Temposonics®

Magnetostrictive, Absolute, Non-contact
Linear-Position Sensor Accessories

Includes Installation, Mounting and Application References

Current Production and Retrofit Options for
R-Series, G-Series and E-Series Sensors

MTS SENSORS

Accessories

Document Part Number
550929 Revision C

ROD-STYLE SENSOR MOUNTING

- R-Series Model RH Rod-Style Sensor
- R-Series Model RF Flexible Sensor
- R-Series Model RD4 Rod-Style Sensor
- G-Series Model GH Rod-Style Sensor
- R-Series Models GT2 and GT3 Redundant Rod-Style Sensors

PROFILE-STYLE SENSOR MOUNTING

- R-Series Model RP Profile-Style
- G-Series Model GP Profile-Style
- E-Series Model EP Profile-Style Sensor

ROD-AND-CYLINDER STYLE SENSOR MOUNTING

- E-Series Model ER Rod-and-Cylinder Sensor

MAGNET AND FLOAT COMPATIBILITY CHART

- R-Series Rod and Profile Style Sensors
- G-Series Rod and Profile-Style Sensors

MAGNET SELECTIONS ROD-STYLE SENSORS

- R-Series Sensors
- G-Series Sensors
- E-Series Rod-and-Cylinder Sensor

MAGNET SELECTIONS PROFILE-STYLE SENSORS

- R-Series Sensors
- G-Series Sensors
- E-Series Sensors

EXTENSION CABLE OPTIONS

- Cable length limitations
- R-Series Sensors
- G-Series Sensors
- E-Series Sensors

ADAPTER CABLE RETROFIT OPTIONS

- Temposonics II Sensors
- L-Series Sensors
- R-Series Sensors
- G-Series Sensors

CONNECTORS (CURRENT PRODUCTION SENSORS)

- R-Series Sensors
- G-Series Sensors
- E-Series Rod-and-Cylinder Sensor

CONNECTORS, LEGACY PRODUCT RETROFITS

- L-Series Sensors
- G-Series Sensors
- R-Series Sensors

PRESSURE HOUSING ORDERING INFORMATION

- Models RH and GH Rod-Style Sensors

MECHANICAL END CONNECTORS

- G-Series Sensors
- R-Series Sensors

OPTIONAL EXTENSION RODS

INSTALLATION HARDWARE

- R-Series Sensors
- G-Series Sensors
- E-Series Sensors

FIELD PROGRAMMING

- R-Series Sensors
- G-Series Sensors

Model RH Rod-Style sensor mounting

The position magnet requires minimum distances away from ferrous metals to allow proper sensor output. The minimum distance from the front of the magnet to the cylinder end cap is 15 mm (0.6 in.).

The minimum distance from the back of the magnet to the piston head is 3.2 mm (0.125 in.). The non-ferrous spacer (part no. 400633), provides this minimum distance when used along with the standard ring magnet (part no.: 201542-2).

For applicable magnet selections, refer to the ***Compatibility Chart*** *on page 7.*

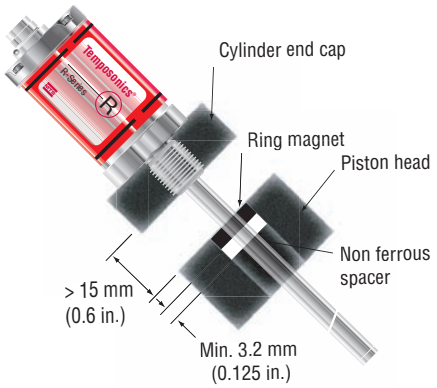


Figure 1. Model RH rod-style mounting

MODEL RH CYLINDER INSTALLATION

When used for direct-stroke measurement in fluid cylinders, the sensor's high pressure, stainless steel rod installs into a bore in the piston head/rod assembly as illustrated. This method guarantees a long-life and trouble-free operation.

The sensor cartridge can be removed from the flange and rod housing while still installed in the cylinder. This procedure allows quick and easy sensor cartridge replacement, without the loss of hydraulic pressure.

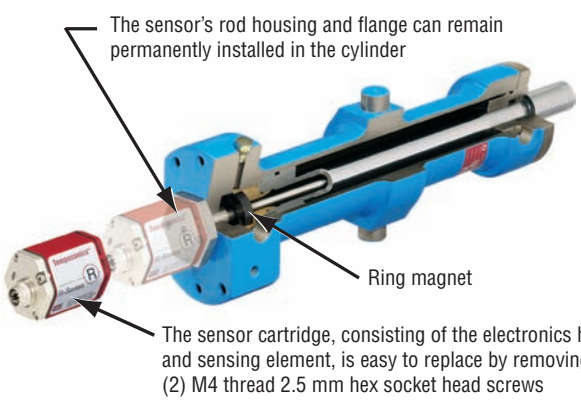


Figure 2. Fluid cylinder installation

R-Series Model RF sensor mounting and Installation references

The model RF flexible sensor housing can be mounted to provide straight or curvilinear measurements. The sensor's flexible housing requires supports or anchoring to maintain proper alignment between the sensor rod and the magnet. Without proper alignment, the sensor's output signal can be interrupted or lost.

Refer to the R-Series Model RF section of this catalog for detailed mounting and installation information.

R-Series Model RD4 sensor mounting and Installation references

The Temposonics RD4 position sensor provides an added degree of flexibility compared to the standard R-Series rod style sensor package. The RD4 design utilizes a separate electronics housing and interconnection cable to allow installation of the sensor rod into small spaces. By relocating the electronics, the head of the sensor rod is reduced to its minimal size. This makes the RD4 ideal for use with clevis mount cylinders or any space limited cylinder application. Also, the RD4 sensor can be used for applications that require remote mounting of the sensor electronics due to environmental factors, such as, high temperatures or high levels of shock and vibration.

Refer to the R-Series Model RD4 section of this catalog for detailed mounting and installation information.

Model GH rod-style sensor mounting

The position magnet requires minimum distances away from ferrous metals to allow proper sensor output. The minimum distance from the front of the magnet to the cylinder end cap is 15 mm (0.6 in.).

The minimum distance from the back of the magnet to the piston head is 3.2 mm (0.125 in.). The non-ferrous spacer (part no. 400633), provides this minimum distance when used along with the standard ring magnet (part no.: 201542-2).

For applicable magnet selections, refer to the ***Compatibility Chart*** *on page 7*.

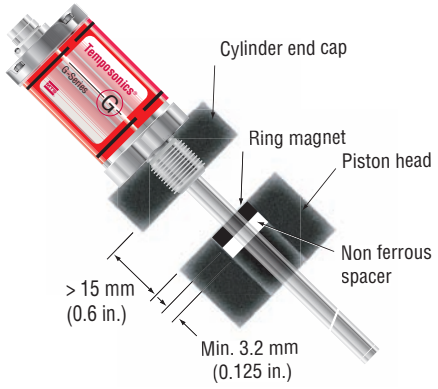


Figure 3. Model GH rod-style mounting

MODEL GH CYLINDER INSTALLATION

When used for direct-stroke measurement in fluid cylinders, the sensor's high pressure, stainless steel rod installs into a bore in the piston head/rod assembly *(See 'Figure 3')*. This method guarantees a long-life and trouble-free operation.

The sensor cartridge can be removed from the flange and rod housing while still installed in the cylinder. This procedure allows quick and easy sensor cartridge replacement, without the loss of hydraulic pressure.

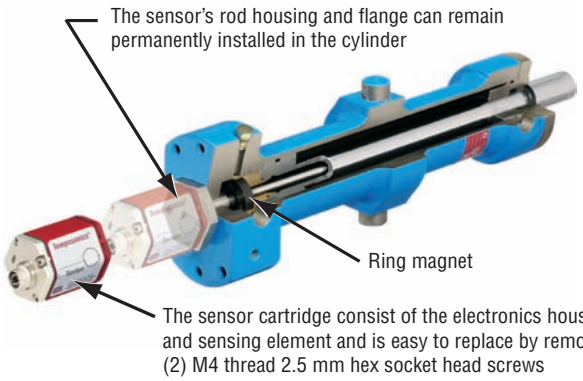


Figure 4. Fluid cylinder installation

Models GT2/GT3 rod-style sensor mounting

The position magnet requires minimum distances away from ferrous metals to allow proper sensor output. The minimum distance from the front of the magnet to the cylinder end cap is 15 mm (0.6 in.).

The minimum distance from the back of the magnet to the piston head is 3.2 mm (0.125 in.). The non-ferrous spacer (part no. 400633) provides this minimum distance when used along with the standard ring magnet (part no.: 201542-2).

For applicable magnet selections, refer to the ***Compatibility Chart*** *on page 7*.

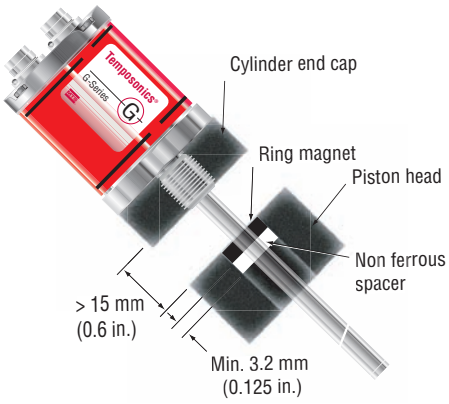


Figure 5. Models GT2/GT3 rod-style mounting

MODELS GT2/GT3 CYLINDER INSTALLATION

When used for direct-stroke measurement in fluid cylinders, the sensor's high pressure, stainless steel rod installs into a bore in the piston head/rod assembly *(See 'Figure 6')*. This method guarantees a long-life and trouble-free operation.

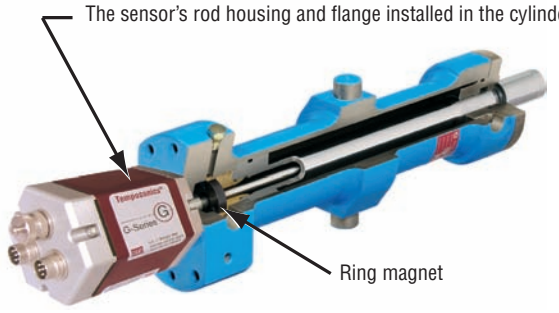


Figure 6. Fluid cylinder installation example

Note:

Unlike the G-Series Model GH sensor (shown in figure 4), GT2/GT3 redundant sensor models do not have a replaceable sensor cartridge feature.

