

EasyMount

# CAPACITIVE SENSORS

RECHNER  
SENSORS





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#### **Edition February 2019**

With publication of this catalogue all former printed catalogues about RECHNER capacitive proximity sensors of the EasyMount series are invalid.

All specifications are subject to change without notice. (20.02.2019)

**CAPACITIVE  
SENSORS**

**EasyMount**

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## Capacitive Sensors **EasyMount**

- ✓ for level control of liquids
- ✓ for leakage detection
- ✓ for position control of objects ... and much more.

These small sensors have all that makes the handling and application easy for the user.

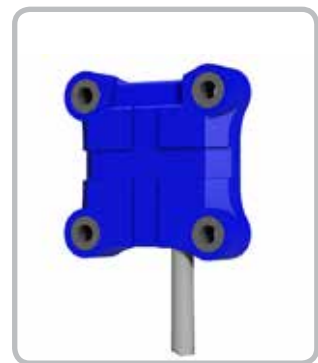
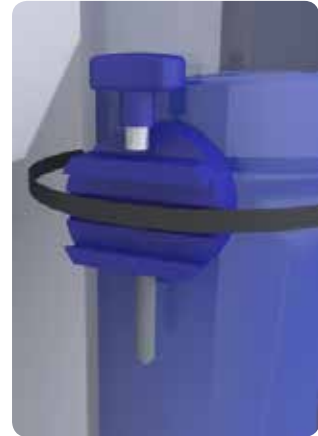
**The mounting is really simple.** The sensor itself is featured with excellent technical characteristics and is very small in size. It can be mounted in various ways. It can be glued in the desired position, fixed with a cable tie or it can be mounted with one of the holders from the range accessories.

The sensitivity- or sensing distance adjustment is almost made by itself, thanks to the **EasyTeach function**.

In the course of which it does not matter if the magnet is used or the version with EasyTeach by wire is the model of choice. The steps one has to pass through are easy and quick to complete, so the user does not lose time from looking after his core business.

With the use of the newest production technologies the components of the sensors are embedded in the plastic body. They are watertight and operate wear-free. All sensors produced from RECHNER Sensors Germany are 100 % tested. The product marking is made with modern laser technology for everlasting identification and traceability.

For further information about Rechner Sensors feel free to contact us or visit our web site under [www.rechner-sensors.com](http://www.rechner-sensors.com).



Measurement through non-metallic container walls

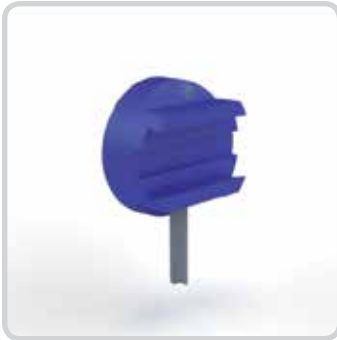
# IP68

**EasyTeach + EasyMount  
= Simply perfect**

*100 % tested*

*Laser product marking*

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## Capacitive Sensors

Series 70 - NPN  
Series 80 - PNP **EasyMount**

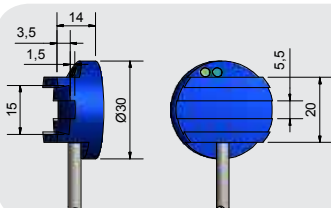
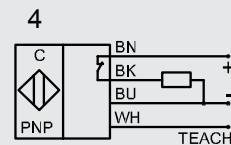
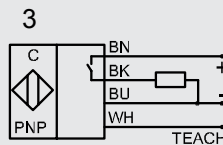
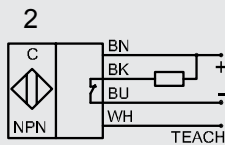
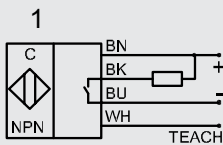
Housing Ø 30 mm  
Capacitive sensor for level control of liquids  
Very suitable for a measurement through non-metallic container walls

- EasyTeach by wire
- Housing material: Polyamide (PA)
- Various mounting possibilities (see accessories)
- Watertight

