

Read head CEM-A-LE05.../CEM-A-LE05...-EX



- ▶ Read head with solenoid
- ▶ Adhesive force 500 N
- ▶ With and without remanence
- ▶ Up to categorie 4 according to EN ISO 13849-1



For possible combinations see page 24

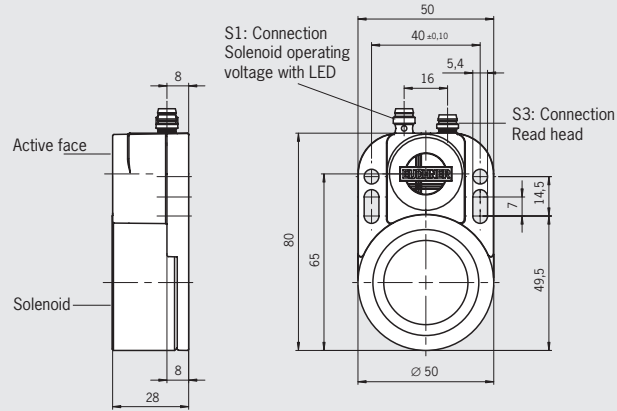
Remanence

Read heads without remanence are de-magnetized when the solenoid is switched off. For this purpose the operating voltage U_B must always be applied.

Read head CEM-A-LE05.../CEM-A-LE05...-EX

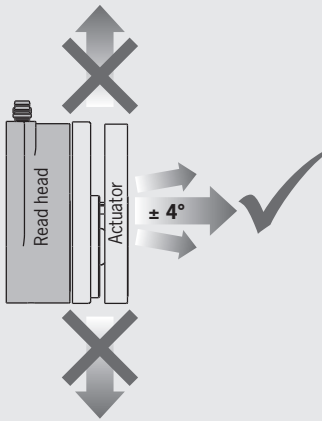


Dimension drawing



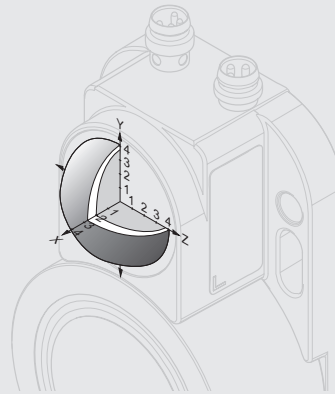
For connection cables see page 65/66

Approach direction



Typical operating distance

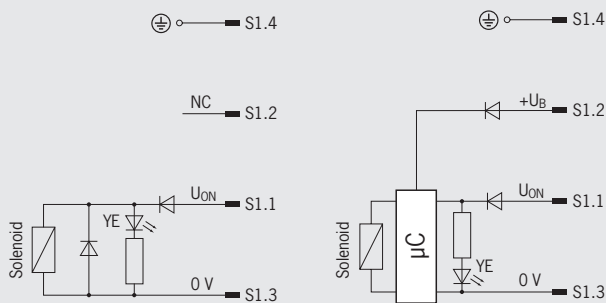
Safe switch-off distance
Note $s_{sw} = 20$ mm for internal component failure.
Safety outputs are safely switched off.



Wiring diagram

CEM-A-LE05K-S2

CEM-A-LE05R-S2



Circuit diagram connection solenoid operating voltage plug S1
A free-wheeling diode is already integrated into each CEM



Solenoid operating voltage

- S1.1 ▶ U_{ON}/DC 24 V
- S1.2 ▶ $+U_B/DC$ 24 V
- S1.3 ▶ 0 V/GND
- S1.4 ▶ ⊕

Evaluation unit CES

- S3.1 ▶ Data line
- S3.3 ▶ Data line
- S3.4 ▶ SH (screen)

Ordering table

Series	Adhesive force [N]	Type	Order no / item
CEM-A-LE05K-S2	500	With remanence	094 800 CEM-A-LE05K-S2
CEM-A-LE05K-S2-EX	500	ATEX, with remanence	097 174 ¹⁾ CEM-A-LE05K-S2-EX
CEM-A-LE05R-S2	500	Without remanence	095 792 CEM-A-LE05R-S2

