



## INDUCTIVE SENSORS NAMUR

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# INDUCTIVE SENSORS NAMUR

## NOTES

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## 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

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

### 2 = Switching distance / range

### 3 = Design

<b>D</b>	Ring housing
<b>G</b>	Cylindrical housing without thread
<b>M</b>	Cylindrical housing with metrical thread
<b>Q</b>	Square housing

### 4 = Housing diameter / edge length

### 5 = Housing material

<b>A</b>	Aluminium
<b>E</b>	Stainless steel
<b>K</b>	Plastic
<b>M</b>	Brass, nickel plated
<b>T</b>	PTFE

### 6 = Installation

<b>B</b>	Shielded
<b>N</b>	Non shielded

### 7 = Tube length

### 8 = Operating voltage

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

### 9 = Type of output signal

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

### 10 = Function

<b>A</b>	Changeover
<b>I</b>	Impulse output
<b>Ö</b>	N.C.
<b>S</b>	N.O.
<b>U</b>	Switchable

### 11 = Connection

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

others as requested

### 12 = Additional marks

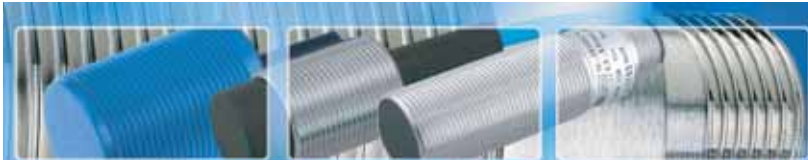
<b>AM</b>	Sensing face in centre
<b>FE</b>	Reduction 1 to steel / iron
<b>HT</b>	High temperature
<b>NF</b>	Reduction 1 to nonferrous metal
<b>SF</b>	Weld field immune
<b>T</b>	Enlarged temperature range
<b>W</b>	Angled sensing face / angled cable exit
<b>X</b>	Customized design with detailed description



# INDUCTIVE SENSORS NAMUR

## 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		



## INDUCTIVE SENSORS NAMUR

### CYLINDER M8

#### General data

Operating voltage $U_b$	nom. 8,2V DC Ri 1K	
Ripple voltage $U_b$	≤ 5%	
Reverse voltage protection	yes	
Load current alive	< 1,1mA	
Load current dead	> 2,2mA	
Hysteresis H	see control unit	
Repeatability R	≤ 10%	
Operating temperature $T_a$	-25°C ... +60°C (high temperature max. +125°C)	
Temperature drift	≤ 10%	
Protection class	IP67	
Necessity of control unit	yes	
EMV-standard	according to EN 60947-5-6	
Housing material	Standard:	brass, nickel-plated
	High temperature:	Arnite
	Plastic:	Trogamid T
Front cap	PCP (brass housing)	



The drawings of these sensors are shown on the following page.

#### Selection chart brass

Article number	Designation switching distance 1mm	Max. switching frequency	Mounting	Connection	Drawing (next page)
08317320100	<b>KJ1-M8MB30-NA</b>	2000Hz	shielded	2m cable PVC 2 x 0,14mm <sup>2</sup>	A
08317320165	<b>KJ1-M8MB50-NA-V2</b>	2000Hz	shielded	connector M12 4-pole	B
	Designation switching distance 2mm				
08317320200	<b>KJ2-M8MN30-NA</b>	1000Hz	non shielded	2m cable PVC 2 x 0,14mm <sup>2</sup>	C
08317320265	<b>KJ2-M8MN50-NA-V2</b>	1000Hz	non shielded	connector M12 4-pole	D

#### Selection chart plastic

Article number	Designation switching distance 2mm	Max. switching frequency	Mounting	Connection	Drawing (next page)
08317321600	<b>KJ2-M8KN30-NA</b>	1000Hz	non shielded	2m cable PVC 2 x 0,14mm <sup>2</sup>	A