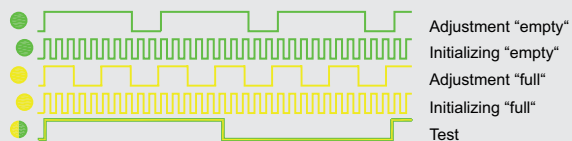


Technical data	Flush mountable	Flush mountable
Operating distance $S_n$	5 mm	5 mm
Operating distance min. / max. programmable	0...10 mm	0...10 mm
Electrical version	3 wire DC	3 wire DC
Output function	Normally open	Normally closed
<b>Type NPN</b>	<b>KAS-70-30EM/15-S-D30-PA-Z02-ETW-HP</b>	<b>KAS-70-30EM/15-Ö-D30-PA-Z02-ETW-HP</b>
<b>Art.-No.</b>	<b>KA 1153</b>	<b>KA 1154</b>
Connection diagram no.	1	2
<b>Type PNP</b>	<b>KAS-80-30EM/15-S-D30-PA-Z02-ETW-HP</b>	<b>KAS-80-30EM/15-Ö-D30-PA-Z02-ETW-HP</b>
<b>Art.-No.</b>	<b>KA 1149</b>	<b>KA1150</b>
Connection diagram no.	3	4
Operating voltage ( $U_b$ )	10...35 V DC	10...35 V DC
Voltage drop max. ( $U_d$ )	≤ 2.0 V	≤ 2.0 V
Permitted residual ripple max.	10 %	10 %
Operating current ( $I_o$ )	0...200 mA	0...200 mA
No-load current ( $I_o$ )	Typ 15 mA	Typ. 15 mA
Frequency of operating cycles max.	2 Hz	2 Hz
Permitted ambient temperature	-25...+70 °C	-25...+70 °C
LED-display	Green / yellow	Green / yellow
Protective circuit	Built-in	Built-in
Degree of protection IEC 60529	IP 68	IP 68
Norm	EN 60947-5-2	EN 60947-5-2
Connection cable	2 m PVC, 4 x 0.14 mm <sup>2</sup>	2 m PVC, 4 x 0.14 mm <sup>2</sup>
Housing material	PA	PA
Accessory supplied with the sensor	-	-

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**EasyTeach chart:**  
LED / Output function  
Yellow = A1  
Green = A1



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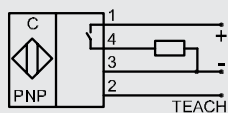
## Capacitive Sensors Series 80 - PNP **EasyMount**

- Housing Ø 30 mm  
Capacitive sensor for level control of liquids  
Very suitable for a measurement through non-metallic container walls
- EasyTeach by wire
  - Housing material: Polyamide (PA)
  - Various mounting possibilities (see accessories)
  - Watertight

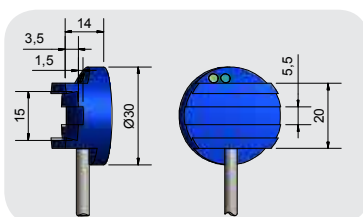
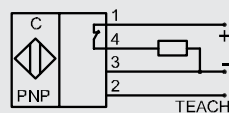


<b>Technical data</b>	Flush mountable
Operating distance $S_n$	5 mm
Operating distance min. / max. programmable	0...10 mm
Electrical version	3 wire DC
Output function	Normally open
<b>Type NPN</b>	
<b>Art.-No.</b>	
Connection diagram no.	
<b>Type PNP</b>	<b>KAS-80-30EM/15-S-D30-PA-Y5C-ETW-HP</b>
<b>Art.-No.</b>	<b>KA 1511</b>
Connection diagram no.	3
Operating voltage ( $U_B$ )	10...35 V DC
Voltage drop max. ( $U_d$ )	≤ 2.0 V
Permitted residual ripple max.	10 %
Operating current ( $I_o$ )	0...200 mA
No-load current ( $I_o$ )	Typ 15 mA
Frequency of operating cycles max.	2 Hz
Permitted ambient temperature	-25...+70 °C
LED-display	Green / yellow
Protective circuit	Built-in
Degree of protection IEC 60529	IP 68
Norm	EN 60947-5-2
Flexible connection	Connector M 12 x 1, 0.1 m, PVC, 4 x 0.14 mm <sup>2</sup>
Housing material	PA
For matching connectors please see our selection of accessories.	