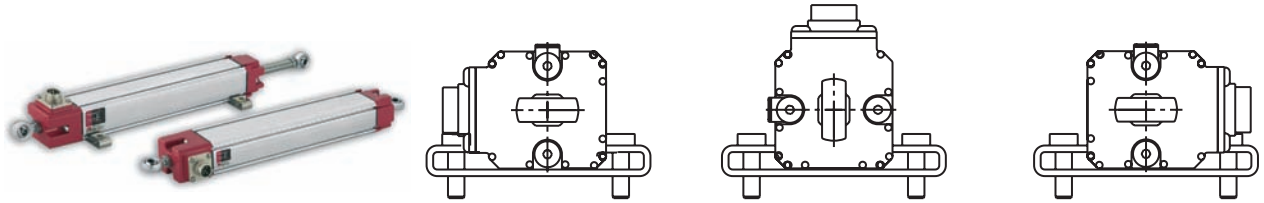
Models ER rod-and-cylinder sensor mounting references

Temposonics model ER rod-and-cylinder sensors are mounted onto the machine with moveable mounting feet (part no.: 400802). Grooves for the mounting feet are available on three sides of the sensor housing, allowing versatile mounting orientations for the sensor connector and extension cable. The rod end is then attached to the moving machine part.

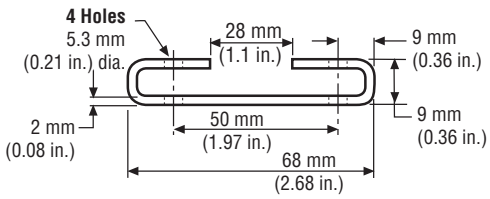
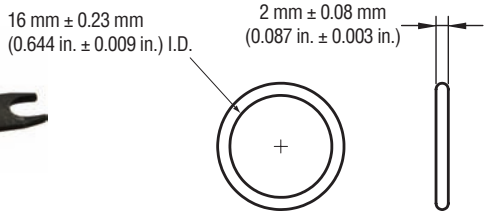
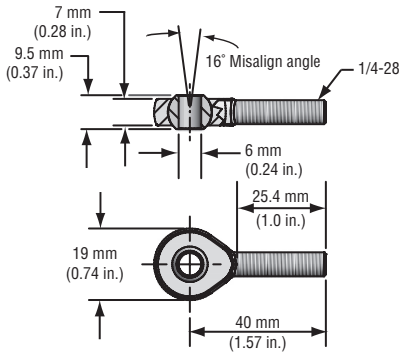
Notes:

1. Mounting feet are ordered separately.
2. MTS recommends using 10-32 cap screws (customer supplied) at a maximum torque of 44 in. lbs. when fastening mounting feet.

Three mounting configurations are possible for the model ER using mounting feet (part no.: 400802) and 10-32 cap screws (customer supplied).



Optional rod ends can be used to simplify sensor installation design and facilitate articulated motion sensing. Using dual rod ends the model ER sensor can be mounted between two independent moving points, such as, swinging door applications. Please note that articulated or unsupported sensor applications must be limited to a maximum of 750 mm (30 in.) stroke length.

Model ER sensor mounting and installation accessory reference	Mounting method	Part number
  (Width = 14.5 mm (0.57 in.)	**Mounting feet, standard (304 SS)** Rod-and-Cylinder sensor mounting	400802
 	**Rod-end kit** Male, M6 rod ends (2 pcs.) with nuts, plus special wrench (Metric measurement) **Optional Rod end** Metric measurement Male M6 threads	253347 561255
 	**Rod-end kit** Male, 1/4 - 28 rod ends (2 pcs.) with nuts, plus special wrench (Standard US customary measurement) **Optional Rod end** US customary measurement Male 1/4 - 28 threads	253346 560444

Models RP and GP sensor mounting references

PROFILE-STYLE SENSOR MOUNTING *Flexible installation in any position!*

Temposonics models RP and GP profile-style sensors offer two basic mounting methods; side grooves for use with mounting feet or a bottom groove that accepts a special T-Slot nut (part no.: 401602). Both the mounting feet and T-Slot nuts can be positioned along the sensor extrusion to best secure the sensor for each particular application.

Notes:

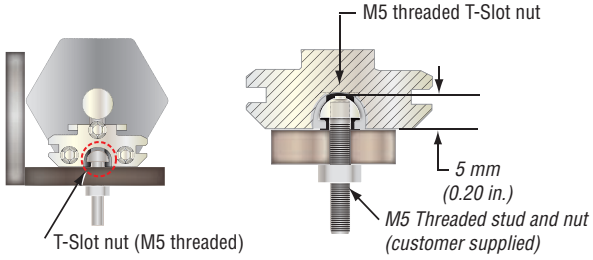
1. Models RP and GP sensors include two mounting feet, (part no. 400802) for sensors stroke lengths up to 1250 mm (50 in.)
2. One additional mounting foot is included for stroke lengths over 1250 mm (50 in.) and for each additional 500 mm (20 in.), thereafter.
3. MTS recommends using 10-32 cap screws (customer supplied) at a maximum torque of 44 in. lbs. when fastening mounting feet.
4. The T-Slot nut (part no.: 401602) requires a ***customer supplied*** M5 threaded stud and nut.

For applicable magnet selections, refer to the ***Compatibility Chart*** *on page 7.*

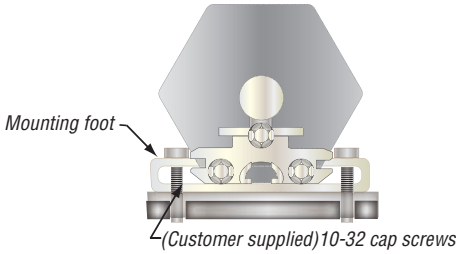
Models RP and GP profile-style sensor mounting and installation references

T-Slot nut (M5 threaded)

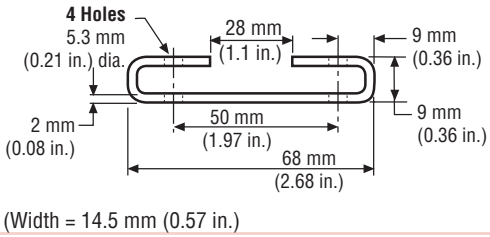
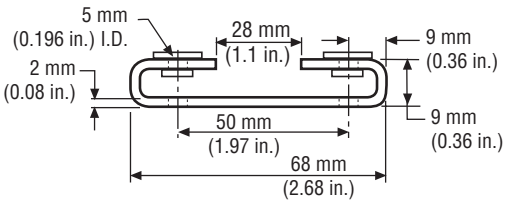
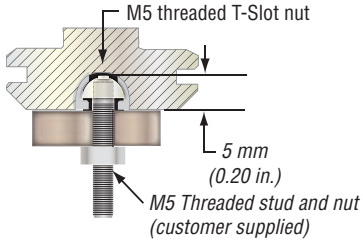
Nut for mounting model RP and GP sensors.



Mounting feet and screws



Models RP and GP sensor mounting and installation accessory reference

	Description	Part number
  (Width = 14.5 mm (0.57 in.)	**Mounting feet, standard (304 SS)** Profile-style sensor mounting for sensor models RP and GP	400802
  (Width = 14.5 mm (0.57 in.)	**Mounting feet, Insulated (304 SS)** Profile-style sensor mounting for sensor models RP and GP. Nylon washers and cloth tape on the bottom provide electrical isolation.	252004
 	**T-Slot nut (M5 threaded)** Nut for mounting model RP and GP sensors.	401602

Model EP sensor mounting references

MODEL EP PROFILE-STYLE SENSOR MOUNTING

Temposonics model EP profile-style sensors are mounted onto the machine with moveable mounting feet. Mounting feet slide into side grooves and should be evenly distributed along the sensor extrusion to best secure the sensor for each particular application.

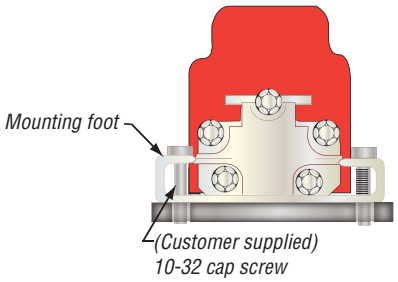
Notes:

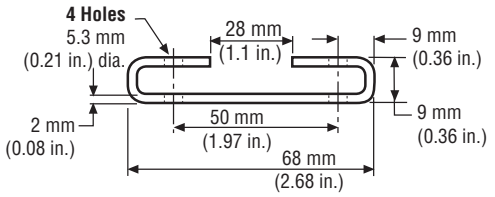
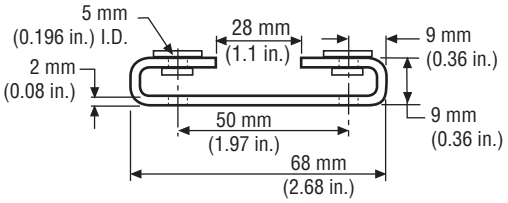
1. The Model EP sensor include two mounting feet, (part no. 400802) for sensors stroke lengths up to 1250 mm (50 in.)
2. One additional mounting foot is included for longer stroke lengths.
3. MTS recommends using 10-32 cap screws (customer supplied) at a maximum torque of 44 in. lbs. when fastening mounting feet.

For applicable magnet selections, refer to the ***Compatibility Chart*** *on page 7*.

Model EP Profile-Style sensor installation and mounting references

Mounting feet and screws



Model EP sensor mounting and installation accessory reference	Description	Part number
  (Width = 14.5 mm (0.57 in.)	**Mounting feet, standard (304 SS)** Rod-and-Cylinder sensor mounting for sensor model EP	400802
  (Width = 14.5 mm (0.57 in.)	**Mounting feet, Insulated (304 SS)** Profile-style sensor mounting for sensor model EP. Nylon washers and cloth tape on the bottom provide electrical isolation.	252004

Model EP2 sensor mounting references

MODEL EP2 PROFILE-STYLE SENSOR MOUNTING

Temposonics model EP2 profile-style sensors are mounted onto the machine with moveable mounting feet. Mounting feet slide into side grooves and should be evenly distributed along the sensor extrusion to best secure the sensor for each particular application.

