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Designation code

Circuit diagrams

Sensors

Product overview

NOTES

DESIGNATION CODE

Example: **K J 10 - M 30 M B 45 - D P S - V1 - X0000**

1	2		3	4	5	6	7		8	9	10		11		12

1 = Working principle

A	Acoustic		
B	Acceleration sensor		
C	Capacitive		
D	Strain gauge sensor		
H	Hall-effect		
J	Inductive	**JR**	Inductive ring
		JF	Inductive surface
		JG	Inductive slot
		JD	Metal face
M	Magnetoresistive		
N	Inclination sensor		
R	Reed-contact		
W	Angle sensor		

2 = Switching distance / range

3 = Design

D	Ring housing
G	Cylindrical housing without thread
M	Cylindrical housing with metrical thread
Q	Square housing

4 = Housing diameter / edge length

5 = Housing material

A	Aluminium
E	Stainless steel
K	Plastic
M	Brass, nickel plated
T	PTFE

6 = Installation

B	Shielded
N	Non shielded

7 = Tube length

8 = Operating voltage

AZ	AC alternating current voltage
D	DC direct current voltage
VZ	AC/DC all voltages

9 = Type of output signal

AN	Analog	**ANI**	Current output
		ANU	Voltage output
CAN	CAN-bus interface		
N	NPN		
NA	Namur		
P	PNP		
Z	Two wire		

10 = Function

A	Changeover
I	Impulse output
Ö	N.C.
S	N.O.
U	Switchable

11 = Type of connection

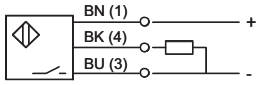
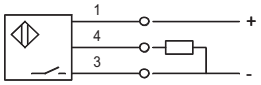
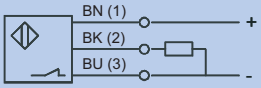
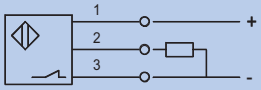
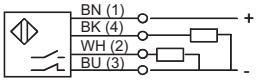
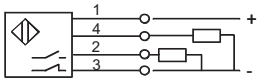
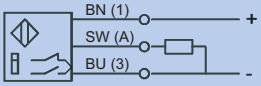
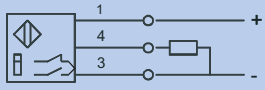
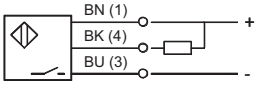
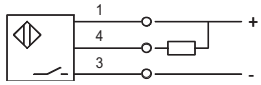
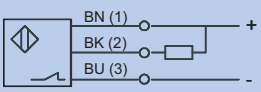
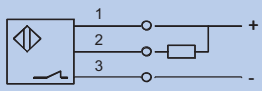
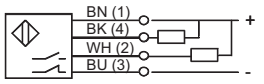
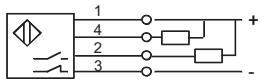
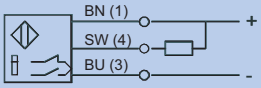
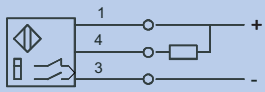
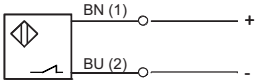
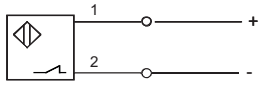
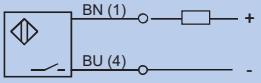
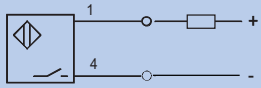
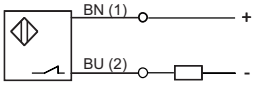
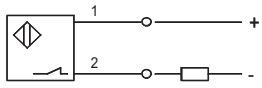
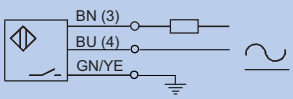
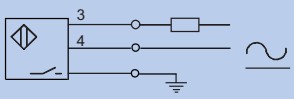
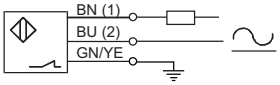
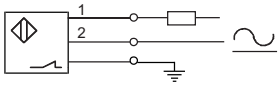
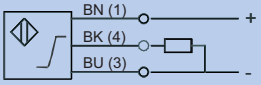
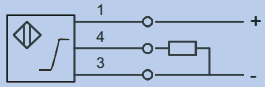
V1	M8 screw-/snap-in
V2	M12 metal
V2/1	M12 plastic
V3	M5 metal
V4	Amphenol Tuchel
V6	Brad Harrison 7/8" UNF
V7	Valve connector type A
V8	M8 snap-in only
V9	Torson
V10	Valve connector type C
V11	AC connector 1/2" UNF
V12	M18 plastic
VE	Euchner connector
RS232	Data interface
PG	Thread joint PG
Mxx	Tread joint metrical

others as requested

12 = Additional marks

AM	Sensing face in centre
FE	Reduction 1 to steel / iron
HT	High temperature
NF	Reduction 1 to nonferrous metal
SF	Weld field immune
T	Enlarged temperature range
W	Angled sensing face / angled cable exit
X	Customized design with detailled description

CIRCUIT DIAGRAMS

Circuit diagram for	Cable / clamp connection	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 EN 60947-5-6		
DZS DC two-wire N.O.		
DZÖ DC two-wire N.C.		
AZS/VZS AC/DC two-wire N.O.		
AZÖ/VZÖ AC/DC two-wire N.C.		
Analog		

SQUARE Q5

General data

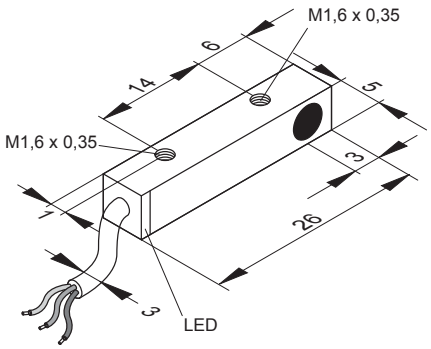
Mounting	shielded
Operating voltage U_b	10 ... 30V DC
Ripple voltage U_b	≤ 10%
Voltage drop U_d	≤ 1V
Max. load current	200mA
Off-state current I_0	≤ 10mA
Residual current I_r	≤ 10µA
Max. switching frequency f	2000Hz
Hysteresis H	≤ 15%
Repeatability R	≤ 1%
Operating temperature T_a	-25°C ... +70°C
Temperature drift	≤ 10%
Protection class	IP67
EMV-standard	according to EN 60947-5-2
Switching state	LED yellow
Housing material	brass, nickel-plated
Front cap	POM
Connection	2m cable PUR 3 x 0,15mm²

Other cable lengths as requested.

Selection chart

Article number	Designation	Output signal
08313550110	**KJ1-Q5MB26-DPS**	PNP
08313550120	**KJ1-Q5MB26-DPÖ**	PNP
08313550130	**KJ1-Q5MB26-DNS**	NPN
08313550140	**KJ1-Q5MB26-DNÖ**	NPN
08313550160	**KJ1-Q5MB26-DPS-X0429**	NPN

Dimensions



all data in mm

SQUARE Q8

General data

Mounting	shielded
Operating voltage U_b	10 ... 30V DC
Ripple voltage U_b	≤ 10% (KJ3... ≤ 20%)
Voltage drop U_d	≤ 2,4V*
Max. load current	200mA
Off-state current I_0	≤ 13mA (KJ3... ≤ 20mA)
Residual current I_r	≤ 10µA (KJ3... ≤ 100µA)
Max. switching frequency f	1000Hz
Hysteresis H	≤ 15% (KJ3... ≤ 10%)
Repeatability R	≤ 5%
Operating temperature T_a	-25°C ... +70°C
Temperature drift	≤ 10%
Protection class	IP67
EMV-standard	according to IEC 60947-5-2
Switching state	LED
Housing material	brass nickel-plated, aluminium
Front cap	brass: PCP aluminium: polyamide 6.6

Selection chart brass

Article number	Designation	Output signal	Switching distance in mm	Connection	Drawing (next page)
08317611000	**KJ1,5-Q8MB40-DPS**	PNP ⎍	1,5	2m cable PVC 3 x 0,14mm²	A
08317611064	**KJ1,5-Q8MB60-DPS-V1**	PNP ⎍	1,5	connector M8 3-pole	B
08317611100	**KJ1,5-Q8MB40-DPS-AM**	PNP ⎍	1,5	2m cable PVC 3 x 0,14mm²	C
08317611164	**KJ1,5-Q8MB60-DPS-V1-AM**	PNP ⎍	1,5	connector M8 3-pole	D
08317612000	**KJ3-Q8MB40-DPS**	PNP ⎍	3	2m cable PVC 3 x 0,14mm²	A
08317612064	**KJ3-Q8MB60-DPS-V1**	PNP ⎍	3	connector M8 3-pole	E

Design NPN and other cable lengths as requested.