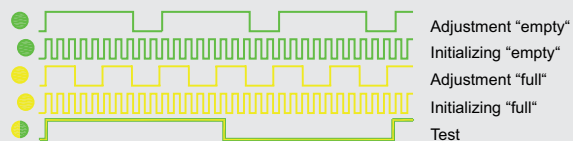
3



4



**EasyTeach chart:**  
LED / Output function  
Yellow = A1  
Green = A1



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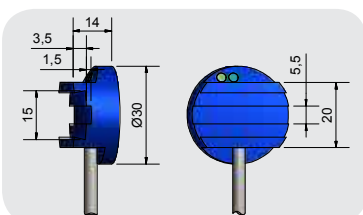
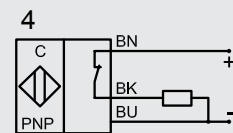
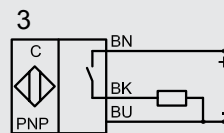
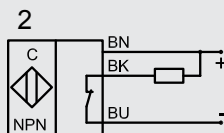
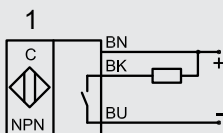
## Capacitive Sensors Series 70 - NPN Series 80 - PNP **EasyMount**

- Housing Ø 30 mm  
Capacitive sensor for level control of liquids  
Very suitable for a measurement through non-metallic container walls
- EasyTeach by magnet (Magnet is supplied with the sensor)
  - Housing material: Polyamid (PA)
  - Various mounting possibilities (see accessories)
  - Watertight

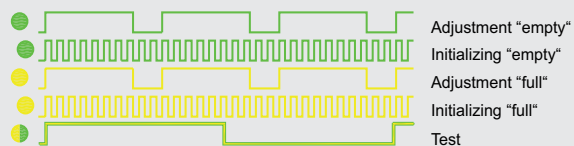


Technical data	Flush mountable	Flush mountable
Operating distance $S_n$	5 mm	5 mm
Operating distance min. / max. programmable	0...10 mm	0...10 mm
Electrical version	3 wire DC	3 wire DC
Output function	Normally open	Normally closed
<b>Type NPN</b>	<b>KAS-70-30EM/15-S-D30-PA-Z02-ETM-HP</b>	<b>KAS-70-30EM/15-Ö-D30-PA-Z02-ETM-HP</b>
<b>Art.-No.</b>	<b>KA 1151</b>	<b>KA 1152</b>
Connection diagram no.	1	2
<b>Type PNP</b>	<b>KAS-80-30EM/15-S-D30-PA-Z02-ETM-HP</b>	<b>KAS-80-30EM/15-Ö-D30-PA-Z02-ETM-HP</b>
<b>Art.-No.</b>	<b>KA 1147</b>	<b>KA 1148</b>
Connection diagram no.	3	4
Operating voltage ( $U_b$ )	10...35 V DC	10...35 V DC
Voltage drop max. ( $U_d$ )	≤ 2.0 V	≤ 2.0 V
Permitted residual ripple max.	10 %	10 %
Operating current ( $I_o$ )	0...200 mA	0...200 mA
No-load current ( $I_o$ )	Typ 15 mA	Typ. 15 mA
Frequency of operating cycles max.	2 Hz	2 Hz
Permitted ambient temperature	-25...+70°C	-25...+70°C
LED-display	Green / yellow	Green / yellow
Protective circuit	Built-in	Built-in
Degree of protection IEC 60529	IP68	IP 68
Norm	EN 60947-5-2	EN 60947-5-2
Connection cable	2 m PVC, 3 x 0.14 mm <sup>2</sup>	2 m PVC, 3 x 0.14 mm <sup>2</sup>
Housing material	PA	PA
Accessory supplied with the sensor	Teach magnet	Teach magnet

All specifications are subject to change without notice. (20.02.2019)