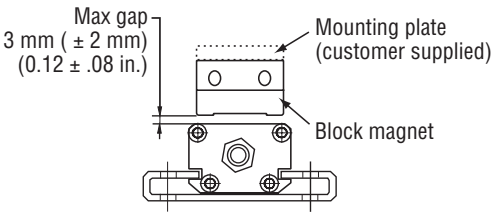
Notes:

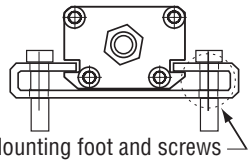
1. The Model EP2 sensor include two mounting feet, (part no. 400802) for sensors stroke lengths up to (48 in.)
2. Two additional mounting feet are included for stroke lengths over (48 in.).
3. MTS recommends using 10-32 cap screws (customer supplied) at a maximum torque of 44 in. lbs. when fastening mounting feet.

For applicable magnet selections, refer to the ***Compatibility Chart*** *on page 7.*

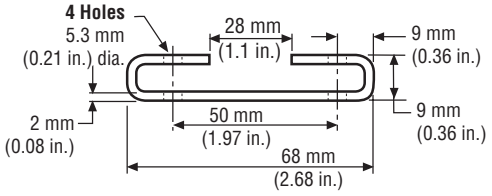
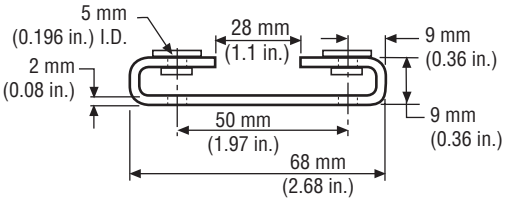
.

Model EP2 sensor mounting and installation reference





Model EP sensor mounting and installation accessory reference

		Description	Part number
	 (Width = 14.5 mm (0.57 in.)	**Mounting feet, standard (304 SS)** Rod-and-Cylinder sensor mounting for sensor model EP2	400802
	 (Width = 14.5 mm (0.57 in.)	**Mounting feet, Insulated (304 SS)** Profile-style sensor mounting for sensor model EP2. Nylon washers and cloth tape on the bottom provide electrical isolation.	252004

Magnet and Magnet Float compatibility quick reference chart

Magnets must be ordered separately unless otherwise specified in the sensors model specific data sheet.

Rod-style Sensor models					Profile-style sensor models					
RH	RF	RD4	GH	GT	RP	GP	EP	EP2	Magnet Description	Part number
●	●	●	●	●					Standard ring magnet	201542-2
●	●		●	●					Large Open-ring magnet	201553
●	●		●						Large ring magnet	201554
●			●		●	●	●		Bar magnet	251298-2
●	●	●	●	●	●	●	●		Open-ring magnet, Style M	251416-2
●			●	●					Magnet float	251447
					●	●	●		Captive-sliding magnet, Style S	252182
					●	●	●		Captive-sliding magnet, Style S with longer ball-jointed arm	252183
					●	●	●		Captive-sliding magnet, Style V	252184
	●						●	●	Block magnet, Style L	252887 Replaced by 403448
	●								Open-ring magnet, Style M Contact applications engineering for handling guidelines	400424
●		●	●						Small ring magnet (PA-ferrite coated)	400533
●			●	●					Magnet spacer, (non-ferrous) use with ring magnet part no.: 201542-2	400633
●			●						Small ring magnet (PA surface coated)	401032
●			●						Large ring magnet (PA-ferrite) Contact applications engineering for handling guidelines.	401467 Replaced by 400424
●			●						Large ring magnet (PA-ferrite)	401468
									Large ring magnet (PA-ferrite)	402316
				●					Collar (Used with float part no.: 251447)	560777

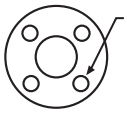
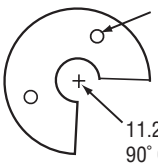
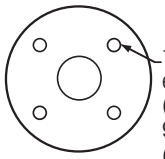
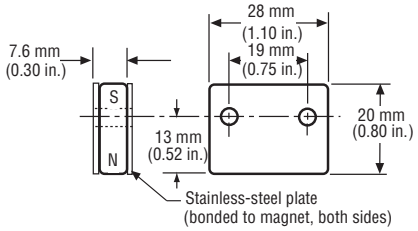
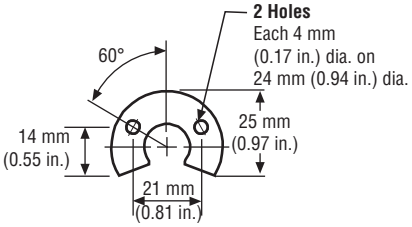
Note:

If your application requires a magnet that is not shown, contact the Factory and consult Applications Engineering for custom or additional non standard magnet options.

Magnet and Magnet Float selections

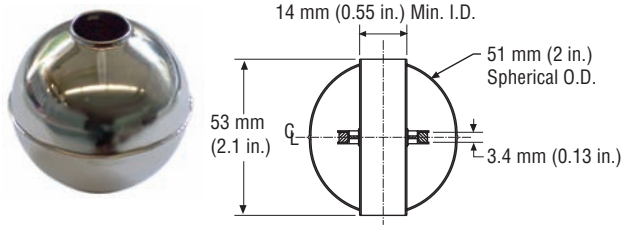
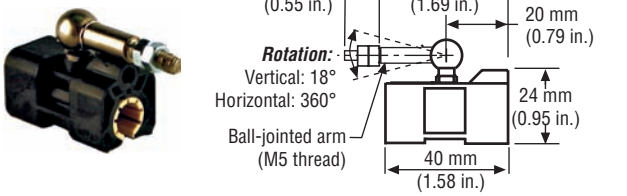
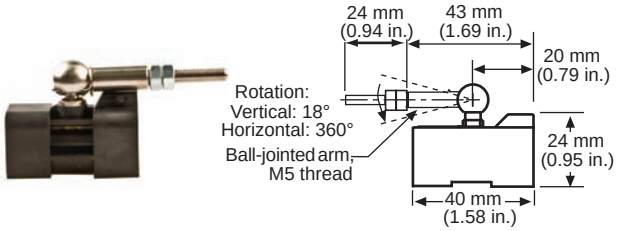
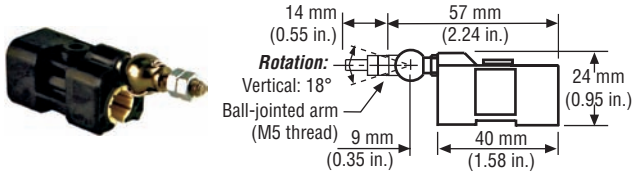
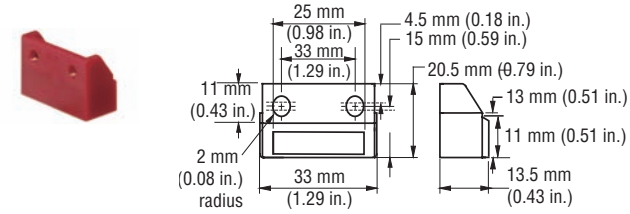
The standard ring magnet (part number 201542-2) is suitable for most applications.

POSITION MAGNET SELECTIONS (Magnet must be ordered separately)

Magnet and dimensions *(Drawing dimensions are for reference only)*	Description and specifications	Sensor model reference			Part number
 	**Standard ring magnet** **Material:** Composite PA ferrite GF20 **I.D.:** 13.5 mm (0.53 in.) **O.D.:** 33 mm (1.3 in.) **Thickness:** 8 mm (0.3 in.) **Weight:** Approx.. 14g **Operating temperature:** - 40 °C to +100 °C	RH RF RD4	GH GT		201542-2
 	**Large open-ring magnet** **Material:** PA 66-GF30 Magnet slugs potted with epoxy. **I.D.:** 15.9 mm (0.625 in.) **O.D.:** 63.25 mm (2.49 in.) **Thickness:** 9.5 mm (0.375 in.) **Weight:** Approx. 26g **Operating temperature:** - 40 °C to +75 °C	RH RF	GH GT		201553
 	**Large ring magnet** **Material:** PA 66-GF30 Magnet slugs potted with epoxy. **I.D.:** 19.05 mm (0.53 in.) **O.D.:** 63.25 mm (2.49 in.) **Thickness:** 9.3 mm (0.375 in.) **Weight:** Approx. 35g **Operating temperature:** - 40 °C to +75 °C	RH RF	GH		201554
 	**Bar magnet, Style L** **Material:** Stainless-steel plate Plate bonded to both magnet sides. Magnet installs on a mounting plate (customer supplied) or flat surface of the machine's moving part.	RH RP	GH GP	EP	251298-2
 	**Open-ring magnet, Style M** **Material:** Composite PA ferrite GF20 **I.D.:** 13.5 mm (0.53 in.) **O.D.:** 33 mm (1.3 in.) **Thickness:** 8 mm (0.3 in.) **Weight:** Approx. 11g **Operating temperature:** - 40 °C to +100 °C	RH RF RD4 RP	GH GT GP	EP	251416-2

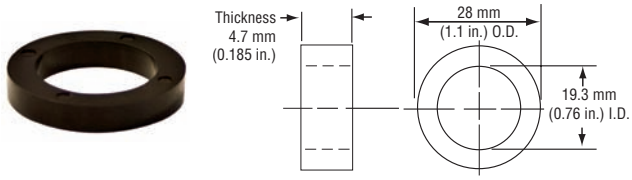
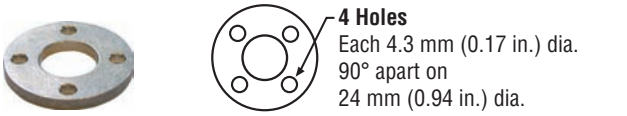
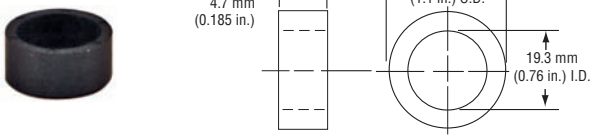
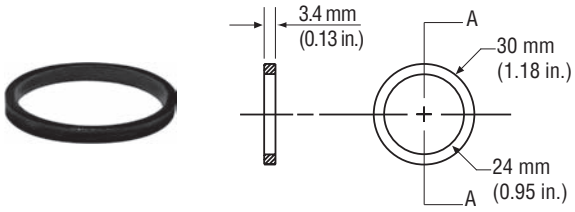
Magnet Selections