Selection chart aluminium

Article number	Designation	Output signal	Switching distance in mm	Connection	Drawing (next page)
08310000475	**KJ2-Q8AB-DPS**	PNP ⎍	2	2m cable PVC 3 x 0,14mm²	F
08310020475	**KJ2-Q8AB-DPÖ**	PNP ⎍	2	2m cable PVC 3 x 0,14mm²	F
08310000509	**KJ2-Q8AB-DPS-V1**	PNP ⎍	2	connector M8 3-pole	G
0831xxxxxxx	**KJ2-Q8AB-DPÖ-V1**	PNP ⎍	2	connector M8 3-pole	G
08310000440	**KJ2-Q8AB-DPS-AM**	PNP ⎍	2	2m cable PVC 3 x 0,14mm²	H
08310000074	**KJ2-Q8AB-DPÖ-AM**	PNP ⎍	2	2m cable PVC 3 x 0,14mm²	H
08310000369	**KJ2-Q8AB-DPS-V1-AM**	PNP ⎍	2	connector M8 3-pole	I
0831xxxxxxx	**KJ2-Q8AB-DPÖ-V1-AM**	PNP ⎍	2	connector M8 3-pole	I
08310001035	**KJ2-Q8AB-DPS-V3**	PNP ⎍	2	connector M5 4-pole	J

Design NPN and other cable lengths as requested.

SQUARE Q8

Dimensions

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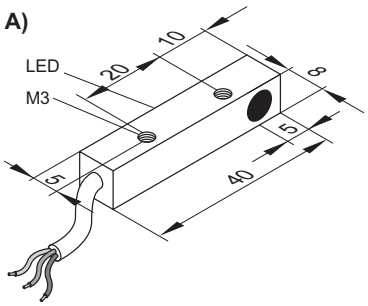

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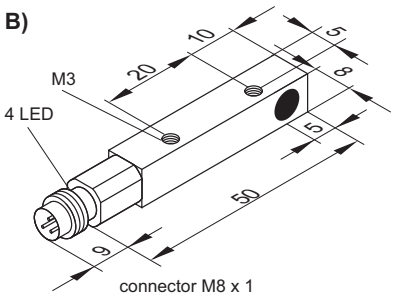

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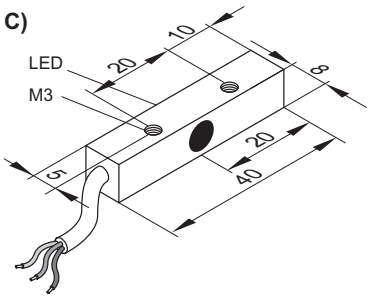

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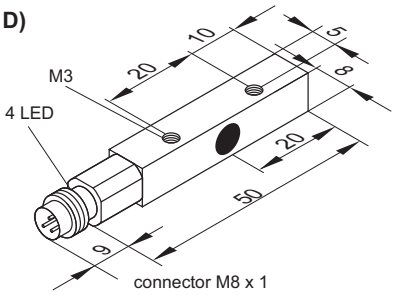

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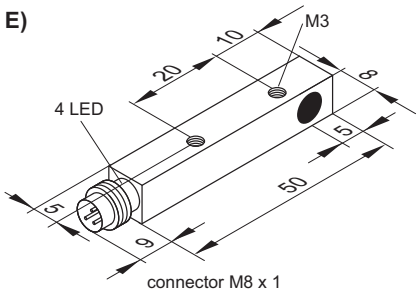

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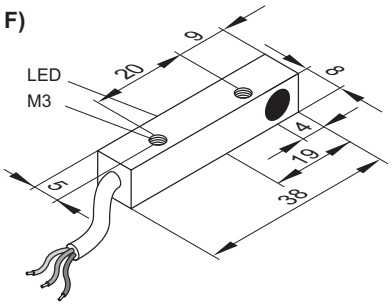

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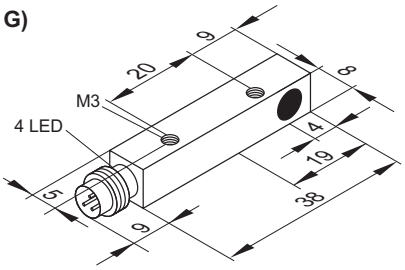

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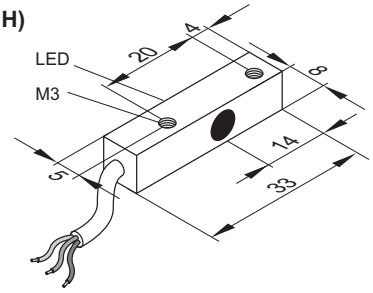

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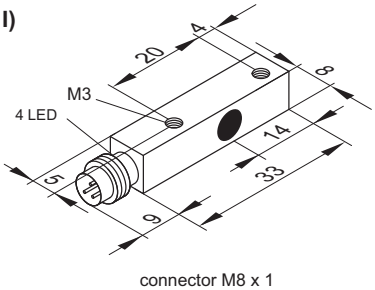

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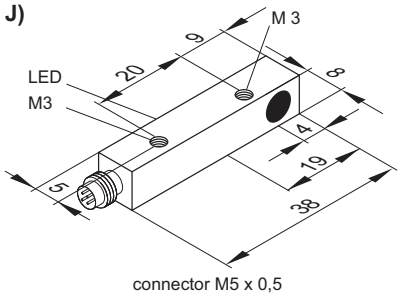


all data in mm

SQUARE Q9,9

General data

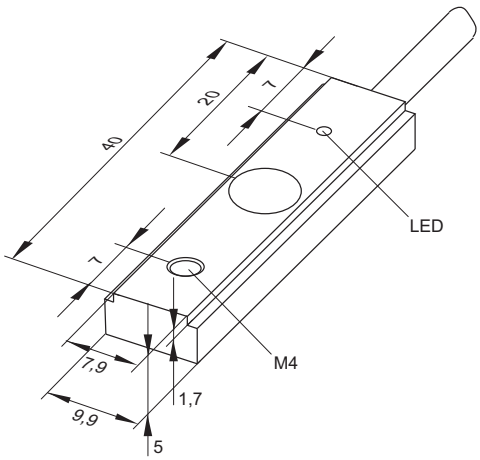
Mounting	shielded
Switching distance	2mm
Operating voltage U_b	10 ... 30V DC
Ripple voltage U_b	≤ 10%
Voltage drop U_d	≤ 2,4V
Max. load current	200mA
Off-state current I_0	≤ 13mA
Residual current I_r	≤ 10µA
Max. switching frequency f	1000Hz
Hysteresis H	≤ 15%
Repeatability R	≤ 2%
Operating temperature T_a	-25°C ... +75°C
Temperature drift	≤ 10%
Protection class	IP67
EMV-standard	according to IEC 60947-5-2
Switching state	LED
Housing material	aluminium
Front cap	polyamide 6.6
Connection	2m cable PVC 3 x 0,14mm²

Design NPN and other cable lengths as requested.

