

Option/Accessories/Supplementary Data

Explosion Proof Option

Explosion Proof Type	Approved Sensors
Explosion proof ATEX Ex nA II C T4 Gc	RH-Analog RH-CANbus RH-SSI RP-Analog RP-CANbus RH-SSi GH-Analog GH-Start/Stop GP-Analog GP-Start/Stop
Pressure-resistant and explosion-proof ATEX Ex d II C T5 Tamb -40°C to +60°C UL Class1, Division1, Group A, B, C and D with High Pressure Housing (HPH) IP68	RH-Analog RH-Profibus RH-CANbus RH-SSi RH-DeviceNet GH-Analog GH-Start/Stop GH-PWM
Explosion-proof TIIS Ex d II B H2T6	RH-Analog Current 4-20mA
Intrinsically safe ATEX EEx ia II A T4 (Liquid Level) ATEX EEx ia II B T4 (Liquid Level) TIIS Ex ia II T4 (Liquid Level)	Liquid Level Transmitters

Waterproof Option

Waterproof Housing
Protection : IP68, IP69K
Material : 304 SS or 316L SS
Application : RH-Analog/Profibus/SSI/CANbus/ DeviceNet/EtherCAT/ GH-Analog/Digital

Multi Position Magnet

Model	R-Analog	R-SSI	R-CANbus/R-Profibus/R-EtherCAT/EtherNet/IP	R-Profinet	G-Start/Stop
Number of Magnet	2	Differential measurement between 2 magnets	20	19	9

Cable Extension Option

Model	R-SSI					R-CANbus				R-DeviceNet		
Data Speed	1MBd	400kBd	300kBd	200kBd	100kBd	1.0MBd	500kBd	250kBd	125kBd	500kBd	250kBd	125kBd
Max Length	3m	50m	100m	200m	400m	25m	100m	250m	500m	100m	250m	500m

Model	R-Profibus					G-Analog	G-Start/Stop, PWM
Data Speed	12MBd	1.5MBd	500kBd	187.5kBd	93.75kBd	—	—
Max Length	100m	200m	400m	1000m	1200m	45m	90m

Resolution for Velocity Measurement









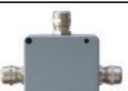


Resolution	R-Analog	R-CANopen	R-CANbasic	R-EtherCAT	R-Profibus		R-SSI
0.1mm/s 0.01mm/s (Option)		0.5mm/s (5μm)	1.0mm/s (5μm)	1μm/s (Stroke dependent)	up to 500mm 0.64mm/s	up to 4500mm 0.21mm/s	velocity over 10 measured values: 0.1 mm/s at 1 ms cycle time
		0.2mm/s (2μm)	0.1mm/s (2μm)		up to 2000mm 0.43mm/s	up to 7600mm 0.14mm/s	

Update Time/Sampling Rate



Model	Measuring Length (mm)											
	300	500	750	1000	1200	2000	2400	4500	4800	5000	7600	
R-Analog	0.5ms 2KHz				1ms 1KHz		2ms 0.5KHz		5ms 0.2KHz			
R-CANbus	0.5ms 2KHz (up to 1200 mm for CANbasic only), 1ms 1KHz (25-2400mm)								2ms 0.5KHz		4ms 0.25KHz	
R-DeviceNet	0.5ms 2KHz				1ms 1KHz		2ms 0.5KHz		4ms 0.25KHz			
R-EtherCAT	Stroke dependent											
R-EtherNet/IP	2ms 0.5KHz								4ms 0.25KHz			
R-Profibus	0.5ms 2KHz		1ms 1KHz			2ms 0.5KHz		3.1ms 0.32KHz				
R-SSI *	0.27ms 3.7KHz	0.33ms 3KHz	0.43ms 2.3KHz	0.83ms 1.2KHz	2ms 0.5KHz							
GH/GP-Analog	<1ms typ >1KHz											
GH/GP-Digital	max 2800m/s measuring length, controller dependent, e.g. 1200mm 0.42ms 2.4KHz+controller processing time											
GT	<1ms typ >1KHz up to 2900mm											
GBS	0.5ms				1ms		2ms up to 3250mm					
E-Analog	<3KHz up to 2500mm (ER : up to 1500mm)											
E-Start/Stop	max 2800m/s measuring length, controller dependent up to 3000mm											
C-Series	2ms 500Hz											

