The TemPower2 series is equipped with an RMS sensing over-current release (OCR) having a wide range of protection functions and capabilities.

Standard OCR with adjustment dial

Type AGR-11B.

Standard OCR with LCD-'Ammeter'

Type AGR-21B,22B.

Backlit LCD optional

Enhanced OCR with LCD- 'Analy

Type AGR-31B.

Backlit LCD installed

Overload protection

Adjustable from 40–100% of rated current. True r.m.s detection up to the 19th harmonic, a distant vision for the competition who rarely see past the 7th. Neutral protection for all those Triple-N harmonics, such as 3rd, 9th and 15th. Also in case we forgot to mention, a "**thermal memory**" ia available on the AGR21B/31B.

Reverse power trip fun

(S-characteristic)

This feature provides additional protection when p generators. The AGR22B/31B OCR for generator with the reverse power trip function, negates the ne stallation and wiring in an external reverse power feature is available using an AGR OCR with a gen type characteristic only.

Two channel pre-trip alarm function (optional)

This function can be used to monitor and switch on additional power backup to feed critical circuits. For example, the function can be set so that when a pre-trip alarm is activated, an emergency generator starts to ensure a constant supply. This feature is only available on some AGR22B/31B OCR models with a generator "S" characteristic.

N-phase protection function (optional)

In 3-phase, 4-wire systems that contain harmonic distortion, the 3rd harmonic may cause large currents to flow through the neutral conductor. The N-phase protection function prevents the neutral conductor from sustaining damage or burnout due to these large currents. Available in all OCRs except for generator "S" characteristic types.

Ground fault trip function

This function eliminates external relays to provide a ground fault protection to TN-C or TN-S power distribution systems on the load side. Ground fault protection on the line side is also available as an option.

Earth leakage trip function

Used in conjunction with an externally mounted Zero phase Current Transformer (ZCT), this function provides protection against leakage to earth of very small levels of current. Trip or alarm indication, and contact output is available to enhance the level of system protection.

Phase rotation protection function

This function detects the negative-phase current occurring due to reverse phase or phase loss and prevents burnout of a motor or damage to equipment.

External display (optional)

Soon to be available

If the ACB is installed in the switchboard so that over
release (OCR) indications are hidden to the operator,
of this large external display allows the operator to mon
indications. Out of phase currents, line voltages (or pha
ages), power and power factor, up to 4 outputs can be
current signals (converted to 4 - 20 mA DC) on the e
display.

Advanced L.C.D. displ Over Current Relay

The AGR-31B OCR comes standard with the backlit L
play. It can monitor and indicate phase currents, voltages,
energy, power factor, frequency, and more. For feature
page 29. The backlit LCD is optional for AGR-21B an
22B.

Remote Communicati Protocols (optional)

Data communications via Modbus, an open network, a
ported.

Energy Measurement

I, V, kW, MWh, kVar, cosø, frequency

Intelligent Fault Analysis

Status, fault type, fault size, tripping time, fault history

Maintenance Information

Trip circuit supervision, contact temperature monitoring

For details please refer to page 12.

For other protocols please contact terasaki.

Contact temperature monitoring function (opt

This function monitors the temperature of the ACBs ma
tacts. An alarm indicates when the temperature exceeds
Continuous monitoring of the contact temperature pr
valuable input for preventative and predictive maintenan
grams.

Optimum protective coordination

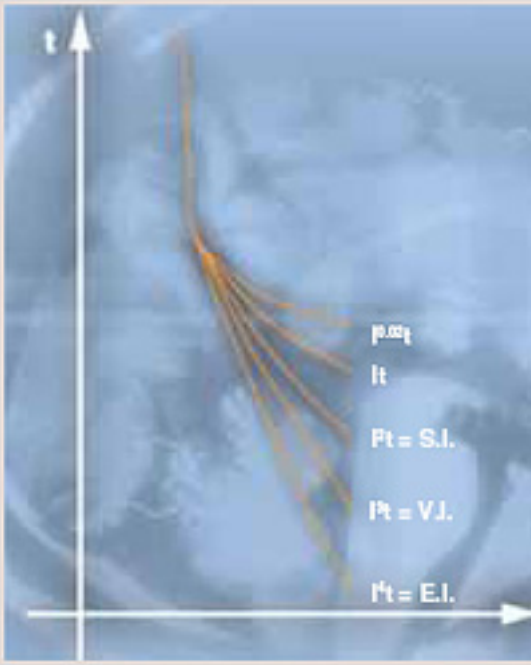
Why use a separate panel mounted protection relay when you can have all the benefits of I.D.M.T. protection integral to the ACB?

TemPower2 is available with a choice of flexible protection curves to assist in selectivity applications.

S.I. Standard Inverse
V.I. Very Inverse
E.I. Extremely Inverse

All these curves are user definable and comply with IEC 60255-3. Standard transformer and generator protection characteristics are also available.

AGR-L Industrial & transformer protection
AGR-S Generator protection
AGR-R Characteristics to IEC 60255-3



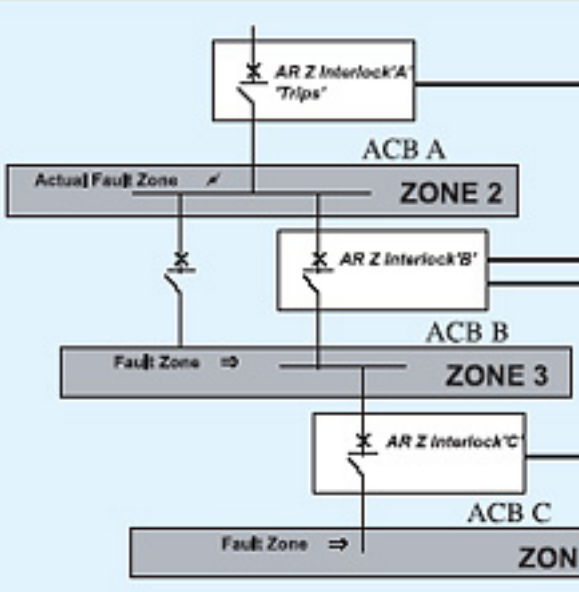
Inverse Definite Minimum Time (I.D.M.T.)

Zone Interlocking

In conventional discrimination systems, short time delays are used to allow a short-circuit current to be tripped by the circuit breaker nearest the fault. The disadvantage of this type of system is during a fault; considerable thermal and mechanical stresses are placed on the entire system. With the *TemPower2* Z Interlock system the breaker nearest the fault irrespective of the short time delay setting will trip first.

Example of operation:

If a fault occurs in Zone 2, only AR Z Interlock 'A' will sense any fault current fault, a no fault signal will be sent by AR Z Interlock 'B' & 'C', consequently AR Z Interlock 'A' trips the ACB immediately, overriding its short time delay.



Example of AR Zone Interlock Function