POSITION MAGNET SELECTIONS (Magnet must be ordered separately)

Magnet and dimensions *(Drawing dimensions are for reference only)*	Description and specifications	Sensor model reference			Part number
	**Magnet float (Level sensing applications)** **Material:** Stainless steel **Weight:** Approx. 42 ± 3g **Density:** 720 kg/m3 **Specific gravity:** 0.70 maximum **Pressure:** 870 psi maximum *(This float is used with Rod-style sensors for hydraulic fluid or fresh water applications only)*	RH	GH GT		251447
	**Captive-sliding magnet, Style S** **Material:** GFK, magnet hard ferrite **Weight:** Approx. 30g **Operating temperature:** -40 °C to +75 °C	RP	GP	EP	252182
	**Captive-sliding magnet, Style N with longer ball-jointed arm** **Material:** GFK, magnet hard ferrite **Weight:** Approx. 30g **Operating temperature:** -40 °C to +75 °C	RP	GP	EP	252183
	**Captive-sliding magnet, Style V** **Material:** GFK, magnet hard ferrite **Weight:** Approx. 30g **Operating temperature:** -40 °C to +75 °C	RP	GP	EP	252184
	**Block magnet, Style L** **Material:** GFK, magnet hard ferrite **Weight:** Approx. 20g ± 2g **Operating temperature:** -40 °C to +75 °C	RF		EP EP2	403448

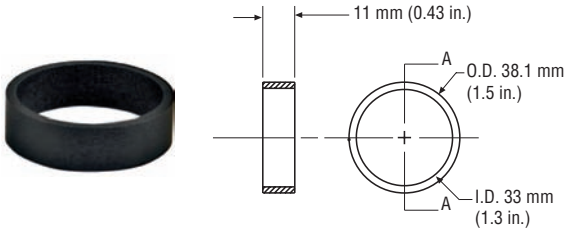
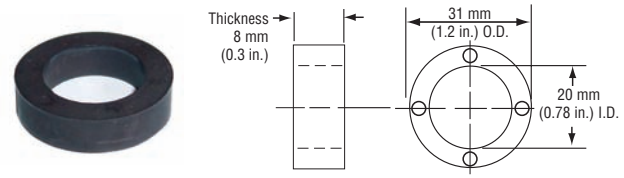
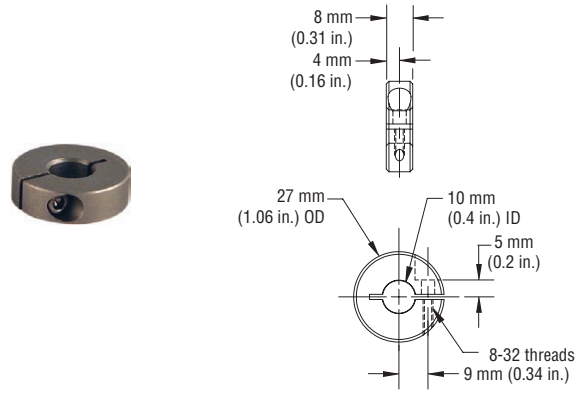
Magnet Selections

POSITION MAGNET SELECTIONS (Magnet must be ordered separately)

Magnet and dimensions *(Drawing dimensions are for reference only)*	Description and specifications	Sensor model reference			Part number
	**Large Ring magnet, Style M** **Material:** Composite PA ferrite GF20 **I.D.:** 19.3 mm (0.76 in.) **O.D.:** 28 mm (1.1 in.) **Thickness:** 4.7 mm (0.185 in.) **Weight:** Approx. 11g **Operating temperature:** - 40 °C to +100 °C	RF			400424 Replaces 401467
	**Small ring magnet** **Material:** PA ferrite coated **Weight:** Approx. 10g **I.D.:** 13.5 mm (0.53 in.) **O.D.:** 25.4 mm (1 in.) **Thickness:** 8 mm (0.3 in.) **Operating temperature:** - 40 °C to +100 °C	RH	GH GT		400533
	**Magnet spacer** **(Non-ferrous, use with ring magnet part no.: 201542-2)** **I.D.:** 14 mm (0.56 in.) **O.D.:** 32 mm (1.25 in.) **Thickness:** 3.2 mm (0.125 in.)	RH	GH GT		400633
	**Small ring magnet** **Material:** PA surface coated **Weight:** Approx. 10g **I.D.:** 13.5 mm (0.53 in.) **O.D.:** 17.4 mm (.0.685 in.) **Thickness:** 7.9 mm (0.312 in.) **Operating temperature:** - 40 °C to +100 °C	RH	GH		401032
	**Large ring magnet** **Material:** PA ferrite **Weight:** Approx. 10g **I.D.:** 24 mm (0.95 in.) **O.D.:** 30 mm (1.18 in.) **Thickness:** 3.4 mm (0.13 in.) **Operating temperature:** - 40 °C to +100 °C Contact applications engineering for handling guidelines	RH	GH		401467 Replaced with 400424

Magnet Selections

POSITION MAGNET SELECTIONS (Magnet must be ordered separately)

Magnet and dimensions *(Drawing dimensions are for reference only)*	Description and specifications	Sensor model reference			Part number
	**Large ring magnet** **Material:** PA ferrite **Weight:** Approx. 10g **I.D.:** 33 mm (1.3 in.) **O.D.:** 38.1 mm (1.5 in.) **Thickness:** 3.4 mm (0.13 in.) **Operating temperature:** - 40 °C to +100 °C Contact applications engineering for handling guidelines	RH	GH		401468
	**Ring magnet with ejector pin** **Material:** **Weight:** **I.D.:** 19.8 mm (0.78 in.) **O.D.:** 31 mm (1.2 in.) **Thickness:** 8 mm (0.3 in.) **Operating temperature:** (Used with 0.5 in. O.D. 800 bar pipe)	RH			402316
	**Collar** Provides end of stroke stops for magnet float (part no.: 251447)	GT			560777

Magnet Selections

Cable length limitations (bus and serial communications industry standards)

Please apply good industry practices for long cable runs. Cables must be kept away from high-power AC lines and all motor drive cables.

R-SERIES SENSORS




SSI	CANbus	DeviceNet	Profibus	Baud rate	Maximum cable or bus length	
●				1.0 MBd	10 ft.	3 m
●				400 kBd	160 ft.	50 m
●				300 kBd	320 ft.	100 m
●				200 kBd	650 ft.	200 m
●				100 kBd	1300 ft.	400 m
	●			1.0 MBd	80 ft.	25 m
	●			500 kBd	320 ft.	100 m
	●			250 kBd	820 ft.	250 m
	●			125 kBd	1640 ft.	500 m
		●		500 kBd	420 ft.	130 m
		●		250 kBd	800 ft.	270 m
		●		125 kBd	1730 ft.	530 m
			●	12 MBd	330 ft.	100 m
			●	1.5 MBd	650 ft.	200 m
			●	500 kBd	1300 ft.	400 m
			●	187.5 kBd	3280 ft.	1000 m
			●	≤ 93.75 kBd	3940 ft.	1200 m

G-SERIES SENSORS

Analog (Voltage/Current) Outputs	Digital (PWM or Start/Stop) Outputs	Neuter (Start/Stop) Output	Maximum Cable Length	
●			150 ft.	45 m
	●		300 ft. Δ	90 m
		●	250 ft. †	75 m

Δ 300 ft.. maximum when using the ± differential pair for the interrogation or **Start** signal and for the gate or **Stop** signal.

† 250 ft. maximum when using the single-ended interrogation or **Start** signal. The unused differential signal **MUST** be terminated to ground at the control box.

EXTENSION CABLE OPTION AND SENSOR MODEL COMPATIBILITY REFERENCE

Extension Cable with Connection types	R-Series	G-Series	E-Series
Standard 6-pin (D60)	●	●	●
6-pin (D63)	**Profibus**		
7-pin DIN (D70)	**SSI**		
10-pin MS (MS0)	**SSI**	●	

Extension Cable with Connector / Ordering Information
D6 (D60) Connection Type Options

EXTENSION CABLE WITH CONNECTORS FOR D6 (D60) CONNECTION TYPES (R-SERIES, G-SERIES & E-SERIES SENSORS)

Extension Cable and Connector	Description	Connection type
	**Female Connector, Straight Exit with Standard PVC Jacket Cable** *(Assembly Includes D6 Connector, Part No.: 560700 and Cable, Part No.:530026)*	**D6**
	**Female Connector, 90° Exit with Standard PVC Jacket Cable** *(Assembly Includes D6 Connector, Part No.: 560778 and Cable, Part No.:530026)*	**DA**
	**Female Connector, Straight Exit with Black Polyurethane Jacket Cable (for higher resistance to moisture, oil and cold temperatures)** *(Assembly Includes D6 Connector, Part No.: 560700 and Cable, Part No.:530045)*	**DJ**
	**Female Connector, 90° Exit with Black Polyurethane Jacket Cable (for higher resistance to moisture, oil and cold temperatures)** *(Assembly Includes D6 Connector, Part No.: 560778 and Cable, Part No.:530045)*	**DK**

Ordering Information
Extension Cable with Connector for D6 (D60) Connection Types

D							
1	2	3	4	5	6	7	8

SENSOR CONNECTION TYPES = D _ — **1 - 2**

D6 = Female connector, straight exit (part no. 560700), and PVC jacket cable (part no. 530026)
DA = Female connector, 90° exit (part no. 560788), and PVC jacket cable (part no. 530026)
DJ = Female connector, straight exit (part no. 560700), and black polyurethane jacket cable (part no. 530045)
DK = Female connector, 90° exit (part no. 560788), and black polyurethane jacket cable (part no. 530045)

CABLE LENGTHS = _ _ _ — **3 - 5**

For standard length cables up to 100 ft.
005 = 5 ft.
015 = 15 ft.
025 = 25 ft.
050 = 50 ft.
100 = 100 ft.