Selection chart

Article number	Designation	Output signal
08310000208	**KJ2-Q9,9AB-DPS**	PNP ⎍
08310000454	**KJ2-Q9,9AB-DPÖ**	PNP ⎍

Dimensions



all data in mm

SQUARE Q12

General data

Operating voltage U_b	10 ... 30V DC
Ripple voltage U_b	≤ 10%
Voltage drop U_d	≤ 2,4V
Max. load current	200mA
Off-state current I_0	≤ 13mA
Residual current I_r	≤ 10µA
Max. switching frequency f	1000Hz
Hysteresis H	≤ 15%
Repeatability R	≤ 2%
Operating temperature T_a	-25°C ... +70°C
Temperature drift	≤ 10%
Protection class	IP67
EMV-standard	according to IEC 60947-5-2
Switching state	LED
Housing material	PBT

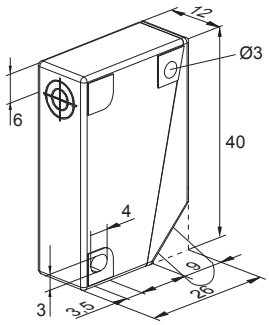
Selection chart

Article number	Designation	Mounting	Output signal	Switching distance in mm	Connection	Drawing
08317613000	**KJ2-Q12KB-DPS**	shielded	PNP	2	2m cable PVC 3 x 0,34mm²	A
08317613400	**KJ2-Q12KB-DPÖ**	shielded	PNP	2	2m cable PVC 3 x 0,34mm²	A
08317613064	**KJ2-Q12KB-DPS-V1**	shielded	PNP	2	connector M8 3-pole	B
08317613464	**KJ2-Q12KB-DPÖ-V1**	shielded	PNP	2	connector M8 3-pole	B
08317613200	**KJ4-Q12KN-DPS**	non shielded	PNP	4	2m cable PVC 3 x 0,34mm²	A
08317613600	**KJ4-Q12KN-DPÖ**	non shielded	PNP	4	2m cable PVC 3 x 0,34mm²	A
08317613264	**KJ4-Q12KN-DPS-V1**	non shielded	PNP	4	connector M8 3-pole	B
08317613664	**KJ4-Q12KN-DPÖ-V1**	non shielded	PNP	4	connector M8 3-pole	B
08310000527	**KJ4-Q12KN-DPA**	non shielded	PNP	4	2m cable PVC 4 x 0,34mm²	A
0831xxxxxxx	**KJ6-Q12KN-DPS**	non shielded	PNP	6	2m cable PVC 4 x 0,34mm²	A
0831xxxxxxx	**KJ6-Q12KN-DPS-V1**	non shielded	PNP	6	connector M8 3-pole	B

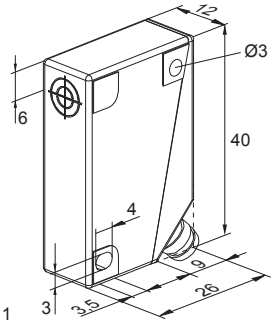
Design NPN and other cable lengths as requested.

Dimensions

A)



B)



connector M8 x 1

all data in mm

SQUARE Q25

General data

Operating voltage U_b	10 ... 30V DC
Ripple voltage U_b	≤ 10%
Voltage drop U_d	≤ 2,4V
Max. load current	200mA
Off-state current I_0	≤ 13mA
Residual current I_r	≤ 10µA
Max. switching frequency f	1000Hz (KJ8... 800Hz)
Hysteresis H	≤ 15%
Repeatability R	≤ 2%
Operating temperature T_a	-25°C ... +70°C
Temperature drift	≤ 10%
Protection class	IP67
EMV-standard	according to IEC 60947-5-2
Switching state	LED
Housing material	polyamide 6.6, aluminium

Selection chart polyamide

Article number	Designation	Mounting	Output signal	Switching distance in mm	Connection	Drawing (next page)
08310000772	**KJ5-Q25KB-DPS**	shielded	PNP	5	2m cable PVC 3 x 0,34mm²	A
08310001285	**KJ5-Q25KB-DPÖ**	shielded	PNP	5	2m cable PVC 3 x 0,34mm²	A
08310000203	**KJ5-Q25KB-DPS-V1**	shielded	PNP	5	connector M8 3-pole	B
08310000472	**KJ5-Q25KB-DPÖ-V1**	shielded	PNP	5	connector M8 3-pole	B
08310000901	**KJ5-Q25KB-DPA**	shielded	PNP	5	2m cable PVC 4 x 0,25mm²	A
08310000056	**KJ8-Q25KN-DPS**	non shielded	PNP	8	2m cable PVC 3 x 0,34mm²	A
08310001952	**KJ8-Q25KN-DPÖ**	non shielded	PNP	8	2m cable PVC 3 x 0,34mm²	A
08310000508	**KJ8-Q25KN-DPS-V1**	non shielded	PNP	8	connector M8 3-pole	B
08310001883	**KJ8-Q25KN-DPÖ-V1**	non shielded	PNP	8	connector M8 3-pole	B
08310001079	**KJ8-Q25KN-DPA**	non shielded	PNP	8	2m cable PVC 4 x 0,25mm²	A

Design NPN and other cable lengths as requested.

Selection chart aluminium

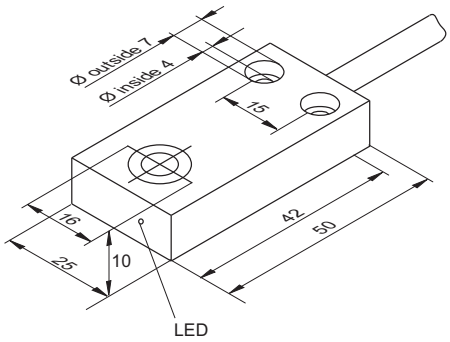
Article number	Designation	Mounting	Output signal	Switching distance in mm	Connection	Drawing (next page)
08310000229	**KJ5-Q25AB-DPS**	shielded	PNP	5	2m cable PVC 3 x 0,34mm²	A
0831xxxxxxx	**KJ5-Q25AB-DPÖ**	shielded	PNP	5	2m cable PVC 3 x 0,34mm²	A

Design NPN and other cable lengths as requested.

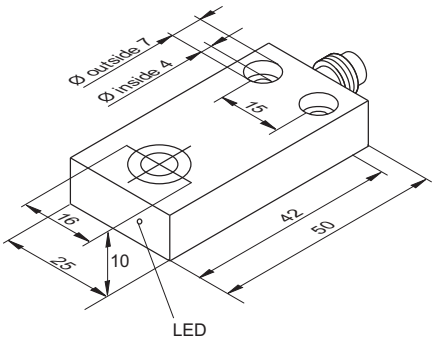
SQUARE Q25

Dimensions

A)



B)



connector M8 x 1

all data in mm

SQUARE Q28

General data

Operating voltage U_b	10 ... 30V DC
Ripple voltage U_b	≤ 10%
Voltage drop U_d	≤ 2,4V
Max. load current	200mA
Off-state current I_0	≤ 13mA
Residual current I_r	≤ 10µA
Max. switching frequency f	1000Hz (KJ4... 800Hz)
Hysteresis H	≤ 15%
Repeatability R	≤ 2%
Operating temperature T_a	-25°C ... +70°C
Temperature drift	≤ 10%
Protection class	IP67
EMV-standard	according to IEC 60947-5-2
Switching state	LED
Housing material	polyamide 6.6

