



BRIEF INFORMATION

Rain/light sensor

- Fourth generation of the long-established rain sensors from HELLA
- Five functions in one product: Rain, light, solar and humidity measurement as well as adjustment of the light intensity on the head-up display
- Optimised design – extremely compact package space

PRODUCT FEATURES

This new sensor offers the user five functions in one product:

Rain sensor

The rain sensor is used to detect different rain conditions in the sensor area and controls the front windshield wiper accordingly. Manual driver intervention is no longer required.

Light sensor

As a light sensor it controls the activation and deactivation of the low beam light in different lighting conditions or in special situations such as in tunnels.

Head-up display

When used for the head-up display, the sensor records the brightness immediately surrounding the vehicle and adjusts the light intensity on the display depending on the current lighting conditions.

Solar sensor

As a solar sensor it measures the insolation and supports the air-conditioning control.

Humidity measurement

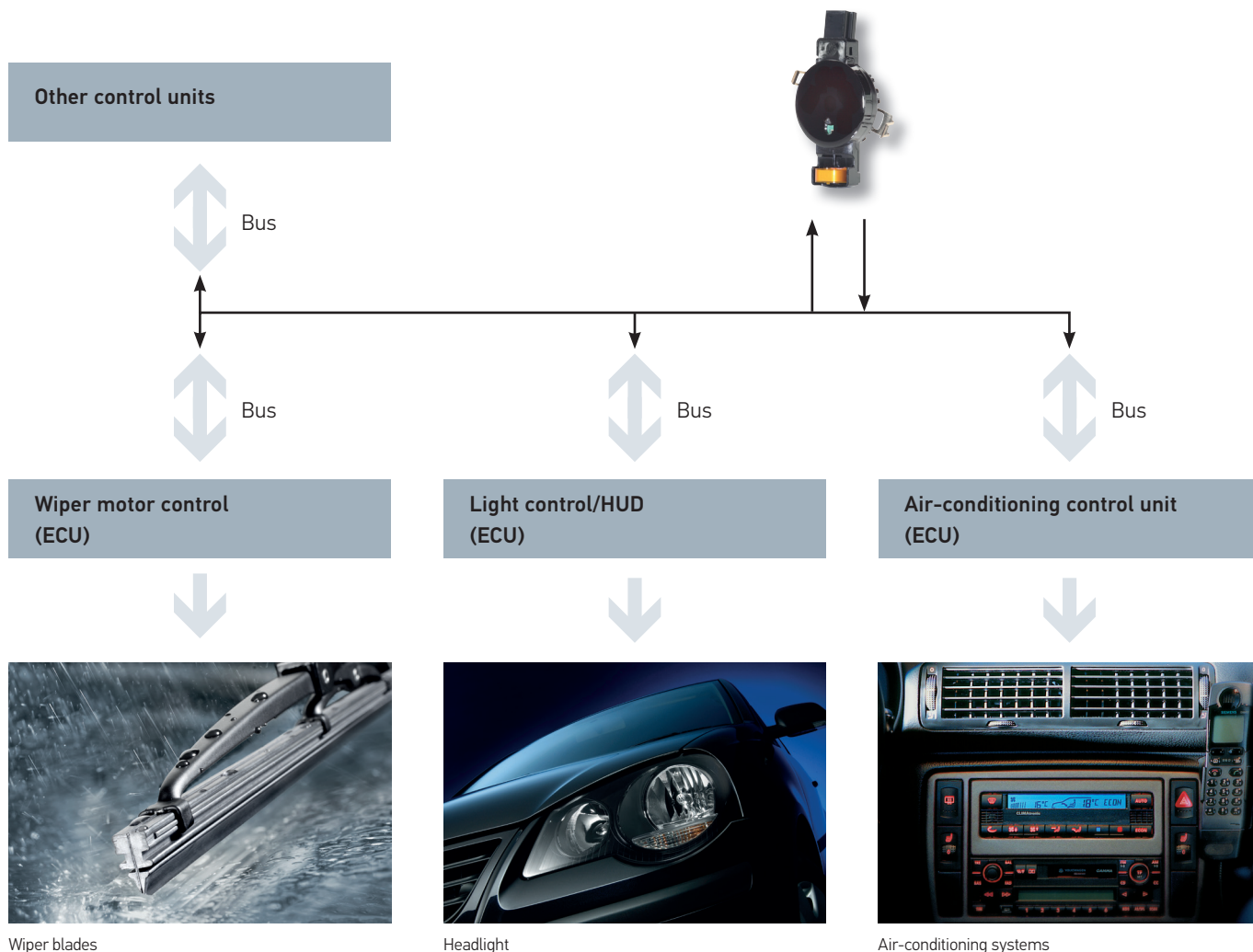
The humidity measurement is used to control the air conditioning control unit for the air conditioning in the vehicle interior, such as automatic ventilation of the windshield.

