ARC FLASH MITIGATION

BE1-50/51B-237 and 235

NEW ARC FLASH Solution

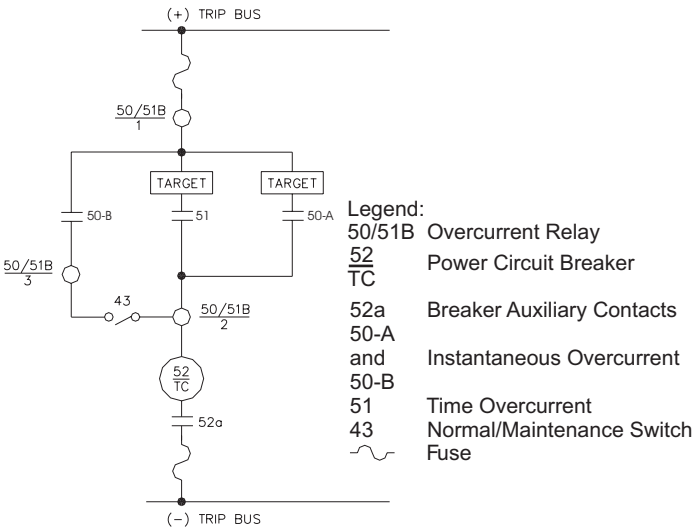
Prepare for NESC 410.A.3 NOW!!

Effective January 1, 2009, the National Electrical Safety Code (NESC) requires all power generating utilities to perform Arc Flash assessments:

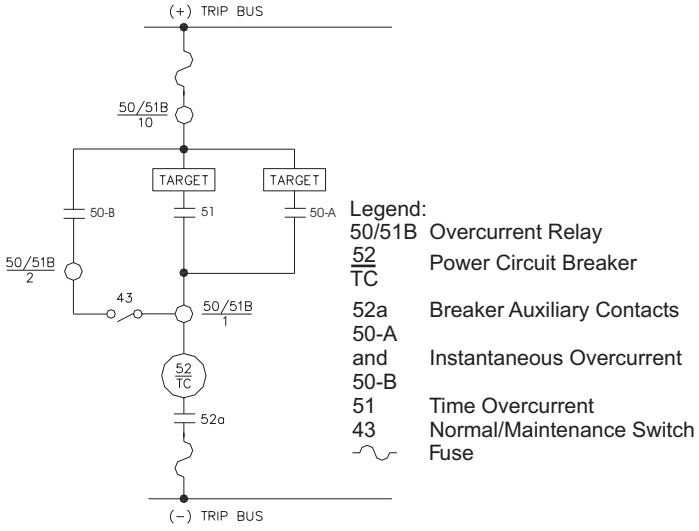
> "Effective as of January 1, 2009, the employer shall ensure that an assessment is performed to determine potential exposure to an electric arc for employees who work on or near energized parts or equipment. If the assessment determines a potential employee exposure greater than 2cal/cm2 exists, the employer shall require employees to wear clothing or a clothing system that has an effective arc rating not less than the anticipated level of arc energy."

Basler Electric Company, the **RETROFIT EXPERT**, has developed a utility grade, "plug & play" product that will help electric utilities meet NESC 410.A.3 requirement in a timely, cost effective manner by reducing the duration of the arc through faster fault clearing.

Typical electromechanical feeder protection schemes are restricted by their inability to "adapt" to short-term operating conditions. Protective relays in these schemes have single time and instantaneous protection element (50/51) which are used for selective coordination required to maintain electric system integrity during faults i.e. minimize amount of electric facilities removed for a given fault. Basler Electric's BE1-50/51B-235 and 237, self-powered single phase overcurrent plug & play replacement relays, add the "adaptability" required for these short-term operating conditions defined by the NESC (arc flash hazards). With the addition of a second instantaneous element (50-B), the utility can selectively insert a sensitive "low set" instantaneous element during the short term operating condition. The same "pin out" used by the existing relays is accommodated by the plug & play replacement including the second instantaneous element (50-B).



BE1-50/51B-237 (IAC Replacement)



BE1-50/51B-235 (CO Replacement)

All information and specifications are as of printing date and subject to change.
Consult Basler factory for latest information and specifications.

Thousands of IAC and CO distribution feeder relays all over the US have been upgraded with the BE1-50/51B-xxx plug & play products, and the "family" continues to be the number one utility grade retrofit product on the market. Plug & play versus "rip & replace" has allowed our utility distribution customers to extend the life of their equipment, lower maintenance costs, and get top flight microprocessor-based protection. And now, to meet the NESC rule change, our customers can easily upgrade to a product that addresses **arc flash mitigation**. Millions of trouble-free service hours have proven the 50/51B-xxx design to be rock solid and capable of performing in nearly any environment.