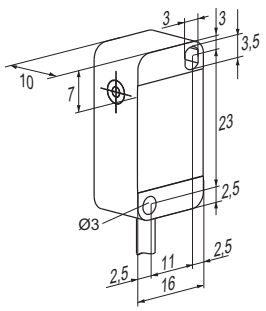
Selection chart

Article number	Designation	Mounting	Output signal	Switching distance in mm	Connection	Drawing
08310000042	**KJ2-Q28KB-DPS**	shielded	PNP	2	2m cable PVC 3 x 0,14mm²	A
08310000437	**KJ2-Q28KB-DPÖ**	shielded	PNP	2	2m cable PVC 3 x 0,14mm²	A
08310000608	**KJ2-Q28KB-DPS-V1**	shielded	PNP	2	connector M8 3-pole	B
08310000632	**KJ2-Q28KB-DPÖ-V1**	shielded	PNP	2	connector M8 3-pole	B
08310006008	**KJ2-Q28KB-DPS-AMP**	shielded	PNP	2	3 x plug connector AMP	C
08310001094	**KJ2-Q28KB-DNS-AMP**	shielded	NPN	2	3 x plug connector AMP	C
08310000610	**KJ4-Q28KN-DPS**	non shielded	PNP	4	2m cable PVC 3 x 0,14mm²	A
08310002041	**KJ4-Q28KN-DPÖ**	non shielded	PNP	4	2m cable PVC 3 x 0,14mm²	A
08310000609	**KJ4-Q28KN-DPS-V1**	non shielded	PNP	4	connector M8 3-pole	B
08310020184	**KJ4-Q28KN-DPÖ-V1**	non shielded	PNP	4	connector M8 3-pole	B
08310000100	**KJ6-Q28KN-DPS-V1**	non shielded	PNP	6	connector M8 3-pole	B
08310001247	**KJ6-Q28KN-DPÖ-V1**	non shielded	PNP	6	connector M8 3-pole	B

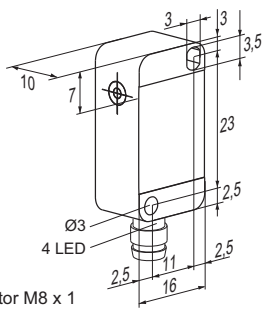
Design NPN and other cable lengths as requested.

Dimensions

A)

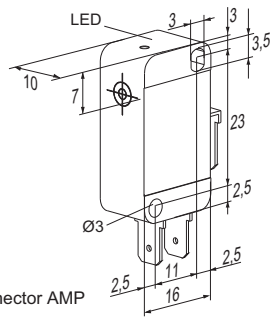


B)



connector M8 x 1

C)



plug connector AMP

all data in mm

SQUARE Q40

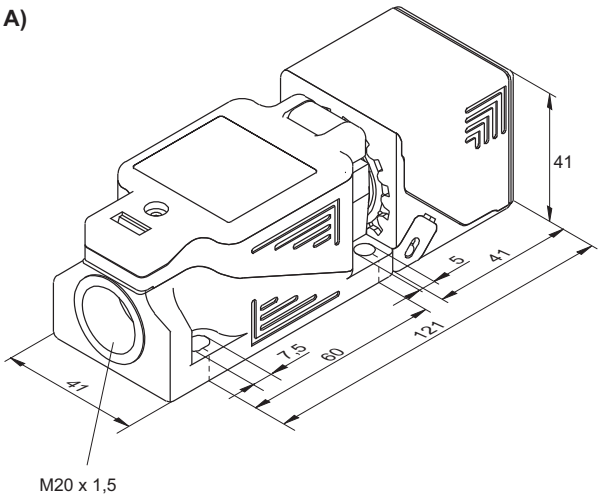
General data

Operating voltage U_b	10 ... 30V DC
Ripple voltage U_b	≤ 10%
Voltage drop U_d	≤ 2,4V
Max. load current	see selection chart
Off-state current I_0	see selection chart
Residual current I_r	≤ 10µA
Max. switching frequency f	150Hz (KJ40... 70Hz)
Hysteresis H	≤ 20%
Repeatability R	≤ 5%
Operating temperature T_a	-25°C ... +70°C
Temperature drift	≤ 10%
Protection class	IP67 / see enclosed label*
EMV-standard	according to IEC 60947-5-2
Switching state	LED
Housing material	trogamit T, polyamide 6.6

* When fixing the cover with the enclosed screw and sealed cable gland IP67 (without using the enclosed screw IP65)

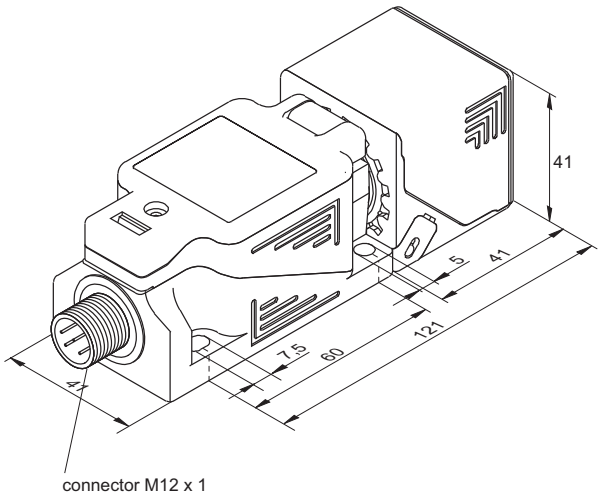
Dimensions

A)



M20 x 1,5

B)



connector M12 x 1

all data in mm
Selection chart on the next page

SQUARE Q40

Selection chart trogamit T

Article number	Designation	Former order number	Mounting	Output signal	Switching distance in mm	Connection	Drawing
08317633000	**KJ15-Q40KB-DPU**	9863-3000	shielded	PNP	15	clamps 1,5mm²	A
08317633300	**KJ15-Q40KB-DNU**	9863-3300	shielded	NPN	15	clamps 1,5mm²	A
08317633065	**KJ15-Q40KB-DPU-V2**	9863-3065	shielded	PNP	15	connector M12 4-pole	B
08317633365	**KJ15-Q40KB-DNU-V2**	9863-3365	shielded	NPN	15	connector M12 4-pole	B
08317633100	**KJ25-Q40KT-DPU**	9863-3100	quasi-shielded	PNP	25	clamps 1,5mm²	A
08317633400	**KJ25-Q40KT-DNU**	9863-3400	quasi-shielded	NPN	25	clamps 1,5mm²	A
08317633165	**KJ25-Q40KT-DPU-V2**	9863-3165	quasi-shielded	PNP	25	connector M12 4-pole	B
08317633465	**KJ25-Q40KT-DNU-V2**	9863-3465	quasi-shielded	NPN	25	connector M12 4-pole	B
08317633200	**KJ40-Q40KN-DPU**	9863-3200	non shielded	PNP	40	clamps 1,5mm²	A
08317633500	**KJ40-Q40KN-DNU**	9863-3500	non shielded	NPN	40	clamps 1,5mm²	A
08317633265	**KJ40-Q40KN-DPU-V2**	9863-3265	non shielded	PNP	40	connector M12 4-pole	B
08317633565	**KJ40-Q40KN-DNU-V2**	9863-3565	non shielded	NPN	40	connector M12 4-pole	B

Max. load current 400mA
Off-state current ≤ 34mA

Selection chart polyamide 6.6

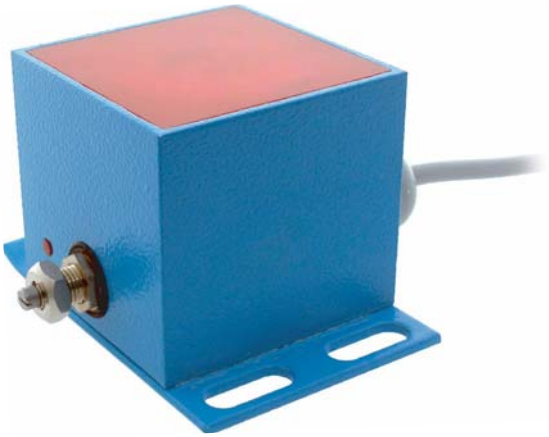
Article number	Designation	Former order number	Mounting	Output signal	Switching distance in mm	Connection	Drawing
08317832000	**KJ20-Q40KB-DPU**	9883-2000	shielded	PNP	20	clamps 2,5mm²	A
08317832300	**KJ20-Q40KB-DNU**	9883-2300	shielded	NPN	20	clamps 2,5mm²	A
08317832065	**KJ20-Q40KB-DPU-V2**	9883-2065	shielded	PNP	20	connector M12 4-pole	B
08317832365	**KJ20-Q40KB-DNU-V2**	9883-2365	shielded	NPN	20	connector M12 4-pole	B
08317832200	**KJ40-Q40KN-DPU**	9883-2200	non shielded	PNP	40	clamps 2,5mm²	A
08317832500	**KJ40-Q40KN-DNU**	9883-2500	non shielded	NPN	40	clamps 2,5mm²	A
08317832265	**KJ40-Q40KN-DPU-V2**	9883-2265	non shielded	PNP	40	connector M12 4-pole	B
08317832565	**KJ40-Q40KN-DNU-V2**	9883-2565	non shielded	NPN	40	connector M12 4-pole	B

Max. load current 120mA
Off-state current ≤ 10mA

SQUARE Q50

General data

Operating voltage U_b	10 ... 30V DC
Ripple voltage U_b	≤ 10%
Voltage drop U_d	≤ 2,4V
Max. load current	400mA
Off-state current I_0	≤ 18mA
Residual current I_r	≤ 10µA
Max. switching frequency f	300Hz
Hysteresis H	≤ 15%
Repeatability R	≤ 2%
Operating temperature T_a	-25°C ... +70°C
Temperature drift	≤ 10%
Protection class	IP67
EMV-standard	according to IEC 60947-5-2
Switching state	LED
Housing material	aluminium
Front cap	dravidur



Switching distance adjustable via potentiometer.

