

INDUCTIVE

INDUCTIVE SENSORS

Specials



p-u-l-s-o-t-r-o-n-i-c

p-u-l-s-o-t-r-o-n-i-c

About us

In the traditional and strive industry region Chemnitz-Zwickau, directly at the freeway A72 you will find the new location of the Pulsotronic GmbH & Co.KG.

As a worldwide active company we develop and produce according to ISO 9001 proximity switches and electronic components for the following product ranges:

- > Inductive and Capacitive Sensors
- > Metal separation and Metal detection
- > Picture Processing
- > Optical Sensors
- > Magnetoresistive Sensors
- > Laser Systems
- > Colour Detection
- > Ultrasonic Sensors
- > X-Ray- Scanner

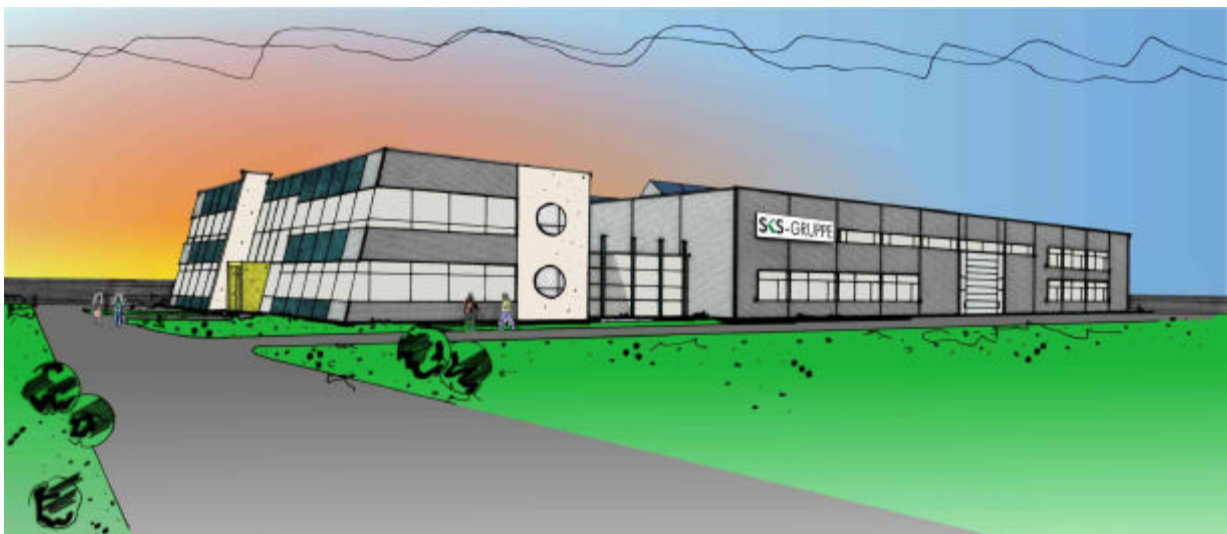
We guarantee customized solutions by our high-performance profile in the area. The available wide palette of key technologies is an ideal condition for the realization of your application.

You find the Pulsotronic everywhere there, where are to set standards and to solve task positions on the far side of well known standing types.

With innovation and individualism our competent team will advise also on place to solve your problem.

Demand us, than you will also find out:

„Pulsotronic - Here is the solution.“

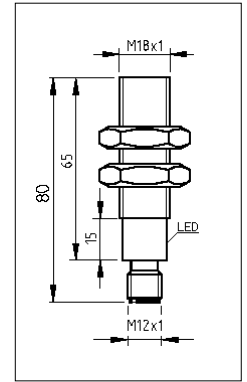
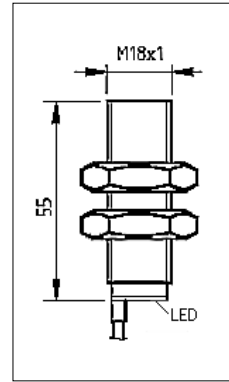
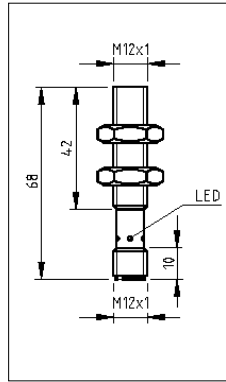
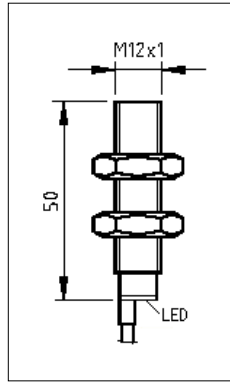


K J 10 - M 30 M B 45 - D P S - V1 - X000
T T T T T T T T T T T T
1 2 3 4 5 6 7 8 9 10 11 12

1= Working principle:	J	inductive	JR	inductive ring
			JF	inductive surface
			JG	inductive slot
			JD	full metal
	C	capacitive		
	M	magneto-resistive		
2= Switching distance / range				
3= Design:	M	cylindrical housings with metrical thread		
	G	cylindrical housings without thread		
	Q	square housings		
	D	ring housings		
4= Housing diameter / edge length				
5= Housing material:	M	brass, nickel plated	11= Kind of Connection:	V1 M8 screw / snap in
	E	stainless steel 1.4305		V2 M12 metal
	K	plastic		V2/1 M12 plastic
	A	aluminium		V3 M5 metal
				V4 Amphenol Tuchel
6= installation type:	B	shielded		V6 Brad Harrison
	N	non shielded		V7 valve connector type A
				V8 M8 only snap in
7= Tube length:		for cylindrical devices in mm		V9 M12 only snap in
				V10 valve connector type C
8= Operating voltage:	D	DC direct-current voltage		V11 AC-connector 1/2" UNF
	AZ	AC alternating-current voltage		V12 M18 plastic
	VZ	AC/DC all voltages		VE Euchner connector
				ZW termination box 90°
9= Type of the output signal:	P	PNP		RS232 data interface
	N	NPN		PG thread joint PG
	Z	two-wire		Mxx thread joint metrical
	AN	analog	ANI	current output
			ANU	voltage output
	NA	Namur		more at inquiry
10= Function:	S	N.O.		
	Ö	N.C.		
	A	changeover		
	U	switchable		
	I	impulse output		
	D	data interface		
12= Addition mark:	SF	weld field immune		
	T	high temperature		
	FE	reduction 1 to steel/iron		
	NF	reduction 1 to aluminium		
	X	customized design		
	W	angled sensing face / angled cable exit		
	AM	middle sensing face		

