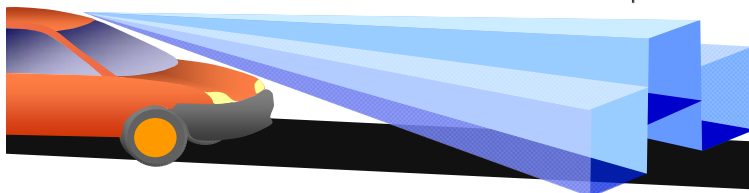
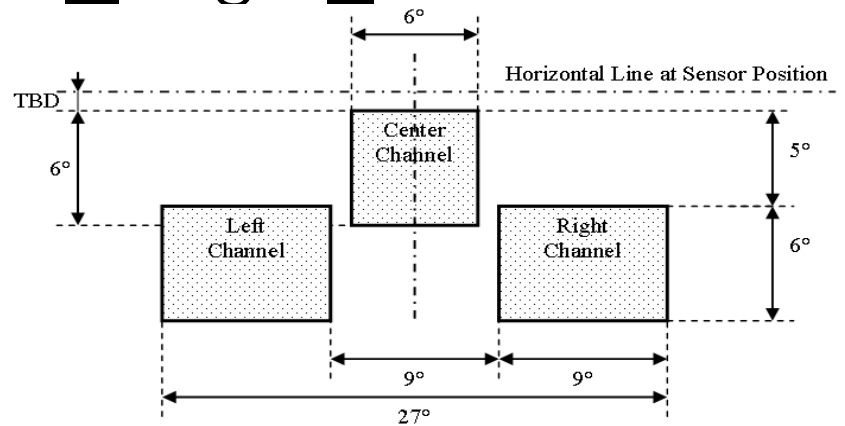


SRL 1 + SRL 1C

Infrared Short Range Lidar Sensor



Energy sharing out:

Basis: Central IR Laser diode	100 %
Center Channel	60 %
Left Channel	20 %
Right Channel	20 %

Fast - reliable - efficient

The A.D.C. GmbH, a subsidiary of the Continental Corporation, offers a new type of infrared sensor, the SRL 1, as a possible adaption in different application.

Typical areas of application:

- Simple anti-collision protection for vehicles of every description (particul. autonomous)
- Positioning, headway control (vehicles of every description, particularly autonomous)
- Area monitoring system, e.g. of hazardous or non-accessible areas
- Object detection, e.g. in confusing or unclear areas

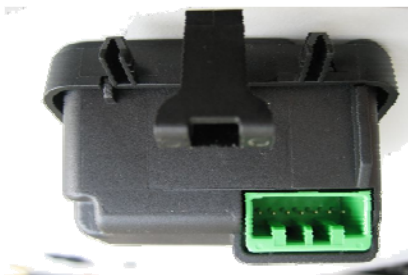
Measuring procedure:

The rugged SRL 1 sensor from A.D.C. measures the distance to objects without reflector by using the technique of the time of flight with a very high repetition rate. A special feature of the device is the measurement of distance and velocity of multiple objects in 3 independent measuring channel in close-up range **up to 13.5 m.**

Advantages:

- **Fast:** The SRL 1 dispels with the apparent contradiction between excellent great measuring performance and a high degree of operational safety. The rugged SRL 1 infrared sensor is capable of determining the distance to an object with a very high repetition rate and dependent on the driving speed a possible risk of collision.
- **Reliable:** The SRL 1 infrared sensor is equipped with a self-monitoring with a cyclic realized self-diagnosis. Hazard incidents of the sensor will be recognized by itself and displayed automatically.
- **Efficient:** By using the infrared laser technology and the development and mass production in automotive supply industry, the relation between costs and performance is very good.

Benefit from the unique features of the latest A.D.C. technology!



SRL 1 + SRL 1C

Infrared Sensor

Measuring performance		to natural targets
Distance range		1.0 – 10.0 m to natural non-reflector targets (standard) 10.0 – 13.5 m expanded distance
Angle augmentation	(total field of view FoV)	27° horizontal; 11° vertical
Resolution distance measuring		1 mm
Accuracy distance measuring		± 0.1 m (± 10 %)
Repeat accuracy		± 5 mm
Speed range		2 – 160 km/h
Speed accuracy		± 2 km/h (± 10 %)
Speed resolution		1 km/h
Repetition rate		100 Hz
Data read-out time	typical	10 ms
Operating conditions		
Eye safety	(time of flight)	class 1M laser according IEC 60825-1 1993+A2:2001
Laser power average /	laser pulse duration	45 mW / 33 ns
Optical peak pulse power		max. 80 W at laser source
Wave length		905 nm ±10nm@25°C ± 0.3 nm/K
Operating time / life time		min. 12000 hours / 15 years
Mains power supply		7.5 - 16 V DC (typical 13.8 V), 120 s protection against wrong polarity
Power consumption		< 1.8 W (< 250 mA - typical 130mA@14V)
High system voltage		40 V during 400 ms (disconnection of battery)
Operating-/ storage temperature		-40°C...+85°C / -40°C...+95°C
Shock	mechanical	100 g, 10 ms, half sine, according IEC 60068-2-27 Ea
Vibration	mechanical	40 m/s ² peak@10-60Hz / 20 m/s ² peak@60-200Hz
Protection rating		IP20 (typical mounting behind a windshield)
Displays and connections		
Monitoring function		self diagnostics / permanent self monitoring of the infrared laser diode
Displays		none
Interface		Private CAN – 1 Mbit/s internally terminated with 120 Ω Communication port open automatically after start up
Housing		
Dimensions / weight	W * H * D (mm) / (mass)	150 * 73 * 36 / < 100 g
Material	housing	glass fiber reinforced plastics PA6-GF30, colour RAL 9017 black
Miscellaneous		
Measuring principle T.o.F.	Time-of-Flight	independent measurement of distance and velocity
Version SRL 1C	C = collision avoidance	as SRL 1, but with anti-collision switching thresholds

Interfaces:

The device is fitted with two CAN bus interfaces – one as a standard. Further interfaces with additional converter, software adaption, housing and / or hardware adaption are possible on demand and in case of assumption of costs.

Information:

Further information about the SRL 1 is available directly from A.D.C. GmbH.

We look forward to receiving your call at +49 8382 9699-114. Tell us about any special requirements you may have, even if they are for a completely different purpose! We would be pleased to provide you with an individual solution.