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Innovating Energy Technology

Fuji SMBE Macquarie takes industry lead with EMR verification of advanced iNTELECT™ G3 switchboards



iNTELECT™ switchboard cabinet and busbar system

Low voltage switchboard manufacturer Fuji SMBE Macquarie has become one of the first manufacturers in Australia to independently verify its iNTELECT™G3 switchboard's low level of electro-magnetic radiation emissions (EMR).

The company has subjected its latest generation iNTELECT™G3 switchboard to independent testing by the NATA-accredited Electrical Testing Company Pty Ltd to ensure it achieved top industry standards and compliance with ARPANSA EMR guidelines for uses in applications such as: public and private infrastructure; commercial and residential apartment buildings; retail, industrial, resources and infrastructure projects; and mission-critical facilities including energy and industrial processing facilities, hospitals, health facilities, telecommunications and financial institution data centres.

The iNTELECT™G3 system is the 3rd generation of the widely used iNTELECT system and has been engineered in Australia for Australian conditions under strict quality and environmental standards. Over the last 30 years, there have been tens of thousands of iNTELECT switchboards manufactured in Australia, giving reliable service in data centres, banks, schools, hospitals, power stations, shopping centres, mines and factories in over 23 countries.

“The results of testing both magnetic field and electrical field vindicated the performance of our advanced, versatile and efficient busbar design with regards to EMR,” says Fuji SMBE Macquarie, a wholly owned subsidiary of Fuji Electric.

“We specifically picked an existing installation with the broadest mix of loads that would likely be encountered in service. As expected, the testing established that the EMR levels measured were well within recommended guidelines. In fact, even the strongest magnetic field emissions from the busbar system were no higher than one would expect from a domestic hairdryer.”

“We have decided to take this industry-leading initiative to raise awareness of EMR as a design issue, and to ensure all users of switchboards could openly compare our EMR performance with the broader market.”

“It is a fact that all busbar systems – and all electrical appliances for that matter - emit EMR, but in the iNTELECT busbars this is effectively minimized by the symmetrical busbar arrangement, close proximity of the neutral and earth conductors, and shielding provided by the modular switchboard housing with its multiple reliable earthing points.”

“In fact, the testing confirmed readings of up to 30% higher where the mains and submains cables are taken out of formation in order to enter or exit the switchboard at a gland plate.”

iNTELECT™G3 is the latest new generation of the proven and versatile iNTELECT™ modular switchboard system from the SMB Group featuring the strength of custom-built configurations with the flexibility of modular construction.

“This latest design progression of the iNTELECT™ system is the most robust and versatile iNTELECT™ switchboard yet, benefitting from 25 years of continuous R & D into the one product to produce the most effective design and multipurpose functionality available for low-voltage switchboards and motor control centres.”

“The G3 system integrates SMB Harwal and SMB Macquarie’s extensive Australian manufacturing and product testing experience, with valuable customer input accumulated over many years of Australian market leadership.”

Fuji SMBE Macquarie specialises in the Australian design, manufacture and testing of custom-engineered modular constructed low voltage electrical switchboards and motor control technology which can be delivered to short lead times as required.

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