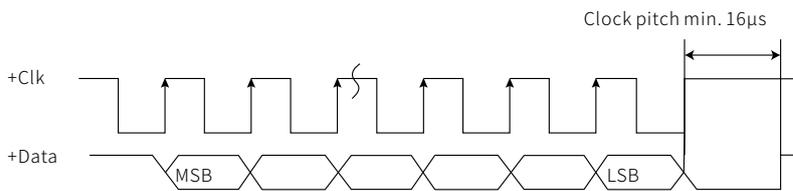




CH2-SSI

CH2 Series

Data Sheet



- + Durust: fully enclosed design with maximum IP69K protection
- + Easy to use, standard signal output, maintenance-free
- + Non-contact measurement, no attrition
- + Standard SSI signal can directly replace the encoder
- + Resolution highest up to 0.5µm
- + Digital technology: instant response, stable and reliable



Input	Measured data	Position													
	Measurement range	50...4500mm													
Output	Interface	SSI synchronous serial interface													
	Date format	Binary or Grey code, parity check and alarm bit optional													
	Data length	8...32 bit													
	Data speed	70kBd...1MBd depending on voltage length:													
		<table border="1"> <tbody> <tr> <td>Stroke length(m)</td> <td>< 3</td> <td>< 50</td> <td>< 100</td> <td>< 200</td> <td>≤ 400</td> </tr> <tr> <td>Baud rate(kBd)</td> <td>1000</td> <td>< 400</td> <td>< 300</td> <td>< 200</td> <td>< 100</td> </tr> </tbody> </table>	Stroke length(m)	< 3	< 50	< 100	< 200	≤ 400	Baud rate(kBd)	1000	< 400	< 300	< 200	< 100	
	Stroke length(m)	< 3	< 50	< 100	< 200	≤ 400									
Baud rate(kBd)	1000	< 400	< 300	< 200	< 100										
	<table border="1"> <tbody> <tr> <td>Update frequency</td> <td>Stroke length(mm)</td> <td>< 300</td> <td>< 750</td> <td>< 1000</td> <td>< 2000</td> <td>≤ 5600</td> </tr> <tr> <td></td> <td>Update frequency (kHz)</td> <td>3.7</td> <td>3.0</td> <td>2.3</td> <td>1.2</td> <td>0.5</td> </tr> </tbody> </table>	Update frequency	Stroke length(mm)	< 300	< 750	< 1000	< 2000	≤ 5600		Update frequency (kHz)	3.7	3.0	2.3	1.2	0.5
Update frequency	Stroke length(mm)	< 300	< 750	< 1000	< 2000	≤ 5600									
	Update frequency (kHz)	3.7	3.0	2.3	1.2	0.5									
Resolution	Position resolution	0.5/1/2/5/10/20/50/100μm													
	None-Linearity	< ±0.02%F.S.(min. ±50μm)													
	Repeatability	< ±0.002%F.S.(min. ±20μm)													
	Temperature coefficient	< 30ppm/°C													
Mounting	Mounting position	Any													
	Thread	Metric M18x1.5, metric M20x1.5, 3/4"-16UNF-3A													
Design/ Material	Electronics housing	Stainless steel 304													
	Measuring rod	Stainless steel 304/316L													
	Operating pressure ratings	35MPa (continuous) ,70MPa (peak)													
Electrical connection	Wiring connection	Straight out cable or 7 pin M16 aviation plug													
	Operating voltage	+24VDC(-15/+20%)													
	Polarity protection	Up to -36VDC													
	Overvoltage protection	Up to +36VDC													
	Power consumption	< 90mA (varies with range size)													
	Dielectric strength	500 VDC (DC ground to machine ground)													
Operating conditions	Magnet velocity	Any													
	Operating temperature	-40...85°C													
	Humidity	90 % relative humidity, no condensation													
	Ingress protection	IP67 (when connector is fitted)/IP68 (straight out cable) IP69K(special customization)													
	Shock	100 g (single shock) IEC standard 60068-2-27													
	Vibration	15g/10...2000 Hz, IEC standard 60068-2-6 (resonant frequencies excluded)													
	EMC	Electromagnetic emission according to EN 61000-6-3 Electromagnetic immunity according to EN 61000-6-2													

ITEM

CATEGORY

PARAMETER

CH2- ____ - **RP** - ____ **Straight out cable**

Color	● Brown	○ White	● Yellow	● Green	● Grey	● Pink
Function	+24VDC (-15/+20%)	0V(GND)	Clock+	Clock-	Data-	Data+