#### Selection chart high temperature

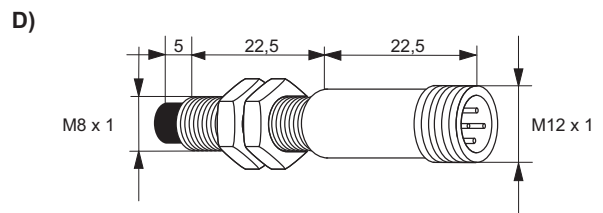
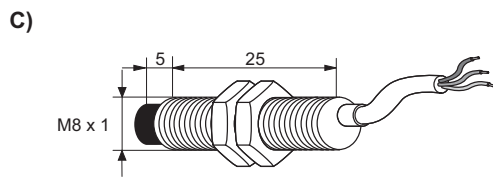
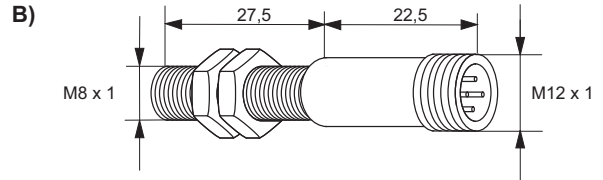
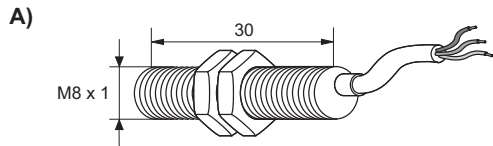
Article number	Designation switching distance 2mm	Max. switching frequency	Mounting	Connection	Drawing (next page)
08317321632	<b>KJ2-M8KN30-NA-HT</b>	1000Hz	non shielded	5m cable PTFE 2 x 0,25mm <sup>2</sup>	A

Other cable lengths as requested.

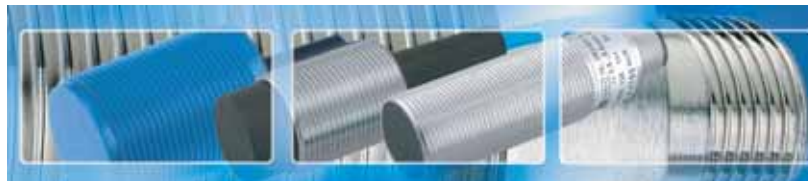


## CYLINDER M8

### Dimensions



all data in mm



# INDUCTIVE SENSORS NAMUR

## CYLINDER M12

### General data

Operating voltage $U_b$	nom. 8,2V DC Ri 1K	
Ripple voltage $U_b$	≤ 5%	
Reverse voltage protection	yes	
Load current alive	< 1,1mA	
Load current dead	> 2,2mA	
Hysteresis H	see control unit	
Repeatability R	≤ 10%	
Operating temperature $T_a$	-25°C ... +60°C (high temperature max. +125°C)	
Temperature drift	≤ 10%	
Protection class	IP67	
Necessity of control unit	yes	
EMV-standard	according to EN 60947-5-6	
Housing material	Standard:	brass, nickel-plated
	High temperature:	Arnite
	Plastic:	Trogamid T
Front cap	PCP (brass housing)	



The drawings of these sensors are shown on the following page.

### Selection chart brass

Article number	Designation switching distance 2mm	Max. switching frequency	Mounting	Connection	Drawing (next page)
08317320300	<b>KJ2-M12MB30-NA</b>	2000Hz	shielded	2m cable PVC 2 x 0,25mm <sup>2</sup>	A
08317320365	<b>KJ2-M12MB55-NA-V2</b>	2000Hz	shielded	connector M12 4-pole	B
	Designation switching distance 4mm				
08317320400	<b>KJ4-M12MN30-NA</b>	1000Hz	non shielded	2m cable PVC 2 x 0,25mm <sup>2</sup>	C
08317320465	<b>KJ4-M12MN50-NA-V2</b>	1000Hz	non shielded	connector M12 4-pole	D

### Selection chart plastic

Article number	Designation switching distance 2mm	Max. switching frequency	Mounting	Connection	Drawing (next page)
083173211000	<b>KJ2-M12KB30-NA</b>	2000Hz	shielded	2m cable PVC 2 x 0,25mm <sup>2</sup>	A
	Designation switching distance 4mm				
08317321000	<b>KJ4-M12KN30-NA</b>	1000Hz	non shielded	2m cable PVC 2 x 0,25mm <sup>2</sup>	A

Other cable lengths as requested.