Proximity switch - Connection pictures

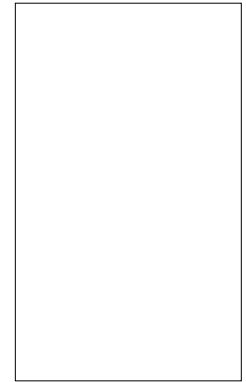
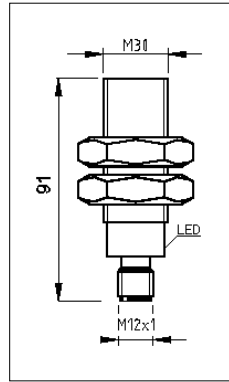
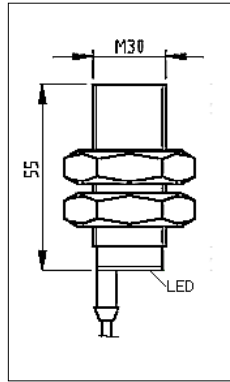
wiring diagrams	cable- / clampconnection	connector V1 ... V9
DPS DC PNP N.O.		
DPÖ DC PNP N.C.		
DPA DC PNP changeover		
DPU DC NO/NC switchable		
DNS DC NPN N.O.		
DNÖ DC NPN N.C.		
DNA DC NPN changeover		
DNU DC NO/NC switchable		
NA Namur DIN 19234		
DZS DC 2-wire N.O.		
DZÖ DC 2-wire N.C.		
AZS / VZS AC/DC 2-wire N.O.		
AZÖ / VZÖ AC/DC 2-wire N.C.		
Analog		



Switching Distance	2,0 mm	2,0 mm	5,0 mm	5,0 mm
Mounting	Shielded	Shielded	Shielded	Shielded
Type	Type	Type	Type	Type
PNP Normally Open	SJD2-M12EB50-DPS	SJD2-M12EB68-DPS-V2	SJD5-M18EB55-DPS	SJD5-M18EB76-DPS-V2
PNP Normally Close	SJD2-M12EB50-DPÖ	SJD2-M12EB68-DPÖ-V2	SJD5-M18EB55-DPÖ	SJD5-M18EB76-DPÖ-V2
NPN Normally Open	SJD2-M12EB50-DNS	SJD2-M12EB68-DNS-V2	SJD5-M18EB55-DNS	SJD5-M18EB76-DNS-V2
NPN Normally Close	SJD2-M12EB50-DNÖ	SJD2-M12EB68-DNÖ-V2	SJD5-M18EB55-DNÖ	SJD5-M18EB76-DNÖ-V2
PNP Changeover	SJD2-M12EB50-DPA	SJD2-M12EB68-DPA-V2	SJD5-M18EB55-DPA	SJD5-M18EB76-DPA-V2
NPN Changeover	SJD2-M12EB50-DNA	SJD2-M12EB68-DNA-V2	SJD5-M18EB55-DNA	SJD5-M18EB76-DNA-V2
Operating Voltage U_b	10 - 30 VDC	10 - 30 VDC	10 - 30 VDC	10 - 30 VDC
Ripple Voltage U_b	$\leq 10 \%$	$\leq 10 \%$	$\leq 10 \%$	$\leq 10 \%$
Voltage Drop U_d	$\leq 1,5 \text{ V}$	$\leq 1,5 \text{ V}$	$\leq 1,5 \text{ V}$	$\leq 1,5 \text{ V}$
Max. Load Current I_L	200 mA	200 mA	200 mA	200 mA
Off-State Current I_0	$\leq 10 \text{ mA}$	$\leq 10 \text{ mA}$	$\leq 10 \text{ mA}$	$\leq 20 \text{ mA}$
Leakage Current I_r	$\leq 10 \mu\text{A}$	$\leq 10 \mu\text{A}$	$\leq 10 \mu\text{A}$	$\leq 10 \mu\text{A}$
Switching Frequency f	2000 Hz	2000 Hz	1000 Hz	1000 Hz
Hysteresis H	$\leq 15 \%$ (Sr)	$\leq 15 \%$ (Sr)	$\leq 15 \%$ (Sr)	$\leq 15 \%$ (Sr)
Operating Temperature T_a	-25°C bis +70°C	-25°C bis +70°C	-25°C bis +70°C	-25°C bis +70°C
Temperature Drift	$\leq 10 \%$ (Sr)	$\leq 10 \%$ (Sr)	$\leq 10 \%$ (Sr)	$\leq 10 \%$ (Sr)
Repeat Accuracy R	$\leq 1 \%$ (Sr)	$\leq 1 \%$ (Sr)	$\leq 1 \%$ (Sr)	$\leq 1 \%$ (Sr)
Protection Class	IP 67	IP 67	IP 67	IP 67
Switching State	LED	LED	LED	LED
EMV-Standard	IEC 60947-5-2	IEC 60947-5-2	IEC 60947-5-2	IEC 60947-5-2
Housing Material	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
Front Cap	-	-	-	-
Termination	3 x 0,34	Connector M12 4-pol.	3 x 0,34	Connector M12 4-pol.

More special versions by separate inquiries!

Connection and Termination picture at page 3.