For custom length cables over 100 ft.
— — — = Cable length (maximum cable length is dependent on the output selected; consult MTS Applications Engineering)

CABLE TERMINATION = _ _ _ — **6 - 8**

P0 = Pigtail cable without connector (2 digit code)
D6M = D6 male connector (straight exit). Only available with the **D6** option above.
D6F = D6 female connector (straight exit). Only available with the **D6** option above.
DAF = D6 female connector (90° exit). Only available with the **DA** option above.

EXTENSION CABLE WITH CONNECTORS FOR R-SERIES PROFIBUS SENSORS WITH (D63) CONNECTION TYPES

Extension cable and connector assemblies	Description	Connection type
	**Hybrid Profibus Bus Cable, straight exit, 6-pin DIN female connector, with PG9 strain relief for (D63) sensor connection types** *(Assembly Includes D63 Connector, Part no.: 370423 and Cable, Part no.:530040)*	DF
	**Hybrid Profibus Bus Cable, straight exit, 6-pin DIN male connector with PG9 strain relief for (D63) sensor connection types** *(Assembly Includes D63 Connector, Part no.: 370427 and Cable, Part no.:530040)*	DG

ORDERING INFORMATION - EXTENSION CABLE WITH CONNECTORS FOR R-SERIES PROFIBUS SENSORS WITH (D63) CONNECTION TYPES

D							
1	2	3	4	5	6	7	8

SENSOR CONNECTION TYPES = D _ 1 - 2

DF = Female connector, straight exit (part no. 370423), and Profibus cable *(part no.: 530040) with (D63) type connector*
DG = Female connector, 90° exit (part no. 560778), and Profibus cable *(part no.: 530040)* with (D63) type connector

CABLE LENGTHS = _ _ _ 3 - 5

For standard length cables up to 100 ft..

005 = 5 ft.
015 = 15 ft.
025 = 25 ft.
050 = 50 ft.
100 = 100 ft.

For custom length cables over 100 ft..

— — — = Cable length (maximum cable length is dependent on baud rate).

CABLE TERMINATION = _ _ _ 6 - 8

P0 = Pigtail cable without connector (2-digit code)
DFM = Male connector, (Straight exit). For daisy-chain connections of Profibus sensors with D63 connector.
DGM = Male connector, (90° exit). For daisy-chain connections of Profibus sensors with D63 connector.

Extension Cable with the Standard 7-pin DIN Connector / Ordering Information
R-Series SSI D7 (D70) Connection Type Options

EXTENSION CABLE WITH CONNECTORS FOR R-SERIES SENSORS WITH THE 7-PIN DIN (D70) CONNECTION TYPE

Extension cable and connector assemblies	Description	Connection Type
	**Female Connector, Straight Exit and Orange Polyurethane Jacket Cable with High-Performance Shielding** *(Assembly Includes D7 Connector, Part No.: 560701 and Cable, part no.: 530029)*	**D7**
	**Female Connector, 90° Exit and Orange Polyurethane Jacket Cable with High-Performance Shielding** *(Assembly Includes D7 Connector, Part No.: 560779 and Cable, part no.: 530029)*	**DR**
	**Female Connector, Straight Exit and Standard PVC Jacket Cable** *(Assembly Includes D7 Connector, Part No.: 560701 and Cable, part no.: 530026)*	**DS**
	**Female Connector, 90° Exit and Standard PVC Jacket Cable** *(Assembly Includes D7 Connector, Part No.: 560779 and Cable, part no.: 530026)*	**DT**
	**Female Connector, Straight Exit and Black Polyurethane Jacket Cable (for higher resistance to moisture, oil and cold temperatures)** *(Assembly Includes D7 Connector, Part No.: 560701 and Cable, part no.: 530045)*	**DU**
	**Female Connector, 90° Exit and Black Polyurethane Jacket Cable (for higher resistance to moisture, oil and cold temperatures)** *(Assembly Includes D7 Connector, Part No.: 560779 and Cable, part no.: 530045)*	**DV**

ORDERING INFORMATION - EXTENSION CABLE WITH CONNECTORS FOR R-SERIES SENSORS WITH THE (D70) CONNECTION TYPE

D					P	0
1	2	3	4	5	6	7

SENSOR CONNECTION TYPES = D _ **1 - 2**

- **D7** = Female connector, straight exit (part no. 560701), and orange polyurethane jacket cable *(part no.: 530029)*
- **DR** = Female connector, 90° exit (part no. 560779), and orange polyurethane jacket cable *(part no.: 530029)*
- **DS** = Female connector, straight exit (part no. 560701), and PVC jacket cable *(part no. 530026)*
- **DT** = Female connector, 90° exit (part no. 560779), and PVC jacket cable *(part no.: 530026)*
- **DU** = Female connector, straight exit (part no. 560701), and black polyurethane jacket cable *(part no. : 530045)*
- **DV** = Female connector, 90° exit (part no. 560779), and black polyurethane jacket cable *(part no.: 530045)*

CABLE LENGTHS = _ _ _ **3 - 5**

For standard length cables up to 100 ft.

- **005** = 5 ft.
- **015** = 15 ft.
- **025** = 25 ft.
- **050** = 50 ft.
- **100** = 100 ft.

For custom length cables over 100 ft.

— — — = Cable length (maximum cable length is dependent on baud rate).

CABLE TERMINATION = P 0 **6 - 7**

- **P0** = Pigtail cable without connector

EXTENSION CABLE WITH CONNECTORS FOR G-SERIES AND R-SERIES (SSI OUTPUT) SENSORS WITH MS (MS0), CONNECTION TYPES

Extension cable and connector assemblies	Description	Connection Type
	**Female Connector, Straight Exit and Black Polyurethane Jacket Cable (for higher resistance to moisture, oil and cold temperatures)** *(Assembly Includes MS Connector with adapter and boot, Part No.: 370418 and Cable, part no.: 530045)*	**MF**

ORDERING INFORMATION - EXTENSION CABLE WITH CONNECTORS FOR G-SERIES RETROFITS AND R-SERIES SENSORS (SSI OUTPUT) WITH THE (MS0) CONNECTION TYPE

M	F				P	0
1	2	3	4	5	6	7

SENSOR CONNECTION TYPES = D _ (1 - 2)

MF = Female connector, straight exit with adapter and boot (part no. 370418), and black polyurethane jacket cable (part no. 530045)

CABLE LENGTHS = _ _ _ (3 - 5)

For standard length cables up to 100 ft.

005 = 5 ft.
015 = 15 ft.
025 = 25 ft.
050 = 50 ft.
100 = 100 ft.

For custom length cables over 100 ft.

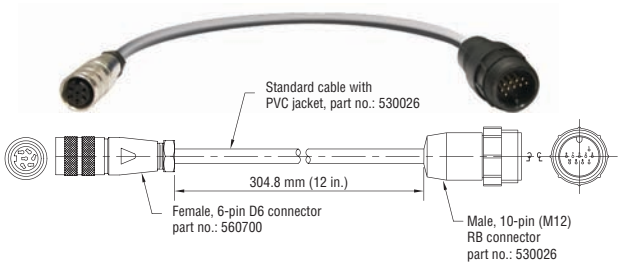
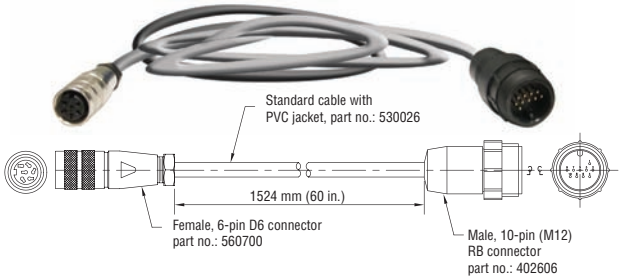
— — — = Cable length (maximum cable length is dependent on baud rate).

CABLE TERMINATION = P 0 (6 - 7)

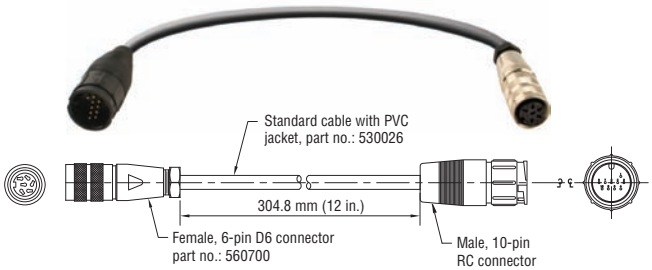
P0 = Pigtail cable without connector

Adapter Cable Retrofit Options, Legacy Products
Temposonics® I and II, L-Series Sensor

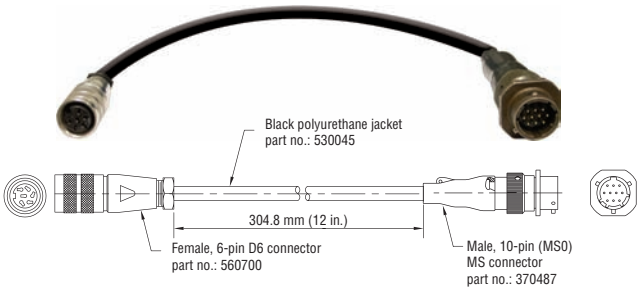
CABLE RETROFITS WHEN REPLACING TEMPOSONICS II AND L-SERIES MODEL LH SENSORS WITH INTEGRAL RB CONNECTORS

Adapter Cable Description and Specifications	Sensor Replacement	Cable Length 1 ft.	Cable Length 5 ft.	Part number
Female, straight exit D6 to male RB cable connections 	**GH/GP** Analog	●		253243-1
	GH/GP Digital-pulse or Neuter	●		253243-2
Female, straight exit D6 to male RB cable connections 	**GH/GP** Analog		●	253244-1
	GH/GP Digital-pulse and Neuter		●	253244-2