* 10KHz synchronous mode option

Programmer/Display

Product	Function	Application
 Hand-Held Programmer 253124 (R-Analog) 253853 (G-Analog)	Null/Span adjustment in the field	R-Analog G-Analog
 USB-Programmer Analog Incl. power supply, USB-cable, sensor-cable and software 253134-1 (R-Analog) 253145-1 (G-Analog)	Null/Span adjustment Velocity range Assignment of output to measured position or velocity Error output value	R-Analog G-Analog
 USB-Programmer SSI Incl. power supply, USB-cable, sensor-cable and software 253135-1	Data length, data format, resolution, measuring direction Synchronous / asynchronous measurement, offset position Error, measurement filter, differential measurement	R-SSI GB-SSI
 USB-Programmer Start/Stop, PWM Incl. power supply, USB-cable, sensor-cable and software 253146-1	Start/Stop, PWM parameter setup	G-Start/Stop, PWM
 Profibus Address Programmer Kit 280640	Slave address setup	R-Profibus
 CANopen Address Programmer 252382-D62 (for M16 connector) 252382-D62A (for M16 90° connector)	Node-address setup	R-CANopen
 Cabinet-Programmer 253408	Null/Span adjustment 35mm DIN rail mounting	R-Analog
 Profibus Master Simulator 401727	Sensor function check Slave address change Magnet positions and diagnostic data read out	R-Profibus
 Profibus Filter Box 252916	24VDC power supply filter EMC	R-Profibus
 M-Series Analog/PWM/CAN Test Kit (charge type) Incl. AC adapter, cable, case and software 280618 (Analog/PWM) 254267 (CAN)	Input voltage signal 0-10V, input current signal 4-20mA PWM/CAN signal input Power supply output for 5V/12V sensor	M-Analog, PWM, CAN
 IX345 6-segment LED SSI Display Built-in power supply IX345	SSI signal input Input voltage: AC115-230V Measured value display Power supply output for 24V sensor	R-SSI

Interface

 SSI Interface (Serial-Parallel Conversion) SSI-1016EC (NPN) SSI-1016G (PNP)	Input voltage : 24VDC Input signal : SSI (24/25/26bit Binary/Gray) Output signal : Parallel (open collector)	R-SSI
 AK288 (Start/Stop-Analog Conversion) AK288	Input voltage : 24VDC Input signal : Start/Stop Output signal : Analog (voltage 0-10V, current 4-20mA)	G-Start/Stop

Option/Accessories

Magnet/Float

	Model/Parts No	Dimension	Features	RH	RP	RD4	RF	GH	GP	GT	GB	EP/EL	EP2	EH	MH	MT	MS	CS/CM	CS/CM H2
	Ring Magnet M 201542-2	32.8x7.9x13.5mm (OD x height x ID)	Material : PA-Ferrite GF20 Weight : 14g Temp. : -40 to +100°C	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	U-Magnet 251416-2	32.8x7.9x13.5mm (OD x height x ID)	Material : PA-Ferrite GF20 Weight : 11g Temp. : -40 to +100°C	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	U-Magnet OD63.5 201553	63.5x9.5x19mm (OD x height x ID)	Material : PA-66GF30 Weight : 26g Temp. : -40 to +75°C	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Ring Magnet OD25.4 400533	25.4x7.9x13.5mm (OD x height x ID)	Material : PA-Ferrite Weight : 10g Temp. : -40 to +100°C	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Ring Magnet OD30.5 402316	30.5x7.6x19.8mm (OD x height x ID)	Material : PA-Ferrite Weight : 13g Temp. : -40 to +100°C	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Ring Magnet OD17.4 401032	17.4x7.9x13.5mm (OD x height x ID)	Material : PA-Neonbond Weight : 5g Temp. : -40 to +100°C	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Ring Magnet OD60 MT0162	60x15x30mm (OD x height x ID)	Material : Al CuMgPb Weight : 90g Temp. : -40 to +75°C	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Ring Magnet OD28 400424	28x4.7x19.3mm (OD x height x ID)	Material : PA-Ferrite Weight : 6g Temp. : -40 to +100°C	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Ring Magnet 401468	38x11x33mm (OD x height x ID)	Material : PA-Ferrite Weight : 17g Temp. : -40 to +100°C	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	System Magnet 253928	22x28x13.1mm (OD x height x ID)	Material : POM Weight : 14g Temp. : -40 to +75°C	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Ring Magnet OD20 254012	20x10.5x13.5mm (OD x height x ID)	Material : PA-Neonbond Weight : 8.5g Temp. : -40 to +75°C	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	U-Magnet 252185	37.5x12x70mm (length x height x width)	Material : AlMg 4.5Mn-black anodised Weight : 125g Temp. : -40 to +75°C	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Bar Magnet 251298-2	20.3x7.4x28mm (length x height x width)	with stainless steel cover Contact Factory	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Ring Magnet OD9 401842	9x9x6.5mm (OD x height x ID)	Contact Factory	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Magnet Slider V 252184	25.3x40 (exclude joint) (height x width)	Material : GFK, Hardferrite Weight : 35g Temp. : -40 to +75°C	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Magnet Slider S 252182	25.3x40 (exclude joint) (height x width)	Material : GFK, Hardferrite Weight : 35g Temp. : -40 to +75°C	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Magnet Slider G 253421	25.3x40 (exclude joint) (height x width)	Material : GFK, Hardferrite Weight : 25g Temp. : -40 to +75°C backlash free	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Magnet Slider P 253673	25.3x44 (exclude joint) (height x width)	Material : GFK, Hardferrite Weight : 38g Temp. : -40 to +75°C with end plates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Block Magnet L 403448	20.5x33x14mm (height x width x thickness)	Material : Polycarbonate Hardferrite Weight : 20g Temp. : -40 to +75°C	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Float 50mm 251447	51x53x14mm (OD x height x ID)	Material : SS SG : 0.72 Pressure : 6MPa Weight : 42g±3g	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Wide Float 201611	28.6x30x9.5mm (OD x height x ID)	Contact Factory	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Slim Float 201656	22x33x6mm (OD x height x ID)	Contact Factory	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

