

MAIN FEATURES

Measuring wheel series designed for specific industrial applications where is required to measure a linear movement (i.e. continuous sheet cutting machines of wood, textiles, glass, etc.).

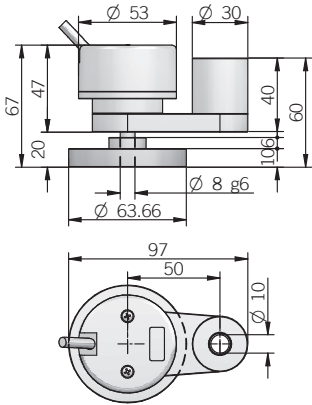
The body is entirely designed of aluminium and mounted using an oscillating arm pivoted on the shaft. It comes with an integrated self-lubricating compact box to assure a long operation period without any maintenance. The weight of the metric wheel keeps a stable contact with the material, allowing an accurate measurement of both length and speed. Wheel surface can be in crossed-knurl aluminium, special anti-oil or anti-sliding rubber.

- 3 channel encoder (A / B / Z) up to 10000 ppr
- Power supply up to +28 VDC with several electronic interfaces available
- Up to 500 kHz output frequency
- Model RM with internal coupling
- Cable or connector output

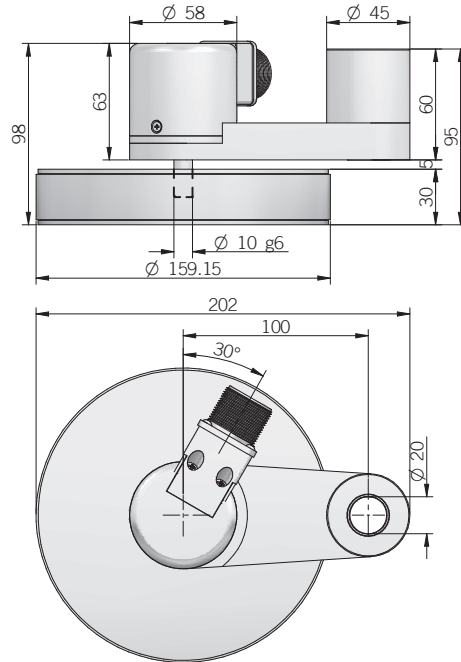


ORDERING CODE	RH200	A	500	S	8/24	N	8	X	3	P	R	.XXX
MODEL 200 mm measuring wheel - RH series RH200 500 mm measuring wheel- RL series RL500 500 mm measuring wheel - RM series RM500												
WHEEL SURFACE smooth A knurled B rubberized C without wheel /												
RESOLUTION (mod. RH) ppr from 50 to 1024 (mod. RL) ppr from 10 to 2500 (mod. RM) ppr from 1 to 10000 <i>see table for pulses availability</i>												
ZERO PULSE without zero pulse S with zero pulse Z												
POWER SUPPLY (with L electronic interface) 5 V DC 5 (with L or PC electronic interface) 8 ... 24 V DC 8/24 (mod. RL / RM) 5 ... 28 V DC 5/28												
ELECTRONIC INTERFACE NPN N NPN open collector C push-pull P (mod. RL / RM) push-pull protected (AEIC-7272) PC line driver L (mod. RL / RM) power supply 5/28V - output RS-422 RS												
SHAFT DIAMETER (mod. RH) mm 8 (mod. RL / RM) mm 10												
ENCLOSURE RATING (mod. RH) IP 54 X (mod. RL / RM) IP 64 X (mod. RL / RM) IP 66 S												
MAX ROTATION SPEED 3000 rpm 3												
OUTPUT TYPE cable (standard length: RH = 0,5 m - RL / RM = 1,5 m) P (mod. RL / RM) MIL connector M (mod. RL / RM) JIS-C-5432 connector J (mod. RL / RM) M12 connector M12 (mod. RL / RM) M23 connector H (mod. RL / RM) IP40 IEC 60130-9 connector C <i>female connector included, without female please add 162 as variant code</i>												
DIRECTION TYPE axial A radial R												
VARIANT custom version XXX												

