

Read head CES-A-LSP-...

- ▶ Optimized for aluminum profile mounting
- ▶ LED for the indication of the door position



For possible combinations see page 24

Attention:

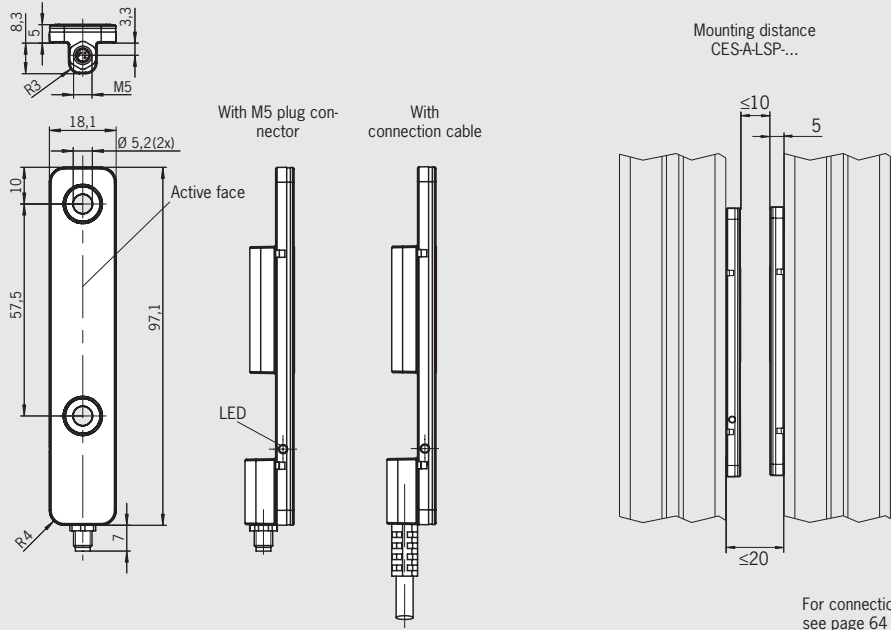
The operating distance may vary depending on the background material and installation situation.

Important:

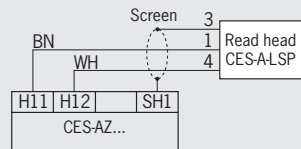
Actuators must be ordered separately! See page 42.

Read head CES-A-LSP-...
M5 plug connector, 3-pin or hard-wire encapsulated cable

Dimension drawing

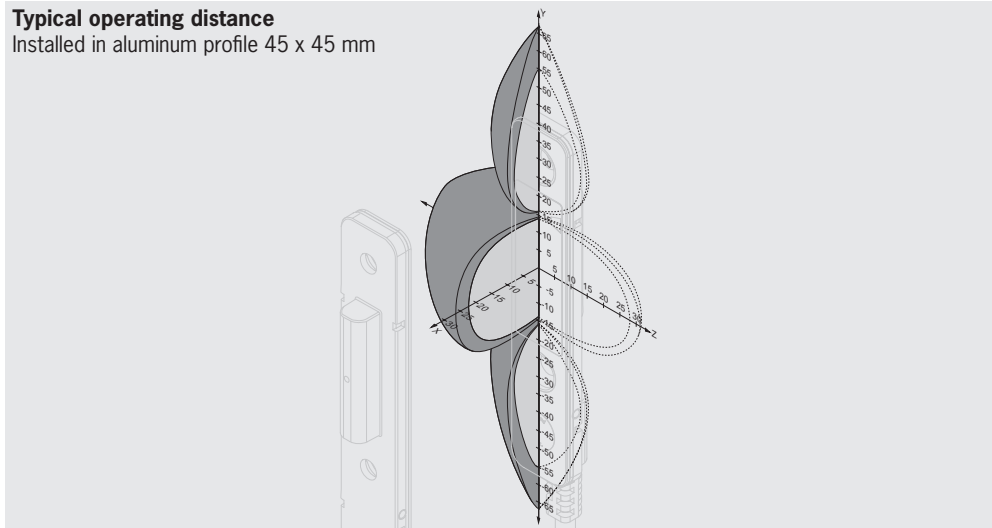


Pin assignment



Typical operating distance

Installed in aluminum profile 45 x 45 mm



Ordering table

Series	Cable/connection type/version	Cable length [m]/description	Order no. / item
CES-A-LSP-...	V Cable PVC	5	104 966 CES-A-LSP-05V-104966
		10	104 967 CES-A-LSP-10V-104967
		15	106 271 CES-A-LSP-15V-106271
		20	106 272 CES-A-LSP-20V-106272
		25	104 968 CES-A-LSP-25V-104968
	SB M5 plug connector	-	104 969 CES-A-LSP-SB-104969
Installation material for CES-A-LSP-...	For Bosch profiles with 8 mm groove	2 screws and 2 clamping pieces	106 633 Installation material 8-groove Bosch
	For Bosch profiles with 10 mm groove	2 screws and 2 clamping pieces	106 634 Installation material 10-groove Bosch
	For ITEM profiles with 8 mm groove	2 screws and 2 clamping pieces	106 635 Installation material 8-groove ITEM

Technical data read head CES-A-LSP-...