INTERFACES / FUNCTIONAL DESCRIPTION

- 1 Spring
- 2 Infrared optics for rain, solar and tunnel detection
- 3 Connector
- 4 Transparent optics for surrounding light detection
- 5 Humidity sensor



The system overview illustration shows an option for how the sensor communicates with other system components in the vehicle via the LIN interface. Here the sensor is switched on by the overriding control unit and supplied with voltage. It thus provides the system with information, however does not have direct access to the system itself.



TECHNICAL DETAILS

Technical data

Operating temperature	-40°C to +85°C
Storage temperature	-40°C to +100°C
Protection class	IP 50
Protection level (in the area of fogging sensors)	IP 20
Operating voltage	9–16 V
Overvoltage	24 V
Rated current consumption	< 50 mA
Communication interface	LIN 2.0
Weight	< 17 g
Mating connector ¹⁾	1-1718346-3

Requirements of the windshield

Spectral working range	400–1,050 nm
Permissible transmission of the windshield	20–80 % (at 950 nm)
Permissible windshield thickness	4–6 mm
Permissible windshield tilt	20° to 36° (PKW); 37 to °54° (Van)
Permissible curvature radius in the area of the sensor	$R \Rightarrow 1,400$ mm
Diameter of the black print section	28 +/- 0,2 mm

¹⁾ This accessory is not included in the scope of delivery.
May be purchased from TE Connectivity. The connector coding is variant-specific.