1) EX II 3G Ex nA IIC T6

Technical data read head CEM-A-LE05.../CEM-A-LE05...-EX



Parameter	Value			Unit
	min.	typ.	max.	
General				
Housing material	Aluminum			
Material, read head CES	Plastic (PPS)			
Solenoid material	Galvanized steel			
Weight	Approx. 0.3			kg
Ambient temperature	-25	-	+50	°C
Degree of protection according to IEC 60529	IP67			
Installation position	Any			
Solenoid				
Adhesive force in axial direction	500			N
Adhesive force due to remanence				N
- CEM-A-LE05K-S2/CEM-A-LE05K-S2-EX ¹⁾	Approx. 10 ± 25 %			
- CEM-A-LE05R-S2	Approx. 0.5			
Solenoid center offset max.	± 2.5			mm
Operating voltage U_B plug S1	24 +10%/-15%			V DC
Solenoid voltage U_{ON} plug S1	24 +10%/-15%			
Reverse polarity protection	Yes			
Free-wheeling diode	Yes			
Current consumption CEM-A-LE05K-S2/CEM-A-LE05K-S2-EX				mA
- at connection S1.1 (U_{ON})	100			
Current consumption CEM-A-LE05R-S2				mA
- at connection S1.2 (U_B)	at $U_{ON} = 0$ V at $U_{ON} = 24$ V			
- at connection S1.1 (U_{ON})	12 100			
- at connection S1.1 (U_{ON})	15			
Power consumption				W
- CEM-A-LE05K-S2/CEM-A-LE05K-S2-EX	Approx. 2.5			
- CEM-A-LE05R-S2	Approx. 2.8			
Solenoid operating voltage connection	M8 plug connector (male socket), 4-pin Yellow LED integrated in the plug connector (see circuit diagram)			
Read head				
Operating distance for center offset $m = 0$				mm
- Assured switch-off distance S_{ar}	-	-	20	
Cable length $l = 0$ to 25 m				
- Switch-on distance	-	2	-	
- Assured switch-on distance S_{ao}	0	-	-	
- Switching hysteresis	-	0.7	-	
Connection evaluation unit plug S3	M8 plug connector (male socket), 3-pin			
Connection cable	-	-	25	m

1) The remanence disappears immediately when the door is opened and over time in de-energized solenoids.



Read head CEM-A-LH10K-S3/CEM-A-LH10R-S3

- ▶ Read head with solenoid
- ▶ Adhesive force 1000 N
- ▶ With and without remanence
- ▶ Up to categorie 4 according to EN ISO 13849-1



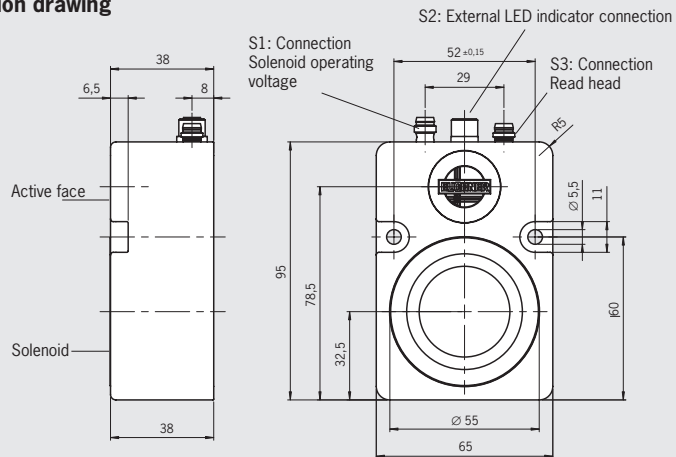
For possible combinations see page 24

Remanence

Read heads without remanence are de-magnetized when the solenoid is switched off. For this purpose the operating voltage U_B must always be applied.

