Migration Solutions

SC300 Hand Detection Safety Sensor to 445L Micro 400 with MSR41 or MSR42 Controller

Why Upgrade or Migrate

While the legacy Allen-Bradley Guardmaster SC300 hand detection safety sensor has had a successful life as a non-contact IP54 safety device and has been a valuable part of our Opto-Electronic safety portfolio it will be discontinued on September 30, 2024.

The suggested migration is to the 445L Micro 400 safety light curtain family, with the MSR41 controller for simple ON/OFF functionality same as the SC300 functionality.

It is also possible to use the MSR42 controller with configurable advanced functionality. Blanking and Muting of the Micro400 is possible by using the MSR42 controller.

Migration to the Micro 400 with MSR41 or MSR42 controller provides a SiL 3, PLe safety solution along with a much larger operating range of 5 meters.

In addition to hand detection, the Micro 400 is available in 14mm resolution for finger detection.

The Micro400 is offered in protective heights of 50mm to 1200mm in 50mm increments to better fit the application to be guarded.

Product overview

The GuardShield Micro 400 is an economical three box (transmitter, receiver, and controller) Type 4 safety light curtain with a small profile (15 x 20 mm (0.59 x 0.79 in.) housing.

The compact housing size allows the GuardShield Micro 400 to be mounted in areas where standard safety light curtains may not be able to be mounted due to space constraints.

Migrating SC300 safety sensor to Micro400 with MSR41 or MSR42 Controller

Mitigate and Eliminate the Risks of Automation Obsolescence

The soon-to-be discontinued SC300 Hand detection safety sensor was required to be mounted in a frame opposite specialized retro-reflective tape. The maximum operating range of this system was 1.5 meters for hand detection of 30mm. The Micro400 can be mounted on a frame or embedded in a frame.

The Micro 400 transmitter and receiver have 8-pin M12 connectors at the end of a 20 inch integrated cable. The patch cords to connect the transmitter and receiver to the controller are the same and are offered in 3, 5, and 8 m (9.8, 16.4, and 26.2 ft) lengths. These patch cords have a M12 connector to mate to the integrated pigtail connector and a RJ45 connector on the opposite end to plug into the MSR41 or MSR42 controller.

In addition, the Micro400 safety system meets the latest functional safety standards such as ISO 13849-1 and IEC 62061 while offering key functions to help simplify installation and reduce system complexity.

Rockwell Automation understands that safety optoelectronic devices are critical assets in your automation system, and we support that by providing you with the latest technology to maximize your investment. By migrating from your legacy SC300 safety sensor to the Micro 400 safety light curtain solution, you can update your safety system to a higher safety performance level.

Active*	Active Mature*	End of Life*	Discontinued*

*ACTIVE: Most current offering within a product category.

ACTIVE MATURE: Product is fully supported, but a newer product or family exists. Gain value by migrating.
END OF LIFE: Discontinued date announced – actively execute migrations and last time buys. Product generally orderable until the discontinued date. [1]
DISCONTINUED: New product no longer manufactured or procured.[2] Repair/exchange services may be available.

[1] Outages on specific items may occur prior to the discontinued date.
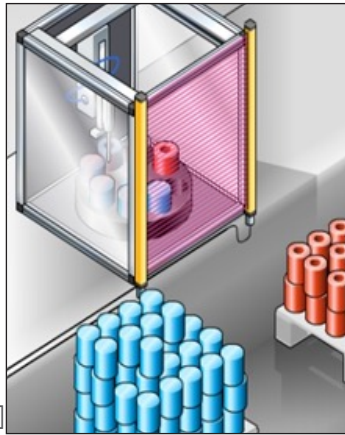[2] Limited stock may be available in run-out mode, regionally.

Allen-Bradley
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Impacted products and recommended replacements

Catalog Number	Material	Description	Suggested Replacement
442L-SAFCAM1	PN-126159	SC300 safety sensor	440L Micro 400 with MSR41 Controller
442L-ACAM24MMKIT	PN-126221	24mm reflective tape	N/A
442L-ACAM20MMKIT	PN-126228	20mm reflective tape	
442L-ACAM30MMKIT	PN-126229	30mm reflective tape	
442L-ATRD20MM	PN-126231	20mm test rod	
442L-ATRD24MM	PN-126232	24mm test rod	
442L-ATRD30MMI	PN-126229	30mm test rod	
442L-ACAMTS	PN-126160	SC300 Teach in Stylus	
442L-ACAMBRK1	PN-126230	SC300 Mounting Bracket Kit	

Micro 400 and MSR 41 / MSR42 product pages

The links below will take you to the on-line product information where you can get installation instructions, detailed specifications, wiring schematics, and other considerations to help you seamlessly convert from the SC300 safety sensor solution to a smarter, more cost-effective machine design featuring the Micro400 safety light curtains and MSR41 / MSR42 controller modules.

445L Micro400 safety light curtains:
445L Guardshield POC Type 4 Micro 400 Safety Light Curtains | Allen-Bradley (rockwellautomation.com)

440R MSR41 and MSR41 Micro400 controllers:
Muting Light Curtain Monitoring Safety Relays | Allen-Bradley (rockwellautomation.com)

To better understand your options, contact your local authorized Allen-Bradley distributor or Rockwell Automation sales office or visit: **www.rockwellautomation.com/go/lifecycle and www.rockwellautomation.com/go/migration.**