Parameter	Value			Unit
	min.	typ.	max.	
Housing material	Reinforced thermoplastic, fully encapsulated			
Weight (without connection cable)	0.02			kg
Ambient temperature	-25	-	+70	°C
Degree of protection	IP67			
Installation position	Any			
Method of operation	Inductive			
Power supply	Via evaluation unit			
Connection type	M5 plug connector, 3-pin			
LED display	White, valid actuator detected			
In combination with actuator CES-A-BSP-104970				
Operating distance for center offset $m = 0$ ¹⁾ with vertical approach direction (x direction)				
- Assured switch-off distance S_{ar}	-	-	45	mm
Cable length $l = 0$ to 25 m				
- Switch-on distance	-	20	-	
- Assured switch-on distance S_{ao}	10	-	-	
- Switching hysteresis	1	4	-	
Cable length	-	-	25	m

1) These values apply for the installation of the read head and the actuator in an aluminum profile 45 x 45 mm.

Read head CES-A-LNN-...

- ▶ **Cube-shaped design**
42 x 25 mm
- ▶ **Attachment compatible with series CES-A-LNA/LCA**
- ▶ **LED for the indication of the door position**



For possible combinations see page 24

Attention:

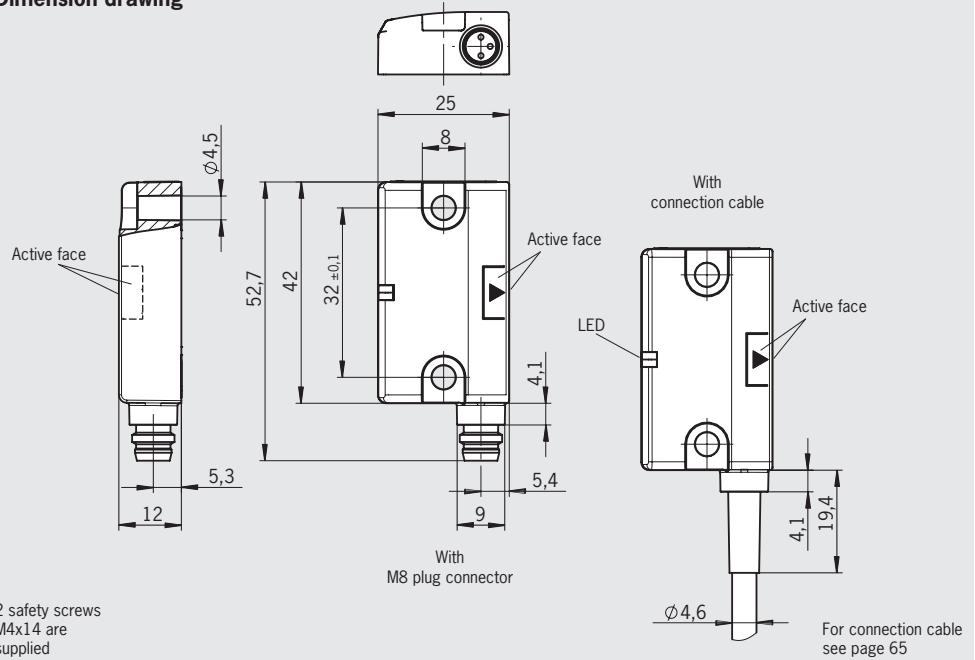
The operating distance may vary depending on the background material and installation situation.

Important:

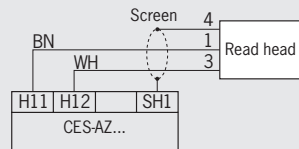
Actuators must be ordered separately! See page 43.