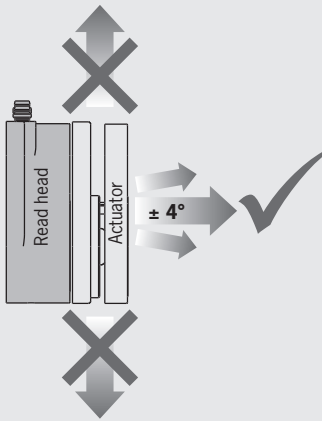
Read head CEM-A-LH10K-S3/CEM-A-LH10R-S3

Dimension drawing



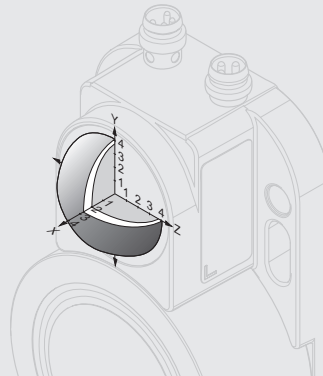
For connection cables see page 65 - 67

Approach direction

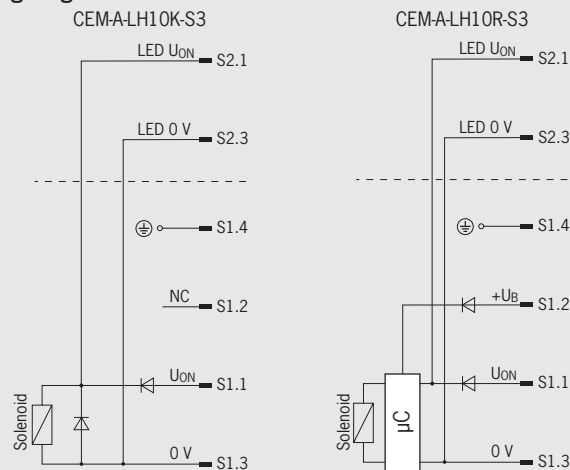


Typical operating distance

Safe switch-off distance
 Note $s_{sw} = 20$ mm for internal component failure. Safety outputs are safely switched off.



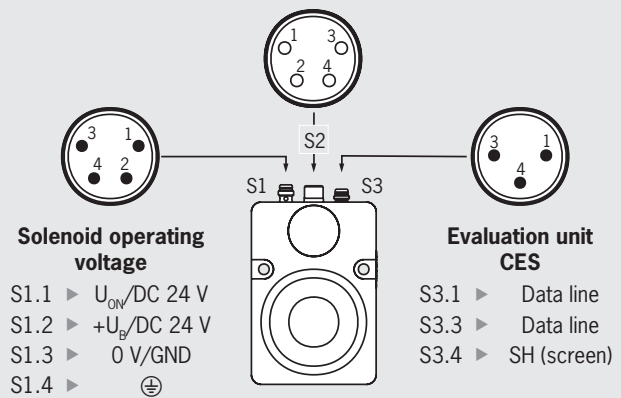
Wiring diagram



Circuit diagram connection solenoid operating voltage plug S1
 A free-wheeling diode is already integrated into each CEM

External LED indicator connection

- S2.1 ▶ LED U_{ON}
- S2.2 ▶ -
- S2.3 ▶ LED 0 V
- S2.4 ▶ -



Ordering table

Series	Adhesive force [N]	Type	Order no / item
CEM-A-LH10K-S3	1000	With remanence	095 170 CEM-A-LH10K-S3
CEM-A-LH10R-S3	1000	Without remanence	095 793 CEM-A-LH10R-S3

Technical data read head CEM-A-LH10K-S3/CEM-A-LH10R-S3

Parameter	Value			Unit
	min.	typ.	max.	
General				
Housing material	Aluminum			
Material, read head CES	Plastic (PPS)			
Solenoid material	Galvanized steel			
Weight	Approx. 0.9			kg
Ambient temperature	-25	-	+50	°C
Degree of protection according to IEC 60529	IP67			
Installation position	Any			
Solenoid				
Adhesive force in axial direction	1000			N
Adhesive force due to remanence	Approx. 40 ± 25 %			N
- CEM-A-LE10K-S2 ¹⁾	Approx. 0.7			
- CEM-A-LE10R-S2				
Solenoid center offset max.	± 2.5			mm
Operating voltage U_b plug S1	24 +10%/-15%			V DC
Solenoid voltage U_{ON} plug S1	24 +10%/-15%			
Reverse polarity protection	Yes			
Free-wheeling diode	Yes			
Current consumption CEM-A-LH10K-S3	225 (without external LED)			mA
- at connection S1.1 (U_{ON})				
Current consumption CEM-A-LH10R-S3	12			mA
- at connection S1.2 (U_b)	225			
at $U_{ON} = 0$ V at $U_{ON} = 24$ V				
- at connection S1.1 (U_{ON})	15			
Power consumption	Approx. 5.4			W
- CEM-A-LE05K-S2	Approx. 5.8			
- CEM-A-LE05R-S2				
Solenoid operating voltage connection	M8 plug connector (male socket), 4-pin			
External LED indicator connection	M8 plug connector (female socket), 4-pin			
Read head				
Operating distance for center offset $m = 0$				mm
- Assured switch-off distance S_{ar}	-	-	20	
Cable length $l = 0$ to 25 m				
- Switch-on distance	-	2	-	
- Assured switch-on distance S_{ao}	0	-	-	
- Switching hysteresis	-	0.7	-	
Connection evaluation unit plug S3	M8 plug connector (male socket), 3-pin			
Connection cable	-	-	25	m
Connection external LED indicator plug S2				
Current consumption	-	-	500	mA