**EasyTeach chart:**  
LED / Output function  
Yellow = A1  
Green = A1



**Made in Germany**



## Capacitive Sensors Series 80 - PNP **EasyMount**

Housing Ø 30 mm

- EasyTeach by magnet (Magnet is supplied with the sensor)

With manufacturer certificate

for use in zone 2

for use in zone 22

Ex II 3G Ex nA IIC T6 Gc X

Ex II 3D Ex mc IIIC T101°C Dc IP67 X

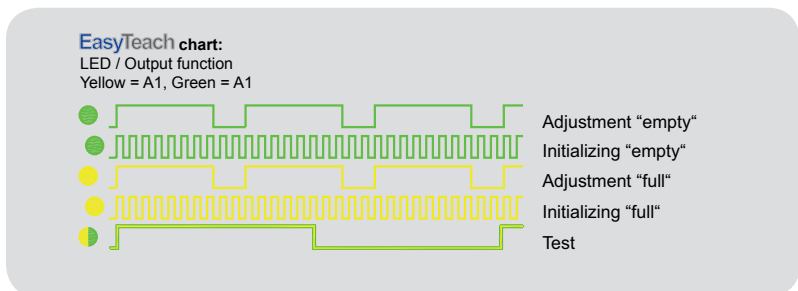
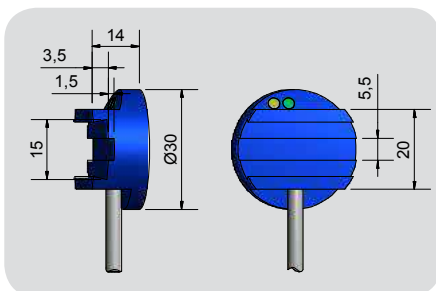
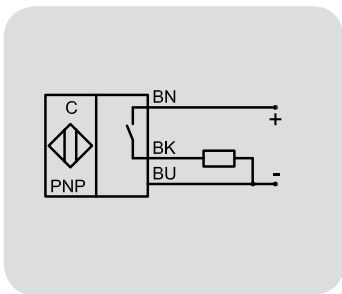


<b>Technical data</b>	Flush mountable
Operating distance $S_n$	5 mm
Operating distance min. / max. programmable	0...10 mm
Electrical version	3 wire DC
Output function	Normally open
<b>Type NPN</b>	
<b>Art.-No.</b>	
Connection diagram no.	
<b>Type PNP</b>	<b>KAS-80-30/EM-S-ETM-3G-3D</b>
<b>Art.-No.</b>	<b>KA 1211</b>
Connection diagram no.	See below
Operating voltage ( $U_B$ )	10...30 V DC
Operating current ( $I_o$ )	0...150 mA
Voltage drop max. ( $U_d$ )	≤ 2.0 V
Permitted residual ripple max.	10 %
No-load current ( $I_o$ )	Typ 15 mA
Frequency of operating cycles max.	2 Hz
Permitted ambient temperature	-25...+70°C
LED-display	Green / yellow
Protective circuit	Built-in
Degree of protection IEC 60529	IP68
Norm	EN 60947-5-2
Connection cable	2 m PVC, 3 x 0.14 mm <sup>2</sup>
Housing material	PA
Accessory supplied with the sensor	Teach magnet

Capacitive sensor for level control of liquids

Very suitable for a measurement through non-metallic container walls

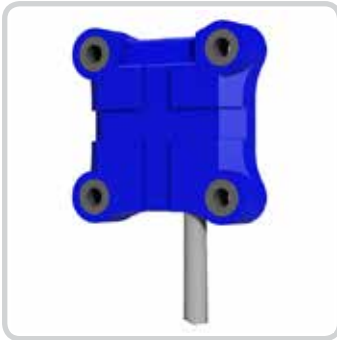
- Watertight
- Various mounting possibilities (see accessories)