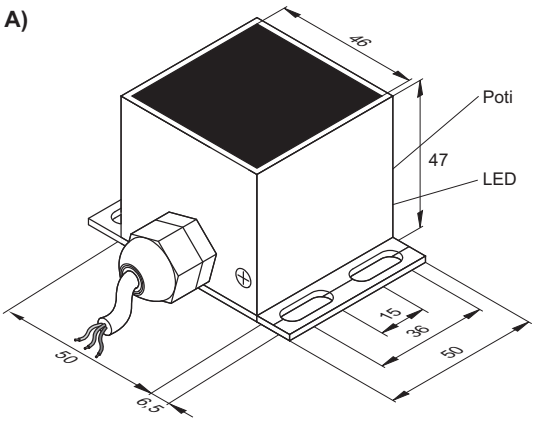
Selection chart

Article number	Designation	Mounting	Output signal	Switching distance in mm	Connection	Drawing
08317070900	**KJ40-Q50AB-DPS**	shielded	PNP ⎍	40	2m cable PVC 3 x 0,34mm²	A
08317070100	**KJ40-Q50AB-DNS**	shielded	NPN ⎍	40	2m cable PVC 3 x 0,34mm²	A
08317070965	**KJ40-Q50AB-DPS-V2**	shielded	PNP ⎍	40	connector M12 4-pole	B
08317070165	**KJ40-Q50AB-DNS-V2**	shielded	NPN ⎍	40	connector M12 4-pole	B

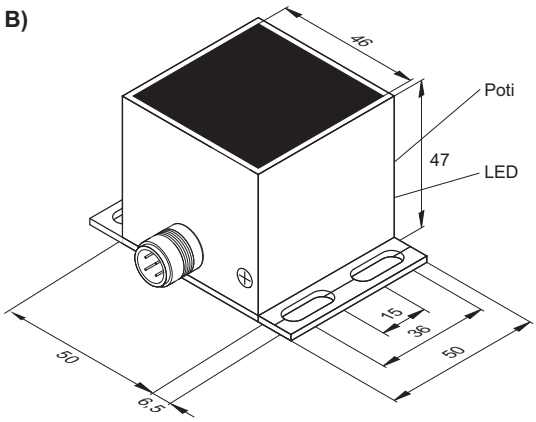
Other cable lengths as requested.

Dimensions

A)



B)



connector M12 x 1

all data in mm

SQUARE Q80

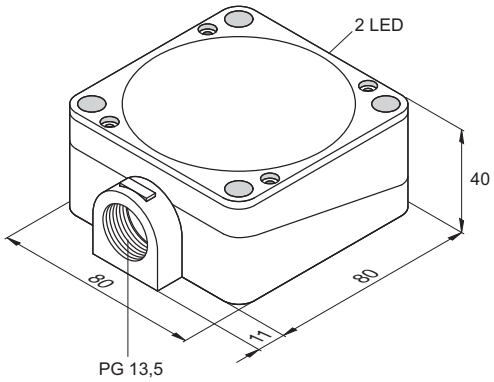
General data

Operating voltage U_b	10 ... 30V DC
Ripple voltage U_b	≤ 10%
Voltage drop U_d	≤ 3,0V (KJ50... ≤ 2,4V)
Max. load current	200mA
Off-state current I_0	≤ 22mA
Residual current I_r	≤ 10µA
Max. switching frequency f	100Hz
Hysteresis H	≤ 15%
Repeatability R	≤ 2%
Operating temperature T_a	-25°C ... +70°C
Temperature drift	≤ 10%
Protection class	IP67
EMV-standard	according to IEC 60947-5-2
Switching state	LED
Housing material	polycarbonate

Selection chart

Article number	Designation	Mounting	Output signal	Switching distance in mm	Connection
08317651100	**KJ40-Q80KB-DPA**	shielded	PNP	40	clamping space
08317651000	**KJ50-Q80KN-DPA**	non shielded	PNP	50	clamping space

Dimensions



all data in mm

SQUARE Q100

General data

Mounting	non shielded
Operating voltage U_b	10 ... 30V DC
Ripple voltage U_b	≤ 10%
Voltage drop U_d	≤ 2,4V
Max. load current	400mA
Off-state current I_0	≤ 12mA
Residual current I_r	≤ 10µA
Max. switching frequency f	300Hz
Hysteresis H	≤ 15%
Repeatability R	≤ 2%
Operating temperature T_a	-25°C ... +70°C
Temperature drift	≤ 10%
Protection class	IP67
EMV-standard	according to IEC 60947-5-2
Switching state	LED
Housing material	aluminium

* For parallel mounting these sensors are available in 5 different frequencies.

Switching distance adjustable via potentiometer.

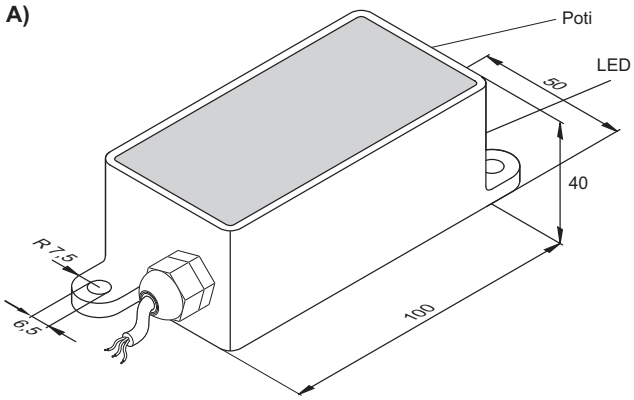
Selection chart

Article number	Designation	Output signal	Switching distance in mm	Connection	Drawing
08316090100	**KJ70-Q100AN-DPS-F1**	PNP ⎍	70	2m cable PVC 3 x 0,34mm²	A
08317090300	**KJ70-Q100AN-DNS-F1**	NPN ⎍	70	2m cable PVC 3 x 0,34mm²	A
08317090165	**KJ70-Q100AN-DPS-V2-F1**	PNP ⎍	70	connector M12 4-pole	B
08317090365	**KJ70-Q100AN-DNS-V2-F1**	NPN ⎍	70	connector M12 4-pole	B

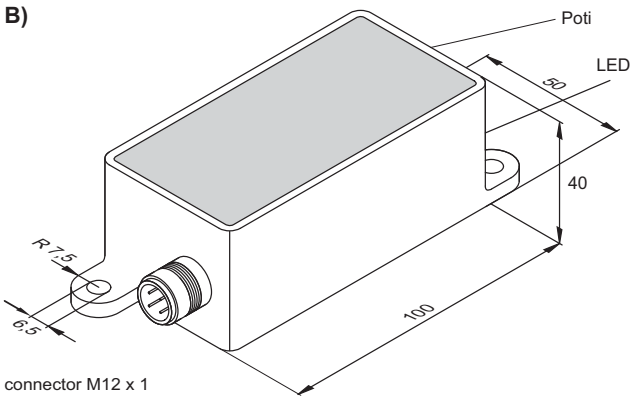
Other cable lengths as requested.