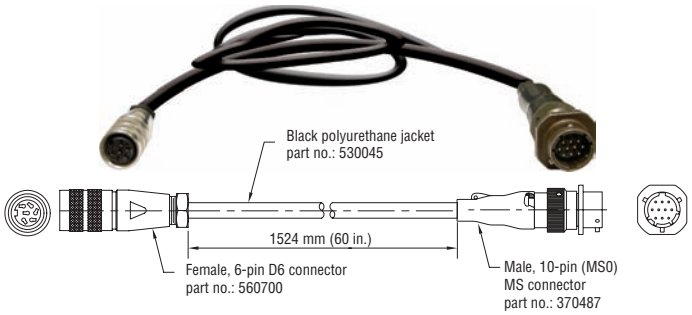
CABLE RETROFITS WHEN REPLACING TEMPOSONICS II SENSORS WITH INTEGRAL RC CONNECTORS

Adapter Cable Description and Specifications	Sensor Replacement	Cable Length 1 ft.	Cable Length 5 ft..	Part number
Female, straight exit D6 to male RC cable connections 	**GH/GP** Analog	●		201612-1
	GH/GP Digital-pulse and Neuter	●		201612-2

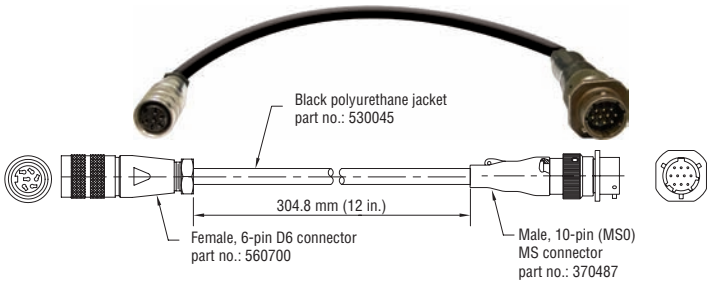
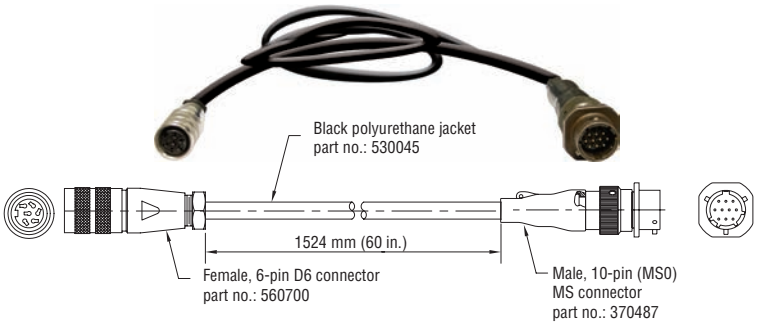
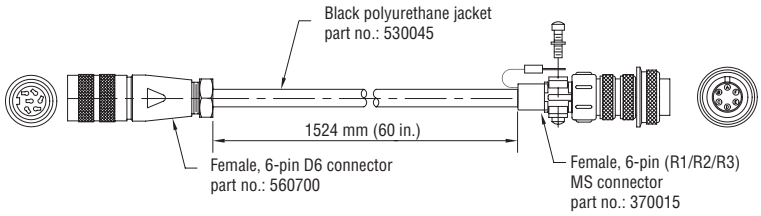
CABLE RETROFITS WHEN REPLACING MODEL LH SENSORS WITH IN-LINE 10-PIN MS CONNECTORS

Adapter Cable Description and Specifications	Sensor Replacement	Cable Length 1 ft.	Cable Length 5 ft.	Part number
Female, straight exit D6 to male MS cable connections 	**GH/GP** Analog	●		253245-1
	GH/GP Digital-pulse and Neuter	●		253245-2

CABLE RETROFITS WHEN REPLACING MODEL LH SENSORS WITH IN-LINE 10-PIN MS CONNECTORS

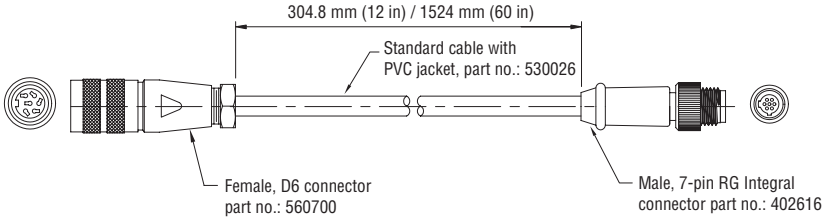
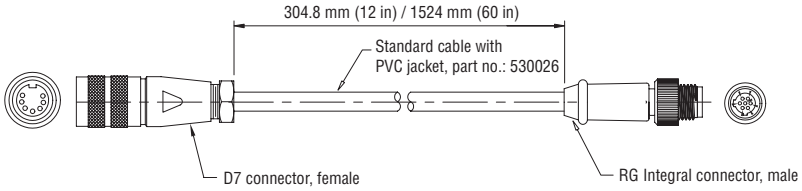
Adapter Cable Description and Specifications	Sensor Replacement	Cable Length 1 ft.	Cable Length 5 ft.	Part number
	**GH/GP** Analog		●	253246-1
	GH/GP Digital-pulse or Neuter		●	253246-2

CABLE RETROFITS WHEN REPLACING TEMPOSONICS II AND L-SERIES MODEL LH SENSORS WITH IN-LINE 10-PIN MS CONNECTORS WIRED FOR R1, R2 OR R3 CONNECTION TYPES

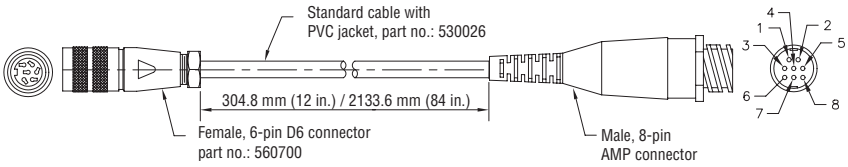
Adapter Cable Description and Specifications	Sensor Replacement	Cable Length 1 ft.	Cable Length 5 ft.	Part number
Female, straight exit D6 to MS (R1, R2 or 10-pin male) cable connections				
	**10-pin R3 Connection using GH/GP** Digital-pulse	●		253245-3
	**10-pin R3 Connection using GH/GP** Digital-pulse		●	253246-3
	**R1 Connection using GH/GP** with Positive interrogation		●	253302-1
	R2 Connection for GH/GP with negative interrogation		●	253302-2

Adapter Cables, Retrofit Options
For Sensors with Integral RG Connectors

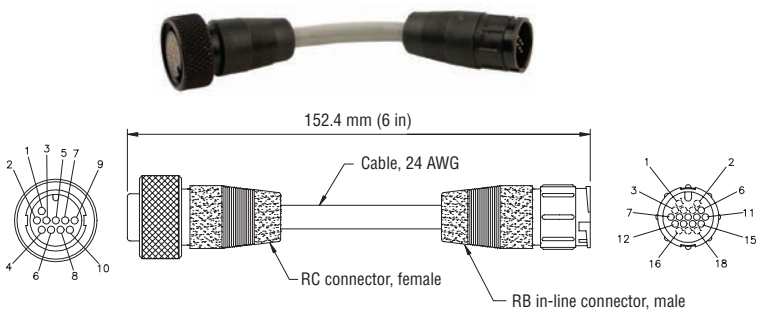
CABLE RETROFITS WHEN REPLACING R-SERIES AND L-SERIES SENSOR MODELS LH AND LP WITH INTEGRAL RG CONNECTORS

Adapter Cable Description and Specifications	Sensor Replacement	Cable Length 1 ft.	Cable Length 5 ft.	Part number
Female, straight exit D6 to male RG cable connections 	**RH/RP** Analog **GH/GP** Analog and Digital-pulse	●		253248-1
	RH/RP Analog **GH/GP** Analog and Digital-pulse		●	253248-2
Female, straight exit D7 to male RG cable connections 	**RH/RP** SSI	●		253315-1
	RH/RP SSI		●	253315-2

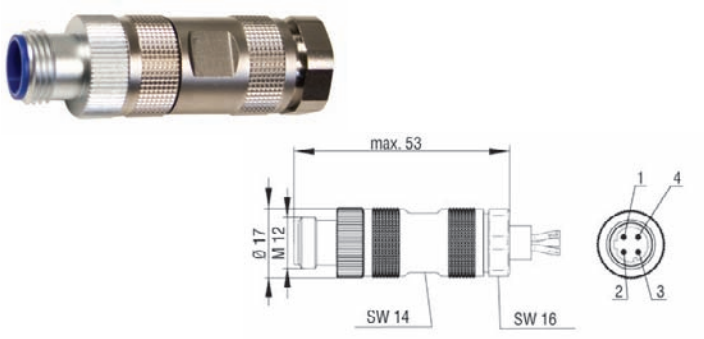
CABLE RETROFITS WHEN REPLACING MODEL LP SENSORS WITH INTEGRAL C-STYLE OR IN-LINE H OR J STYLE CONNECTORS

Adapter Cable Description and Specifications	Sensor Replacement	Cable Length 1 ft.	Cable Length 7 ft.	Part Number
Female, straight exit D6 to male AMP cable connections  	**GH/GP** Analog **EP/ER** Analog	●		253247-1
	GH/GP Digital-pulse **EP/ER** Digital	●		253247-2
	GH/GP Analog **EP/ER** Analog		●	253247-3
	GH/GP Digital-pulse **EP/ER** Digital		●	253247-4
	GH/GP Reverse-acting Analog	●		253710-1
Female, straight exit D6 to male D6 cable connections 	**GH/GP** Reverse-acting Analog	●		253411