Technical drawing

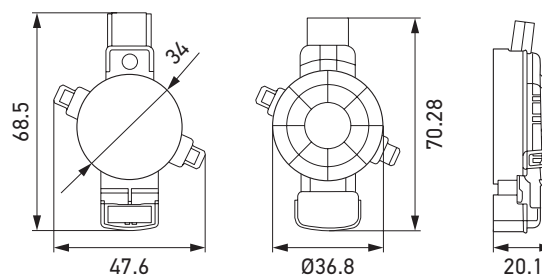
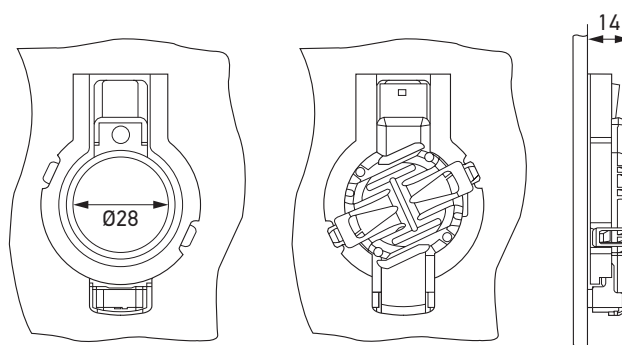
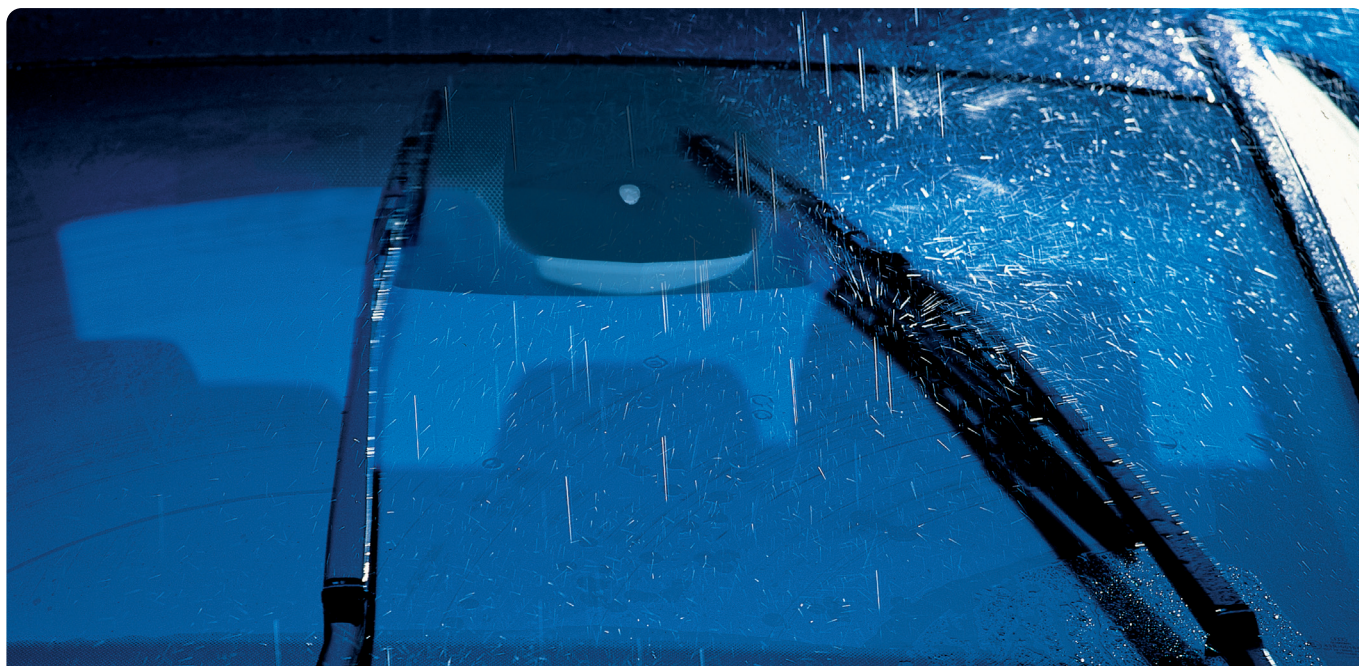


Illustration of installation on the windshield



APPLICATION EXAMPLE

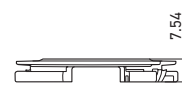
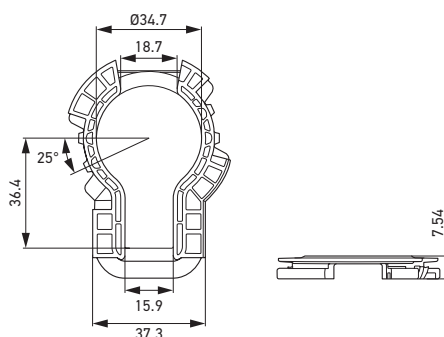


RANGE OVERVIEW

Variant	Permitted windscreen thickness	Permitted windscreen tilt	Part number	Packaging unit
Passenger cars	4 – 6 mm	20° – 36°	on request	-
Passenger cars (van)	4 – 6 mm	37° – 54°	on request	-

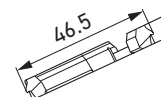
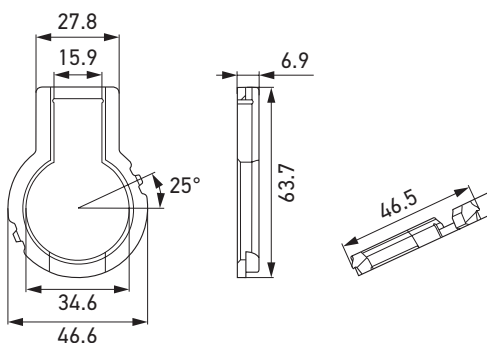
* The sensors must be specially applied for each vehicle. All article numbers are therefore assigned on a customer-specific basis.

Rain/light sensor brackets



Part number

9XD 420 747-601	For mounting with 3M adhesive tape Plastic
9XD 420 747-501	For mounting with PUR liquid adhesive Plastic



Part number

9XD 420 747-007	For mounting with 3M adhesive tape Sintered metal
On request	For mounting with PUR liquid adhesive Sintered metal