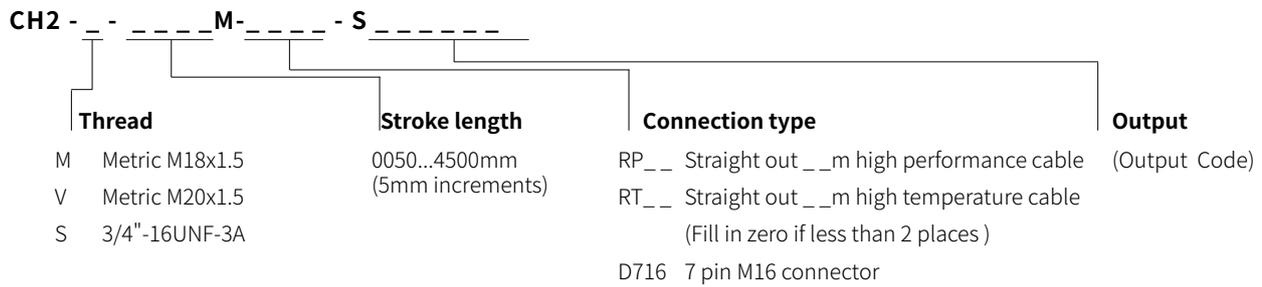
CH2- ____ - **D716** - ____ **7 pin M16 connector**

PIN-Male	1	2	3	4	5	6	7
Function	Data-	Data+	Clock+	Clock-	+24VDC (-15/+20%)	0V(GND)	NC

View on sensor

ORDER CODE

TECHNOLOGY PERCEIVES THE FUTURE



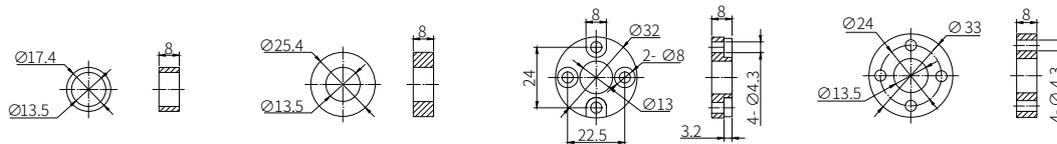
SSI Output Code	S [1][2][3][4][5][6]					
[1] Function	[2] Options	[3] Mode	[4] Data length	[5] Format	[6] Resolution	
1 Position	0 Standard	1 Forward, asynchronous mode	1 25 bit	B Binary	1 5µm	
	1 Internal linearization	2 Reverse, asynchronous mode	2 24 bit	G Gray	2 10µm	
		3 Forward, synchronous mode	3 26 bit		3 50µm	
		4 Reverse, synchronous mode	A 24 bit + alarm bit + parity check bit			4 100µm
						5 20µm
						6 2µm
						8 1µm
					9 0.5µm	

Note: forward, data grows larger when the magnet is distant from the electronics housing;
reverse, data grows larger when the magnet approaches the electronics housing.

Model selection	Model: CH2-M-0800M-RP05-S1011G1
	Explanation: CH2 series, integrated pressure resistance outer tube type, mounting thread metric M18x1.5, stroke length 800mm, straight out 5m high performance cable, position measurement, standard, forward, asynchronous mode, 25 bit, Gray, resolution 5µm.

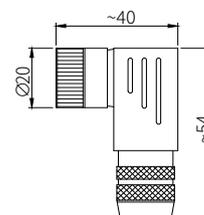
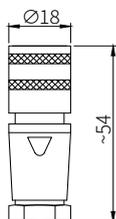
PARTS SELECTION

TECHNOLOGY PERCEIVES THE FUTURE



Name	Ring magnet	Ring magnet	Ring magnet	Ring magnet
Operating temperature	-40...125°C			
Order code	12-1032	12-1019	12-1024	12-1001

Fitting non-permeable gasket				
Name	Non-permeable gasket	Non-permeable gasket	Non-permeable gasket	Non-permeable gasket
Operating temperature	-40...125°C			
Order code	12-1037	12-1021	12-1025	12-1008



Name	7 pin M16 female connector	7 pin M16 female connector (90 degree angle)
End view drawing		
Material	Galvanized nickel	
Fitting diameter	6...8mm	
Connection	Welding	
Order code	18-4001	18-4002

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