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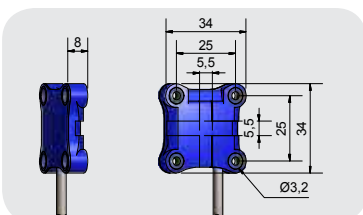
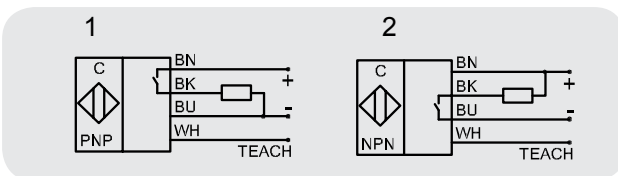
## Capacitive Sensors Series 80 - PNP **EasyMount**

- Housing 34 x 34 mm  
Capacitive sensor for level control of liquids  
Very suitable for a measurement through non-metallic container walls
- Sensitivity adjustment with EasyTeach by wire (ETW)
  - Housing material: PA / PVC
  - Easy to mount, by screwing, glueing or with cable ties
  - Watertight
  - Flat housing - 8 mm

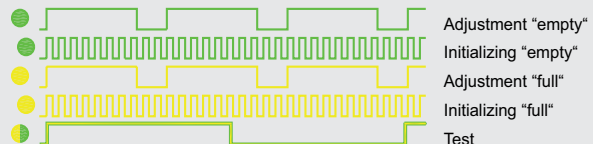


<b>Technical data</b>	Flush mountable
Operating distance $S_n$	5 mm
Operating distance min. / max. programmable	0...10 mm
Electrical version	3 wire DC
Output function	Normally open
<b>Type NPN</b>	
<b>Art.-No.</b>	
Connection diagram no.	
<b>Type PNP</b>	<b>KAS-80-C30EM/8-S-34x34x8-PA-Z02-ETW-HP</b>
<b>Art.-No.</b>	<b>KA 1450</b>
Connection diagram no.	1
Operating voltage ( $U_B$ )	10...35 V DC
Voltage drop max. ( $U_d$ )	≤ 2.0 V
Permitted residual ripple max.	10 %
Operating current ( $I_o$ )	0...200 mA
No-load current ( $I_o$ )	Typ 15 mA
Frequency of operating cycles max.	2 Hz
Permitted ambient temperature	-25...+70°C
LED-display	Green / yellow
Protective circuit	Built-in
Degree of protection IEC 60529	IP68
Norm	EN 60947-5-2
Connection cable	2 m PVC, 4 x 0.14 mm <sup>2</sup>
Housing material	PA / PVC
Accessories (delivered with the sensor)	-

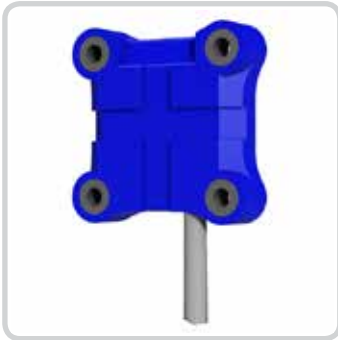
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**EasyTeach chart:**  
LED / Output function  
Yellow = A1  
Green = A1



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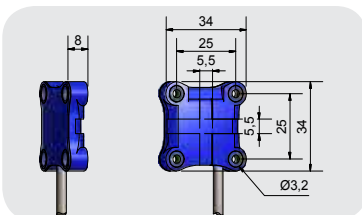
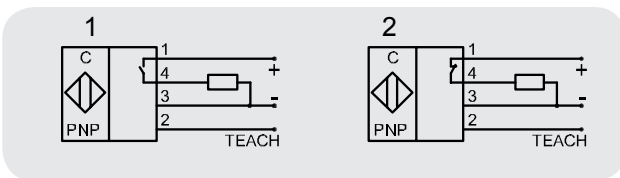


## Capacitive Sensors Series 80 - PNP **EasyMount**

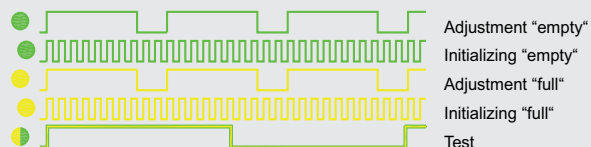
- Housing 34 x 34 mm  
Capacitive sensor for level control of liquids  
Very suitable for a measurement through non-metallic container walls
- Sensitivity adjustment with EasyTeach by wire (ETW)
  - Housing material: PA / PVC
  - Easy to mount, by screwing, glueing or with cable ties
  - Watertight
  - Flat housing - 8 mm



