

Automation at a glance

Ident Systems

		CIS3		CIS3A		CIS3A-Mini		
								
		Read system	Read/write system	Read system	Read/write system	Read system	Read/write system	
General	Housing material	Head	CuZn, nickel-plated	Plastic	CuZn, nickel-plated	Plastic	CuZn, nickel-plated	CuZn, nickel-plated
		Evaluation unit	–	–	–	–	Plastic	Plastic
	Housing dimensions	Head	M30x80mm	40x40x149mm	M30x80mm	40x40x149mm	M12x39mm	M12x39mm
		Evaluation unit	–	–	–	–	114x99x22,5mm	114x99x22,5mm
	Ambient temperature		0 to +50 °C	0 to +55 °C	0 to +50 °C	0 to +55 °C	0 to +50 °C	0 to +55 °C
	Type of installation	Head	non-flush	non-flush	non-flush	non-flush	non-flush	non-flush
	Evaluation unit	–	–	–	–	DIN rail mounting	DIN rail mounting	
Degree of protection, max. acc. to IEC 60529	Head	IP67	IP65	IP67	IP65	IP65	IP65	
	Evaluation unit	–	–	–	–	IP20	IP20	
Connection	Operating voltage U_B		24V	24V	24V	24V	24V	24V
	Current consumption (without load current) I_B		100mA	120mA	100mA	120mA	100mA	100mA
	Output voltage	A, B, C, D, strobe = 1 min. A, B, C, D, strobe = 0 max.	$U_B - 3V$ 2V	– –	$U_B - 3V$ 2V	– –	$U_B - 3V$ 2V	– –
	Input voltage	Skip = 1 min. Skip = 0 max.	15V 2V	– –	15V 2V	– –	15V 2V	– –
Data transfer	Interface		4-Bit parallel	Serial RS 232/V.24	4-Bit parallel	serial RS 232/V.24	4-Bit parallel	serial RS 232/V.24 RS 422
	Transfer protocol		–	3964R	–	3964R	–	3964R
	Data transfer rate		–	9,6kBaud	–	9,6kBaud	–	9,6kBaud 28,8kBaud
Data carrier	Design			 				
	Housing dimensions		Ø16 x 8 mm	35 x 16 x 8 mm	50 x 50 x 20 mm		Ø10 x 4 mm	
	Approach		Direction-dependent		Direction-independent		Direction-independent	
	Type of installation		Cube-shaped: screws, non-flush with metal Cylindrical: bonding, flush in metal		Screws, non-flush with metal		Bonding, flush in metal	
	Read distance, max.		18 mm		28 mm		5 mm	
	Relative speed		410mm/s	Static	230mm/s	Static	Static	
	Data carrier/read station							
	Storage capacity		16 bytes		16 bytes		4 bytes	116 bytes
	Ambient temperature		-40 to +85 °C		-20 to +85 °C		-25 to +70 °C	
	Degree of protection		IP67		IP67		IP67	
Number of write cycles, min.		100.000		100.000		100.000		
Number of read cycles		Not limited		Not limited		Not limited		

Inductive ident systems are used for the non-contact identification of products such as workpiece carriers or tools. The robust data carriers without batteries are, for example, programmed with a sequential number. Data carriers can be purchased programmed or you can program them yourself using a head with serial interface, or a portable hand-held terminal. The information is transferred via read-only heads directly to the inputs/ outputs on a control system using a parallel data interface. Integration is therefore straightforward and low-cost.

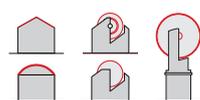
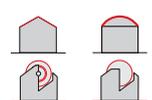
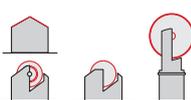
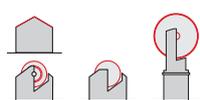
Detailed information in catalog

Identsystem CIS

● available ○ available on request – not available

All given data refer to the respective minimum or maximum values for the entire series.