Switching Distance
Mounting

10,0 mm
Shielded

10,0 mm
Shielded

PNP Normally Open

SJD10-M30EB55-DPS

SJD10-M30EB91-DPS-V2

PNP Normally Close

SJD10-M30EB55-DPÖ

SJD10-M30EB91-DPÖ-V2

NPN Normally Open

SJD10-M30EB55-DNS

SJD10-M30EB91-DNS-V2

NPN Normally Close

SJD10-M30EB55-DNÖ

SJD10-M30EB91-DNÖ-V2

PNP Changeover

SJD10-M30EB55-DPA

SJD10-M30EB91-DPA-V2

NPN Changeover

SJD10-M30EB55-DNA

SJD10-M30EB91-DNA-V2

Operating Voltage U_b

10 - 30 VDC

10 - 30 VDC

Ripple Voltage U_o

$\leq 10 \%$

$\leq 10 \%$

Voltage Drop U_d

$\leq 1,5 \text{ V}$

$\leq 1,5 \text{ V}$

Max. Load Current I_f

200 mA

200 mA

Off-State Current I_o

$\leq 10 \text{ mA}$

$\leq 10 \text{ mA}$

Leakge Current I_r

$\leq 10 \mu\text{A}$

$\leq 10 \mu\text{A}$

Switching Frequency f

300 Hz

300 Hz

Hysteresis H

$\leq 15 \%$ (Sr)

$\leq 15 \%$ (Sr)

Operating Temperature T_f

-25°C bis +70°C

-25°C bis +70°C

Temperature Drift

$\leq 10 \%$ (Sr)

$\leq 10 \%$ (Sr)

Repeat Accuracy R

$\leq 1 \%$ (Sr)

$\leq 1 \%$ (Sr)

Protection Class

IP 67

IP 67

Switching State

LED

LED

EMV-Standard

IEC 60947-5-2

IEC 60947-5-2

Housing Material

Stainless Steel

Stainless Steel

Front Cap

-

-

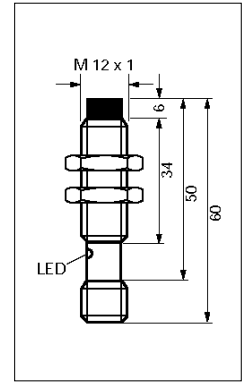
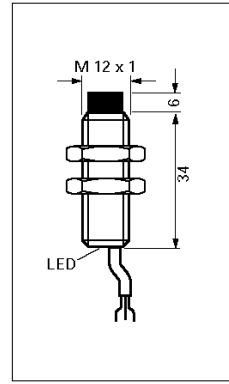
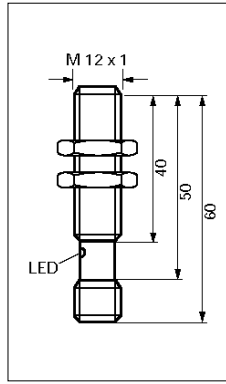
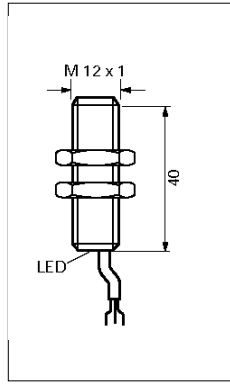
Termination

3 x 0,5

Connector M12 4-pol.

More special versions by separat inquiries!

Connection and Termination picture at page 3.



Switching Distance
Mounting

2 mm
Shielded

2 mm
Shielded

4 mm
Non - Shielded

4 mm
Non - Shielded

Type **KJ2-M12MB40-DPS-T** 9962-6010 **KJ2-M12MB60-DPS-V2-T** 9962-6065 **KJ4-M12MN40-DPS-T** 9962-6110 **KJ4-M12MN60-DPS-V2-T** 9962-6165

Special **High Temperature 100°C** **High Temperature 100°C** **High Temperature 100°C** **High Temperature 100°C**

Operating Voltage U_b **10 - 30 VDC** **10 - 30 VDC** **10 - 30 VDC** **10 - 30 VDC**
 Ripple Voltage U_o $\leq 10 \%$ $\leq 10 \%$ $\leq 10 \%$ $\leq 10 \%$
 Voltage Drop U_d $\leq 2,4 \text{ V}$ $\leq 2,4 \text{ V}$ $\leq 2,4 \text{ V}$ $\leq 2,4 \text{ V}$

Max. Load Current I_o **200 mA** **200 mA** **200 mA** **200 mA**
 Off-State Current I_o $\leq 10 \text{ mA}$ $\leq 10 \text{ mA}$ $\leq 10 \text{ mA}$ $\leq 10 \text{ mA}$
 Leakage Current I_r $\leq 10 \mu\text{A}$ $\leq 10 \mu\text{A}$ $\leq 10 \mu\text{A}$ $\leq 10 \mu\text{A}$

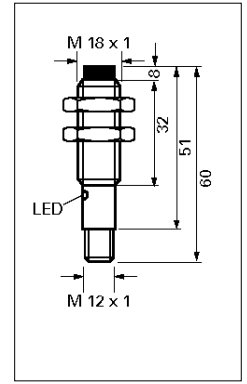
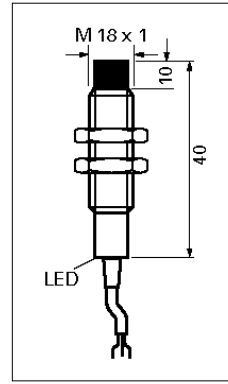
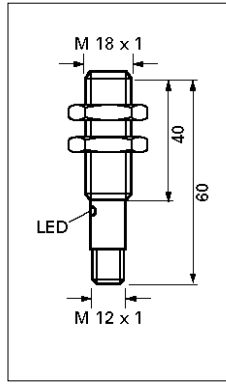
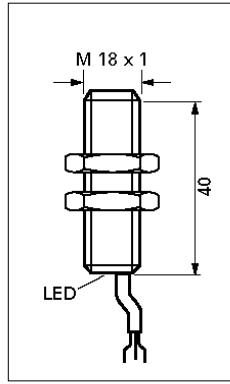
Switching Frequency f **2000 Hz** **2000 Hz** **1000 Hz** **1000 Hz**
 Hysteresis H $\leq 15 \%$ $\leq 15 \%$ $\leq 15 \%$ $\leq 15 \%$
 Operating Temperature T_a $-40 \text{ °C} \dots + 100 \text{ °C}$ $-40 \text{ °C} \dots + 100 \text{ °C}$ $-40 \text{ °C} \dots + 100 \text{ °C}$ $-40 \text{ °C} \dots + 100 \text{ °C}$
 Temperature Drift $\leq 10 \%$ $\leq 10 \%$ $\leq 10 \%$ $\leq 10 \%$
 Repeat Accuracy R $\leq 10 \%$ $\leq 10 \%$ $\leq 10 \%$ $\leq 10 \%$
 Protection Class IP 67 IP 67 IP 67 IP 67

Switching State LED yellow LED yellow LED yellow LED yellow
 EMC-Standard EN 60947-5-2 EN 60947-5-2 EN 60947-5-2 EN 60947-5-2
 Housing Material Brass Nickel-Plated Brass Nickel-Plated Brass Nickel-Plated Brass Nickel-Plated
 Front Cap PCP PCP PCP PCP

Termination Cable PUR 3x0.34 Connector M12 4pol. Cable PUR 3x0.34 Connector M12 4pol.

