

Solar Positioning Function Block Offers High Accuracy



WAGO Corporation's free Solar Positioning Function Block (SPFB) increases concentrated solar arrangement efficacy. SPFB achieves this by enabling dynamic solar mirrors to track the sun's arc within $\pm 0.02^\circ$ via WAGO-I/O-SYSTEM. For precise East-to-West tracking, the block relies on multiple variables and inputs. These include atmospheric pressure, site elevation, azimuth, latitude, longitude, date and local time. Calculations are then paired with the internal clock of a WAGO Programmable Fieldbus Controller, optimizing mirror position. Data is communicated to a connected WAGO DC Motor Control Module and encoder, or other component (e.g., variable frequency drive) for alignment. The SPFB provides remote access and manual control by linking to a central PC via fieldbus. System status/alarms are available via e-mail, and a "stow" feature positions panels horizontally (wind) or vertically (snow), reducing stress during inclement weather. SPFB was developed in-house utilizing data from both the U.S. National Resource Energy Laboratory, and the 2011 Astronomical Almanac produced by the U.S. Naval Observatory and H.M. Nautical Almanac Office.

WAGO Corporation

262-255-6222, www.wago.com [1]

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Links:

[1] <http://www.wago.com>