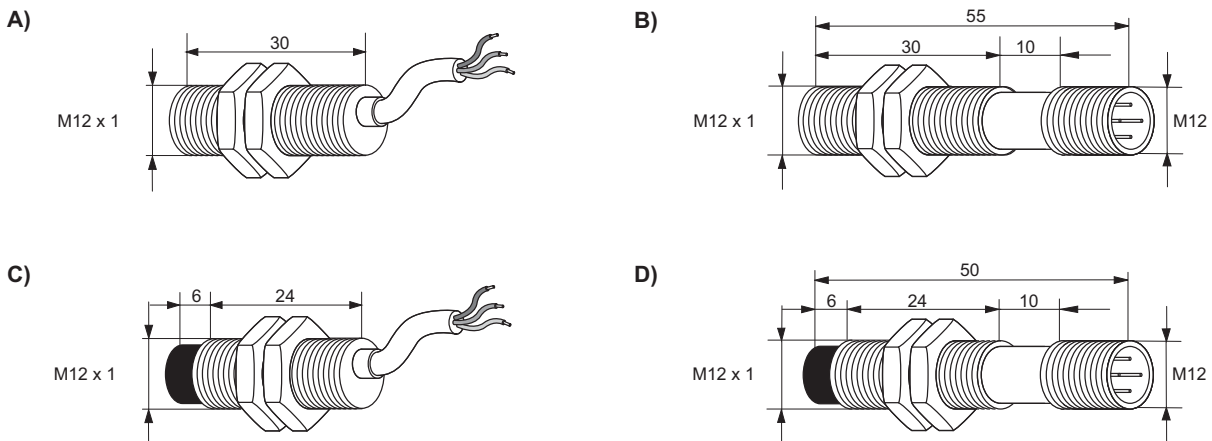
## CYLINDER M12

### Selection chart high temperature

Article number	Designation switching distance 4mm	Max. switching frequency	Mounting	Connection	Drawing
08317321032	<b>KJ4-M12KN30-NA-HT</b>	1000Hz	non shielded	5m cable PTFE 2 x 0,25mm <sup>2</sup>	A

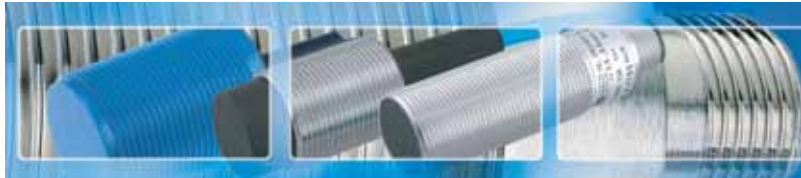
Other cable lengths as requested.

### Dimensions



all data in mm





# INDUCTIVE SENSORS NAMUR

## CYLINDER M18

### General data

Operating voltage $U_b$	nom. 8,2V DC Ri 1K
Ripple voltage $U_b$	$\leq 5\%$
Reverse voltage protection	yes
Load current alive	$< 1,1\text{mA}$
Load current dead	$> 2,2\text{mA}$
Hysteresis H	see control unit
Repeatability R	$\leq 10\%$
Operating temperature $T_a$	$-25^\circ\text{C} \dots +60^\circ\text{C}$
Temperature drift	$\leq 10\%$
Protection class	IP67
Necessity of control unit	yes
EMV-standard	according to EN 60947-5-6
Housing material	Standard: brass, nickel-plated Plastic: Trogamid T
Front cap	PCP (brass housing)



The drawings of these sensors are shown on the following page.

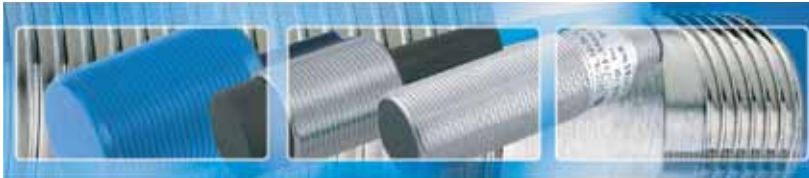
### Selection chart brass

Article number	Designation switching distance 5mm	Max. switching frequency	Mounting	Connection	Drawing (next page)
08317320500	<b>KJ5-M18MB30-NA</b>	1000Hz	shielded	2m cable PVC 2 x 0,25mm <sup>2</sup>	A
08317320565	<b>KJ5-M18MB50-NA-V2</b>	1000Hz	shielded	connector M12 4-pole	B
	<b>Designation switching distance 8mm</b>				
08317320600	<b>KJ8-M18MN30-NA</b>	500Hz	non shielded	2m cable PVC 2 x 0,25mm <sup>2</sup>	C
08317320665	<b>KJ8-M18MN50-NA-V2</b>	500Hz	non shielded	connector M12 4-pole	D

### Selection chart plastic

Article number	Designation switching distance 5mm	Max. switching frequency	Mounting	Connection	Drawing (next page)
08317321300	<b>KJ5-M18KB30-NA</b>	1000Hz	shielded	2m cable PVC 2 x 0,25mm <sup>2</sup>	A
	<b>Designation switching distance 8mm</b>				
08317321200	<b>KJ8-M18KN30-NA</b>	500Hz	non shielded	2m cable PVC 2 x 0,25mm <sup>2</sup>	A

