



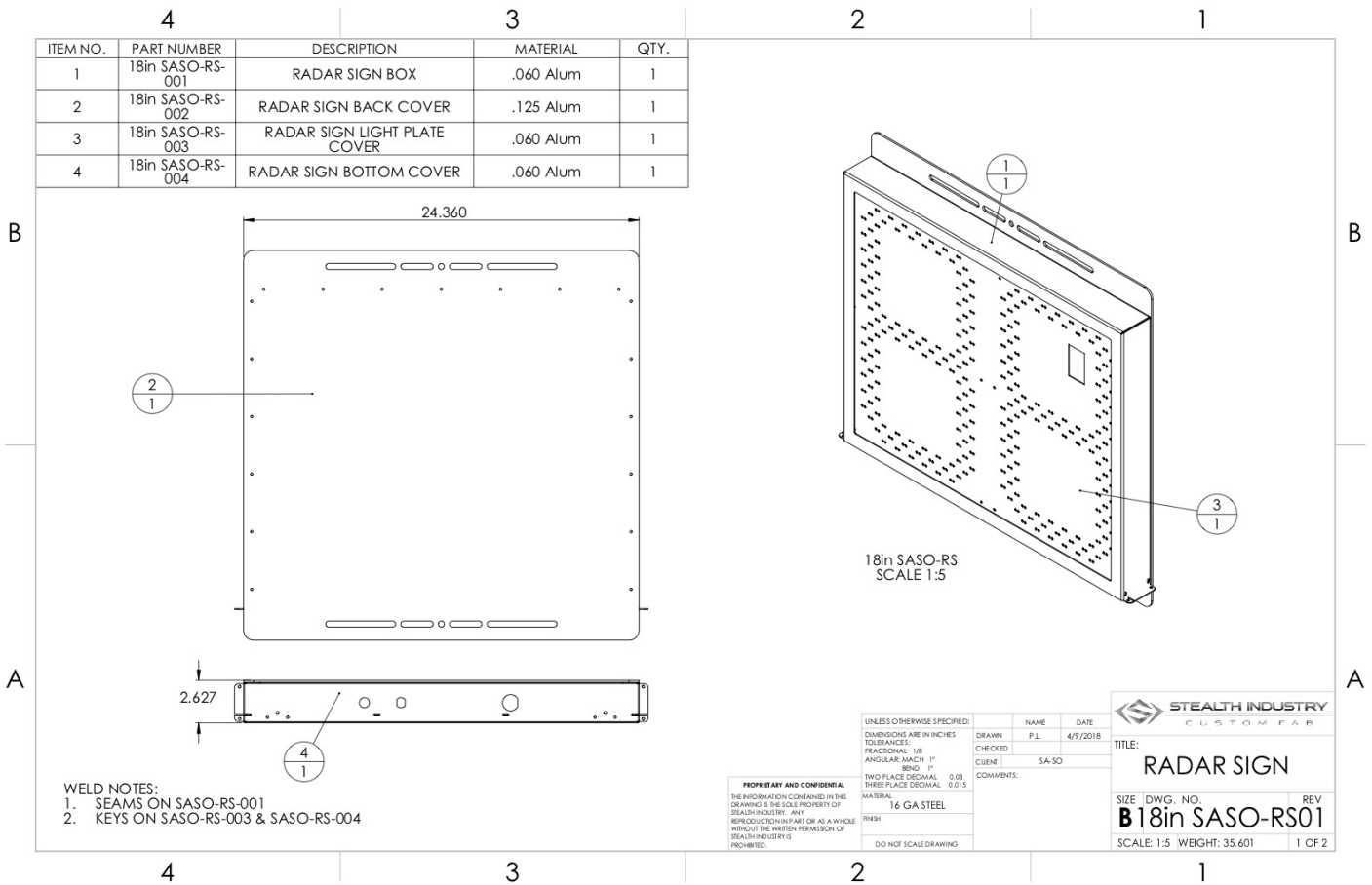
18" Radar Feedback Sign Specifications



Part #
SR18

Technical Data Sheet

Scope
This specification covers the method and procedures of the physical dimensions and performance properties of the SR18, 18" Radar Feedback Sign as manufactured by SA-SO of Arlington, Texas.