CABLE RETROFITS FOR FOR TEMPOSONICS II OR MODEL LH SENSORS WITH RC CONNECTION TYPES

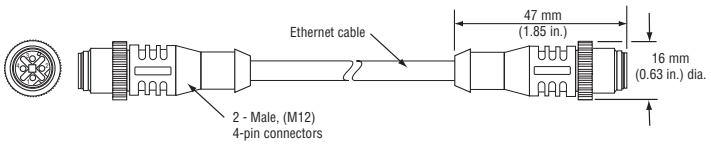
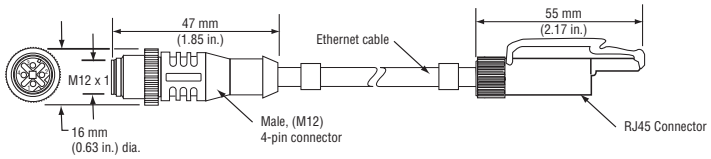
Adapter Cable Description and Specifications	RC Connection Sensor Model Retrofit	Cable Length	Part number
Male RC to female RB cable connections 	**Temposonics II or Model LH**	6 in.	401327

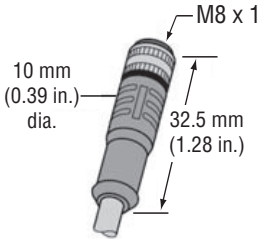
4-PIN STYLE CABLE CONNECTOR OPTIONS FOR R-SERIES ETHERCAT SENSOR MALE (D57) CONNECTION TYPES

Cable Connector and Dimensions	Description / Specifications	Sensor Model Reference	Part number
Female, straight exit cable connections 	**Bus Cable Connector, Male** **Style:** 4-pin (M12) **Housing:** Zinc nickel plated **Termination:** D-coded with insulation displacement technology **Installation:** Field installable	**RP/RH** EtherCAT	370523

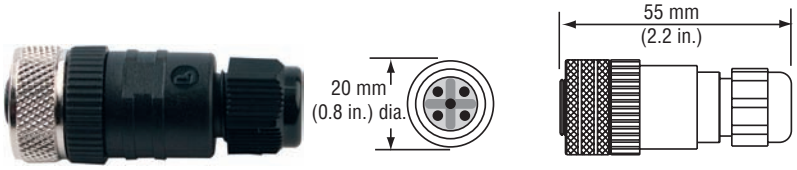
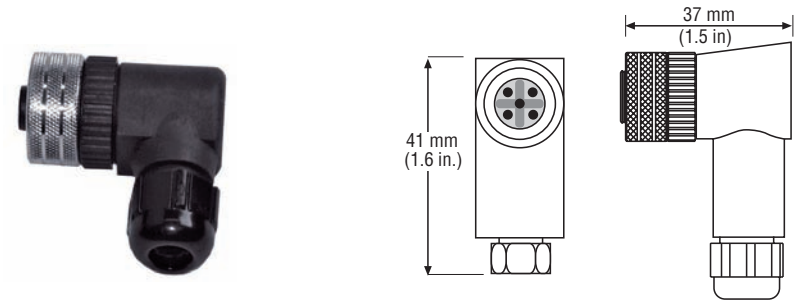
Connectors with Cables

BUS CABLE WITH CONNECTORS FOR R-SERIES ETHERCAT SENSOR MODELS WITH (D56) CONNECTION TYPES

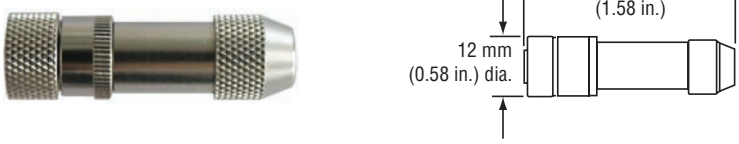
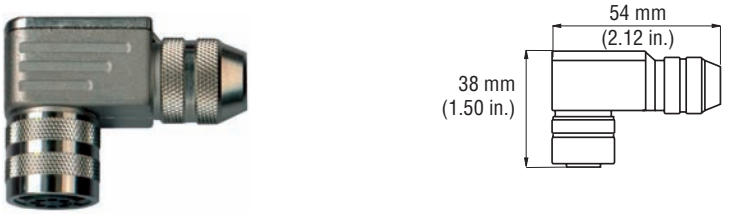
Bus Cable Connector and Dimensions *(Drawing dimensions are for reference only)*	Description / Specifications	Sensor Model	Cable Length	Part number
Bus cable connector option  	**Industrial Ethernet cable (Cat 5e Es) D-Coded** **Connector type:** Two Male, 4-pin (M12) **Cable jacket:** PUR cable jacket (green **Installation:** Field installable	**RP/RH** EtherCAT	5 m	530064
 	**Industrial Ethernet cable (Cat 5e Es) D-Coded** **Connector type:** One RJ45 connector and one male, 4-pin (M12) **Cable jacket:** PUR cable jacket (green) **Installation:** Cables using the RJ45 connector provide convenient sensor connection to a PC for setup and programming but are not recommended for factory floor installations.	**RP/RH** EtherCAT	5 m	530065

Power Cable Connector and Dimensions *(Drawing dimensions are for reference only)*	Power cable, Female 4-pin (M8) and cable with pigtail termination	Models RP/RH	Cable Length	Part number
 	**Input:** 24 Vdc **Wire gage:** 4x0.25 mm² shielded **Cable jacket:** PUR	EtherCAT	5 m 10 m 15 m	530066 530096 530093

5-PIN STYLE CONNECTOR OPTIONS FOR R-SERIES DEVICENET SENSORS WITH (D51) CONNECTION TYPES

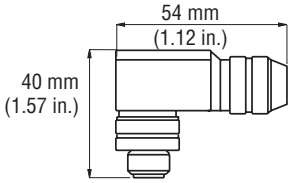
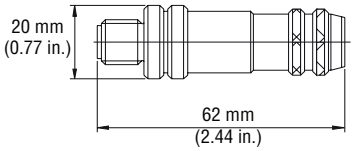
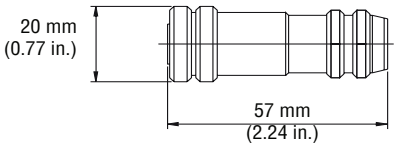
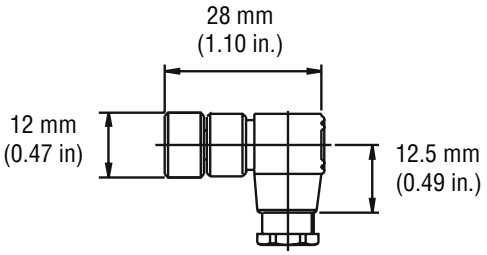
Connector and Dimensions *(Drawing dimensions are for reference only)*	Description and Specifications	Sensor Model Reference	Part Number
	**Cable connector, female, straight exit** **Style:** 5-pin (D51) **Installation:** Field installable	**RP/RH** DeviceNet	370375
	**Cable connector, female,90° exit** **Style:** 5-pin (D51) Field installable	**RP/RH** DeviceNet	370376

5-PIN CABLE CONNECTOR OPTIONS FOR R-SERIES PROFIBUS SENSORS WITH (D53) CONNECTION TYPES

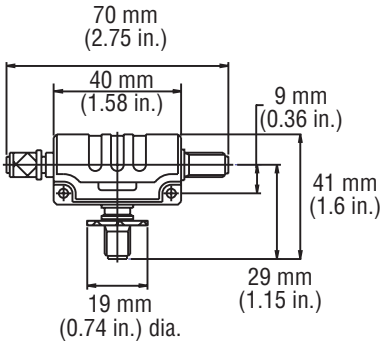
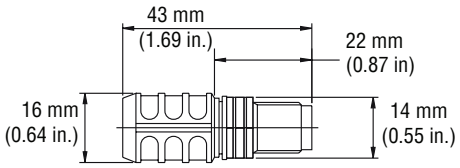
Connector and Dimensions *(Drawing dimensions are for reference only)*	Description and Specifications	Sensor Model Reference	Part Number
	**Cable connector, female, straight exit** **Style:** 4-pin (M8) **Housing:** Zinc nickel plated **Termination:** Solder **Contact insert:** Silver plated **Input Power:** 24 Vdc **Installation:** Field installable, (D53) connection types	**RP/RH** Profibus	370504
	**Cable connector, female, 90° exit** **Style:** 5-pin (M12) **Housing:** Zinc nickel plated **Termination:** Screw **Contact insert:** Silver plated **Installation:** Field installable, (D53) connection types	**RP/RH** Profibus	370514

R-Series Sensor Connectors, Current Production
For Profibus (D53) Connection Types

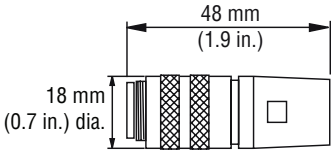
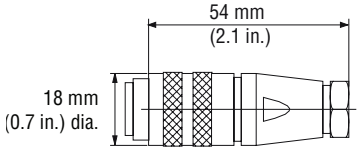
5-PIN CABLE CONNECTOR OPTIONS FOR R-SERIES PROFIBUS SENSORS WITH (D53) CONNECTION TYPES

Connector and Dimensions *(Drawing dimensions are for reference only)*	Description and Specifications	Sensor Model Reference	Part number
 	**Cable connector, male, 90° exit** **Style:** 5-pin (M12) **Housing:** Zinc nickel plated **Termination:** Screw **Contact insert:** Silver plated **Installation:** Field installable, (D53) connection types	**RP/RH** Profibus	370515
 	**Cable connector, male, straight exit** **Style:** 5-pin (M12) **Housing:** Zinc nickel plated **Termination:** Screw **Contact insert:** Silver plated **Installation:** Field installable, (D53) connection types	**RP/RH** Profibus	560884
 	**Cable connector, female, straight exit** **Style:** 5-pin (M12) **Housing:** Zinc nickel plated **Termination:** Screw **Contact insert:** Silver plated **Installation:** Field installable, (D53) connection types	**RP/RH** Profibus	560885
 	**Cable connector, female, 90° exit** **Style:** 4-pin (M8) **Housing:** Zinc nickel plated **Termination:** Solder **Contact insert:** Silver plated **Input voltage:** 24 Vdc **Installation:** Field installable, (D53) connection types	**RP/RH** Profibus	560886