1) The remanence disappears immediately when the door is opened and over time in de-energized solenoids.

Actuator CEM-A-BE05/CEM-A-BE05-EX



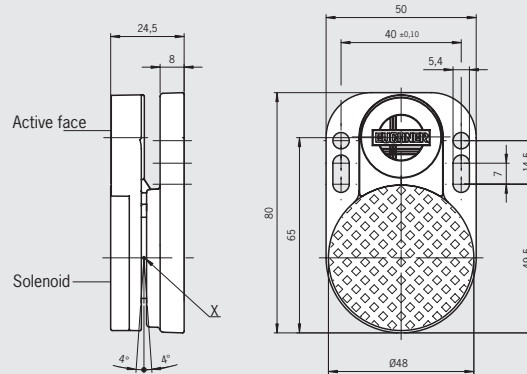
▶ Adhesive force 500 N

Actuator CEM-A-BE05/CEM-A-BE05-EX



For possible combinations see page 24

Dimension drawing



2 safety screws
M5x16 are
supplied

Ordering table

Series	Order no / item
CEM-A-BE05	094 805 CEM-A-BE05
CEM-A-BE05-EX	097 178 ¹⁾ CEM-A-BE05-EX

Technical data

Parameter	Value			Unit
	min.	typ.	max.	
Housing material	Aluminum			
Material, read head CES	Plastic (PPS)			
Solenoid mating plate material	Galvanized steel			
Weight	Approx. 0.18			kg
Ambient temperature	-25	-	+50	°C
Degree of protection according to IEC 60529	IP67			
Installation position	Active face opposite read head			
Adjustment angle (around point X, see dimension drawing)	± 4			°

1) EX II 3G Ex nA IIC T6



Actuator CEM-A-BH10

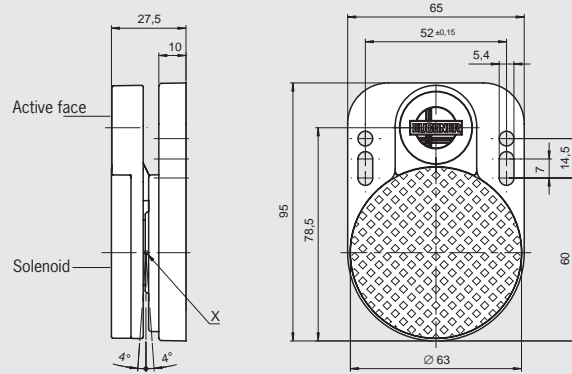
► Adhesive force 1000 N

Actuator CEM-A-BH10

Dimension drawing



For possible combinations see page 24



2 safety screws
M5x16 are
supplied

Ordering table

Series	Order no / item
CEM-A-BH10	095 175 CEM-A-BH10

Technical data

Parameter	Value			Unit
	min.	typ.	max.	
Housing material	Aluminum			
Material, read head CES	Plastic (PPS)			
Solenoid mating plate material	Galvanized steel			
Weight	Approx. 0.3			kg
Ambient temperature	-25	-	+50	°C
Degree of protection according to IEC 60529	IP67			
Installation position	Active face opposite read head			
Adjustment angle (around point X, see dimension drawing)	± 4			°