Read head CES-A-LNN-...
M8 plug connector, 3-pin or hard-wire encapsulated cable

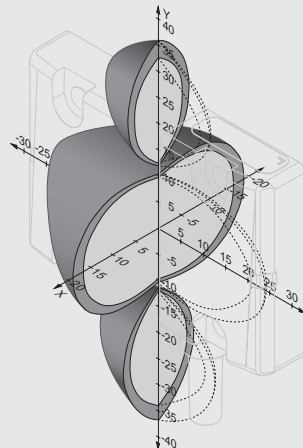
Dimension drawing



Pin assignment

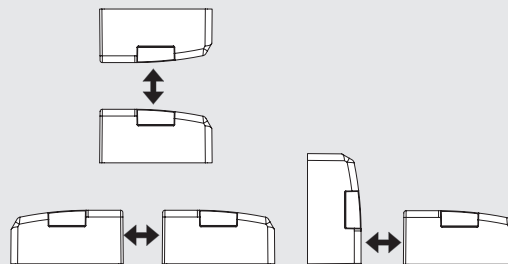


Typical operating distance



For a side approach direction for the actuator and read head, a minimum distance of $s = 6$ mm must be maintained so that the operating distance of the side lobes is not entered.

Approach directions



Ordering table

Series	Cable/connection type	Cable length [m]	Order no. / item
CES-A-LNN-...	V Cable PVC	5	106 602 CES-A-LNN-05V-106602
	SC M8 plug connector	-	106 601 CES-A-LNN-SC-106601

Technical data read head CES-A-LNN-...

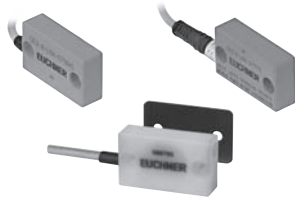
Parameter	Value			Unit
	min.	typ.	max.	
Housing material	Reinforced thermoplastic (PBT), fully encapsulated			
Dimensions	42 x 25 x 12			mm
Weight (without connection cable)	0.025			kg
Ambient temperature	-25	-	+70	°C
Degree of protection	IP67			
Installation position	Any			
Method of operation	Inductive			
Power supply	Via evaluation unit			
Connection type	M8 plug connector, 3-pin or connection cable			
LED display	White, valid actuator detected			
In combination with actuator CES-A-BBN-106600				
Operating distance for center offset $m = 0$ ¹⁾				
- Assured switch-off distance S_{ar}	in x/z direction	-	-	50
	in y direction	-	-	80
Cable length $l = 0$ to 25 m				mm
- Switch-on distance		-	20	-
- Assured switch-on distance S_{ao}		10	-	-
- Switching hysteresis		1	4	-
In combination with actuator CES-A-BDN-06-104730				
Operating distance for center offset $m = 0$				
- Assured switch-off distance S_{ar}	in x/z direction	-	-	80
	in y direction	-	-	50
Cable length $l = 0$ to 25 m				mm
- Switch-on distance		-	19	-
- Assured switch-on distance S_{ao}		14	-	-
- Switching hysteresis		-	4	-
Cable length		-	-	25

1) These values apply for the surface installation of the read head and the actuator.

Read head CES-A-LC.../CES-A-LN...



- ▶ **Cube-shaped design**
42 x 25 mm



For possible combinations see page 24

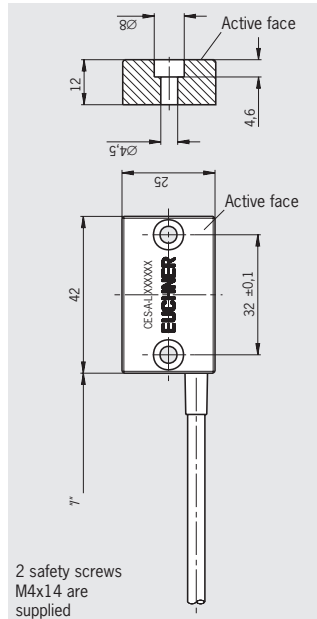
Warning:

The operating distance may vary depending on the background material and installation situation.

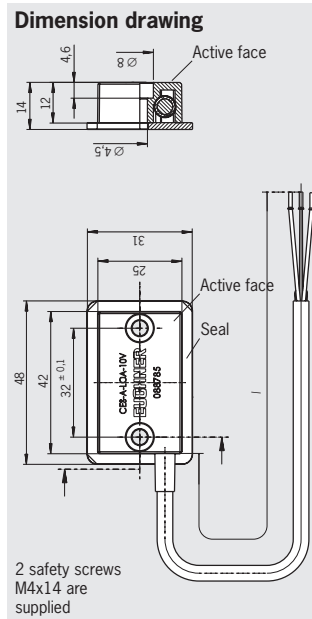
Important:

Actuators must be ordered separately! See page 45 and 47.

