

Read head CES-A-LNN-...

- ▶ Rectangular 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.

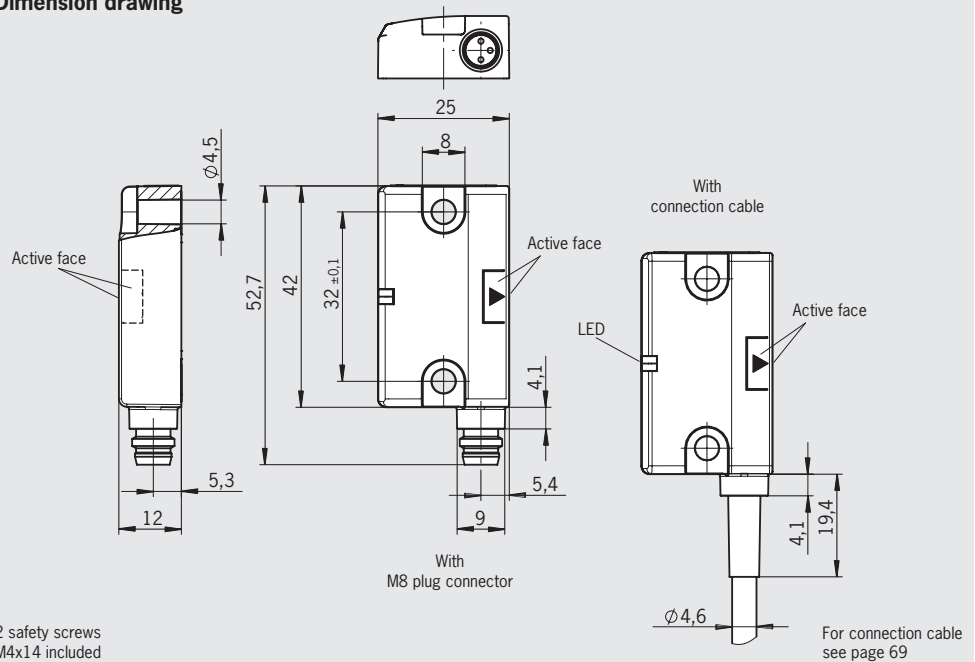
Important:

Actuators must be ordered separately! See page 43.

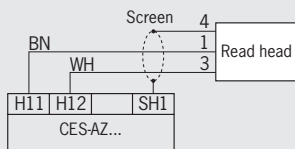
Read head CES-A-LNN-...

M8 plug connector, 3-pin or hard-wire encapsulated cable

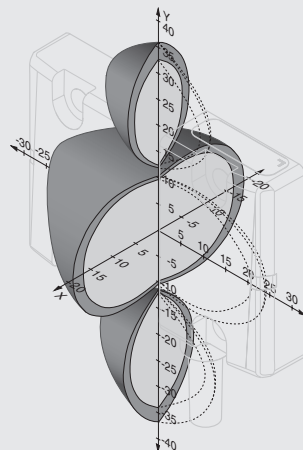
Dimension drawing



Terminal assignment

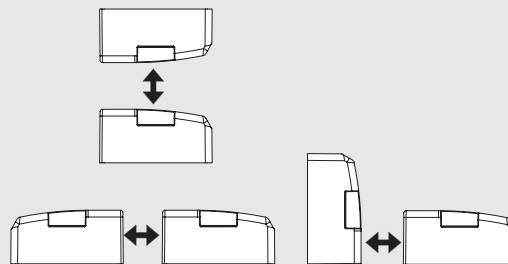


Typical operating distance



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 type/connection type	Cable length [m]	Order no. / item
CES-A-LNN-...	V PVC cable	5	106602 CES-A-LNN-05V-106602
	SC M8 plug connector	-	106601 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	M8 plug connector, 3-pin or connection cable			
LED indicator	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
				m