More special versions by separate inquiries!

Connection and Termination picture at page 3.



Switching Distance	5 mm	5 mm	8 mm	8 mm
Mounting	Shielded	Shielded	Non - Shielded	Non - Shielded

Type	KJ5-M18MB40-DPS-T 9964-6010	KJ5-M18MB60-DPS-V2-T 9964-6065	KJ8-M18MN40-DPS-T 9964-6110	KJ8-M18MN60-DPS-V2-T 9964-6165
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Special	High Temperature 100°C	High Temperature 100°C	High Temperature 100°C	High Temperature 100°C
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Operating Voltage U_b	10 - 30 VDC	10 - 30 VDC	10 - 30 VDC	10 - 30 VDC
Ripple Voltage U_o	$\leq 10 \%$	$\leq 10 \%$	$\leq 10 \%$	$\leq 10 \%$
Voltage Drop U_d	$\leq 2,4 \text{ V}$	$\leq 2,4 \text{ V}$	$\leq 2,4 \text{ V}$	$\leq 2,4 \text{ V}$

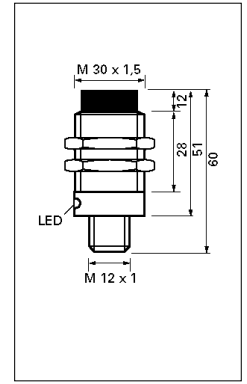
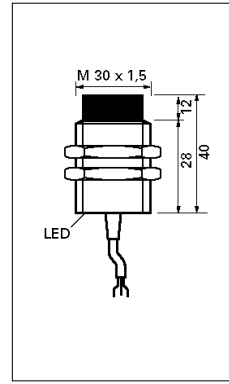
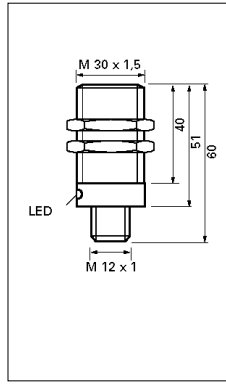
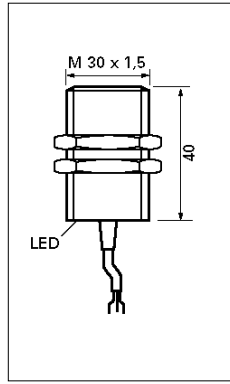
Max. Load Current I_o	200 mA	200 mA	200 mA	200 mA
Off-State Current I_o	$\leq 10 \text{ mA}$	$\leq 10 \text{ mA}$	$\leq 10 \text{ mA}$	$\leq 10 \text{ mA}$
Leakge Current I_r	$\leq 10 \mu\text{A}$	$\leq 10 \mu\text{A}$	$\leq 10 \mu\text{A}$	$\leq 10 \mu\text{A}$

Switching Frequency f	1000 Hz	1000 Hz	500 Hz	500 Hz
Hysteresis H	$\leq 15 \%$	$\leq 15 \%$	$\leq 15 \%$	$\leq 15 \%$
Operating Temperature T_a	-40 °C ... + 100 °C	-40 °C ... + 100 °C	-40 °C ... + 100 °C	-40 °C ... + 100 °C
Temperature Drift	$\leq 10 \%$	$\leq 10 \%$	$\leq 10 \%$	$\leq 10 \%$
Repeat Accuracy R	$\leq 10 \%$	$\leq 10 \%$	$\leq 10 \%$	$\leq 10 \%$
Protection Class	IP 67	IP 67	IP 67	IP 67

Switching State	LED yellow	LED yellow	LED yellow	LED yellow
EMC-Standard	EN 60947-5-2	EN 60947-5-2	EN 60947-5-2	EN 60947-5-2
Housing Material	Brass Nickel-Plated	Brass Nickel-Plated	Brass Nickel-Plated	Brass Nickel-Plated
Front Cap	PCP	PCP	PCP	PCP
Termination	CablePUR 3x0.34	Connector M12 4pol.	Cable PUR 3x0.34	Connector M12 4pol.

More special versions by separate inquiries!

Connection and Termination picture at page 3.



Switching Distance
Mounting

10 mm
Shielded

10 mm
Shielded

15 mm
Non - Shielded

15 mm
Non - Shielded

Type	KJ10-M30MB40-DPS-T 9966-6010	KJ10-M30MB60-DPS-V2-T 9966-6065	KJ15-M30MN40-DPS-T 9966-6110	KJ15-M30MN60-DPS-V2-T 9966-6165
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Special	High Temperature 100°C	High Temperature 100°C	High Temperature 100°C	High Temperature 100°C
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Operating Voltage U_b	10 - 30 VDC	10 - 30 VDC	10 - 30 VDC	10 - 30 VDC
Ripple Voltage U_o	$\leq 10 \%$	$\leq 10 \%$	$\leq 10 \%$	$\leq 10 \%$
Voltage Drop U_d	$\leq 2,4 \text{ V}$	$\leq 2,4 \text{ V}$	$\leq 2,4 \text{ V}$	$\leq 2,4 \text{ V}$