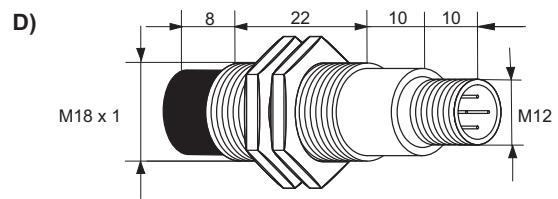
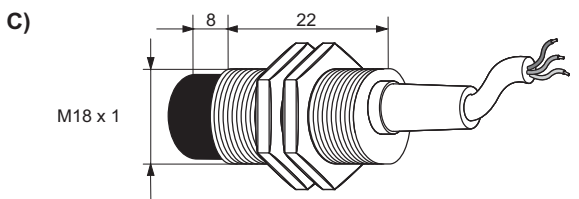
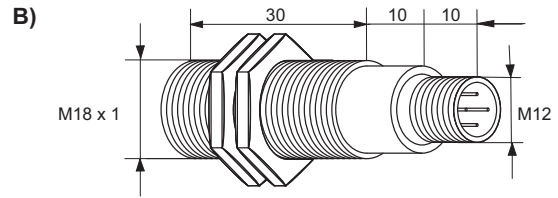
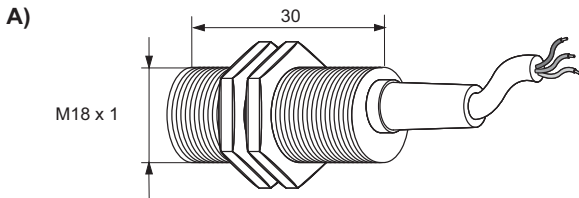
Other cable lengths as requested.



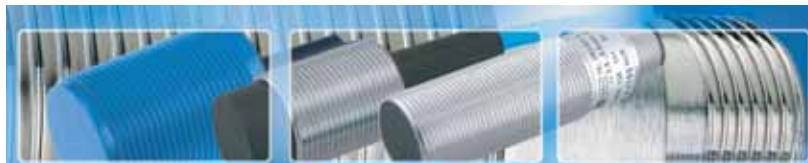
# INDUCTIVE SENSORS NAMUR

## CYLINDER M18

### Dimensions



all data in mm



## INDUCTIVE SENSORS NAMUR

### CYLINDER M30

#### General data

Operating voltage $U_b$	nom. 8,2V DC Ri 1K
Ripple voltage $U_b$	≤ 5%
Reverse voltage protection	yes
Load current alive	< 1,1mA
Load current dead	> 2,2mA
Hysteresis H	see control unit
Repeatability R	≤ 10%
Operating temperature $T_a$	-25°C ... +60°C
Temperature drift	≤ 10%
Protection class	IP67
Necessity of control unit	yes
EMV-standard	according to EN 60947-5-6
Housing material	Standard: brass, nickel-plated Plastic: Trogamid T
Front cap	PCP (brass housing)



The drawings of these sensors are shown on the following page.

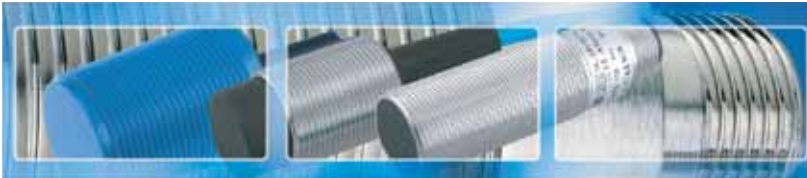
#### Selection chart brass

Article number	Designation switching distance 10mm	Max. switching frequency	Mounting	Connection	Drawing (next page)
08317320700	<b>KJ10-M30MB40-NA</b>	500Hz	shielded	2m cable PVC 2 x 0,25mm <sup>2</sup>	A
08317320765	<b>KJ10-M30MB60-NA-V2</b>	500Hz	shielded	connector M12 4-pole	B
	Designation switching distance 15mm				
08317320800	<b>KJ15-M30MN40-NA</b>	300Hz	non shielded	2m cable PVC 2 x 0,25mm <sup>2</sup>	C
08317320865	<b>KJ15-M30MN60-NA-V2</b>	300Hz	non shielded	connector M12 4-pole	D

#### Auswahltabelle Kunststoff

Article number	Designation switching distance 10mm	Max. switching frequency	Mounting	Connection	Drawing (next page)
08317321500	<b>KJ10-M30KB40-NA</b>	500Hz	shielded	2m cable PVC 2 x 0,25mm <sup>2</sup>	A
	Designation switching distance 15mm				
08317321400	<b>KJ15-M30KN40-NA</b>	300Hz	non shielded	2m cable PVC 2 x 0,25mm <sup>2</sup>	A

