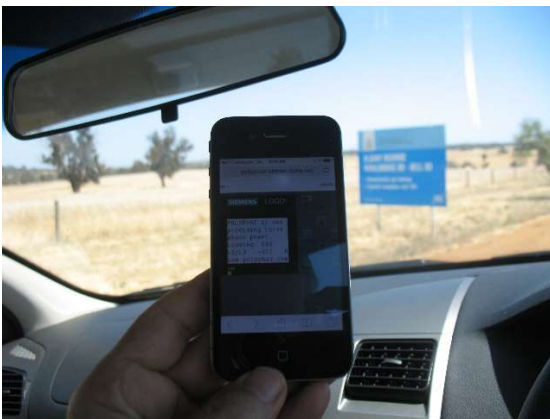
SiteNet via Ethernet

From November 2015 all R & HR series converters will use the latest in technology as standard, an Ethernet enabled controller with a new program offering greater performance and better protection. * Separate data sheet available on request.

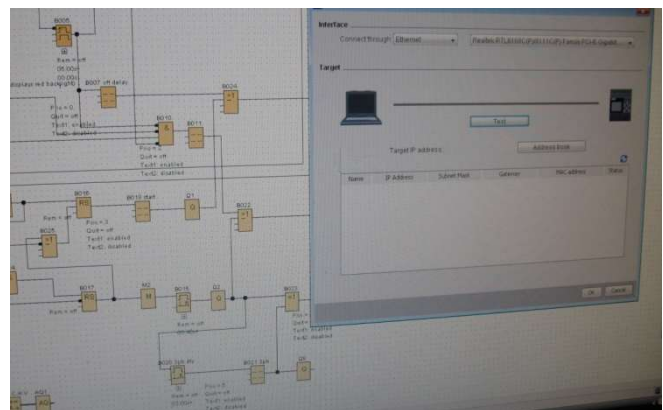
"Remote from site" diagnosis, control and monitoring now possible.



- New 6-line multicolour H.M.I display.
- Ethernet enabled for simple connection via WIFI Bridge GSM, landline.
- Integrated web server for remote diagnosis by iphone, tablet or computer.
- Remote communication via cellular network possible. Data logging possible.
- Loading in "%" and output voltage display.



remote monitoring possible



remote connection via web server underway

APPLICATIONS



Hardware Technical Specification

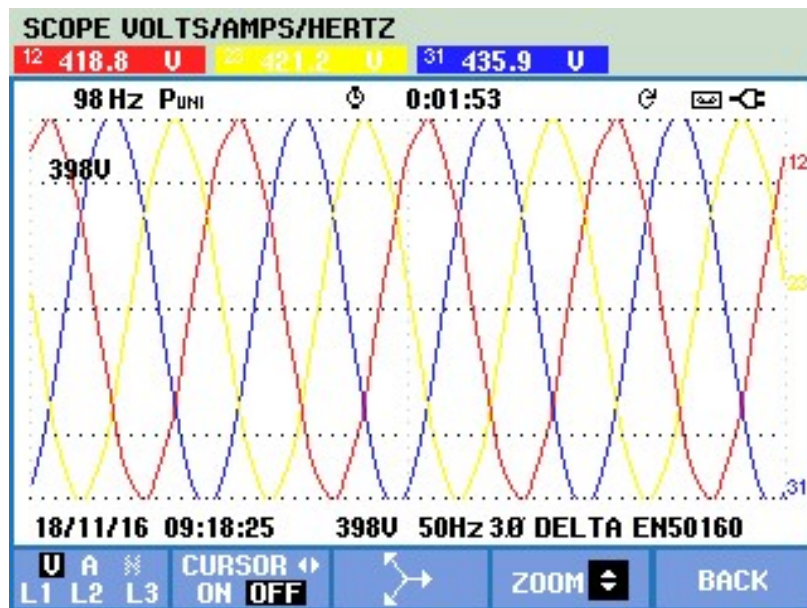
Feature	EPZ	PZ	R7.5-18.5	HR18.5-75
BI-metal Thermal overload rotary protection	✓	✓	✓	✓
High specification Power capacitors			✓	✓
2 wire control	✓	✓	✓	✓
Stop/Start buttons	✓	✓	✓	✓
FaultTrak Text display			✓	✓
VoltTrak 8 stage system +/-6%		✓		
VoltTrak 16 stage system +/-6%			✓	✓
VoltTrak 24 stage system +/- 6%				✓
Vermin proof	✓	✓	✓	✓
Independent fan forced cooling	✓	✓	✓	✓
Generator protection class supply breaker			✓	✓
Lightning and overvoltage protection				✓
Auto start/stop option possible		✓	✓	✓
Single wire multi motor control possible		✓	✓	✓
NeuTrak option possible		✓	✓	✓
FaultTrakX Front panel Machine operator panel *				✓

*Higher specification, covered in separate specification, available on request.