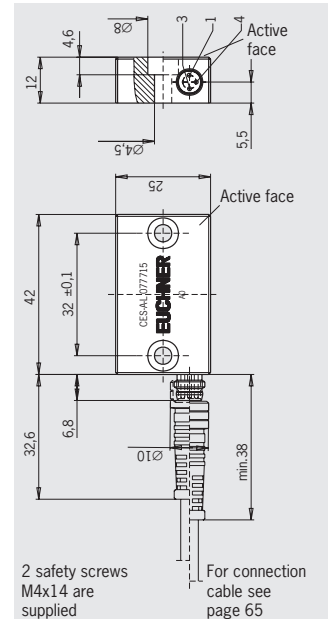
Read head CES-A-LNA... (Fortron) Hard-wired encapsulated cable



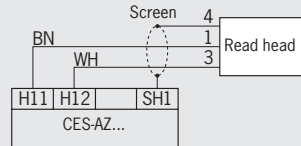
Read head CES-A-LCA... (PE-HD) Hard-wired encapsulated cable



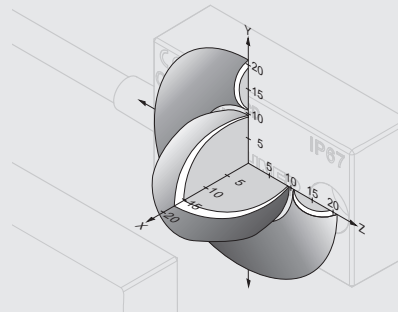
Read head CES-A-LNA-SC (Fortron) M8 plug, 3-pin



Pin assignment



Typical operating distance



For a side approach direction for the actuator and read head, a minimum distance of $s = 3$ mm must be maintained so that the operating distance of the side lobes is not entered.

Ordering table

Series	Cable/connection type	Cable length [m]	Type	Order no. / item
CES-A-LCA-...	V Cable PVC	10	Housing material PE-HD ²⁾	088 785 CES-A-LCA-10V
		5		071 845 CES-A-LNA-05V
CES-A-LNA-...	V Cable PVC	10		071 846 CES-A-LNA-10V
		15		071 847 CES-A-LNA-15V
		25		071 975 CES-A-LNA-25V
		5		077 806 CES-A-LNA-05P
	P Cable PUR	10		077 807 CES-A-LNA-10P
		15		084 682 CES-A-LNA-15P
	SC M8 plug connector	-		077 715 ³⁾ CES-A-LNA-SC
CES-A-LNA-SC-EX	SC M8 plug connector	-	ATEX ¹⁾	098 156 ^{1) 3)} CES-A-LNA-SC-EX

1) EX II 3G Ex nL IIC T70°C (zone 2 gases)

2) Suitable for use in aggressive media (e. g. acids, alkalis)

3) Plug connector suitable for snap-action and screw terminals

Technical data read head CES-A-LC.../CES-A-LN...

Parameter	Value			Unit
	min.	typ.	max.	
Housing material	Fortron, reinforced thermoplastic, fully encapsulated			
- CES-A-LNA...	Plastic PE-HD without reinforcement, fully encapsulated			
- CES-A-LCA...	Fluororubber 75 FPM 4100			
Flat seal material (CES-A-LCA... only)	Fluororubber 75 FPM 4100			
Dimensions	42 x 25 x 12			mm
Weight (incl. 10 m cable)	0.3			kg
Ambient temperature				
- CES-A-LCA...	-25	-	+50	°C
- CES-A-LNA.../CES-A-LNA-SC-EX	-25	-	+70	
Degree of protection	IP67/IP69K			
Installation position	Any			
Method of operation	Inductive			
Power supply	Via evaluation unit			
In combination with CES-A-BBA				
Operating distance for center offset $m = 0$ ¹⁾				
- Assured switch-off distance S_{ar}	-	-	26	mm
Cable length $l = 0$ to 25 m				
- Switch-on distance	-	15	-	
- Assured switch-on distance S_{ao}	10	-	-	
- Switching hysteresis	0.5	2	-	
Connection cable	Hard-wired encapsulated connection cable, with crimped ferrules			
- CES-A-LCA.../CES-A-LNA...	PVC, Ø 4.6 mm			
- CES-A-LNA...	PUR, Ø 4.8 mm, suitable for drag chain			
- CES-A-LNA-SC	M8 plug connector (snap-action and screw terminals), 3-pin			
Cable length	See ordering table		25	m

1) These values apply for surface installation of the read head and the actuator.



Read head CES-A-LQA-SC

- ▶ Cube-shaped design
50 x 50 mm
- ▶ M8 plug connector (snap-action and screw terminals)



For possible combinations see page 24

Warning:

The operating distance may vary depending on the background material and installation situation.

