

Technical Bulletin

TB 0283 - Replacement of failed IDEC RH2B-UD Relays

Purpose

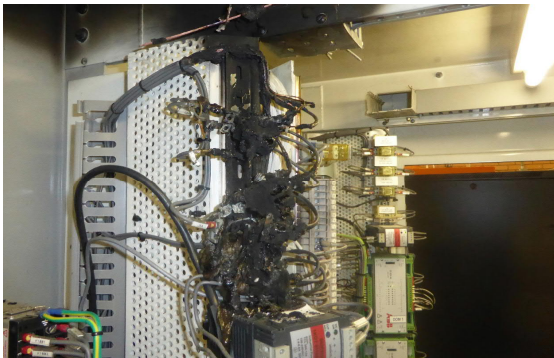
To provide guidance to Protection and Control Technologists on the replacement of failed IDEC interposing relays used to operate Trip and Close coils.

Background

IDEC RH2B-UD relays used to operate the trip and close coils of circuit breakers are not rated to break the inductive coil current.

The breaking of this current is normally performed by a 52A / 52B cut-off contact in series with the coil.

A recent fire at Mittagong ZS was started by an IDEC relay that was forced to break inductive coil current. A photo of the damage from the failed IDEC is shown below



Testing has shown that relays with magnetic blow-out contacts are effective at breaking the current should the main cut-off contact fail to open.

A quantitative risk assessment concluded that a wholesale replacement of all IDEC relays with a relay with magnetic blow-out contact is not justified.

However, the risk is significantly increased if there has been a failure of an IDEC relay observed.

At Mittagong – multiple IDEC relays had been replaced on this circuit prior to the one that caught fire.

Actions

Whenever a failed circuit breaker operation has resulted in a damaged IDEC relay, the relay and base must be replaced with an interposing relay with a magnetic blow-out contact whenever practical.

The recommended relay and associate base is

Item	VOCAB
MORS SMITT D-B 110VDC	001572387
MORS SMITT V23 base	001572395



Implementation

Once the relay has been replaced, the marked up Schematic Drawing must be sent to the Secondary Systems Design section.

The changes to be marked up are

Item	IDEC RH2B-UD	SMITT D-B
Coil +ve	Terminal 14	Terminal 1
Coil -ve	Terminal 13	Terminal 2
Contact	Term. 4-9 or 8-12	Terminals 4 - 12