○=MTS recommend

Level Float

	Model/Parts No.	Dimension OD x Height x ID	Magnet Offset	Pressure MPa	Temp.	Specific Gravity	Material	Weight offset
	Standard Float 251981-X	47x77x18	No	2.93	149°C	0.65/0.67/0.68/0.71	SS or Hastelloy C	Yes/No
	Standard Float 251387-X	59x57x18	No	2.24	149°C	0.48	SS	Yes/No
	Standard Float 200938-X	41x36x18	No	0.86	149°C	0.74	SS	Yes/No
	Standard Float 252354	55x50x18	No	5.17	149°C	0.74	SS	No
	Standard Float 201605-2	47x54x18	Yes	0.4	149°C	0.6	SS	Yes
	Standard Float 201693-1	45x79x18	Yes	2.93	149°C	0.45	Aluminum	No
	Standard Float 251469-X	89x91x18	No	2.93	149°C	0.43/0.45	SS	Yes/No
	Low-Liftoff Float 252228-3	101x76x18	Yes	0.86	149°C	0.65	SS	No
	Standard Interface Float 251982-X 251983-X	47x77x18	No	2.93	149°C	0.9-0.96 1.03-1.1	SS or Hastelloy C	Yes/No
	Standard Interface Float 201606-2	47x31x18	Yes	0.4	149°C	0.85-0.9	SS	Yes
	Sanitary Float 401513-X	47x108x18	Yes	1.03	149°C	0.66	SS 200 Grit/Ra25 or SS 240Grit/Ra15	Yes/No
	Sanitary Float 200931-X	60x75x18	Yes/No	2.24	149°C	0.63	SS 200 Grit/Ra25 or SS 240Grit/Ra15	Yes/No
	Sanitary Float 252228-1	92x102x18	Yes	0.86	149°C	0.48	SS 240 Grit/Ra15	No
	Sanitary Float 251234-X	51x50x18	No	2.24	149°C	0.74	SS 200 Grit/Ra25	Yes/No
	Sanitary Float 560564-2	80x73x23	Yes	6.4	149°C	0.83-0.86	SS 240 Grit/Ra15	Yes
	Teflon Float 201109 251115 251116	61x76x18	Yes	0.17	38°C	0.86 0.9-0.95 1.04-1.11	Teflon	No
	Teflon Float 251939	49x135x18	No	0.17	38°C	0.86	Teflon	No
	Teflon Float 251119 251120	115x115x28	Yes	0.17	38°C	0.9-0.95 1.04-1.11	Teflon	No
	NITROPHYL Float 2016XX-X	31x76x18	Yes	1.72	104°C	0.4/0.45 0.8-0.86 0.91-0.96	NITROPHYL	Yes/No
	Long-Gauge Float 25296X-X	92x88x28	Yes/No	2.93	149°C	0.54/0.65 0.9-0.96 1.03-1.1	SS or Hastelloy C	Yes/No
	Long-Gauge Float 201XXX-X 252XXX-X	130x127x28	Yes/No	3.79	149°C	0.44/0.52 0.9-0.96 1.03-1.1	SS or Hastelloy C	Yes/No
	Long-Gauge Float 25142X-X	178x178x48	No	1.72	149°C	0.44/0.47 0.9-0.96 1.03-1.1	SS or Hastelloy C-22	Yes/No
	Long-Gauge Float 20123X-X	70x127x28	No	2.24	149°C	0.66 0.7 0.92-0.96	SS or Hastelloy C	Yes/No

SS=SUS316L 12