Dimensions

A)



B)



connector M12 x 1

all data in mm

MICRO SQUARE Q6

General data

Operating voltage U_b	10 ... 30V DC
Ripple voltage U_b	≤ 10%
Voltage drop U_d	≤ 1,0V
Max. load current	100mA
Off-state current I_0	≤ 10mA
Residual current I_r	≤ 10µA
Max. switching frequency f	400Hz
Hysteresis H	≤ 15%
Repeatability R	≤ 0,04mm
Operating temperature T_a	-25°C ... +70°C
Temperature drift	≤ 10%
Protection class	IP67
EMV-standard	according to IEC 60947-5-2
Switching state	LED
Housing material	polycarbonate

Mounting clamp included in delivery.

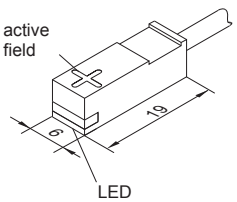
Selection chart

Article number	Designation	Mounting	Output signal	Switching distance in mm	Connection	Drawing
08313661210	**SJ1,2-Q6KN19-DPS**	non shielded	PNP ⎍	1,2	2m cable PVC 3 x 0,15mm²	A
08313661220	**SJ1,2-Q6KN19-DPÖ**	non shielded	PNP ⎍	1,2	2m cable PVC 3 x 0,15mm²	A
08313661230	**SJ1,2-Q6KN19-DNS**	non shielded	NPN ⎍	1,2	2m cable PVC 3 x 0,15mm²	A
08313661240	**SJ1,2-Q6KN19-DNÖ**	non shielded	NPN ⎍	1,2	2m cable PVC 3 x 0,15mm²	A
08313661219	**SJ1,2W-Q6KN19-DPS**	non shielded	PNP ⎍	1,2	2m cable PVC 3 x 0,15mm²	B
08313661229	**SJ1,2W-Q6KN19-DPÖ**	non shielded	PNP ⎍	1,2	2m cable PVC 3 x 0,15mm²	B
08313661239	**SJ1,2W-Q6KN19-DNS**	non shielded	NPN ⎍	1,2	2m cable PVC 3 x 0,15mm²	B
08313661249	**SJ1,2W-Q6KN19-DNÖ**	non shielded	NPN ⎍	1,2	2m cable PVC 3 x 0,15mm²	B

Other cable lengths as requested.

Dimensions

A)



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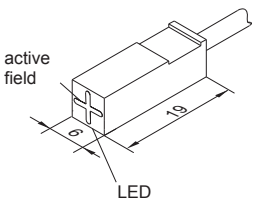


all data in mm

MICRO SQUARE Q8

General data

Mounting	non shielded
Operating voltage U_b	10 ... 30V DC
Ripple voltage U_b	≤ 10%
Voltage drop U_d	≤ 1,0V
Max. load current	100mA
Off-state current I_0	≤ 10mA
Residual current I_r	≤ 10µA
Max. switching frequency f	500Hz
Hysteresis H	≤ 15%
Repeatability R	≤ 0,04 mm
Operating temperature T_a	-25°C ... +70°C
Temperature drift	≤ 10%
Protection class	IP67
EMV-standard	according to IEC 60947-5-2
Switching state	LED
Housing material	polycarbonate

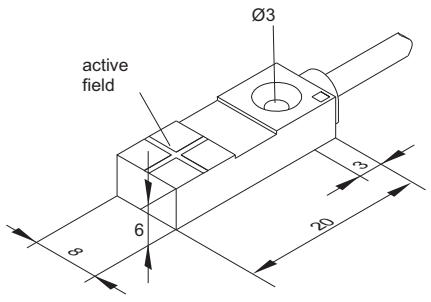
Selection chart

Article number	Designation	Output signal	Switching distance in mm	Connection	Drawing
08313881512	**SJ1,5-Q8KN20-DPS**	PNP —/—	1,5	2m cable PVC 3 x 0,15mm²	A
08313881522	**SJ1,5-Q8KN20-DPÖ**	PNP —/‾\—	1,5	2m cable PVC 3 x 0,15mm²	A
08313881532	**SJ1,5-Q8KN20-DNS**	NPN —/—	1,5	2m cable PVC 3 x 0,15mm²	A
08313881542	**SJ1,5-Q8KN20-DNÖ**	NPN —/‾\—	1,5	2m cable PVC 3 x 0,15mm²	A
08313881519	**SJ1,5W-Q8KN23-DPS**	PNP —/—	1,5	2m cable PVC 3 x 0,15mm²	B
08313881529	**SJ1,5W-Q8KN23-DPÖ**	PNP —/‾\—	1,5	2m cable PVC 3 x 0,15mm²	B
08313881539	**SJ1,5W-Q8KN23-DNS**	NPN —/—	1,5	2m cable PVC 3 x 0,15mm²	B
08313881549	**SJ1,5W-Q8KN23-DNÖ**	NPN —/‾\—	1,5	2m cable PVC 3 x 0,15mm²	B

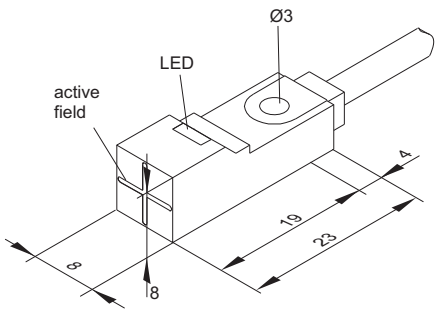
Other cable lengths as requested.

Dimensions

A)



B)



all data in mm

MICRO SQUARE Q10/Q12

General data

Operating voltage U_b	10 ... 30V DC
Ripple voltage U_b	≤ 10%
Voltage drop U_d	≤ 1,0V
Max. load current	100mA
Off-state current I_0	≤ 10mA
Residual current I_r	≤ 10µA
Max. switching frequency f	250Hz (version Q12: 500Hz)
Hysteresis H	≤ 15%
Repeatability R	≤ 0,04mm
Operating temperature T_a	-25°C ... +70°C
Temperature drift	≤ 10%
Protection class	IP67
EMV-standard	according to IEC 60947-5-2
Switching state	LED
Housing material	polycarbonate

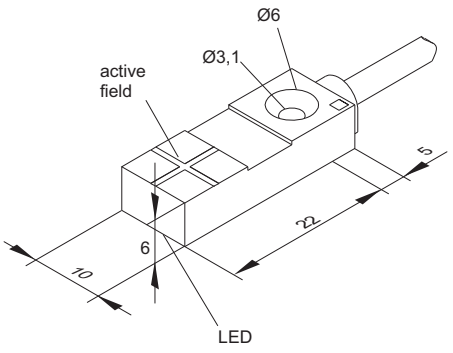
Selection chart

Article number	Designation	Mounting	Output signal	Switching distance in mm	Connection	Drawing
08313021010	**SJ2-Q10KN27-DPS**	non shielded	PNP	2	2m cable PVC 3 x 0,15mm²	A
0831xxxxxxx	**SJ2-Q10KN27-DPÖ**	non shielded	PNP	2	2m cable PVC 3 x 0,15mm²	A
0831xxxxxxx	**SJ2-Q10KN27-DNS**	non shielded	NPN	2	2m cable PVC 3 x 0,15mm²	A
0831xxxxxxx	**SJ2-Q10KN27-DNÖ**	non shielded	NPN	2	2m cable PVC 3 x 0,15mm²	A
0831xxxxxxx	**SJ2-Q12KN27-DPS**	non shielded	PNP	2	2m cable PVC 3 x 0,15mm²	B
0831xxxxxxx	**SJ2-Q12KN27-DPÖ**	non shielded	PNP	2	2m cable PVC 3 x 0,15mm²	B
0831xxxxxxx	**SJ2-Q12KN27-DNS**	non shielded	NPN	2	2m cable PVC 3 x 0,15mm²	B
0831xxxxxxx	**SJ2-Q12KN27-DNÖ**	non shielded	NPN	2	2m cable PVC 3 x 0,15mm²	B

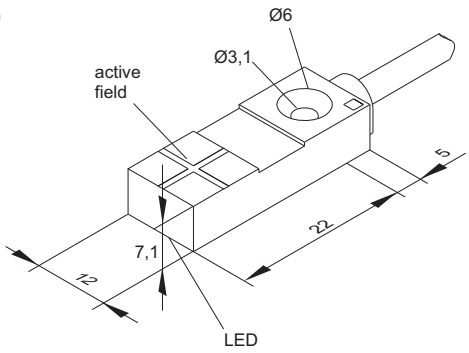
Other cable lengths as requested.