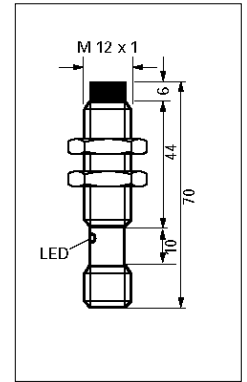
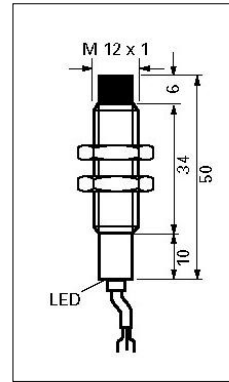
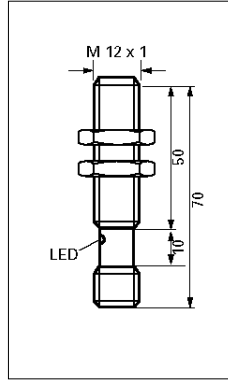
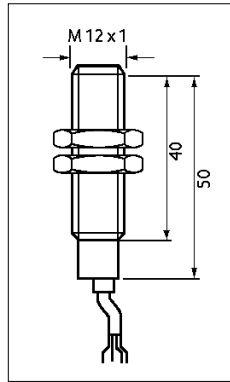
Max. Load Current I_o	200 mA	200 mA	200 mA	200 mA
Off-State Current I_o	$\leq 10 \text{ mA}$	$\leq 10 \text{ mA}$	$\leq 10 \text{ mA}$	$\leq 10 \text{ mA}$
Leakge Current I_r	$\leq 10 \mu\text{A}$	$\leq 10 \mu\text{A}$	$\leq 10 \mu\text{A}$	$\leq 10 \mu\text{A}$

Switching Frequency f	500 Hz	500 Hz	300 Hz	300 Hz
Hysteresis H	$\leq 15 \%$	$\leq 15 \%$	$\leq 15 \%$	$\leq 15 \%$
Operating Temperature T_a	$-40 \text{ °C} \dots + 100 \text{ °C}$	$-40 \text{ °C} \dots + 100 \text{ °C}$	$-40 \text{ °C} \dots + 100 \text{ °C}$	$-40 \text{ °C} \dots + 100 \text{ °C}$
Temperature Drift	$\leq 10 \%$	$\leq 10 \%$	$\leq 10 \%$	$\leq 10 \%$
Repeat Accuracy R	$\leq 10 \%$	$\leq 10 \%$	$\leq 10 \%$	$\leq 10 \%$
Protection Class	IP 67	IP 67	IP 67	IP 67

Switching State	LED yellow	LED yellow	LED yellow	LED yellow
EMC-Standard	EN 60947-5-2	EN 60947-5-2	EN 60947-5-2	EN 60947-5-2
Housing Material	Brass Nickel-Plated	Brass Nickel-Plated	Brass Nickel-Plated	Brass Nickel-Plated
Front Cap	PCP	PCP	PCP	PCP
Termination	Cable PUR 3x0.34	Connector M12 4pol.	Cable PUR 3x0.34	Connector M12 4pol.

More special versions by separate inquiries!

Connection and Termination picture at page 3.



Switching Distance
Mounting

2 mm
Shielded

2 mm
Shielded

4 mm
Non - Shielded

4 mm
Non - Shielded

Type

KJ2-M12MB50-DPS-SF
9962-5840

KJ2-M12MB70-DPS-V2-SF
9962-5845

KJ4-M12MN50-DPS-SF
9962-5900

KJ4-M12MN70-DPS-V2-SF
9962-5965

Special

Weld Field Immune

Weld Field Immune

Weld Field Immune

Weld Field Immune

Operating Voltage U_b
Ripple Voltage U_o
Voltage Drop U_d

10 - 30 VDC
 $\leq 10 \%$
 $\leq 2,4 \text{ V}$

10 - 30 VDC
 $\leq 10 \%$
 $\leq 2,4 \text{ V}$

10 - 30 VDC
 $\leq 10 \%$
 $\leq 2,4 \text{ V}$

10 - 30 VDC
 $\leq 10 \%$
 $\leq 2,4 \text{ V}$

Max. Load Current I_o
Off-State Current I_o
Leakge Current I_r

200 mA
 $\leq 10 \text{ mA}$
 $\leq 10 \mu\text{A}$

200 mA
 $\leq 10 \text{ mA}$
 $\leq 10 \mu\text{A}$

200 mA
 $\leq 10 \text{ mA}$
 $\leq 10 \mu\text{A}$

200 mA
 $\leq 10 \text{ mA}$
 $\leq 10 \mu\text{A}$

Switching Frequency f
Hysteresis H
Operating Temperature T_a
Temperature Drift
Repeat Accuracy R
Protection Class

15 Hz
 $\leq 15 \%$
-25 °C ... + 70 °C
 $\leq 10 \%$
 $\leq 10 \%$
IP 67

15 Hz
 $\leq 15 \%$
-25 °C ... + 70 °C
 $\leq 10 \%$
 $\leq 10 \%$
IP 67

15 Hz
 $\leq 15 \%$
-25 °C ... + 70 °C
 $\leq 10 \%$
 $\leq 10 \%$
IP 67

15 Hz
 $\leq 15 \%$
-25 °C ... + 70 °C
 $\leq 10 \%$
 $\leq 10 \%$
IP 67

Switching State
EMC-Standard
Housing Material
Front Cap

LED yellow
EN 60947-5-2
Brass Teflon-Plated
PTFE

LED yellow
EN 60947-5-2
Brass Teflon-Plated
PTFE

LED yellow
EN 60947-5-2
Brass Nickel-Plated
PCP

LED yellow
EN 60947-5-2
Brass Nickel-Plated
PCP

Termination

Cable PVC 3x0.34

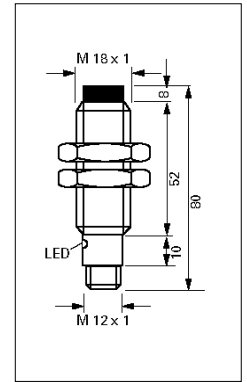
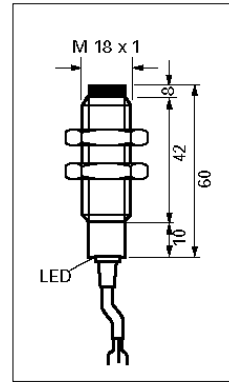
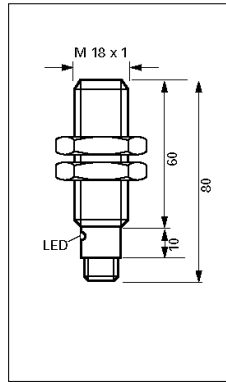
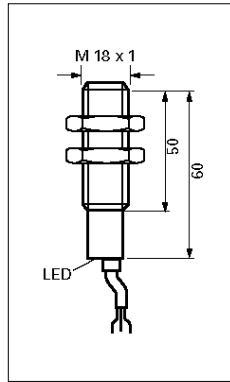
Connector M12 4pol.

