



T H E R M O M E T R I C S
A C O M M I T M E N T T O E X C E L L E N C E

Dual Solar Sensor



Dual solar sensor is mounted on the IP panel near the front window. The dual solar sensor uses two photo diode cells inside of it to measure the intensity of the light that enters into the cabin of the vehicle. It then takes this information and feeds it back to the automatic temperature control (ATC) unit of the vehicle's air conditioning system. The air temperatures of the driver's side and passenger side are then automatically adjusted up or down depending upon the amount of light entering both sides of the vehicle.

Applications

- Dual air conditioner and HVAC systems for automobiles

Features

- Fast response time
- Easy to install



Amphenol
Advanced Sensors

Dual Solar Sensor Specifications

Elevation Response

Elevation $45^\circ \pm 10^\circ$ (azimuth 0°)

Output Current (elevation 45° , azimuth 0° , at 1000 lx)

$I_d = 1.7 \text{ uA} \pm 15\%$

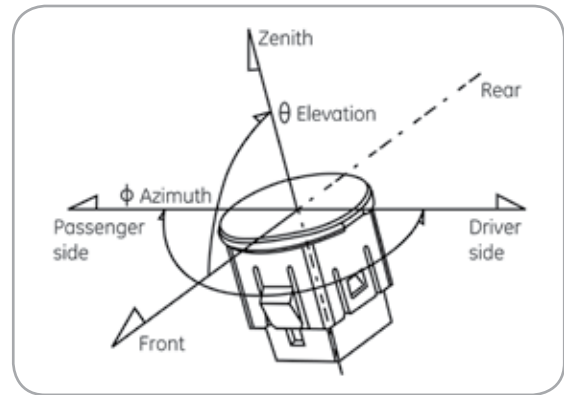
Azimuth Angle Ratio (elevation 45°)

Azimuth -90° (driver side)

$I_d = I_d / (I_d + I_p) = 0.7 \pm 15\%$, $I_p = I_p / (I_d + I_p) = 0.3 \pm 15\%$

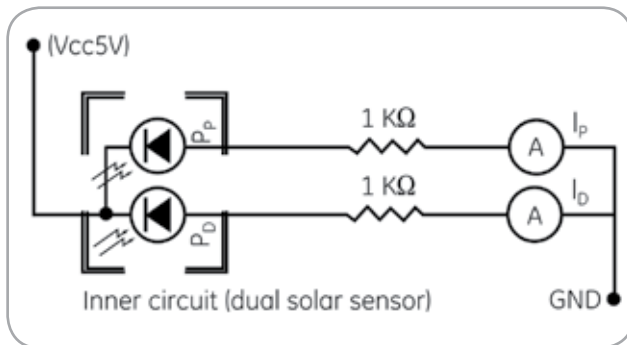
Azimuth 90° (passenger side)

$I_d = I_d / (I_d + I_p) = 0.3 \pm 15\%$, $I_p = I_p / (I_d + I_p) = 0.7 \pm 15\%$

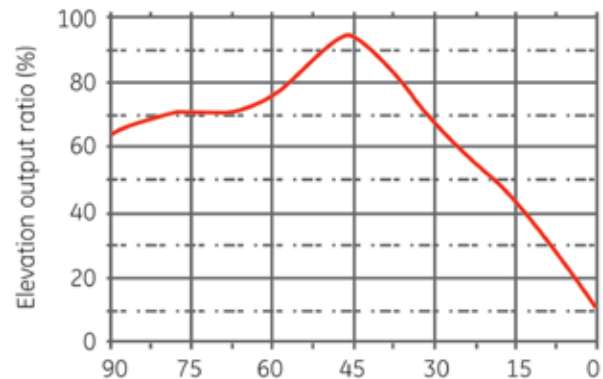


Angle definition

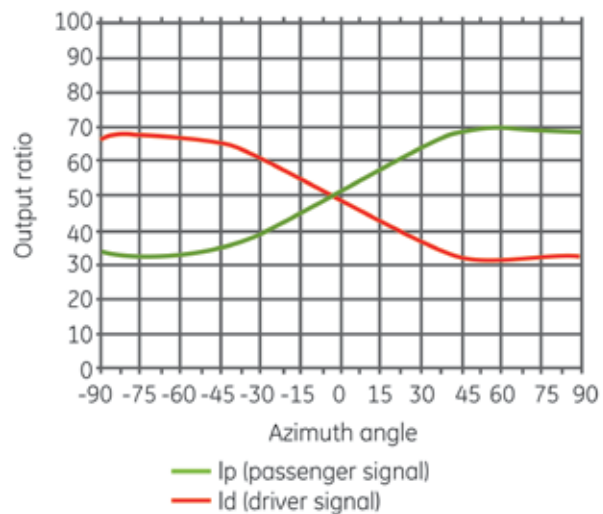
Circuit Diagram



Elevation vs. Output Current Graph



Azimuth Angle Ratio Graph



Amphenol
Advanced Sensors

www.amphenol-sensors.com

© 2014 Amphenol Corporation. All Rights Reserved. Specifications are subject to change without notice. Other company names and product names used in this document are the registered trademarks or trademarks of their respective owners.

AAS-920-147B - 09/2014