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

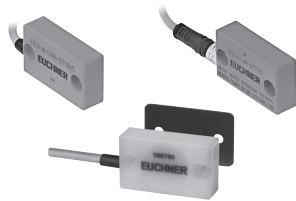


CES-AZ

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



- ▶ Rectangular design
42 x 25 mm

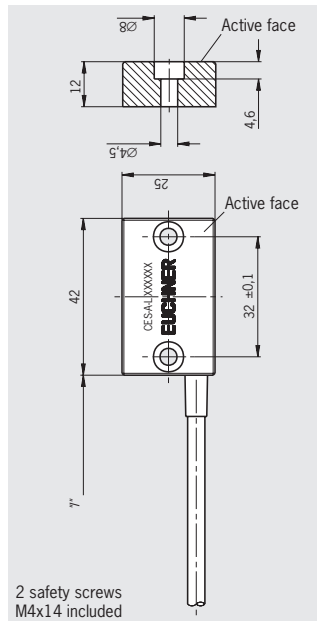


For possible combinations see page 24

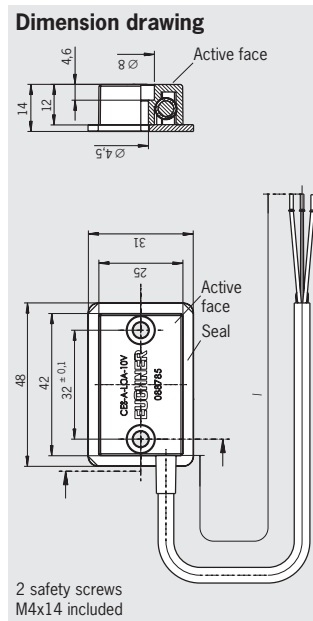
Attention:
The operating distance may vary depending on the background material and installation situation.

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

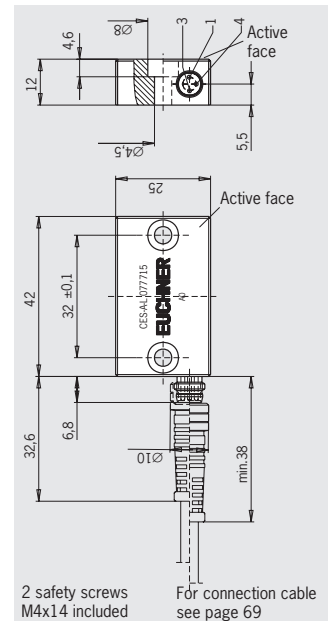
Read head CES-A-LNA... (Fortron) Hard-wired encapsulated cable



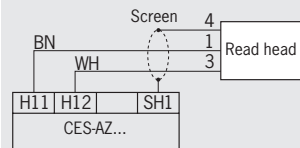
Read head CES-A-LCA... (PE-HD) Hard-wired encapsulated cable



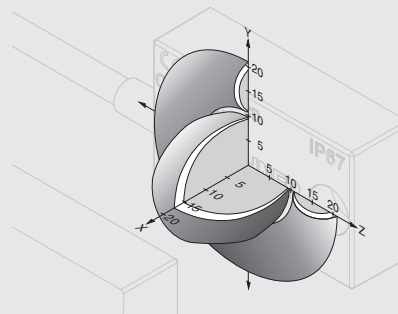
Read head CES-A-LNA-SC (Fortron) M8 plug, 3-pin



Terminal 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 type/connection type	Cable length [m]	Version	Order no. / item
CES-A-LCA-...	V PVC cable	10	Housing material PE-HD ²⁾	088785 CES-A-LCA-10V
		5		071845 CES-A-LNA-05V
CES-A-LNA-...	V PVC cable	10		071846 CES-A-LNA-10V
		15		071847 CES-A-LNA-15V
		25		071975 CES-A-LNA-25V
		5		077806 CES-A-LNA-05P
	P Cable PUR	10		077807 CES-A-LNA-10P
		15		084682 CES-A-LNA-15P
	SC M8 plug connector	-		077715 ³⁾ CES-A-LNA-SC
CES-A-LNA-SC-EX	SC M8 plug connector	-	ATEX ¹⁾	098156 ^{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-... - CES-A-LCA-...	Plastic PE-HD without reinforcement, fully encapsulated			
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				°C
- CES-A-LCA-...	-25	-	+50	
- CES-A-LNA-.../CES-A-LNA-SC-EX	-25	-	+70	
Degree of protection				
- CES-A-LCA-...	IP67			
- CES-A-LNA-.../CES-A-LNA-SC-EX	IP67/IP69K			
Installation position	Any			
Method of operation	Inductive			
Power supply	Via evaluation unit			
In combination with actuator CES-A-BBA				
Operating distance for center offset $m = 0$ ¹⁾				mm
- Assured switch-off distance S_{ar}	-	-	26	
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-... - CES-A-LNA-...	PVC, Ø 4.6 mm			
- CES-A-LNA-SC	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