Cable PVC 3x0.34

Connector M12 4pol.

More special versions by separate inquiries!

Connection and Termination picture at page 3.



Switching Distance

5 mm

5 mm

8 mm

8 mm

Mounting

Shielded

Shielded

Non - Shielded

Non - Shielded

Type

KJ5-M18MB60-DPS-SF
9964-5840

KJ5-M18MB80-DPS-V2-SF
9964-5845

KJ8-M18MN60-DPS-SF
9964-5900

KJ8-M18MN80-DPS-V2-SF
9964-5965

Special

Weld Field Immune

Weld Field Immune

Weld Field Immune

Weld Field Immune

Operating Voltage U_b

10 - 30 VDC

10 - 30 VDC

10 - 30 VDC

10 - 30 VDC

Ripple Voltage U_o

$\leq 10 \%$

$\leq 10 \%$

$\leq 10 \%$

$\leq 10 \%$

Voltage Drop U_d

$\leq 2,4 \text{ V}$

$\leq 2,4 \text{ V}$

$\leq 2,4 \text{ V}$

$\leq 2,4 \text{ V}$

Max. Load Current I_o

200 mA

200 mA

200 mA

200 mA

Off-State Current I_o

$\leq 10 \text{ mA}$

$\leq 10 \text{ mA}$

$\leq 10 \text{ mA}$

$\leq 10 \text{ mA}$

Leakge Current I_r

$\leq 10 \mu\text{A}$

$\leq 10 \mu\text{A}$

$\leq 10 \mu\text{A}$

$\leq 10 \mu\text{A}$

Switching Frequency f

15 Hz

15 Hz

15 Hz

15 Hz

Hysteresis H

$\leq 15 \%$

$\leq 15 \%$

$\leq 15 \%$

$\leq 15 \%$

Operating Temperature T_a

-25 °C ... + 70 °C

-25 °C ... + 70 °C

-25 °C ... + 70 °C

-25 °C ... + 70 °C

Temperature Drift

$\leq 10 \%$

$\leq 10 \%$

$\leq 10 \%$

$\leq 10 \%$

Repeat Accuracy R

$\leq 10 \%$

$\leq 10 \%$

$\leq 10 \%$

$\leq 10 \%$

Protection Class

IP 67

IP 67

IP 67

IP 67

Switching State

LED yellow

LED yellow

LEDyellow

LED yellow

EMC-Standard

EN 60947-5-2

EN 60947-5-2

EN 60947-5-2

EN 60947-5-2

Housing Material

Brass Teflon-Plated

Brass Teflon-Plated

Brass Nickel-Plated

Brass Nickel-Plated

Front Cap

PTFE

PTFE

PCP

PCP

Termination

CablePVC 3x0.34

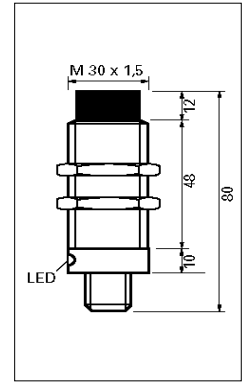
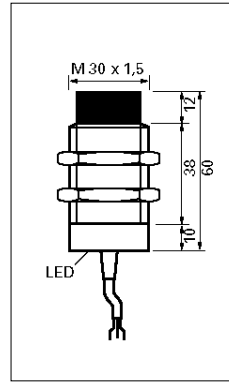
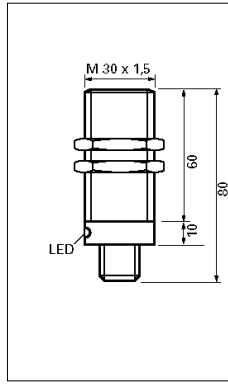
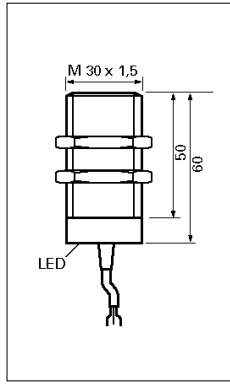
Connector M12 4pol.

Cable PVC 3x0.34

Connector M12 4pol.

More special versions by separate inquiries!

Connection and Termination picture at page 3.



Switching Distance
Mounting

10 mm
Shielded

10 mm
Shielded

15 mm
Non - Shielded

15 mm
Non - Shielded

Type	KJ10-M30MB60-DPS-SF 9966-5840	KJ10-M30MB80-DPS-V2-SF 9966-5845	KJ15-M30MN60-DPS-SF 9966-5900	KJ15-M30MN80-DPS-V2-SF 9966-5965
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Special	Weld Field Immune	Weld Field Immune	Weld Field Immune	Weld Field Immune
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Operating Voltage U_b	10 - 30 VDC	10 - 30 VDC	10 - 30 VDC	10 - 30 VDC
Ripple Voltage U_o	$\leq 10 \%$	$\leq 10 \%$	$\leq 10 \%$	$\leq 10 \%$
Voltage Drop U_d	$\leq 2,4 \text{ V}$	$\leq 2,4 \text{ V}$	$\leq 2,4 \text{ V}$	$\leq 2,4 \text{ V}$

Max. Load Current I_o	200 mA	200 mA	200 mA	200 mA
Off-State Current I_o	$\leq 10 \text{ mA}$	$\leq 10 \text{ mA}$	$\leq 10 \text{ mA}$	$\leq 10 \text{ mA}$
Leakge Current I_r	$\leq 10 \mu\text{A}$	$\leq 10 \mu\text{A}$	$\leq 10 \mu\text{A}$	$\leq 10 \mu\text{A}$

Switching Frequency f	15 Hz	15 Hz	15 Hz	15 Hz
Hysteresis H	$\leq 15 \%$	$\leq 15 \%$	$\leq 15 \%$	$\leq 15 \%$
Operating Temperature T_a	-25 °C ... + 70 °C	-25 °C ... + 70 °C	-25 °C ... + 70 °C	-25 °C ... + 70 °C
Temperature Drift	$\leq 10 \%$	$\leq 10 \%$	$\leq 10 \%$	$\leq 10 \%$
Repeat Accuracy R	$\leq 10 \%$	$\leq 10 \%$	$\leq 10 \%$	$\leq 10 \%$
Protection Class	IP 67	IP 67	IP 67	IP 67

