# **KUEBLER - MAGNET SENSOR LI20 WITH MAGNETIC RING RI20**

SERIE 8.LI20

- Robust and able to withstand vibration
- Easy to install
- High resolution
- IP67. Impervious to chips, oil, water, etc.





#### Product description

The combination RI20/LI20 is used to measure length via a rotary shaft, e.g. in woodturning machines, materials handling, overhead cranes, etc. This sensor is more or less totally impervious to chips, oil, dust and water and thus can be used in troublesome environments, it is sealed and has no moving parts. The sensor is fitted to read on a yoke. This yoke is available for shaft dimensions 8-30 mm. There are three different yoke sizes; 31 mm, 41.2 mm and 45 mm.

The yoke RI20 has a pole distance of 2 mm. The distance between the sensor and the yoke should be 0.1 to 1.0 mm (recommended 0.4 mm). For the magnet sensor, the slope must not exceed  $\pm 3^{\circ}$ , the rotation must not exceed  $\pm 3^{\circ}$  and the offset must not exceed  $\pm 1$  mm.

The following information is required to select the right combination:

- voke size
- max. shaft rotation speed (given the frequency to following systems)

Pulses/revolution	Yoke	Magnet sensor	Max. revolutions (rpm)
250	RI20.031.XXXX	LI20.11X1.2005	12000
1000	RI20.031.XXXX	LI20.11X1.2020	2400
2500	RI20.031.XXXX	LI20.11X1.2050	3900
1024	RI20.041.XXXX	LI20.11X1.2016	7000
360	RI20.045.XXXX	LI20.11X1.2005	12000
3600	RI20.045.XXXX	LI20.11X1.2050	2700

Please refer to the images below for ordering information.

Order code Sensor head Limes LI20	8.L120 . X 1 X X . 2 XXX		
Model  1 = IP67, standard  2 = IP68 / IP69k and humidity tested	Type of connection  1 = cable, 2 m [6.56'] PUR  A = radial cable, special length PUR *)	• Reference signal 2 = Index periodical	Stock types 8.LI20.1111.2005 8.LI20.1111.2020
acc. to EN 60068-3-38, EN 60068-3-78  Output circuit / power supply  1 = RS422 / 4.8 26 V DC  2 = Push-pull / 4.8 30 V DC	*) Available special lengths (connection type A): 3, 5, 8, 10, 15 m [9.84, 16.40, 26.25, 32.80, 49.21'] order code expansion .XXXX = length in dm ex.: 8.LI20.111A.2005.0030 (for cable length 3 m)	Interpolation factor 005, 016, 020, 050	8.LI20.1111.2050 8.LI20.1121.2005 8.LI20.1121.2020 8.LI20.1121.2050

## Order code Magnetic ring RI20

8.RI20 . XXX . XXXX . 111

Min. order quantity for non-stock types: 10 pieces

Outer diameter

031 = 31 mm [1.22"] 041 = 41.2 mm [1.62"] 045 = 45 mm [1.77"] Bore diameter

0800 = 8 mm [0.32"] 1800 = 18 mm [0.71"] 0952 = 3/8" 1000 = 10 mm [0.39"] 2000 = 20 mm [0.79"] 1587 = 5/8" 1200 = 12 mm [0.47"] 2500 = 25 mm [0.98"] 3) 2540 = 1" 3)

1500 = 15 mm [0.59"] 3000 = 30 mm [1.18"] <sup>3)</sup>

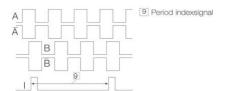
Stock types
8.RI20.031.0800.111
8.RI20.031.1000.111
8.RI20.031.1200.111
8.RI20.031.1500.111
8.RI20.041.0800.111
8.RI20.045.1200.111
8.RI20.045.1500.111
8.RI20.045.2500.111
8.RI20.045.2540.111
8.RI20.045.3000.111

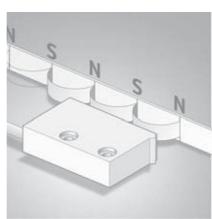
Order code Sensor head Limes LI20	8.L120 . X 1 X X . 2 XXX		
Model     1 - IPSZ, standard     2 - IPSSZ, PDSS and humidity tested soc. to EN 60088-3-36, EN 60088-3-78     Output circuit / prover apply     1 - IRSSZZ, 4.8 - 28 V DC     2 - Paulh-put / 4.8 - 28 V DC	Type of connection Connection Connection Connection Connection Connection Connection Connection type Al D. S. L. 10, 15 m (1941, 16.40, 26.25, 26.96, 46.27) order code expansion. XXXXIII charge is englished on Ex. ELIZB 111A 2005.0030 (for cable length 3 m)	Reference signal     Index periodical     interpolation factor     005, 016, 020, 050	Stock hypes 8.129.1111.2005 8.129.1111.2009 8.129.1111.2050 8.129.1121.2005 8.129.1121.2000 8.129.1121.2000

