
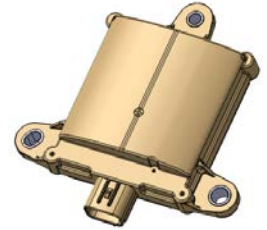


Date/Datum: 12/03/2013 File ARS4-A.Datasheet V2.docX	Data Sheet / Datenblatt  <b>ARS4-A</b> Short Range Radar	 Advanced Driver Assistant Systems
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## General Description / Allgemeine Beschreibung:

The ARS400-Premium is a 77 GHz radar sensor with digital beam-forming scanning antenna which offers two independent scans for far and short range. The ARS400-Premium uses a pulse compression radar modulation scheme as basic principle for its measurements.


ARS4-A is designed for Forward Collision Warning, Emergency Brake Assist, Collision Mitigation System, Adaptive Cruise Control (ACC), Emergency Steering Assist, Traffic Jam Assist (working together with a camera)



## Technical Data / Technische Daten:

Signal / Signal	Value / Wert	Unit / Einheit	Remark / Bemerkung
<b>Radar Characteristics</b>			
Operation frequency	77	GHz	
Distance measurement	0.25 – 250 0.25 - 70	m	one far range scan of $\pm 9^\circ$ one near range scan of $\pm 60^\circ$
Accuracy for distance measurement	$\pm 0.2$	m	For a single target
Speed measurement	-400 ... +200	kph	
Accuracy of speed measurement	0.1	Kph	For point target
Sensitivity	Corner with radar cross section of 3 dBm <sup>2</sup> at distance < 80 m		For azimuth range $-10^\circ \dots +10^\circ$
Emitted radar power (EIRP)	< 38	dBm	
Conducted power (antenna input )	< 10	dBm	
Update rate	60	ms	
<b>Antenna</b>			
Antenna principle	Planar antenna combined with digital beam forming		2 Tx columns plus 6 Rx columns
Field of view in azimuth	-9...+9 -75...+75	$^\circ$	Far range scan Near range scan
Field of view in elevation	14 20	$^\circ$	6 dB – two way
Angle measurement accuracy	$\pm 2$ $\pm 4$ $\pm 5$	$^\circ$ $^\circ$ $^\circ$	$\pm 30^\circ$ $\pm 60^\circ$ $\pm 75^\circ$
<b>Vehicle Interface</b>			
Vehicle interface	CAN, Flexray, Ethernet		A host wake-up or un wakeble CAN transceiver module
Power consumption	6W	W	Power supply of 12 V on KL.15 (ignition)
Mechanical size	137.27 x 90.8 x 30.66	mm	Width x length x height
Weight	318	g	
Mounting area	Application specific		Vertically: between 295mm and 800 mm above road-surface level
Connector	Tyco C-114-18063-128		8 pins standard connector
Vehicle integration	<ul style="list-style-type: none"> <li>Concealed in front of grill or behind bumper fascia.</li> <li>No manual alignment necessary</li> </ul>		
Temperature range	-40 ... +85 -40 ... +90	$^\circ$ C $^\circ$ C	Operating Storage

Contact us to learn more about technical details or the availability of deliverables. Sales Contact / Kontaktadresse:

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Preliminary