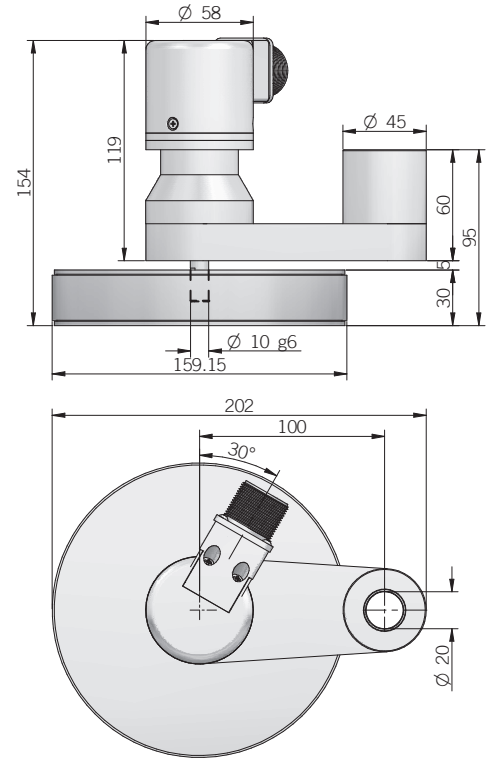
RH 200 A / B / C



RL 500 A / B / C



RM 500 A / B / C



dimensions in mm

ELECTRICAL SPECIFICATIONS (RH SERIES)	
Resolution	from 50 to 1024 ppr
Power supply	5 = 4,5 ... 5,5 V DC 8/24 = 7,6 ... 25,2 V DC
Current consumption without load	100 mA max
Max load current	N / C / P = 50 mA / channel L = 20 mA / channel
Output type*	NPN / NPN open collector / push-pull / line driver
Max output frequency	100 kHz
Counting direction	A leads B clockwise (shaft view)
Electromagnetic compatibility	IEC 61000-6-2 IEC 61000-6-4

ELECTRICAL SPECIFICATIONS (RL SERIES)	
Resolution	from 10 to 2500 ppr
Power supply	5 = 4,5 ... 5,5 V DC 5/28 = 4,75 ... 29,4 V DC 8/24 = 7,6 ... 25,2 V DC (reverse polarity protection)
Power draw without load	800 mW
Max load current	N / C / P / PC = 50 mA / channel L = 20 mA / channel
Output type*	NPN / NPN open collector / push-pull / line driver
Max output frequency	220 kHz
Counting direction	A leads B clockwise (shaft view)
Electromagnetic compatibility	IEC 61000-6-2 IEC 61000-6-4

ELECTRICAL SPECIFICATIONS (RM SERIES)	
Resolution	from 1 to 10000 ppr
Power supply	5 = 4,5 ... 5,5 V DC 5/28 = 4,75 ... 29,4 V DC 8/24 = 7,6 ... 25,2 V DC (reverse polarity protection)
Power draw without load	800 mW
Max load current	N / C / P / PC = 50 mA / channel L = 20 mA / channel
Output type*	NPN / NPN open collector / push-pull / line driver
Max output frequency	250 kHz up to 6000 ppr 500 kHz from 7200 ppr
Counting direction	A leads B clockwise (shaft view)
Electromagnetic compatibility	IEC 61000-6-2 IEC 61000-6-4

*output levels according to power supply, for further details please see under Technical basics section

MECHANICAL SPECIFICATIONS

Shaft diameter	∅ 8 / 10 mm
Enclosure rating	IP 54 / IP 64 / IP 66 (IEC 60529)
Max rotation speed	3000 rpm
Shock	50 G, 11 ms up to 2500 ppr (IEC 60068-2-27)
Vibration	10 G, 10 ... 2000 Hz (IEC 60068-2-6)
Starting torque (at +20°C / +68°F)	mod. RH 200 < 0,01 Nm mod. RL / RM IP64 < 0,03 Nm mod. RL / RM IP66 < 0,06 Nm
Body material (mod.RL / RM)	EN-AW 2011 aluminum
Housing material	PA66 glass fiber reinforced
Shaft material	1.4305 / AISI 303 stainless steel
Support material	EN-AW 2011 aluminum
Wheel material	EN-AW 2011 aluminum (mod. RH) EN AB 43100 (mod. RL / RM)
Bearings	2 ball bearings 2 ball bearings on support (mod. RM)
Bearings life	10 ⁹ revolutions
Operating temperature	-10° ... +70°C (+14° ... +158°F)
Storage temperature	-25° ... +70°C (-13° ... +158°F)
Encoder + support weight	250 g (8,82 oz) mod.RH 1000 g (35,27 oz) mod. RL / RM
Wheel weight	100 g (3,53 oz) mod. RH 800 g (28,22 oz) mod. RL / RM