Automation at a glance

	Position Switches	Precision Single Limit Switches				
						
	NG	N01	SN01	N1A	N11	
Approvals						
Special features/ specific advantages	Acc. to EN 50041 down to -40 °C (on request)	down to -40 °C (on request)		Acc. to DIN 43693 down to -40 °C (on request)		
Switching element	Contact elements, max.	4	1	2	2	2
	Switching current, max.	10A	4A	4A	6A	10A
	Switching current min. (at 24V)	1 mA	10 mA	10 mA	5 mA	20 mA
	Switching voltage, max.	230V	230V	230V	230V	230V
	Mechanical life, max.	30x10 ⁶	1x10 ⁷	1x10 ⁷	30x10 ⁶	30x10 ⁶
	Operating point accuracy	± 0.002	± 0.02	± 0.02	± 0.002	± 0.002
Environment	Housing material	Die-cast aluminum, anodized	Die-cast aluminum, anodized	Die-cast aluminum, anodized	Die-cast aluminum, anodized	Die-cast aluminum, anodized
	Housing dimensions, min. (HxWxD)	100x40x42mm	40x40x20mm	45x50x22mm	60x76x28mm	62x65x30mm
	Plunger spacing	-	-	-	-	-
	Number of plungers	1	1	1	1	1
	Ambient temperature	-25 to +80 °C	-5 to +125 °C	-5 to +80 °C	-25 to +80 °C	-5 to +80 °C
	Degree of protection, max., acc. to IEC 60529	IP 67	IP 67	IP 67	IP 67	IP 67
	LED indicator	●	-	-	●	-
	Approach/actuating direction					
Approach speed, max.	300 m/min	50 m/min	50 m/min	80 m/min	80 m/min	
Connection	Cable entry	M20x1.5	M12x1.5	M16x1.5	2 x M16x1.5	3 x M20x1.5
	Connection cable (pre-assembled)	-	2 or 5 m	2 or 5 m	-	-
	Plug connector	-	M12, 4-pin + PE	M12, 4-pin + PE	M12, 4-pin + PE	-
Accessories	Plunger types					

Detailed information
in catalog

Position Switches
acc. to EN 50041

Position Switches

● available ○ available on request - not available

All given data refer to the respective minimum or maximum values for the entire series.

Single Hole Fixing Limit Switches



EGT12
EGT1/4



EGM12



EGT1M12



EGT1



EGT2



EGT4



up to +120 °C
(on request)

down to -30 °C
(on request)

1

1

1

1

2

4

0.3A

0.6A

0.6A

0.6A

2A

2A

1 mA

10mA

10mA

10mA

10mA

10mA

230V

230V

230V

230V

230V

230V

30x10⁶

1x10⁶

1x10⁶

1x10⁶

3x10⁶

5x10⁵

± 0.01

± 0.01

± 0.01

± 0.01

± 0.01

± 0.01

Stainless steel

Stainless steel

Brass, nickel-plated

Brass, nickel-plated

Steel/brass

Brass, nickel-plated

61 x Ø12.6mm

40 x Ø14mm

74 x Ø12mm

65 x Ø12mm

88 x Ø24mm

115 x Ø18mm

-

-

-

-

-

-

1

1

1

1

1

1

-25 to +80 °C

-25 to +85 °C

-25 to +80 °C

-25 to +80 °C

-5 to +60 °C

-25 to +70 °C

IP 68

IP 65

IP 67

IP 67

IP 67

IP 67

-

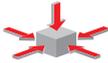
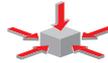
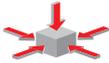
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8m/min

8m/min

8m/min

8m/min

10m/min

10m/min

-

-

-

-

-

-

5m

5m

5m

5m

5m

5m

M12, 4-pin + PE

M12, 4-pin

M12, 4-pin

M12, 4-pin

M12, 4-pin + PE

-



(with longer plunger and
PU scraper on request)



Precision Multiple Limit Switches



RGBF



SN/SB



GSBF



RGBF...AM



SN...AM



RGCS



Acc. to DIN 43697

Upright housing, small flange, down to -25 °C (on request)

Upright housing

Acc. to DIN 43697 with exterior diaphragm

With exterior diaphragm

Acc. to DIN 43697 with replaceable plunger guide

2 per plunger unit

10A

10A

10A

10A

10A

10A

10mA

10mA

10mA

10mA

10mA

10mA

230V

230V

230V

230V

230V

230V

30x10⁶

30x10⁶

30x10⁶

30x10⁶

30x10⁶

30x10⁶

± 0.002

± 0.002

± 0.002

± 0.002

± 0.002

± 0.002

Die-cast aluminum, anodized

Depending on the number of plungers

12/16

8/12/16

8/12/16

12

12

12

2 to 16

2 to 6

2 to 10

2 to 8

2 to 6

2 to 8

-5 to +80 °C

IP 67

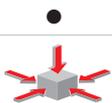
IP 67

IP 67

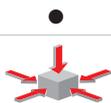
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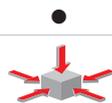
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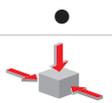
120 m/min



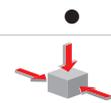
120 m/min



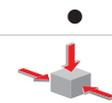
120 m/min



50 m/min



50 m/min



50 m/min

M25x1.5

M20x1.5

M25x1.5

M25x1.5

M25x1.5

M25x1.5

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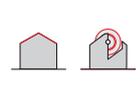
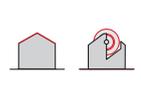
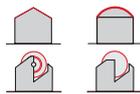
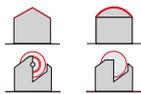
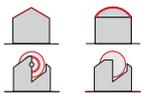
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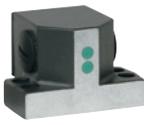
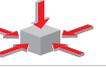
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Multiple Limit Switches

Automation at a glance

		Inductive				
		Precision Single Limit Switches		Precision Multiple Limit Switches		
						