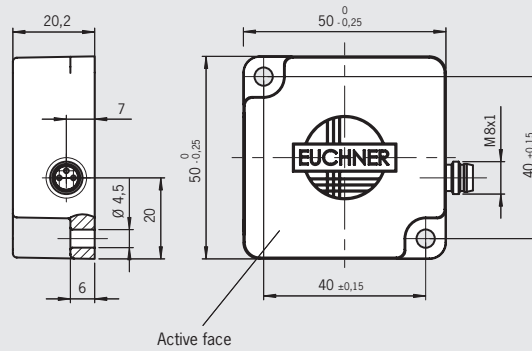
Important:

Actuators must be ordered separately! See page 46.

Read head CES-A-LQA-SC

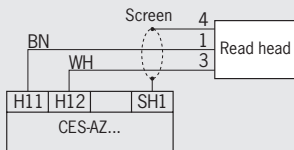
M8 plug, 3-pin

Dimension drawing

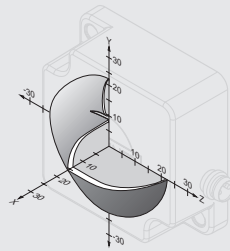


For connection cable see page 65

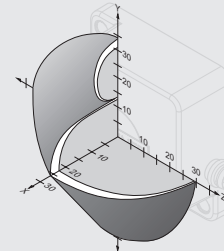
Pin assignment



Typical operating distance



With actuator CES-A-BBA or CES-A-BCA



With actuator CES-A-BQA and evaluation unit CES-AZ...-01B

Ordering table

Series	Connection type	Comment	Order no. / item
CES-A-LQA-SC	SC M8 plug connector	2 safety screws M4 x 14 are supplied	095 650 CES-A-LQA-SC

Technical data read head CES-A-LQA-SC

Parameter	Value			Unit
	min.	typ.	max.	
Housing material	Fortron, reinforced thermoplastic, fully encapsulated			
Dimensions	50 x 50 x 20.2			mm
Weight	0.08			kg
Ambient temperature	-25	-	+70	°C
Degree of protection	IP67			
Installation position	Any			
Method of operation	Inductive			
Power supply	Via evaluation unit			
In combination with actuator CES-A-BBA or CES-A-BCA				
Operating distance for center offset $m = 0$ ¹⁾				
- Assured switch-off distance S_{ar}	-	-	47	mm
Cable length $l = 0$ to 25 m				
- Switch-on distance	-	15	-	
- Assured switch-on distance S_{ao}	10	-	-	
- Switching hysteresis	2	3	-	
In combination with actuator CES-A-BQA and evaluation unit CES-AZ-...-01B				
Operating distance for center offset $m = 0$ ¹⁾				
Cable length $l = 0$ to 25 m				
- Assured switch-off distance S_{ar}	-	-	60	mm
For vertical approach direction				
- Switch-on distance	-	23	-	
- Assured switch-on distance S_{ao}	16	-	-	
- Switching hysteresis	2	3	-	
For side approach direction				
- Switch-on distance	-	28	-	
- Assured switch-on distance S_{ao}	24	-	-	
- Switching hysteresis	1	1.3	-	
Cable length	-	-	25	m

1) These values apply for surface installation of the read head and the actuator.



Read head CES-A-LMN-SC

- ▶ Cylindrical design M12
- ▶ M8 plug connector (snap-action and screw terminals)



For possible combinations see page 24

Warning:

The operating distance may vary depending on the background material and installation situation.

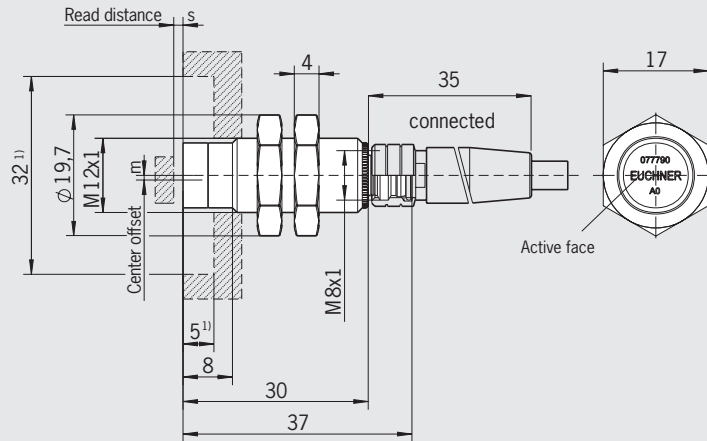
Important:

Actuators must be ordered separately! See page 48.