<b>Technical data</b>	Flush mountable
Operating distance $S_n$	5 mm
Operating distance min. / max. programmable	0...10 mm
Electrical version	3 wire DC
Output function	Normally open
<b>Type NPN</b>	
<b>Art.-No.</b>	
Connection diagram no.	
<b>Type PNP</b>	<b>KAS-80-C30EM/8-S-34x34x8-PA-Y5C-ETW-HP</b>
<b>Art.-No.</b>	<b>KA 1512</b>
Connection diagram no.	1
Operating voltage ( $U_B$ )	10...35 V DC
Voltage drop max. ( $U_d$ )	≤ 2.0 V
Permitted residual ripple max.	10 %
Operating current ( $I_o$ )	0...200 mA
No-load current ( $I_o$ )	Typ 15 mA
Frequency of operating cycles max.	2 Hz
Permitted ambient temperature	-25...+70°C
LED-display	Green / yellow
Protective circuit	Built-in
Degree of protection IEC 60529	IP68
Norm	EN 60947-5-2
Flexible connection	Connector M 12 x 1, 0.1 m, PVC, 4 x 0.14 mm <sup>2</sup>
Housing material	PA / PVC
For matching connectors please see our selection of accessories.	-

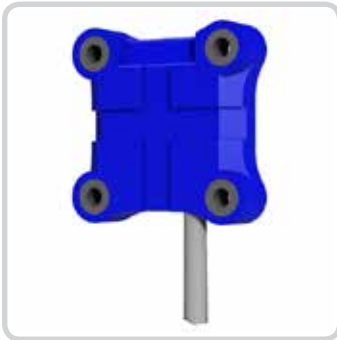


**EasyTeach chart:**  
LED / Output function  
Yellow = A1  
Green = A1



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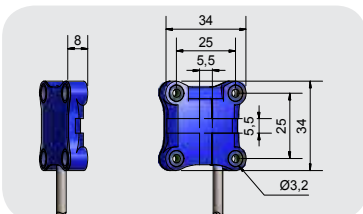
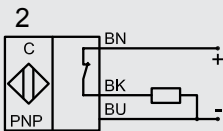
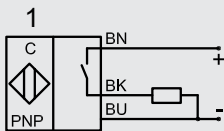
## Capacitive Sensors Series 80 - PNP **EasyMount**

- Housing 34 x 34 mm  
Capacitive sensor for level control of liquids  
Very suitable for a measurement through non-metallic container walls
- Housing material: PA / PVC
  - Easy to mount, by screwing, glueing or with cable ties
  - Watertight
  - Sensitivity adjustment with EasyTeach by Magnet (ETM)
  - Magnet delivered with the sensor
  - Flat housing - 8 mm

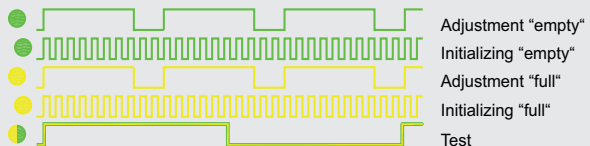


Technical data	Flush mountable	Flush mountable
Operating distance $S_n$	5 mm	5 mm
Operating distance min. / max. programmable	0...10 mm	0...10 mm
Electrical version	3 wire DC	3 wire DC
Output function	Normally open	Normally closed
<b>Type NPN</b>		
<b>Art.-No.</b>		
Connection diagram no.		
<b>Type PNP</b>	<b>KAS-80-C30EM/8-S-34x34x8-PA-Z02-ETM-HP</b>	<b>KAS-80-C30EM/8-Ö-34x34x8-PA-Z02-ETM-HP</b>
<b>Art.-No.</b>	<b>KA 1451</b>	<b>KA 1476</b>
Connection diagram no.	1	2
Operating voltage ( $U_b$ )	10...35 V DC	10...35 V DC
Voltage drop max. ( $U_d$ )	≤ 2.0 V	≤ 2.0 V
Permitted residual ripple max.	10 %	10 %
Operating current ( $I_o$ )	0...200 mA	0...200 mA
No-load current ( $I_o$ )	Typ 15 mA	Typ 15 mA
Frequency of operating cycles max.	2 Hz	2 Hz
Permitted ambient temperature	-25...+70°C	-25...+70°C
LED-display	Green / yellow	Green / yellow
Protective circuit	Built-in	Built-in
Degree of protection IEC 60529	IP68	IP68
Norm	EN 60947-5-2	EN 60947-5-2
Connection cable	2 m PVC, 3 x 0.14 mm <sup>2</sup>	2 m PVC, 3 x 0.14 mm <sup>2</sup>
Housing material	PA / PVC	PA / PVC
Accessories (delivered with the sensor)	Teach magnet	Teach magnet

