DeadEasy 31

Test for Dead Tester, 3 Phase

DeadEasy confirms that equipment is disconnected from electricity. This is achieved through the use of self-checking hardware, a design emphasis on fault tolerant components and methods and a simple isolation confirmation procedure.

One power circuit requires the following equipment:
- One DeadEasy (DE31 – Figure 1)
- One DeadEasy Human Machine Interface (DE31HMI – Figure 2)
- One DeadEasy Human Machine Interface cable (DE31HMIC – Figure 3)
- Two DeadEasy Instrument cables (DE31IC – Figure 4)

Features

DeadEasy offers the following features:
- **Simple Use** – 3 Step Procedure - Isolator On = Red Lamp, Isolator Off = Green Lamp, Self Test = Red Lamp. Minimal training and changes to isolation procedures.
- **Positive Result** - Lamp On = Isolated. Whereas “Pilot Lamp” solution Off = Isolated? = Inconclusive!
- **Operator Confidence** - Operator initiated Self Testing provision
- **Power System Safety** - No electrical connections, hence impact, on the power circuit
- **Inexpensive** – Similar to pilot lamps but without the safety and maintenance issues
- **Simple Installation** – 25mm wide DIN rail mount electronics, HMI incorporating LED lamps and self test request all in one only 22.5mm lamp cut-out
- **Wide Application** - Suitable for new and retrofit installations and dusty, low and high ambient light environments.
- **Verifier Safety** – No exposure to live terminals in contrast to electrician confirmed, isolation verification methods
- **Flexible** – Allows subsequent verifications without reversal of the isolation i.e accommodates late working parties

Operation

The DeadEasy Isolation Confirmation Procedure is provided with each DeadEasy in the form of a self adhesive label. The label is depicted in Figure 5.

To confirm an isolation with DeadEasy:

1. Isolator on/closed/1 the red LED only should be illuminated
2. Isolator off/opened/0 the green LED only should be illuminated
3. Isolator off/opened/0 and self test activated the red LED only should be illuminated
Figure 5

The “Self Test” is activated by placing an object (or the operators hand) within 10mm of the HMI/LED face. The “Self Test” is active for approximately 3 seconds. This allows the user to witness the transition from the green to the red LED and back to the green LED. This confirms that DeadEasy is still functional after it has reported the test result and therefore establishes that the isolated result, previously reported, is of high integrity.

Should the above procedure be followed and LED lamp indication is different to that identified in the procedure, a problem with either the power supply, isolation or DeadEasy has been identified.

Description

A block diagram of a typical 3 phase switch and DeadEasy is shown in Figure 6.