Dimensions

A)



B)



all data in mm

MICRO SQUARE Q15

General data

Mounting	non shielded
Operating voltage U_b	10 ... 30V DC
Ripple voltage U_b	≤ 10%
Voltage drop U_d	≤ 1,0V
Max. load current	100mA
Off-state current I_0	≤ 10mA
Residual current I_r	≤ 10µA
Max. switching frequency f	250Hz
Hysteresis H	≤ 15%
Repeatability R	≤ 0,04 mm
Operating temperature T_a	-25°C ... +70°C
Temperature drift	≤ 10%
Protection class	IP67
EMV-standard	according to IEC 60947-5-2
Switching state	LED
Housing material	polycarbonate

Selection chart

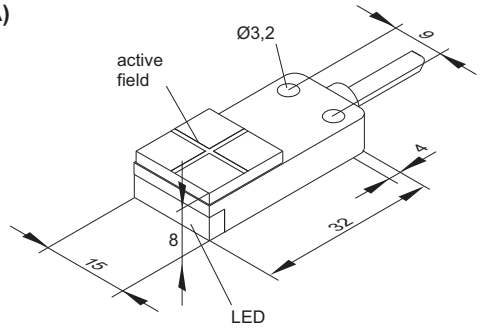
Article number	Designation	Output signal	Switching distance in mm	Connection	Drawing (next page)
08313150410	**KJ4-Q15KN32-DPS**	PNP	4	2m cable PVC 3 x 0,14mm²	A
08313150420	**KJ4-Q15KN32-DPÖ**	PNP	4	2m cable PVC 3 x 0,14mm²	A
08313150430	**SJ4-Q15KN32-DNS**	NPN	4	2m cable PVC 3 x 0,15mm²	A
08313150440	**SJ4-Q15KN32-DNÖ**	NPN	4	2m cable PVC 3 x 0,15mm²	A
08313150419	**SJ4W-Q15KN30-DPS**	PNP	4	2m cable PVC 3 x 0,15mm²	B
08313150429	**SJ4W-Q15KN30-DPÖ**	PNP	4	2m cable PVC 3 x 0,15mm²	B
08313150439	**KJ4W-Q15KN30-DNS**	NPN	4	2m cable PVC 3 x 0,15mm²	B
08313150449	**SJ4W-Q15KN30-DNÖ**	NPN	4	2m cable PVC 3 x 0,15mm²	B
08313156410	**KJ6,4-Q15KN32-DPS**	PNP	6,4	2m cable PVC 3 x 0,14mm²	A
08313156420	**SJ6,4-Q15KN32-DPÖ**	PNP	6,4	2m cable PVC 3 x 0,15mm²	A
08313156430	**KJ6,4-Q15KN32-DNS**	NPN	6,4	2m cable PVC 3 x 0,14mm²	A
08313156440	**SJ6,4-Q15KN32-DNÖ**	NPN	6,4	2m cable PVC 3 x 0,15mm²	A
08313156419	**SJ6,4W-Q15KN30-DPS**	PNP	6,4	2m cable PVC 3 x 0,15mm²	B
08313156429	**SJ6,4W-Q15KN30-DPÖ**	PNP	6,4	2m cable PVC 3 x 0,15mm²	B
08313156439	**SJ6,4W-Q15KN30-DNS**	NPN	6,4	2m cable PVC 3 x 0,15mm²	B
08313156449	**SJ6,4W-Q15KN30-DNÖ**	NPN	6,4	2m cable PVC 3 x 0,15mm²	B

Other cable lengths as requested.

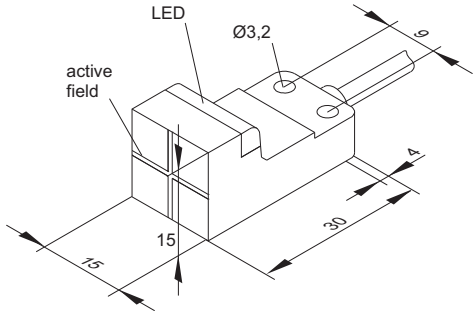
MICRO SQUARE Q15

Dimensions

A)



B)



all data in mm

PRODUCT OVERVIEW

Product group	Designation	Article number	Matchcode	Page
Inductive Square, Micro Square	KJ1-Q5MB26-DPS	08313550110		5
Inductive Square, Micro Square	KJ1-Q5MB26-DPÖ	08313550120		5
Inductive Square, Micro Square	KJ1-Q5MB26-DNS	08313550130		5
Inductive Square, Micro Square	KJ1-Q5MB26-DNÖ	08313550140		5
Inductive Square, Micro Square	KJ1-Q5MB26-DPS-X0429	08313550160		5
Inductive Square, Micro Square	SJ1,2-Q6KN19-DPS	08313661210		18
Inductive Square, Micro Square	SJ1,2W-Q6KN19-DPS	08313661219		18
Inductive Square, Micro Square	SJ1,2-Q6KN19-DPÖ	08313661220		18
Inductive Square, Micro Square	SJ1,2W-Q6KN19-DPÖ	08313661229		18
Inductive Square, Micro Square	SJ1,2-Q6KN19-DNS	08313661230		18
Inductive Square, Micro Square	SJ1,2W-Q6KN19-DNS	08313661239		18
Inductive Square, Micro Square	SJ1,2-Q6KN19-DNÖ	08313661240		18
Inductive Square, Micro Square	SJ1,2W-Q6KN19-DNÖ	08313661249		18
Inductive Square, Micro Square	KJ1,5-Q8MB40-DPS	08317611000		6
Inductive Square, Micro Square	KJ1,5-Q8MB40-DPS-AM	08317611100		6
Inductive Square, Micro Square	SJ1,5-Q8KN20-DPS	08313881512		19
Inductive Square, Micro Square	SJ1,5W-Q8KN23-DPS	08313881519		19
Inductive Square, Micro Square	SJ1,5-Q8KN20-DPÖ	08313881522		19
Inductive Square, Micro Square	SJ1,5W-Q8KN23-DPÖ	08313881529		19
Inductive Square, Micro Square	SJ1,5-Q8KN20-DNS	08313881532		19
Inductive Square, Micro Square	SJ1,5W-Q8KN23-DNS	08313881539		19
Inductive Square, Micro Square	SJ1,5-Q8KN20-DNÖ	08313881542		19
Inductive Square, Micro Square	SJ1,5W-Q8KN23-DNÖ	08313881549		19
Inductive Square, Micro Square	KJ1,5-Q8MB60-DPS-V1	08317611064		6
Inductive Square, Micro Square	KJ1,5-Q8MB60-DPS-V1-AM	08317611164		6
Inductive Square, Micro Square	KJ2-Q8AB-DPS	08310000475		6
Inductive Square, Micro Square	KJ2-Q8AB-DPS-AM-X0409	08310000440		6
Inductive Square, Micro Square	KJ2-Q8AB-DPÖ	08310020475		6
Inductive Square, Micro Square	KJ2-Q8AB-DPÖ-AM	08310000074		6
Inductive Square, Micro Square	KJ2-Q8AB-DPS-V1	08310000509		6
Inductive Square, Micro Square	KJ2-Q8AB-DPS-V1-AM	08310000369		6
Inductive Square, Micro Square	KJ2-Q8AB-DPÖ-V1	0831xxxxxxx		6
Inductive Square, Micro Square	KJ2-Q8AB-DPÖ-V1-AM	0831xxxxxxx		6
Inductive Square, Micro Square	KJ2-Q8AB-DPS-V3	08310001035		6
Inductive Square, Micro Square	KJ2-Q9,9AB-DPS	08310000208		8
Inductive Square, Micro Square	KJ2-Q9,9AB-DPÖ-X0303	08310000454		8
Inductive Square, Micro Square	SJ2-Q10KN27-DPS	08313021010		20
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Inductive Square, Micro Square	SJ2-Q10KN27-DNS	0831xxxxxxx		20
Inductive Square, Micro Square	SJ2-Q10KN27-DNÖ	0831xxxxxxx		20
Inductive Square, Micro Square	KJ2-Q12KB-DPS	08317613000		9
Inductive Square, Micro Square	SJ2-Q12KN27-DPS	0831xxxxxxx		20
Inductive Square, Micro Square	KJ2-Q12KB-DPÖ	08317613400		99
Inductive Square, Micro Square	SJ2-Q12KN27-DPÖ	0831xxxxxxx		20
Inductive Square, Micro Square	SJ2-Q12KN27-DNS	0831xxxxxxx		20
Inductive Square, Micro Square	SJ2-Q12KN27-DNÖ	0831xxxxxxx		20
Inductive Square, Micro Square	KJ2-Q12KB-DPS-V1	08317613064		9
Inductive Square, Micro Square	KJ2-Q12KB-DPÖ-V1	08317613464		9