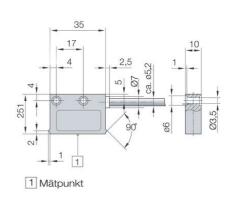
Order code Magnetic ring RI20		XX . XXXX .	111	Min. order o	yuantity for non-stock types: 10 pieces
Outer diameter 031 = 31 mm [1.22"] 041 = 41.2 mm [1.82"] 045 = 45 mm [1.77"]	O Sore diameter 0800 = 8 mm [0.32*] 1000 = 10 mm [0.39*] 1200 = 12 mm [0.71*] 1500 = 15 mm [0.59*]	1800 = 18 mm [0.717] 2000 = 20 mm [0.797] 2000 = 25 mm [0.987] 2000 = 30 mm [1.187] <sup>21</sup>	1587	+ 50° + 50° - 20°	Stock Rypest 8. RECO 031 8000.111 8. RECO 031 8000.111 8. RECO 031 8000.111 8. RECO 031 8000.111 8. RECO 041 8000.111 8. RECO 045 2000.111

#### Pin assignment:

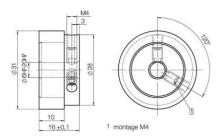
Signal 0 V, GND	Wire colour white
UB	brown
A	green
$\overline{A}$	yellow
В	grey
B	pink
1	blue
Τ	red
Shield is on the housing	







#### Magnetring 8.RI20.031.XXXX.111, ø 31 mm



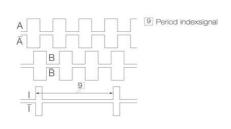
Order code Sensor head Limes LI20	8.LI20 . X 1 X X . 2 XXX		
Model  1 = IPET, standard  2 = IPEE / IPERs and humidity tested ser. to EN 60068-3-38. EN 60068-3-78.	Type of connection  1 = cable, 2 in (6.56") PUR  A = radial cable, special length PUR ")  7 Available special length (connection type A)	Reference signal     Index periodical     Interpolation factor	Stock types 8.1/20.1111.2005 8.1/20.1111.2020 8.1/20.1111.2050
O Output circuit / power supply 1 = 85422 / 4.8 26 V DC 2 = Pash-pull / 4.8 30 V DC	<ol> <li>Available special lengths (connection type Al 2, 5, 8, 10, 15 m (8.64, 16.40, 26.25, 32.80, 49.27) order code expansion. XXXX = length in dm ex: 8.LX23.111A.2005.0030 (for cable length 3 m)</li> </ol>	905, 916, 020, 050	B.LI20.1121.2005 B.LI20.1121.2020 B.LI20.1121.2050

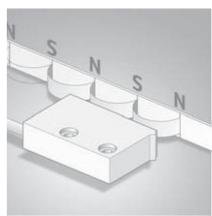
Order code Magnetic ring RI20		XX . XXXX .	111	Min. order o	uartity for non-stock types: 10 pieces
Outer diameter 031 = 31 mm [1.22"] 041 = 41.2 mm [1.82"] 045 = 45 mm [1.77"]	O Sore diameter 0000 = 8 mm [0.32*] 1000 = 10 mm [0.39*] 1200 = 12 mm [0.79*] 1500 = 15 mm [0.59*]	1800 = 18 mm (0.71") 2000 = 20 mm (0.79") 2500 = 25 mm (0.98") <sup>3</sup> 3000 = 30 mm (1.18") <sup>3</sup>	1587	= 36" = 56" = 1" <sup>3</sup>	Stock hypest 8.R2co.dol 8000.111 8.R2co.dol 8000.111 8.R2co.dol 1900.111 8.R2co.dol 1900.111 8.R2co.dol 1900.111 8.R2co.dol 1900.111 8.R2co.dol 1900.111 8.R2co.dol 1900.111 8.R2co.dol 1900.111 8.R2co.dol 1900.111

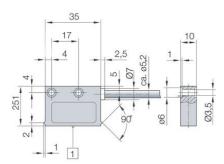
### Pin assignment:

Signal	Wire colour
0 V, GND	white
UB	brown
A	green
Ā	yellow
В	grey
B	pink
1	blue
ī	red

Shield is on the housing







1 Mätpunkt

