

SF Seam Finding Sensor



...easy to handle robot-seam finding system

For the correction of saved seam positions of a robot path, ScoutVision achieved new quality in weld torch positioning with the SF-Series weld seam finding sensor.

Sensors of the SF-Series from ScoutVision are the best solution for the perfect positioning of a welding torch on weld seams, for e.g. seam welding on a chassis in vehicle construction.

With real workpieces, the position and direction of a weld seam can deviate from the saved seam position, but in industrial and automated production very short production cycles do not allow manual correction before each welding process.

Functions of the ScoutVision SF:

- ▶ superior positioning speed compared to contact based methods with wire,
- ▶ suitable for all welding methods and all types of weld seams,
- ▶ The usage of the ScoutVision user-interface (GUI-software) is easy,
- ▶ completely integratable in the robot control,
- ▶ low costs .



Before welding, the sensor takes 2 or 3 measurements on the weld seam on the workpiece to determine position and direction. The correcting signal is send to the robot controller and the robot corrects the original programmed position and locates the weld torch on the starting point of the weld seam. The weld process then acts according to the robot program.

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Programming the ScoutVision SF is also very easy: the ScoutVision SF-system is programmed with a windows based software packet called ScoutVision-user interface (GUI) on a laptop or pc. The selected parameter are transferred to the ScoutVision SF-system via an Ethernet cable and after programming is complete, the settings made are saved in the ScoutVision SF-system. The ScoutVision-user interface (GUI) can then be disconnected. Thereby it is guaranteed that settings are not changed unauthorized. The saved parameters of the ScoutVision SF-system are selected and activated via the robot.

The ScoutVision SF-system has already shown great advantages in terms of welding quality and cost reduction for all end users and system integrators. Furthermore, the ScoutVision SF-system does not require any additional control, so that the system can be connected directly to the robot controller and full integration is achieved

ScoutVision SF uses the same highly reliable laser sensor head found in the various ScoutVision tracking and inspection products.

ScoutVision SF is a complete weld seam positioning system. Each System is configured according to different user requirements.

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Specifications of the SF-Series

Sensor	SF35	SF50	SF70
nominal distance[mm]	250	250	350
FOV (near) [mm]	20	30	35
FOV (far) [mm]	35	50	70
Depth of field[mm]	90	120	150
Measurement accuracy[mm]	0.25	0.3	0.35
Measurement area	depends on field of view an depth of field		
Gap area	0.1 mm – 70 mm (depends on sensor type)		
Lead	> 25 mm		
Wavelength	660 nm (visible)		
Laser security	laser class 3B		
Calibration	with calibration plate		
Size[mm]	40*90*103		
Weight	650 g		
Industry	cooling air, protection glass etc.		

To improve your welding process, please contact:

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