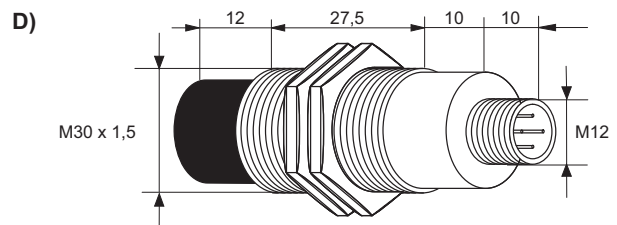
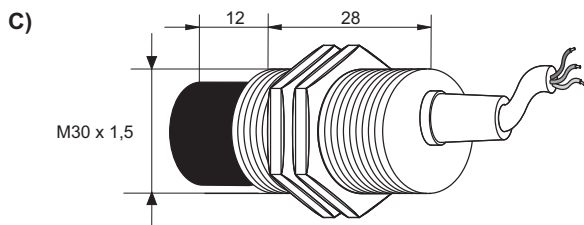
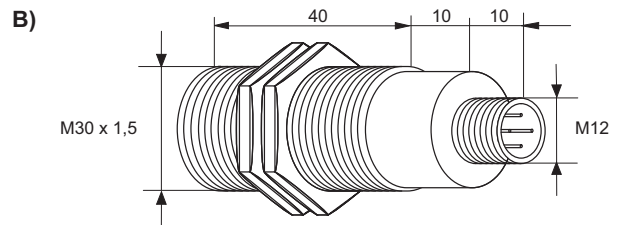
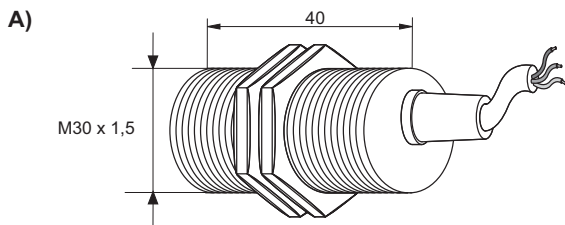
Other cable lengths as requested.



# INDUCTIVE SENSORS NAMUR

## CYLINDER M30

### Dimensions



all data in mm



## INDUCTIVE SENSORS NAMUR

### PRODUCT OVERVIEW

Product group	Designation	Article number	Matchcode	Page
Inductive Namur	KJ1-M8MB30-NA	08317320100	9932-0100	5
Inductive Namur	KJ1-M8MB50-NA-V2	08317320165	9932-0165	5
Inductive Namur	KJ2-M8KN30-NA	08317321600	9932-1600	5
Inductive Namur	KJ2-M8MN30-NA	08317320200	9932-0200	5
Inductive Namur	KJ2-M8KN30-NA-HT	08317321632	9932-1632	5
Inductive Namur	KJ2-M8MN50-NA-V2	08317320265	9932-0265	5
Inductive Namur	KJ2-M12KB30 NA	08317321100	9932-1100	7
Inductive Namur	KJ2-M12MB30-NA	08317320300	9932-0300	7
Inductive Namur	KJ2-M12MB55-NA-V2	08317320365	9932-0365	7
Inductive Namur	KJ4-M12KN30-NA	08317321000	9932-1000	7
Inductive Namur	KJ4-M12MN30-NA	08317320400	9932-0400	7
Inductive Namur	KJ4-M12KN30-NA-HT	08317321032	9932-1032	8
Inductive Namur	KJ4-M12MN50-NA-V2	08317320465	9932-0465	7
Inductive Namur	KJ5-M18KB30-NA	08317321300	9932-1300	9
Inductive Namur	KJ5-M18MB30-NA	08317320500	9932-0500	9
Inductive Namur	KJ5-M18MB50-NA-V2	08317320565	9932-0565	9
Inductive Namur	KJ8-M18KN30-NA	08317321200	9932-1200	9
Inductive Namur	KJ8-M18MN30-NA	08317320600	9932-0600	9
Inductive Namur	KJ8-M18MN50-NA-V2	08317320665	9932-0665	9
Inductive Namur	KJ10-M30KB40-NA	08317321500	9932-1500	11
Inductive Namur	KJ10-M30MB40-NA	08317320700	9932-0700	11
Inductive Namur	KJ10-M30MB60-NA-V2	08317320765	9932-0765	11
Inductive Namur	KJ15-M30KN40-NA	08317321400	9932-1400	11
Inductive Namur	KJ15-M30MN40-NA	08317320800	9932-0800	11
Inductive Namur	KJ15-M30MN60-NA-V2	08317320865	9932-0865	11



## NOTES

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## NOTES

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## NOTES

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