Read head CES-A-LMN-SC

M8 plug, 3-pin

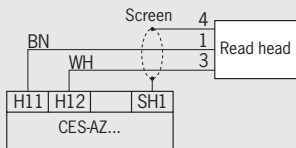
Dimension drawing



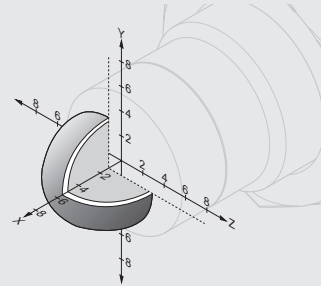
1) Clear zone (area of the active face without metal housing)

For connection cable see page 65

Pin assignment



Typical operating distance



A minimum distance of $s = 1.2$ mm must be maintained.

Ordering table

Series	Connection type	Type	Order no. / item
CES-A-LMN-SC	SC M8 plug connector	Housing M12	077 790 CES-A-LMN-SC
CES-A-LMN-SC-EX	SC M8 plug connector	ATEX ¹⁾	098 157 ¹⁾ CES-A-LMN-SC-EX

1) EX II 3G Ex nL IIC T70°C (zone 2 gases)

Technical data read head CES-A-LMN-SC

Parameter	Value			Unit
	min.	typ.	max.	
Housing material	Nickel-plated CuZn housing sleeve Plastic PBT GF20 cap			
Dimensions	M12 x 1, length 38			mm
Weight	0.2			kg
Ambient temperature				°C
- CES-A-LMN-SC	-20	-	+70	
- CES-A-LMN-SC-EX	-20	-	+60	
Ambient pressure (only of active face in installed condition)	-	-	10	bar
Degree of protection	IP67			
Installation position	Any			
Method of operation	Inductive			
Power supply	Via evaluation unit			
In combination with actuator CES-A-BMB				
Operating distance for center offset $m = 0$ ¹⁾				mm
- Assured switch-off distance S_{ar}	-	-	10	
Cable length $l = 0$ to 15 m				
- Switch-on distance	-	5	-	
- Assured switch-on distance S_{ao}	3.5	-	-	
- Switching hysteresis	0.1	0.3	-	
Connection	M8 plug connector (snap-action and screw terminals), 3-pin			
Cable length	-	-	15	m

1) These values apply for surface installation of the read head in steel.

Actuator CES-A-BSP

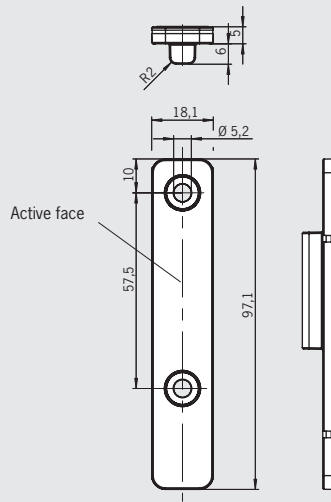
► Optimized for aluminum profile mounting



For possible combinations see page 24

Actuator CES-A-BSP

Dimension drawing



Ordering table

Series	Comment	Version	Order no. / item
CES-A-BSP	Please order installation material separately		104 970 CES-A-BSP-104970
Installation material for CES-A-BSP	For Bosch profiles with 8 mm groove	2 screws and 2 clamping pieces	106 633 Installation material 8-groove Bosch
	For Bosch profiles with 10 mm groove	2 screws and 2 clamping pieces	106 634 Installation material 10-groove Bosch
	For ITEM profiles with 8mm groove	2 screws and 2 clamping pieces	106 635 Installation material 8-groove ITEM

Technical data

Parameter	Value			Unit
	min.	typ.	max.	
Housing material	Reinforced thermoplastic, fully encapsulated			
Weight	0.02			kg
Ambient temperature	-25	-	+70	°C
Degree of protection	IP67			
Installation position	Active face opposite read head			
Power supply	Inductive via read head			

Actuator CES-A-BBN

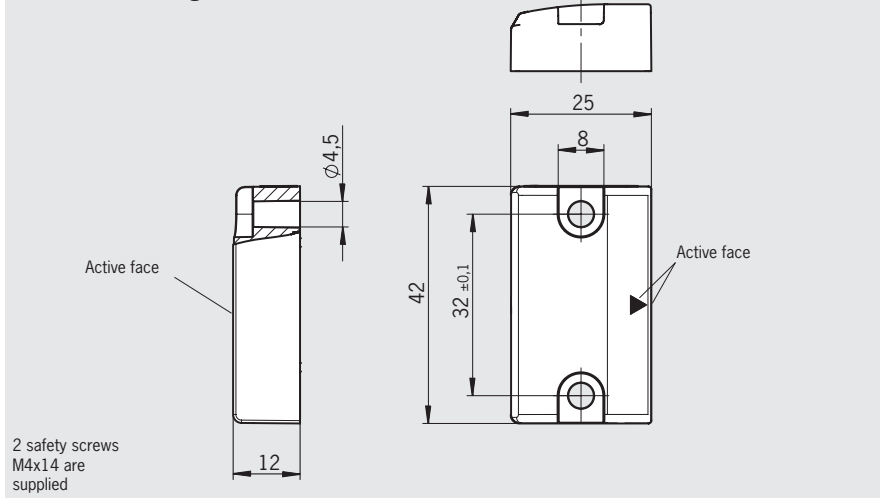
- ▶ Cube-shaped design 42 x 25 mm
- ▶ Attachment compatible with actuator CES-A-BBA/BCA