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Product group	Designation	Article number	Matchcode	Page
Inductive Square, Micro Square	KJ2-Q28KB-DPS	08310000042		12
Inductive Square, Micro Square	KJ2-Q28KB-DPS-AMP	08310006008		12
Inductive Square, Micro Square	KJ2-Q28KB-DPÖ	08310000437		12
Inductive Square, Micro Square	KJ2-Q28KB-DNS-AMP	08310001094		12
Inductive Square, Micro Square	KJ2-Q28KB-DPS-V1	08310000608		12
Inductive Square, Micro Square	KJ2-Q28KB-DPÖ-V1	08310000632		12
Inductive Square, Micro Square	KJ3-Q8MB40-DPS	08317612000		6
Inductive Square, Micro Square	KJ3-Q8MB60-DPS-V1	08317612064		6
Inductive Square, Micro Square	KJ4-Q12KN-DPS	08317613200		9
Inductive Square, Micro Square	KJ4-Q12KN-DPÖ	08317613600		9
Inductive Square, Micro Square	KJ4-Q12KN-DPS-V1	08317613264		9
Inductive Square, Micro Square	KJ4-Q12KN-DPÖ-V1	08317613664		9
Inductive Square, Micro Square	KJ4-Q12KN-DPA	08310000527		9
Inductive Square, Micro Square	SJ4-Q15KN32-DPS	08313150410		21
Inductive Square, Micro Square	SJ4W-Q15KN30-DPS	08313150419		21
Inductive Square, Micro Square	SJ4-Q15KN32-DPÖ	08313150420		21
Inductive Square, Micro Square	SJ4W-Q15KN30-DPÖ	08313150429		21
Inductive Square, Micro Square	SJ4-Q15KN32-DNS	08313150430		21
Inductive Square, Micro Square	SJ4W-Q15KN30-DNS	08313150439		21
Inductive Square, Micro Square	SJ4-Q15KN32-DNÖ	08313150440		21
Inductive Square, Micro Square	SJ4W-Q15KN30-DNÖ	08313150449		21
Inductive Square, Micro Square	KJ4-Q28KN-DPS	08310000610		12
Inductive Square, Micro Square	KJ4-Q28KN-DPÖ	08310002041		12
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Inductive Square, Micro Square	KJ6-Q12KN-DPS-V1	0831xxxxxxx		9
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Inductive Square, Micro Square	SJ6,4-Q15KN32-DPS	08313156410		21
Inductive Square, Micro Square	SJ6,4W-Q15KN30-DPS	08313156419		21
Inductive Square, Micro Square	SJ6,4-Q15KN32-DPÖ	08313156420		21
Inductive Square, Micro Square	SJ6,4W-Q15KN30-DPÖ	08313156429		21
Inductive Square, Micro Square	SJ6,4-Q15KN32-DNS	08313156430		21
Inductive Square, Micro Square	SJ6,4W-Q15KN30-DNS	08313156439		21
Inductive Square, Micro Square	SJ6,4-Q15KN32-DNÖ	08313156440		21
Inductive Square, Micro Square	SJ6,4W-Q15KN30-DNÖ	08313156449		21
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Inductive Square, Micro Square	KJ8-Q25KN-DPS-V1	08310000508		10
Inductive Square, Micro Square				

PRODUCT OVERVIEW

Product group	Designation	Article number	Matchcode	Page
Inductive Square, Micro Square	KJ8-Q25KN-DPÖ-V1	08310001883		10
Inductive Square, Micro Square	KJ8-Q25KN-DPA	08310001079		10
Inductive Square, Micro Square	KJ15-Q40KB-DPU	08317633000	9863-3000	14
Inductive Square, Micro Square	KJ15-Q40KB-DNU	08317633300	9863-3300	14
Inductive Square, Micro Square	KJ15-Q40KB-DPU-V2	08317633065	9863-3065	14
Inductive Square, Micro Square	KJ15-Q40KB-DNU-V2	08317633365	9863-3365	14
Inductive Square, Micro Square	KJ20-Q40KB-DPU	08317832000	9883-2000	14
Inductive Square, Micro Square	KJ20-Q40KB-DNU	08317832300	9883-2300	14
Inductive Square, Micro Square	KJ20-Q40KB-DPU-V2	08317832065	9883-2065	14
Inductive Square, Micro Square	KJ20-Q40KB-DNU-V2	08317832365	9883-2365	14
Inductive Square, Micro Square	KJ25-Q40KT-DPU	08317633100	9863-3100	14
Inductive Square, Micro Square	KJ25-Q40KT-DNU	08317633400	9863-3400	14
Inductive Square, Micro Square	KJ25-Q40KT-DPU-V2	08317633165	9863-3165	14
Inductive Square, Micro Square	KJ25-Q40KT-DNU-V2	08317633465	9863-3465	14
Inductive Square, Micro Square	KJ40-Q40KN-DPU	08317633200	9863-3200	14
Inductive Square, Micro Square	KJ40-Q40KN-DPU	08317832200	9883-2200	14
Inductive Square, Micro Square	KJ40-Q40KN-DNU	08317633500	9863-3500	14
Inductive Square, Micro Square	KJ40-Q40KN-DNU	08317832500	9883-2500	14
Inductive Square, Micro Square	KJ40-Q40KN-DPU-V2	08317633265	9863-3265	14
Inductive Square, Micro Square	KJ40-Q40KN-DPU-V2	08317832265	9883-2265	14
Inductive Square, Micro Square	KJ40-Q40KN-DNU-V2	08317633565	9863-3565	14
Inductive Square, Micro Square	KJ40-Q40KN-DNU-V2	08317832565	9883-2565	14
Inductive Square, Micro Square	KJ40-Q50AB-DPS	08317070900	9807-0900	15
Inductive Square, Micro Square	KJ40-Q50AB-DNS	08317070100	9807-0100	15
Inductive Square, Micro Square	KJ40-Q50AB-DPS-V2	08317070965	9807-0965	15
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Inductive Square, Micro Square	KJ40-Q80KB-DPA	08317651100	9865-1100	16
Inductive Square, Micro Square	KJ50-Q80KN-DPA	08317651000	9865-1000	16
Inductive Square, Micro Square	KJ70-Q100AN-DPS-F1	08316090100	9809-0100	17
Inductive Square, Micro Square	KJ70-Q100AN-DPS-V2-F1	08316090165	9809-0165	17
Inductive Square, Micro Square	KJ70-Q100AN-DNS-V2-F1	08316090365	9809-0365	17
Inductive Square, Micro Square	KJ70-Q100AN-DNS-F1	08316090300	9809-0300	17