Technical Description, Design, and Material

Technical Description:

The AR18 Solar Powered Radar Feedback Sign is a single housing that contains radar detection, LED speed display, and electronics, powered by a 12v Lithium Ion Battery contained in the housing, and a 30 watt Solar Panel, separate from the housing.

General Design and Operation:

The SR18 Solar powered radar sign will detect and display speeds up to 99 mph. The SR18 has an 18" letter height, which is suitable for all roadway speeds.

Standard mounting of the SR18 is on a 1.75" or 2" Square post or a 2.375" Round Post.
 Typical length of Post: 12'.

References:

Federal Highway Administration: "MUTCD 2009 Edition, Dated December 2009 (PDF) - FHWA MUTCD." Manual on Uniform Traffic Control Devices (MUTCD) - FHWA. N.p., n.d. Web. 29 Jan. 2015.

Federal Communication Commission: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that the interference will not occur in a particular installation.

Regarding the Buy America Act and the American Iron and Steel (AIS) requirements:

This product is manufactured locally in the USA. Regarding steel content, this product is made primarily of components other than steel. The total steel content falls under the De Minimus waiver of the AIS requirements.

Dimensions

Radar Specifications:

The SR18 utilizes a 200 meter radar device.

Power Consumption: 14.5 mA Typical 44 mA Max
Operating Temperature: -40C to 85C
Transmit Frequency: 24 GHz
Default Unit Setting: mph
Speed Resolution: 1 mph.

Mechanical Properties

Enclosure with LED Display

Size: See attached drawing
LED Display: 7 segment LED, with 38 LED's per segment.
Character Size: 12 inches
Display Range: Up to 99 mph.
Housing Material: Polyester Powder Coated 16 gauge Steel
Housing Color: White
Housing Weight:
Environmental Operating temperature: -40° C to +85° C

MIL-STD-810F Moisture Resistant
MIL-STD-833 Mechanical Vibration

All electronics are located in the display enclosure.

Solar Panel Properties:

Monocrystalline 30W Panel
Maximum Power: 30W
Optimum Operating Voltage (Vmp): 17.5V
Optimum Operating Current (Imp): 1.71A
Weight: 6.2 lbs.
Maximum System Voltage: 600V DC (UL)
Open-Circuit Voltage (Voc): 21.6V
Short-Circuit Current (Isc): 1.85A
Dimensions: 13.5 X 23.8 X 1.0 In

Glass: 3.2 mm tempered glass,
Resists 5400 PA snow loads and 2400 PA wind load.
Film: main component is 30%-33% EVA, coated with fluoro-resin to prevent aging.
Frame: Corrosion-resistant aluminum
Mounting Bracket: Corrosion-resistant aluminum

Battery Properties:

12.6v Rechargeable Lithium-Ion (Li-ion) battery pack
20.8 Ah Capacity
Built in IC chip to prevent over charge and over discharge
3000 Cycle Life Expectancy
8 month Shelf Life exceeds NiMH batteries
High Temperature Tolerance: 60C

Solar Charge Controller Properties:

99% efficient MPPT tracking (15Hz Speed)
Operating Consumption of 0.150mA (150uA)
CC-CV Charging Profile
-40°C to 85°C Operating Temperature
99.85% Electrical Efficiency

IMPORTANT NOTICE: ACP International and SA-SO (a division of ACP International) trusts that the user of the product has the most accurate knowledge of how the product might be most efficiently or safely utilized in any given application or environment.

ACP International and SA-SO also trust that the above technical data and product information is based on thorough and accurate testing of the product, but are not liable for any loss or damage to the product (or any other product, employee, or building from which the product might come into direct or indirect contact) resulting from an intentional or unintentional mishandling of the product.



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