For possible combinations see page 24

Actuator CES-A-BBN

Dimension drawing



Ordering table

Series	Comment	Version	Order no. / item
CES-A-BBN	2 safety screws M4 x 14 are supplied		106 600 CES-A-BBN-106600

Technical data

Parameter	Value			Unit
	min.	typ.	max.	
Housing material	Reinforced thermoplastic (PBT), fully encapsulated			
Dimensions	42 x 45 x 12			mm
Weight	0.025			kg
Ambient temperature	-25	-	+70	°C
Degree of protection	IP67			
Installation position	Active face opposite read head			
Power supply	Inductive via read head			

Actuator CES-A-BDN-06

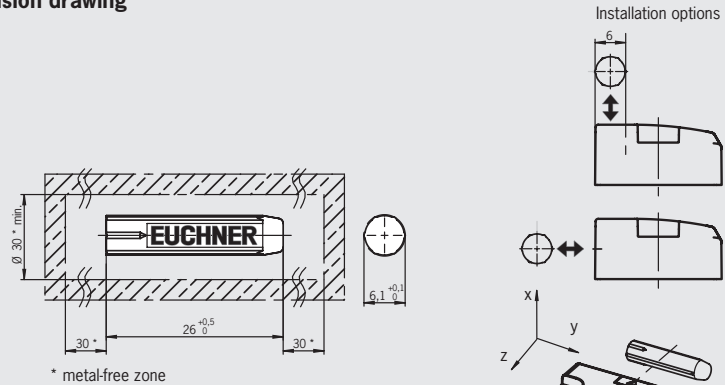
► Cylindrical design \varnothing 6 mm



For possible combinations see page 24

Actuator CES-A-BDN-06

Dimension drawing



Ordering table

Series	Comment	Version	Order no. / item
CES-A-BDN-06			104 730 CES-A-BDN-06-104730

Technical data

Parameter	Value			Unit
	min.	typ.	max.	
Housing material	Macromelt PA-based plastic			
Dimensions	26 x \varnothing 6			mm
Weight	0.005			kg
Ambient temperature	-25	-	+70	°C
Degree of protection	IP67			
Installation position	Active face opposite read head			
Power supply	Inductive via read head			

Actuator CES-A-BBA/CES-A-BCA

► Cube-shaped design 42 x 25 mm



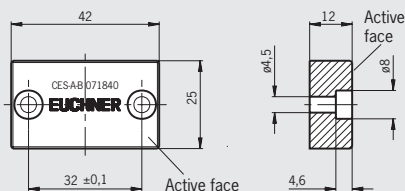
Actuator CES-A-BBA (Fortron)

Actuator CES-A-BCA (PE-HD) Housing material PE-HD

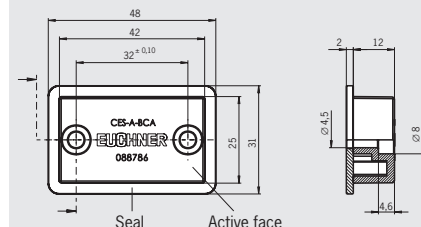


For possible combinations see page 24

Dimension drawing



2 safety screws
M4x14 are
supplied



2 safety screws
M4x14 are
supplied

Ordering table

Series	Comment	Type	Order no. / item
CES-A-BBA	2 safety screws M4 x 14 are supplied	-	071 840 CES-ABBA
CES-A-BBA-EX	2 safety screws M4 x 14 are supplied	ATEX ¹⁾	098 158 ¹⁾ CES-ABBA-EX
CES-A-BCA	2 safety screws M4 x 14 are supplied Flat seal included	Housing material PE-HD ²⁾	088 786 CES-ABCA

1) EX II 3G Ex nL IIC T70°C (zone 2 gases) and EX II 3D Ex tD A22 T70°C
2) Suitable for use in aggressive media (e. g. acids, alkalis)