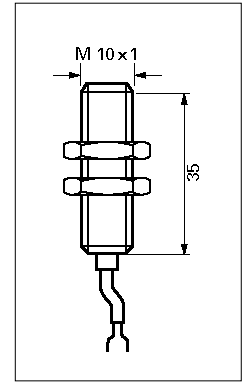
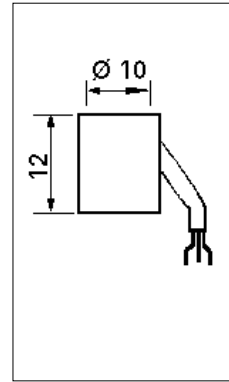
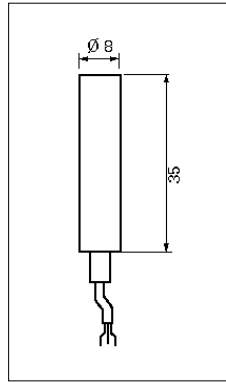
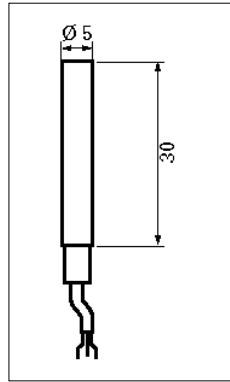
Switching State	LED yellow	LED yellow	LED yellow	LED yellow
EMC-Standard	EN 60947-5-2	EN 60947-5-2	EN 60947-5-2	EN 60947-5-2
Housing Material	Brass Teflon-Plated	Brass Teflon-Plated	Brass Nickel-Plated	Brass Nickel-Plated
Front Cap	PTFE	PTFE	PCP	PCP
Termination	Cable PVC 3x0.34	Connector M12 4pol.	Cable PVC 3x0.34	Connector M12 4pol.

More special versions by separate inquiries!

Connection and Termination picture at page 3.



Pick Up Sensors



Switching Distance
Mounting

up to 1 mm
Shielded

up to 4 mm
Shielded

up to 3 mm
Shielded

up to 4 mm
Shielded

	Type	Type	Type	Type
with Koax-Cable	KJ1-G5MB30 <i>9906-0000</i>	KJ4-G8MB35 <i>9912-0000</i>	KJ3-G10MB12 <i>9906-1000</i>	KJ4-M10MB35 <i>9913-0000</i>
with Koax-Cable and Connector	KJ1-G5MB30-VK <i>9906-0100</i>	KJ4-G8MB35-VK <i>9912-0100</i>	KJ3-G10MB12-VK <i>9906-1100</i>	KJ4-M10MB35-VK <i>9913-0100</i>

Special

Pick Up adjustable

Pick Up adjustable

Pick Up adjustable

Pick Up adjustable

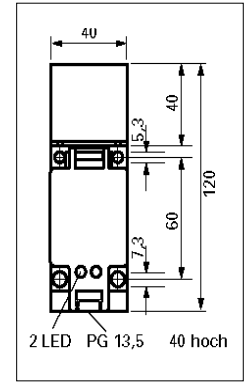
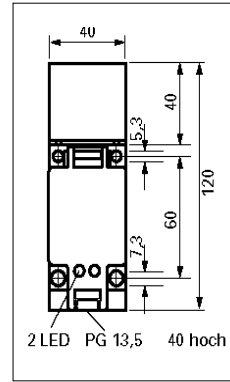
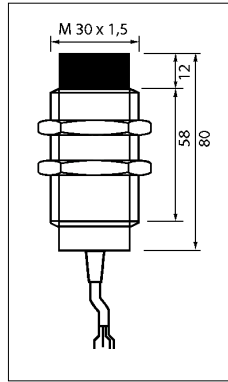
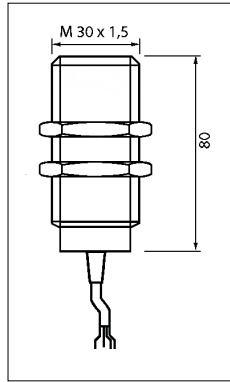
Switching Frequency f		5000 Hz	5000 Hz	5000 Hz	5000 Hz
Hysteresis	H	Sn = 0,5 <0,03 mm	Sn = 2,0 <0,04 mm	Sn = 1,5 <0,05 mm	Sn = 2,0 <0,04 mm
Operating Temperature	T _a	-10 °C ... + 70 °C	-10 °C ... + 70 °C	-10 °C ... + 70 °C	-10 °C ... + 70 °C
Temperature Drift		≤ 0,01 mm	≤ 0,01 mm	≤ 0,01 mm	≤ 0,01 mm
Repeat Accuracy	R	IP 67	IP 67	IP 67	IP 67
Protection Class		yes	yes	yes	yes

Switching State	-	-	-	-
Housing Material	Brass Nickel-Plated	Brass Nickel-Plated	Brass Nickel-Plated	Brass Nickel-Plated
Front Cap	PA 6.6	PA 6.6	PA 6.6	PA 6.6
Termination	see Type	see Type	see Type	see Type

Pick-Up Sensors need a control unit or an amplifier unit for working. You adjust the switching distance of the sensor with a potentiometer at the amplifier. The maximum switching frequency of the sensor depends on the maximum frequency of the amplifier. Please look into our accessory catalog about our control units for one type or four type termination.