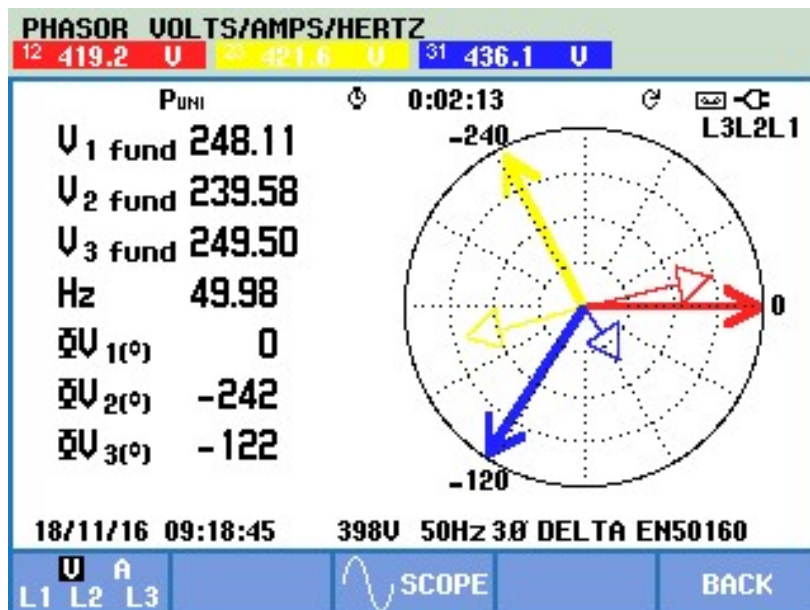
Software Technical Specification

Feature	EPZ	PZ	R7.5-18.5	HR18.5-75
3PH output voltage monitoring *		✓	✓	✓
Start fail lockout *		✓	✓	✓
Start overtime lockout *		✓	✓	✓
Hour run meter			✓	✓
Remote fault reset possible		✓	✓	✓
Low output/ capacitor fail fault *		✓	✓	✓
Off delay start *		✓	✓	✓
Off delay restart *		✓	✓	✓
Off delay due to power failure *		✓	✓	✓
Start fail re-start, 3 shot *		✓	✓	✓
Output % loading via Txt display			✓	✓
Input supply voltage monitoring				✓

*site/user adjustments possible by H.M.I panel

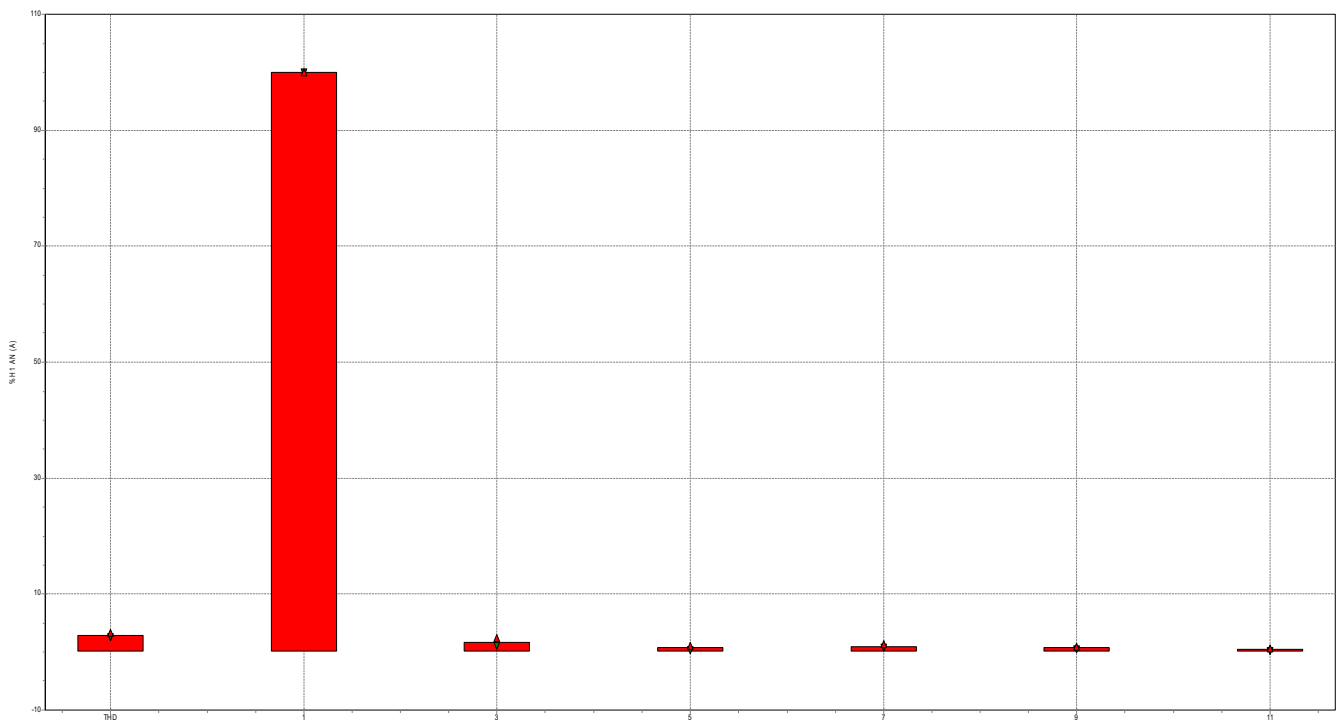


Sine wave produced by POLYPHAZ rotary converter



Phase angle produced by POLYPHAZ rotary converter

NO harmonic losses to allow for as per AS2279.2



Harmonic report, R75480B 60% loaded

This is a R75480 under approx 60% loading powering a range of three phase 415 volt refrigeration equipment from a 100KVA 480 volt single phase supply with a THID (total harmonic current distortion) of approx 5% well under the Australian standards.

Some inverter based converter equipment 40% > 60% loss would need to allowed for in the maximum demand calculation as per AS2279.2