EXERGEN industrial sales Europe™

Exertherm FAQ's

What does Exertherm do?

ExerTherm is a system specifically designed to provide continuous 24/7 thermal monitoring of mission critical electrical equipment within enclosures, and to detect & identify the exact location of the problem long BEFORE the failure.

Is ExerTherm similar to thermal imaging?

Both use non contact infrared to measure temperature of the target, but that's where the similarity ends. Thermal imaging is done from OUTSIDE the enclosure, and can only be used for terminations / components immediately adjacent & with direct line of sight to the panel surface, (because it's measuring the temperature of the panel not the component).

ExerTherm uses patented, small, plastic bodied, non contact IR sensors, which require no external power. These are placed INSIDE the enclosure to directly thermally monitor any component in ANY location within the panel.

A key difference is that thermal imaging inspections are periodic, generally 1 or 2 days per year. To rely on detecting problems prior to failure, in mission critical equipment, with 1 or 2 days inspection out of 365, leaves an unacceptable reliance on luck.

ExerTherm is continuous 24/7 365 days per year. It misses nothing.

Don't thermal windows overcome these problems?

They improve the view from camera to target, but don't resolve some key issues, like how to inspect targets with no direct line of sight, nor the fact that the inspections remain periodic. They can also add significant cost.

What benefits does direct & continuous thermal monitoring provide?

ExerTherm continuously protects 24/7, 365 days per year to detect and identify the location of problems at an early stage of development via on-going trend analysis / alarms.

What if the problem develops quickly or trend data is not acted upon?

Each sensor also has 2 alarm levels (warning + alarm), which trigger in the event the temperature of any monitored component exceeds pre-set (user definable) limits. These can be integrated into BMS or other host systems, send SMS messages, or simply provide a remote warning.

How can small cable terminations be monitored?

ExerTherm also utilises patented cable sensors which simply strap onto the cable, adjacent to the termination to be monitored.

For further information

European Sales Office
Pastoor Clercxstraat 26, 5465 RH Veghel
Netherlands

T +31 (0)413 37 65 99
F +31 (0)413 37 93 10
E info@exergeneurope.com
W www.exergeneurope.com

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Exertherm FAQ's Continued...

How reliable are these sensors?

The IR sensors have an MTBF of in excess of 1,000yrs.

What should be monitored?

Thermal inspection is internationally recognised as the best method of detecting poor terminations, the most common cause of power outages. Thus, if it's mission critical & within the enclosure, it should be considered. Generally, the IR sensors are utilised to monitor key busbar terminations (ACB's, switches, busbar connections etc). The cable sensors are utilised to monitor critical cable terminations (i.e. MCB's, MCCB's etc).

Can ExerTherm be used to thermally monitor other critical plant?

Yes! An increase in heat is a common symptom of malfunction across diverse cross section of plant (i.e. bearings, motors, gearboxes, pumps, etc). Thus, virtually all key plant can also be continuously thermally monitored on the same system, using non-contact IR, contact thermocouples, or air temperature sensors.

What type of business is most likely to benefit from installing ExerTherm?

Any business which is "power critical" i.e. will incur significant downtime costs, or safety is compromised in the event of a major power failure. Examples include computer data centres, financial services, telecommunications, defence / Govt establishments, large scale manufacturing, shipping, metro transport systems, petro-chemical industry etc.

Can it interface with existing BMS / SCADA systems?

Yes, and very easily. Modbus is the "standard" export protocol, but Profibus, CANopen, Ethernet options are available. A further 400 protocol drivers can also be utilised. Thus ExerTherm is easy to integrate into virtually any existing host system, via connection to existing data bus outstation.

Can it be retro-fitted to existing equipment ?

As well as being designed into new installations, ExerTherm can also be retro-fitted and / or subsequently expanded, by just adding to the existing system.

Is the system expensive ?

No. In fact over the life of the switchgear, ExerTherm will provide a considerable saving against the total cost of periodic thermal imaging inspections. In addition, shutdowns for conventional intrusive maintenance can often be extended, providing further significant savings. Generally, payback is within 1 - 3 years.

How do the sensors connect to the system ?

Each sensor connects back to an 8 channel data acquisition card, which conditions & linearises the input signal, & converts to the desired output protocol (Std is Modbus). Within each panel the data cards are interconnected, providing a single cable connection to the host system outstation. ExerTherm can also be installed as a stand alone system where required.

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