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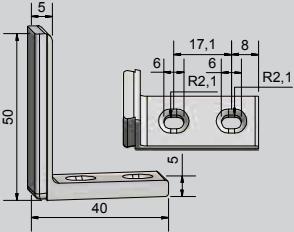

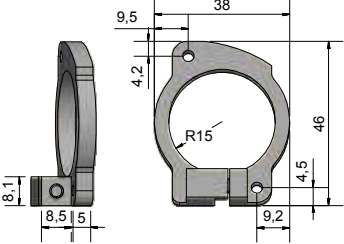

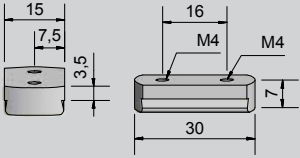

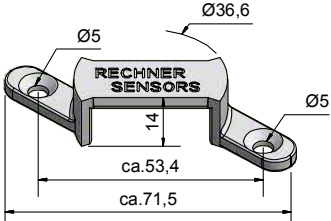


**EasyTeach chart:**  
LED / Output function  
Yellow = A1  
Green = A1



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## ACCESSORIES

Picture	Art.-No.	Description	Dimensions
	196389	H-01 Angled holder Material PA 2200	
	196390	H-02 Mounting adapter Material PA 2200	
	196391	H-03 Mounting adapter Material PA 2200	
	196393	H-05 Mounting adapter Material PA 2200	

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## TYPE SELECTION IN ARTICLE NUMBER ORDER

Art.-No.	Description	Page
196389	EasyMount H-01	12
196390	EasyMount H-02	12
196391	EasyMount H-03	12
196393	EasyMount H-05	12
KA1147	KAS-80-30EM/15-S-D30-PA-Z02-ETM-HP	7
KA1148	KAS-80-30EM/15-Ö-D30-PA-Z02-ETM-HP	7
KA1149	KAS-80-30EM/15-S-D30-PA-Z02-ETW-HP	5
KA1150	KAS-80-30EM/15-Ö-D30-PA-Z02-ETW-HP	5
KA1151	KAS-70-30EM/15-S-D30-PA-Z02-ETM-HP	7
KA1152	KAS-70-30EM/15-Ö-D30-PA-Z02-ETM-HP	7
KA1153	KAS-70-30EM/15-S-D30-PA-Z02-ETW-HP	5
KA1154	KAS-70-30EM/15-Ö-D30-PA-Z02-ETW-HP	5
KA1211	KAS-80-30/EM-S-ETM-3G-3D	8
KA1450	KAS-80-C30EM/8-S-34x34x8-PA-Z02-ETW-HP	9
KA1451	KAS-80-C30EM/8-S-34x34x8-PA-Z02-ETM-HP	11
KA1476	KAS-80-C30EM/8-Ö-34x34x8-PA-Z02-ETM-HP	11
KA1511	KAS-80-30EM/15-S-D30-PA-Y12C-ETW-HP	6
KA1512	KAS-80-C30EM/8-S-34x34x8-PA-Y12C-ETW-HP	10

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## TYPE SELECTION IN DESCRIPTION ORDER

Art.-No.	Description	Page
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196391	EasyMount H-03	12
196393	EasyMount H-05	12
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KA1154	KAS-70-30EM/15-Ö-D30-PA-Z02-ETW-HP	5
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