Overspeed monitor



Switching Distance	10 mm	15 mm	20 mm	30 mm
Mounting	Shielded	Non - Shielded	Shielded	Non - Shielded
	Type	Type	Type	Type
PNP Normally Open	SJ10-M30MB80-DPSI	SJ15-M30MN80-DPSI	SJ20-Q40KB-DPSI	SJ30-Q40KN-DPSI
PNP Normally Close	SJ10-M30MB80-DPÖI	SJ15-M30MN80-DPÖI	SJ20-Q40KB-DPÖI	SJ30-Q40KN-DPÖI
Speed range	n	120 - 3000 U / min	120 - 3000 U / min	120 - 3000 U / min
Operating Voltage	U_b	10 - 30 VDC	10 - 30 VDC	10 - 30 VDC
Ripple Voltage	U _o	≤ 10 %	≤ 10 %	≤ 10 %
Start Time Delay		0.5 - 10 sec	0.5 - 10 sec	0.5 - 10 sec
Max. Load Current	I_o	200 mA	200 mA	200 mA
Off-State Current	I _o	≤ 15 mA	≤ 15 mA	≤ 15 mA
Leakge Current	I _r	≤ 10 µA	≤ 10 µA	≤ 10 µA
Hysteresis	H	≤ 15 %	≤ 15 %	≤ 15 %
Operating Temperature	T _a	-25 °C ... + 70 °C	-25 °C ... + 70 °C	-25 °C ... + 70 °C
Temperature Drift		≤ 10 %	≤ 10 %	≤ 10 %
Repeat Accuracy	R	≤ 1.0 %	≤ 1.0 %	≤ 1.0 %
Protection Class		IP 67	IP 67	IP 67
Switching State		LED yellow	LED yellow	LED yellow
EMC-Standard		EN 60947-5-2	EN 60947-5-2	EN 60947-5-2
Housing Material		Brass Nickel-Plated	Brass Nickel-Plated	PBT
Front Cap		PBT	PBT	-
Termination		Cable PVC 3x0.5	Cable PVC 3x0.5	Clamp till 2,5 mm ²

Overspeed monitors control electronically the rotations per minute of engines, pumps or drives. Yoe regulate the following settings about potentiometers:
 1. Start time delay from 0.5 to 10 Seconds
 2. Speed range 120 to 3000 revolutions per minute

More special versions by separate inquiries!

Connection and Termination picture at page 3.

A large empty rectangular box with a black border, intended for taking notes.

A large empty rectangular box with a black border, intended for taking notes.

A large empty rectangular box with a black border, intended for taking notes.

Type	Art-Nr.	Site	Type	Art-Nr.	Site
Metal Face			Weld Field Immune		
SJD2-M12EB50-DPS	08313121210	4	KJ2-M12MB50-DPS-SF	08317625840	9
SJD2-M12EB50-DPÖ	08313121220	4	KJ2-M12MB70-DPS-V2-SF	08317625845	9
SJD2-M12EB50-DNS	08313121230	4	KJ4-M12MN50-DPS-SF	08317625900	9
SJD2-M12EB50-DNÖ	08313121240	4	KJ4-M12MN70-DPS-V2-SF	08317625945	9
SJD2-M12EB50-DPA	08313121250	4			
SJD2-M12EB50-DNA	08313121260	4	KJ5-M18MB60-DPS-SF	08317645840	10
			KJ5-M18MB80-DPS-V2-SF	08317645845	10
SJD2-M12EB68-DPS-V2	08313121211	4	KJ8-M18MN60-DPS-SF	08317645900	10
SJD2-M12EB68-DPÖ-V2	08313121221	4	KJ8-M18MN80-DPS-V2-SF	08317645965	10
SJD2-M12EB68-DNS-V2	08313121231	4			
SJD2-M12EB68-DNÖ-V2	08313121241	4	KJ10-M30MB60-DPS-SF	08317665840	11
SJD2-M12EB68-DPA-V2	08313121251	4	KJ10-M30MB80-DPS-V2-SF	08317665845	11
SJD2-M12EB68-DNA-V2	08313121261	4	KJ15-M30MN60-DPS-SF	08317665900	11
			KJ15-M30MN80-DPS-V2-SF	08317665965	11
SJD5-M18EB55-DPS	08313181510	4	Special-Mini		
SJD5-M18EB55-DPÖ	08313181520	4	KJ1-G5MB30	08317060000	12
SJD5-M18EB55-DNS	08313181530	4	KJ1-G5MB30-VK	08317060100	12
SJD5-M18EB55-DNÖ	08313181540	4	KJ4-G8MB35	08317120000	12
SJD5-M18EB55-DPA	08313181550	4	KJ4-G8MB35-VK	08317120100	12
SJD5-M18EB55-DNA	08313181560	4			
SJD5-M18EB76-DPS-V2	08313181511	4	KJ3-G10-MB12	08317061000	12
SJD5-M18EB76-DPÖ-V2	08313181521	4	KJ3-G10-MB12-VK	08317061100	12
SJD5-M18EB76-DNS-V2	08313181531	4	KJ4-M10MB35	08317130000	12
SJD5-M18EB76-DNÖ-V2	08313181541	4	KJ4-M10MB35-VK	08317130100	12
SJD5-M18EB76-DPA-V2	08313181551	4			
SJD5-M18EB76-DNA-V2	08313181561	4	Overspeed Monitor		
			SJ10-M30MB80-DPSI	08343301010	13
SJD10-M30EB55-DPS	08313301110	5	SJ10-M30MB80-DPÖI	08343301020	13
SJD10-M30EB55-DPÖ	08313301120	5	SJ15-M30MN80-DPSI	08343301510	13
SJD10-M30EB55-DNS	08313301130	5	SJ15-M30MN80-DPÖI	08343301520	13
SJD10-M30EB55-DNÖ	08313301140	5			
SJD10-M30EB55-DPA	08313301150	5	SJ20-Q40KB-DPSI	08343402010	13
SJD10-M30EB55-DNA	08313301160	5	SJ20-Q40KB-DPÖI	08343402020	13
			SJ30-Q40KN-DPSI	08343403010	13
SJD10-M30EB91-DPS-V2	08313301111	5	SJ30-Q40KN-DPÖI	08343403020	13
SJD10-M30EB91-DPÖ-V2	08313301121	5			
SJD10-M30EB91-DNS-V2	08313301131	5			
SJD10-M30EB91-DNÖ-V2	08313301141	5			
SJD10-M30EB91-DPA-V2	08313301151	5			
SJD10-M30EB91-DNA-V2	08313301161	5			
High Temperature					
KJ2-M12MB40-DPS-T	08317626010	6			
KJ2-M12MB60-DPS-V2-T	08317626065	6			
KJ4-M12MN40-DPS-T	08317626110	6			
KJ4-M12MN60-DPS-V2-T	08317626165	6			
KJ5-M18MB40-DPS-T	08317646010	7			
KJ5-M18MB60-DPS-V2-T	08317646065	7			
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KJ15-M30MN40-DPS-T	08317666110	8			
KJ15-M30MN60-DPS-V2-T	08327666165	8			

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