		ENA	ESN	RGBF	SN	GSBF
Approvals						
Special features/ specific advantages		Acc. to DIN 43693	Small design	Acc. to DIN 43697	Upright housing, small flange	Upright housing
Switching element	Assured operating distance	0 to 4 mm	0 to 4 mm	0 to 4 mm	0 to 4 mm	0 to 0.8 mm
	Switching function	NO + NC	NO + NC	NO + NC	NO + NC	NC/NO
	Output	PNP/NPN	PNP/NPN	PNP/NPN	PNP/NPN	PNP/NPN
	Operating voltage DC/AC	10 to 55V/20 to 250V	10 to 55V/20 to 250V	10 to 55V/20 to 250V	10 to 55V/20 to 250V	10 to 30V
	Rated operating current	250 mA	250 mA	250 mA	250 mA	250 mA
Environment	Housing material	Die-cast aluminum, anodized	Die-cast aluminum, anodized	Die-cast aluminum, anodized	Die-cast aluminum, anodized	Die-cast aluminum, anodized
	Housing dimensions, min. (HxWxD)	74x76x28mm	50x45x22mm	Depending on the number of proximity switches	Depending on the number of proximity switches	Depending on the number of proximity switches
	Proximity switch spacing	–	–	12/16	12/16	8
	Number of proximity switches	1	1	2 to 16	2 to 6	2 to 14
	Ambient temperature	-25 to +70 °C	-25 to +70 °C	-25 to +70 °C	-25 to +70 °C	-25 to +70 °C
	Degree of protection, max. acc. to IEC 60529	IP 67	IP 67	IP 67	IP 67	IP 67
	LED indicator			Integrated as standard	Integrated as standard	Integrated as standard
Approach/actuating direction						
Connection	Cable entry	M16x1.5	–	M25x1.5	M20x1.5	M20x1.5
	Connection cable (pre-assembled)	–	5 m	–	–	–
	Plug connectors	–	M12, 4-pin	–	–	–

Detailed information
in catalog

Position Switches

Multiple Limit Switches

● available ○ available on request – not available

All given data refer to the respective minimum or maximum values for the entire series.



Round design,
metal encapsulated



Design acc. to DIN43651,
plastic encapsulated



Design acc. to DIN43651,
with cable



Round design,
metal encapsulated, with cable

Version	●	●	–	–
Male socket	●	●	–	–
Male plug	●	–	–	–
Female socket	●	●	●	●
Female plug	●	–	–	–
Coupling socket	●	–	–	–
Elbow connector (female)	–	●	●	●
Connection				
Number of pins	4 to 19	6+PE/11+PE	6+PE/11+PE	18+PE
Thread	PG9 to PG21/M16 to M25	PG11/PG13.5/PG16/M20x1.5	PG11/PG13.5/PG16/M20x1.5	M20x1.5
Earth conductor	●	●	●	●
Contact material	CuZn, nickel-plated, 1µm hard gold-plated	CuZn, silver-plated	CuZn, silver-plated	CuZn, alloy
Connection	Soldered connection	Crimp connection	Crimp connection	Crimp connection
Conductor cross-section, max.	1 mm ²	1.5 mm ²	1.5 mm ²	1 mm ²
General				
Housing material	CuZn, matt chromium-plated	PET (polyethylene terephthalate)	PET (polyethylene terephthalate)	CuZn, nickel-plated
Degree of protection to IEC 529/EN60529	IP67	IP65	IP65	IP67
Ambient temperature	-20 to +80°C	-40 to +90°C	-40 to +90°C	-40 to +125°C
Contact resistance	≤ 5 mΩ	≤ 5 mΩ	≤ 5 mΩ	≤ 3 mΩ
Rated impulse withstand voltage U _{imp}	4 kV	4 kV	4 kV	1.5 kV
Rated voltage with PE	250V	250V	250V	150V
Rated voltage without PE	50V	50V	50V	–
Rated current	6 A	10 A	10 A	8 A

EMC-compliant assembly

The more demanding and complex electronic devices become, the higher the requirements in relation to electromagnetic compatibility (EMC). Only devices that are free of electromagnetic interference will provide trouble-free operation. The connectors on the device input and output can be a key element for an optimal EMC solution. Screened connectors that reduce radiated effects and remove conducted interference are the ideal solution. Round connectors with symmetrical pin patterns and full metal housings are very suitable for this application. The screen function can be optimally realized with these connectors.

Detailed information
in catalog

Round Connectors

● available ○ available on request – not available

All given data refer to the respective minimum or maximum values for the entire series.

Company _____

First Name/Last Name _____

Department _____

Street, No./P.O. Box _____

Post Code/City _____

Phone/Fax _____

Email _____

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Automation

- Position Switches Multiple Limit Switches
- Round Connectors Inductive Ident Systems

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- Safety Switches Plastic Housing Metal Housing
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