Technical data

Parameter	Value			Unit
	min.	typ.	max.	
Housing material	Fortron, reinforced thermoplastic, fully encapsulated			
- CES-ABBA	Fortron, reinforced thermoplastic, fully encapsulated			
- CES-ABCA	Plastic PE-HD without reinforcement, fully encapsulated			
Flat seal material (CES-ABCA only)	Fluororubber 75 FPM 4100			
Dimensions	42 x 25 x 12			mm
Weight	0.02			kg
Ambient temperature				°C
- CES-ABBA	-25	-	+70	
- CES-ABBA-EX	-25	-	+60	
- CES-ABCA	-25	-	+50	
Degree of protection	IP67/IP69K			
Installation position	Active face opposite read head			
Power supply	Inductive via read head			

Actuator CES-A-BQA

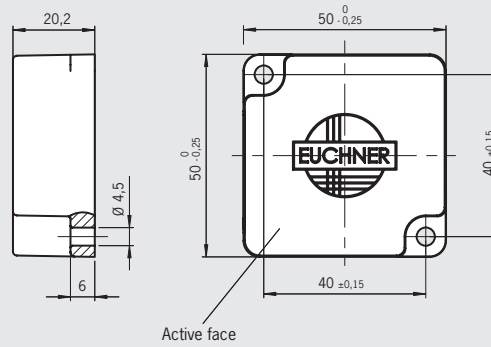
► Cube-shaped design 50 x 50 mm



For possible combinations see page 24

Actuator CES-A-BQA

Dimension drawing



2 safety screws
M4x14 are
supplied

Ordering table

Series	Comment	Type	Order no. / item
CES-A-BQA	2 safety screws M4 x 14 are supplied		098 108 CES-A-BQA

Technical data

Parameter	Value			Unit
	min.	typ.	max.	
Housing material	Fortron, reinforced thermoplastic, fully encapsulated			
Dimensions	50 x 50 x 20.2			mm
Weight	0.07			kg
Ambient temperature	-25	-	+70	°C
Degree of protection	IP67			
Installation position	Active face opposite read head			
Power supply	Inductive via read head			

Actuator CES-A-BDA

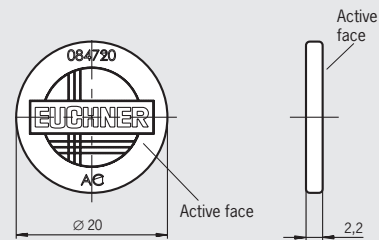
- ▶ Round design \varnothing 20 mm



For possible combinations see page 24

Actuator CES-A-BDA

Dimension drawing



Ordering table

Series	Comment	Type	Order no. / item
CES-A-BDA			084 720 CESA-BDA-20

Technical data

Parameter	Value			Unit
	min.	typ.	max.	
Housing material	Plastic PC			
Dimensions	\varnothing 20 x 2.2			mm
Weight	0.0008			kg
Ambient temperature	-25	-	+70	°C
Degree of protection	IP67			
Installation position	Active face opposite read head			
Power supply	Inductive via read head			

Actuator CES-A-BMB/CES-A-BMB-EX



► Cylindrical design M12 x 0.75



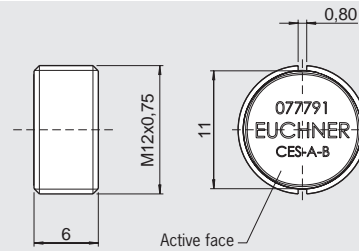
For possible combinations see page 24

Insertion tool

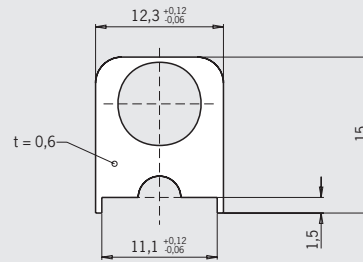
With the aid of the insertion tool, the actuator CES-A-BMB (cylindrical design) can be screwed into a prepared M12 x 0.75 thread in safety doors.

Actuator CES-A-BMB

Dimension drawing



Insertion tool



Ordering table

Series	Comment	Type	Order no. / item
CES-A-BMB			077 791 CES-A-BMB
CES-A-BMB-EX		ATEX ¹⁾	098 159 ¹⁾ CES-A-BMB-EX
Insertion tool		For actuator CES-A-BMB	037 662

1) EX II 3G Ex nL IIC T70°C (zone 2 gases)

Technical data

Parameter	Value			Unit
	min.	typ.	max.	
Housing material	Stainless steel, Niro			
Dimensions	M12 x 0.75, depth 6			mm
Weight	0.002			kg
Ambient temperature	-25	-	+70	°C
Ambient pressure (only applies if the pressure acts on all sides of the actuator)	-	-	10	bar
Degree of protection	IP67			
Installation position	Active face opposite read head			
Power supply	Inductive via read head			