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



For possible combinations see page 24

Attention:

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

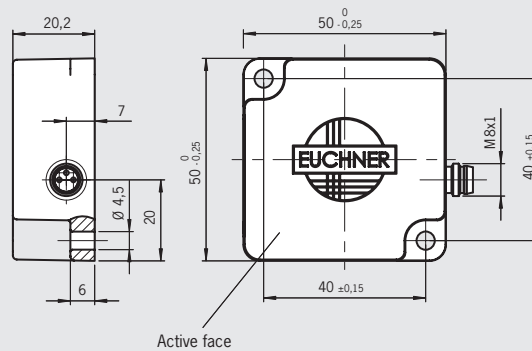
Important:

Actuators must be ordered separately! See page 46.

Read head CES-A-LQA-SC

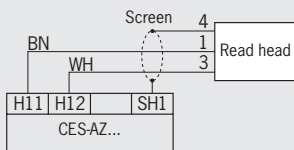
M8 plug, 3-pin

Dimension drawing

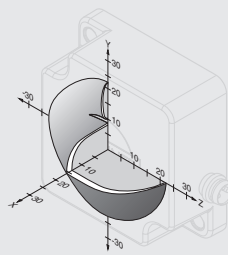


For connection cable see page 69

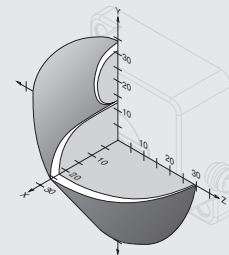
Terminal assignment



Typical operating distance



With actuator CES-A-BBA or CES-A-BCA on evaluation unit CES-AZ



With actuator CES-A-BQA on evaluation unit CES-AZ

Ordering table

Series	Connection	Comment	Order no. / item
CES-A-LQA-SC	SC M8 plug connector	2 safety screws M4 x 14 are supplied	095650 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 on evaluation unit CES-AZ				
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 on evaluation unit CES-AZ				
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.



CES-AZ



Read head CES-A-LMN-SC

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



For possible combinations see page 24

Attention:

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

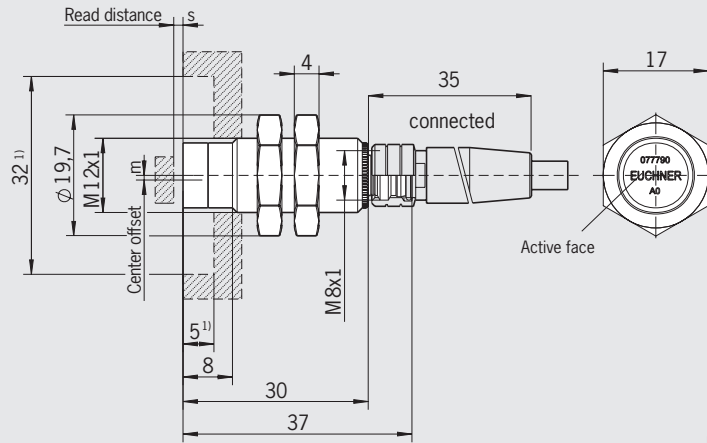
Important:

Actuators must be ordered separately! See page 48.

Read head CES-A-LMN-SC

M8 plug, 3-pin

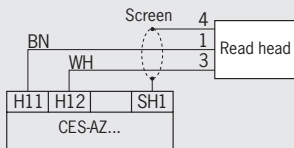
Dimension drawing



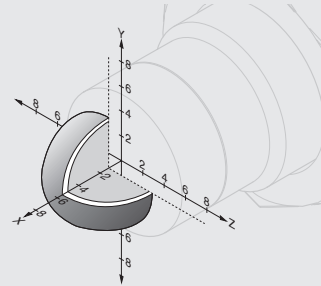
1) Clear zone (area of the active face without metal housing)

For connection cable see page 69

Terminal assignment



Typical operating distance



A minimum distance of $s = 1.2 \text{ mm}$ must be maintained.

Ordering table

Series	Connection	Version	Order no. / item
CES-A-LMN-SC	SC M8 plug connector	Housing M12	077790 CES-A-LMN-SC
CES-A-LMN-SC-EX	SC M8 plug connector	ATEX ¹⁾	098157 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.