RH SERIES RESOLUTIONS

50* - 100 - 200 - 250 - 400 - 500 - 512 - 1000 - 1024

**available only without zero pulse*

RL SERIES RESOLUTIONS

10 - 20 - 50 - 100 - 150 - 200 - 250 - 300 - 360 - 400 - 500 - 512 - 600 - 720 - 1000 - 1024 - 1200 - 1440 - 2000 - 2048 - 2500

RM SERIES RESOLUTIONS

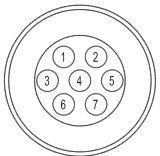
1 - 2 - 4 - 5 - 10 - 15 - 16 - 20 - 25 - 30 - 32 - 40 - 50 - 60 - 70 - 80 - 90 - 100 - 120 - 128 - 150 - 200 - 240 - 250 - 256 - 300 - 360 - 400 - 480 - 500 - 512 - 600 - 625 - 720 - 750 - 800 - 900 - 1000 - 1024 - 1200 - 1250 - 1440 - 1500 - 1600 - 1800 - 2000 - 2048 - 2500 - 3000 - 3600 - 4000 - 4096 - 5000 - 6000 - 7200 - 8000 - 8192 - 9000 - 10000

please directly contact our offices for other pulses, preferred resolutions in bold

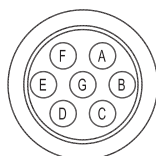
CONNECTIONS

Function	Cable output	Cable output	7 pin J output	7 pin J output	7 pin M output	7 pin M output	10 pin J output	10 pin M output	5 pin M12 output	8 pin M12 output	12 pin H output	5 pin C output	8 pin C output
	N / C / P / PC	Line driver	N / C / P / PC	Line Driver no Zero	N / C / P / PC	Line Driver no Zero	Line Driver with Zero	Line Driver with Zero	N / C / P / PC	Line Driver	CCW	N / C / P / PC	Line Driver
+V DC	red	red	6	4	F	D	4 - 5	D - E	2	7	12	5	7
0 V	black	black	1	6	A	F	6	F	4	1	10	1	8
Ch. A	green	green	3	1	C	A	1	A	3	6	5	2	1
Ch. A-	/	brown	/	3	/	C	7	G	/	5	6	/	2
Ch. B	yellow	yellow	5	2	E	B	2	B	1	4	8	4	3
Ch. B-	/	orange	/	5	/	E	8	H	/	3	1	/	4
Ch. Z	blue	blue	4	/	D	/	3	C	5	2	3	3	5
Ch. Z-	/	white	/	/	/	/	9	I	/	8	4	/	6
⊥	shield	shield	7	7	G	G	10	J	housing	housing	9	/	/

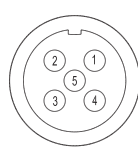
J connector (7 pin)
JIS-C-5432 Size 16
solder side view FV



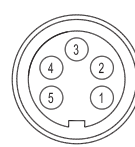
M connector (7 pin)
Amphenol MS3102-E-16-S
solder side view FV



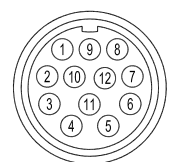
M12 connector (5 pin)
M12 A coded
solder side view FV



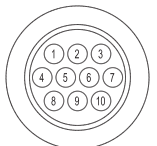
C connector (5 pin)
IEC 60130-9
solder side view FV



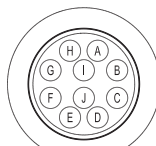
H connector (12 pin) - M23 CCW
Hummel 7.410.000000 -
7.002.912.603
solder side view FV



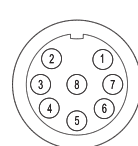
J connector (10 pin)
JIS-C-5432 Size 16
solder side view FV



M connector (10 pin)
Amphenol MS3102-E-18-1
solder side view FV



M12 connector (8 pin)
M12 A coded
solder side view FV



C connector (8 pin)
IEC 60130-9
solder side view FV

