R												S									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22

(for advanced options)

SENSOR MODEL = R [ ] 1-2

RP = Profile style

RH = Hydraulic rod style

HOUSING STYLE = [ ] 3

Model RP profile-style sensor (includes one magnet):

S = Captive-sliding magnet with ball joint at top (part no. 252182)

V = Captive-sliding magnet with ball joint at front (part no. 252184)

M = Open-ring magnet (Part no. 251416-2)

Model RH rod-style sensor (magnet(s) must be ordered separately):

T = US customary threads, raised-faced flange and pressure tube, standard

U = Same as option 'T', except uses fluoroelastomer seals for the electronics housing

B = Sensor cartridge only (no flange and pressure tube, stroke length < 1830 mm (72 in.))

S = US customary threads, flat-faced flange and pressure tube, standard

H = Same as option 'S', except uses fluoroelastomer seals for the electronics housing

M = Metric threads, flat-faced flange and pressure tube, standard

V = Same as option 'M', except uses fluoroelastomer seals for the electronics housing

STROKE LENGTH = [ ][ ][ ][ ][ ] 4-8

_ _ _ _ **M** = Millimeters
(Encode in 5 mm increments)

_ _ _ . _ **U** = Inches and tenths
(Encode in 0.1 in. increments)

Stroke Length Notes:

1. Profile-style sensor (model RP) stroke range = 25 mm (1 in.) - 5080 mm. (200 in.)
2. Rod-style sensor (model RH) stroke range = 25 mm (1 in.) - 7620 mm (300 in.

CONNECTION TYPE = [ ][ ][ ] 9-11

Integral connector:

D70 = 7-pin DIN (M16), male, standard

MSO = 10-Pin MS style, male

Integral cables:

P _ _ = Integral high-performance cable, orange jacket with pigtail termination

E _ _ = Integral cable, PVC jacket, pigtail termination, standard

F _ _ = Integral cable, black polyurethane jacket with pigtail termination

Cable length:
Encode in feet if using US customary stroke length
Encode in meters if using metric stroke length

→ _ _ = 3 (**03**) to 98 (**98**) ft. *or* 1 (**01**) to 30 (**30**) meters.

Cable Length Note:

MTS recommends the maximum integral cable length to be 10 meters (33 ft.). Cables greater than 10 m (33 ft.) in length are available, however, proper care must be taken during handling and installation.

INPUT VOLTAGE = [ ] 12

1 = +24 Vdc (+20% - 15%)

A = Same as option "1" except includes the High Vibration-Resistant (HVR) option for Model RH only, limited to stroke range = 25 mm (1 in.) - 2000 mm (78.7 in.), Refer to *'HVR Option Note'*.

HVR Option Note:

The High Vibration-Resistant (HVR) option provides the model RH rod-style sensors with increased resistance to shock and vibration for use in heavy duty machinery. Refer to "G-Series and R-Series Sensors for High Shock and Vibration Applications", document part no.: 551073 for more information.

OUTPUT *(13 - 19)*
S *+ the 6 digit Output code defined (Continue to the next page)*
OPTIONAL ADVANCED OUTPUTS *(18- 22)*
99 *+ the 3 digit Output code defined (Continue to the next page)*

R-Series Models RP and RH Sensors
Ordering information

R											S									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22

Optional Advanced Outputs

OUTPUT *(13 - 19)*
***S** + the 6 digit Output code*

= | S | | | | | | | **13-19**
13 14 15 16 17 18 19

[14] Data length
- **1** = 25 bits
- **2** = 24 bits
- **3** = 26 bits

[15] Output Format
- **B** = Binary
- **G** = Gray code

[16] Resolution
- **1** = 0.005 mm
- **2** = 0.01 mm
- **3** = 0.05 mm
- **4** = 0.1 mm
- **5** = 0.02 mm
- **6** = 0.002 mm
- **8** = 0.001 mm
- **9** = 0.0005 mm

[17] Filtering Performance
- **1** = Standard, no filter
- **A** = No filter + error delay (4 cycles)
- **C** = No filter + error delay (8 cycles)
- **D** = No filter + error delay (10 cycles)
- **G** = Noise reduction filter (8 values) + error delay (10 cycles)
- **K** = Peak reduction filter (8 values)
- **N** = Peak reduction filter (8 values) + error delay (10 cycles)

[18] [19] Signal Options (scale orientation)
- **00** = Measuring direction forward, async
- **01** = Measuring direction reverse, async
- **02** = Measuring direction forward, sync1
- **05** = Measuring direction forward, bit-25 = Alarm, bit-26 = Parity even, (select data length 24 bits)
- **16** = Measuring direction forward, LCO
- **99** = **Advanced output options (Enter 99 and an additional 3 character suffix as shown below for boxes 18-22). Advanced outputs are optional and are not required to complete a valid model number.**

OPTIONAL ADVANCED OUTPUTS *(18- 22)*
***99** + 3 digit Output code*

= | 9 | 9 | | | | **18-22**
18 19 20 21 22

[20] Measurement Contents
- **1** = Position
- **2** = Position difference between 2 magnets
- **3** = Velocity
- **4** = Position + temperature
- **5** = Position difference between 2 magnets + temperature
- **6** = Velocity + temperature

[21] Direction and Sync Mode
- **1** = Forward async
- **2** = Forward sync1
- **3** = Forward sync2
- **4** = Forward sync3
- **5** = Reverse async
- **6** = Reverse sync1
- **7** = Reverse sync2
- **8** = Reverse sync3

[22] Linearity Correction Option (LCO) and Communication Diagnostics
- **0** = No further option
- **1** = LCO
- **2** = Additional alarm bit + even parity bit
- **4** = Additional alarm bit + even parity bit + LCO