The Basler Electric BE1-50/51B-235 and 237 overcurrent relays are CT powered, requiring no external power supply. Each single phase relay provides nondirectional phase or ground overcurrent protection by monitoring the magnitude of a single phase ac current and providing accurate instantaneous and time overcurrent protection for 50 hertz or 60 hertz power systems. The relay provides a wide range of pickup settings:

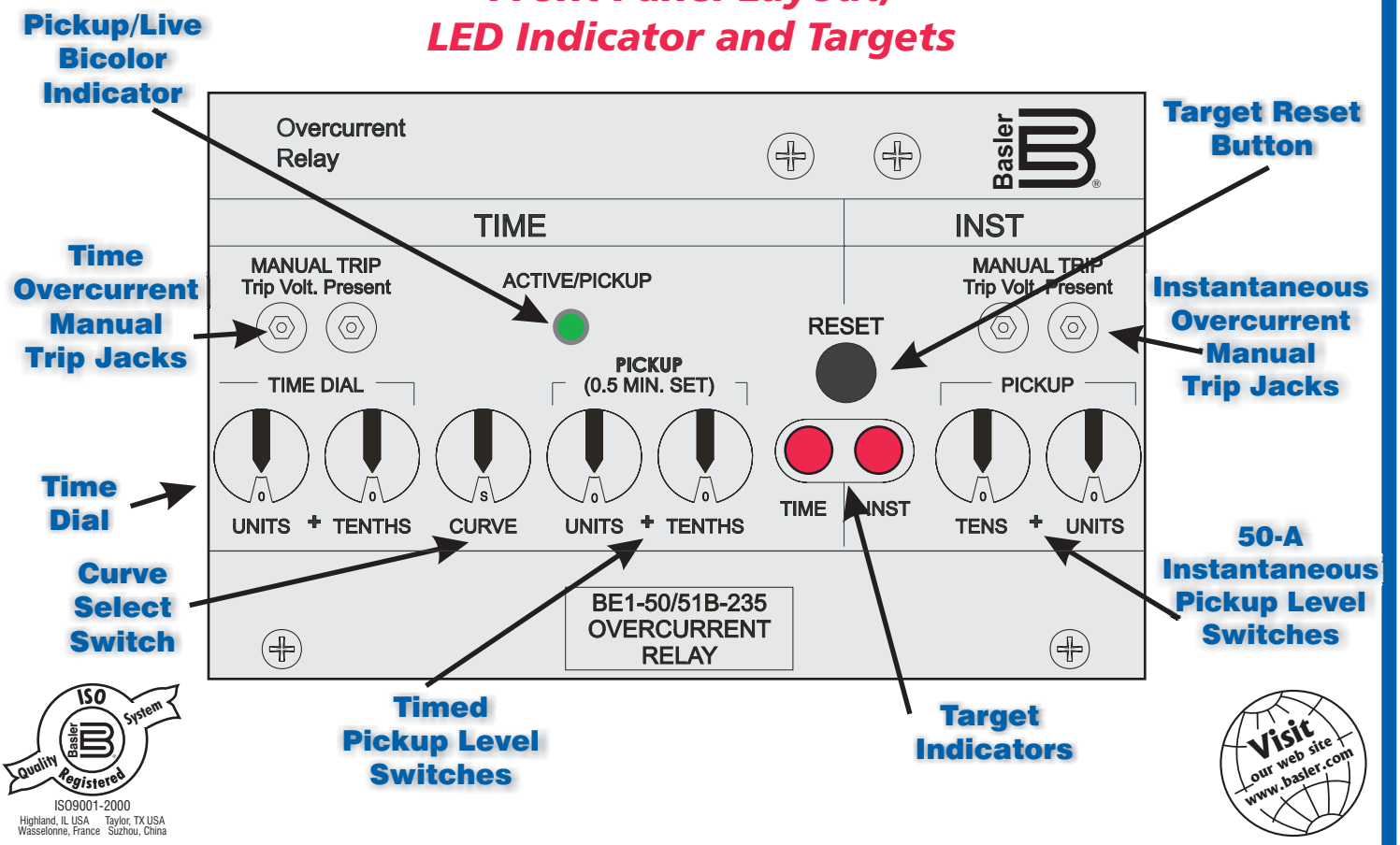
- 51 Pickup - Settable from 0.5 to 15.9 in 0.1 amp increments
- 50-A Pickup - Settable from 1 to 99 in 1 amp increments
- 50-B Pickup - Settable from 2.0 to 15.9 in 0.1 amp increments
- 51 Time Dial - Settable from 0.0 to 9.9 in 0.1 increments

LED Indicator and Targets

LED - Red LED indicates sensed current has exceeded the TIME PICKUP setting.
Green LED indicates current below TIME PICKUP setting but above minimum operate current (0.5A).

Targets - Electrically set, mechanically reset target indicators are provided for the 51 and 50-A elements.
Minimum operate current for each target is jumper selectable between 0.15A and 1.5A.
There is no target indicator for the 50-B element. During the short time 50-B is in service, a trip with no targeting is assumed to be from the 50-B element.

Front Panel Layout, LED Indicator and Targets



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