5-PIN CABLE CONNECTOR OPTIONS FOR R-SERIES PROFIBUS SENSORS WITH (D53) CONNECTION TYPES

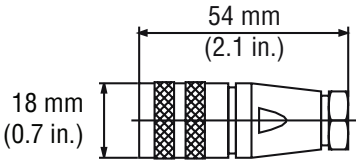
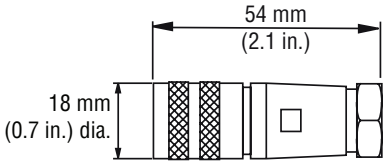
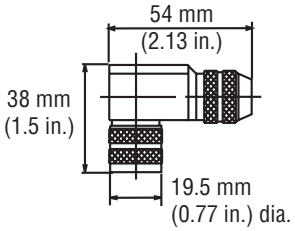
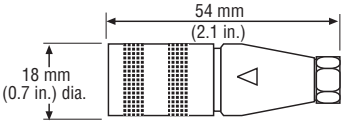
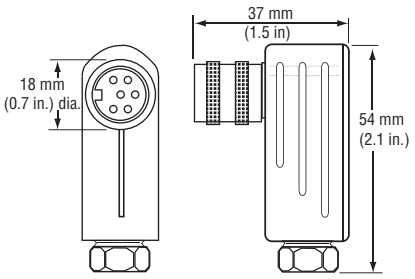
Connector and Dimensions *(Drawing dimensions are for reference only)*	Description and Specifications	Sensor Model Reference	Part Number
 	**5-pin Profibus (M12) T connector** **Style:** 5-pin (M12) **Housing:** Zinc nickel plated **Termination:** Solder **Contact insert:** Silver plated **Installation:** Field installable, (D53) connection types	**RP/RH** Profibus	560887
 	**Profibus Bus Terminator, male, straight exit** **Style:** 5-pin (M12) **Housing:** Zinc nickel plated **Termination:** Solder **Contact insert:** Silver plated **Installation:** Field installable, (D53) connection types	**RP/RH** Profibus	560888

6-PIN DIN (D60) STYLE CABLE CONNECTOR OPTIONS FOR SENSORS WITH (D63) CONNECTION TYPES

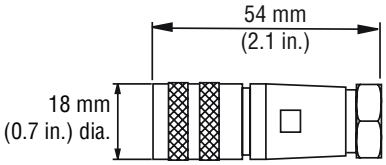
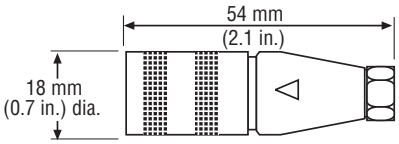
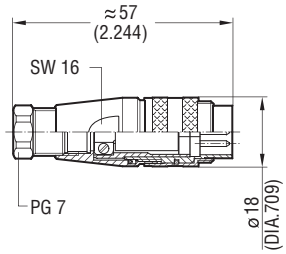
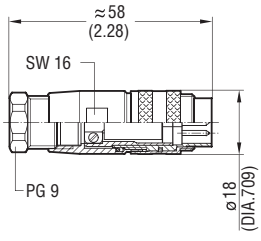
Connector and Dimensions *(Drawing dimensions are for reference only)*	Description / Specifications	Sensor Model Reference	Part number
 	**Profibus bus terminator for male cable connector type** **Style:** (STA09131H06) **Housing:** Zinc nickel plated **Termination:** Solder **Contact insert:** Silver plated **Installation:** Field installable, Mates with standard male connector	**RP/RH/RF** Profibus	252347
 	**Cable connector, male, straight exit** **Style:** 6-pin DIN (D6) **Housing:** Zinc nickel plated **Termination:** Solder **Contact insert:** Silver plated **Cable clamp:** PG7 **Installation:** Field installable	**RP/RH**	370372

Current Connectors

6-PIN DIN (D60) STYLE CABLE CONNECTOR OPTIONS FOR SENSORS WITH (D63) CONNECTION TYPES

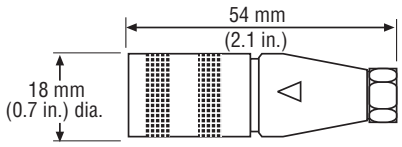
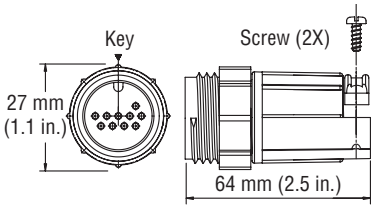
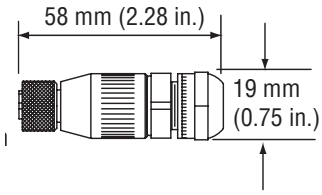
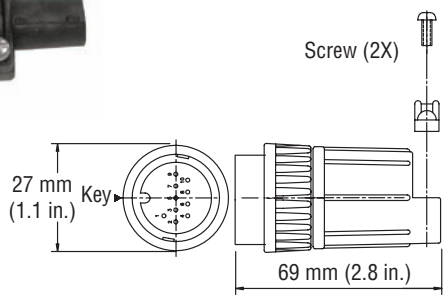
Connector and Dimensions *(Drawing dimensions are for reference only)*	Description and Specifications	Sensor Model Reference	Part number
 	**Cable connector, female, straight exit** **Style:** 6-pin DIN (D6) **Housing:** Zinc nickel plated **Termination:** Solder **Contact insert:** Silver plated **Cable clamp:** PG9 **Installation:** Field installable (D63) connection types. Cable dia. 8 mm max.	**RP/RH** Profibus **TEMPO II** Extension cable retrofits (STC09131D-06PG9)	370423
 	**Cable connector, male, straight exit** **Style:** 6-pin DIN (D6) **Housing:** Zinc nickel plated **Termination:** Solder **Contact insert:** Silver plated **Cable clamp:** PG9 **Installation:** Field installable (D63) connection type (STC09131H06PG9). Cable dia. 8 mm max.	**RP/RH** Profibus	370427
 	**Cable connector, male, 90° exit** **Style:** 6-pin DIN (D6) **Housing:** Zinc nickel plated **Termination:** Solder **Contact insert:** Silver plated **Cable clamp:** PG9 **Installation:** Field installable (D63) connection types. Cable dia. 8 mm max.	**RP/RH** Profibus	370460
 	**Cable connector, female, straight exit** **Style:** 6-pin DIN (D6) **Housing:** Zinc nickel plated **Termination:** Solder **Contact insert:** Silver plated **Cable clamp:** PG7 **Installation:** Field installable, Mates with standard male (D60) integral connector	**RP/RH** **GP/GH** **EP** with 6-conductor cable (STC09131D)	560700
 	**Cable connector, female,90° exit** **Style:** 6-pin DIN (D6) **Housing:** Zinc nickel plated **Termination:** Solder **Contact insert:** Silver plated **Cable clamp:** PG7 **Installation:** Field installable, Mates with standard male (D60) integral connector	**RP/RH** **GP/GH** **EP** with 6-conductor cable (STC09131-6)	560778

7-PIN STYLE CABLE CONNECTOR OPTIONS FOR R-SERIES SENSORS WITH (D70) CONNECTION TYPES

Cable Connector and Dimensions	Description and Specifications	Sensor Model Reference	Part number
 	**Cable connector, female, straight exit** **Style:** 7-pin (D7) **Housing:** Zinc nickel plated **Termination:** Solder **Contact insert:** Silver plated **Cable clamp:** PG9 for cable (STC09131D07PG9) **Installation:** Field installable for (D70) connection types. Cable dia. 8 mm max.	**RP/RH** SSI	370516
 	**Cable connector, female, straight exit** **Style:** 7-pin (D7) **Housing:** Zinc nickel plated **Termination:** Solder **Contact insert:** Silver plated **Cable clamp:** PG7 for cable(STC09131D07) **Installation:** Field installable (D70) connection types. Cable dia. 8 mm max.	**RP/RH** SSI	560701
 	**Cable connector, male, straight exit** **Style:** 7-pin (D7) **Housing:** Zinc nickel plated **Termination:** Solder **Contact insert:** Silver plated **Cable clamp:** PG9 **Installation:** Field installable for (D70) connection types. Cable dia. 8 mm max.	**RP/RH** SSI	370565
 	**Cable connector, male, straight exit** **Style:** 7-pin (D7) **Housing:** Zinc nickel plated **Termination:** Solder **Contact insert:** Silver plated **Cable clamp:** PG7 **Installation:** Field installable (D70) connection types. Cable dia. 8 mm max.	**RP/RH** SSI	370566

Current Connectors

CABLE CONNECTOR OPTIONS FOR R-SERIES G-SERIES AND L-SERIES LEGACY SENSOR MODELS

Cable Connector and Dimensions	Description and Specifications	Sensor Model Reference	Part number
 	**Cable connector, female, straight exit** **Style:** (D8) **Housing:** Zinc nickel plated **Termination:** Solder **Contact insert:** Silver plated **Cable clamp:** PG7 **Installation:** Field installable for (D80) connection types.	**L-SERIES** Sensors	370391
 	**Cable connector, male, RB straight exit** **Style:** 10-pin **Housing:** Zinc nickel plated **Termination:** Solder **Contact insert:** Silver plated **Cable clamp:** PG7 **Installation:** Field installable for 400755-3 (RB/RC) connection type.	**GP/GH** Sensor connector retrofits	370486
 	**Cable connector, female, RG straight exit** **Style:** RG **Housing:** Zinc nickel plated **Termination:** Solder **Contact insert:** Silver plated **Cable clamp:** PG7 **Installation:** Field installable, mates to 7-pin male RG connection type.	**RP/RH L-SERIES** Sensors	401366
 	**Cable connector, female, RB/RC straight exit** **Style:** RB/RC retrofit **Housing:** Zinc nickel plated **Termination:** Solder **Contact insert:** Silver plated **Cable clamp:** PG7 **Installation:** Field installable for 400755-3 (RB/RC) connection type.	**GP/GH** Sensor connector retrofits	401755-3

Legacy Connectors

H	H						
1	2	3	4	5	6	7	8

SENSOR MODELS RH AND GH = H H 1-2

PRESSURE HOUSING PIPE AND FLANGE STYLES = 3

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

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

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

STROKE LENGTH = 4-8

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

____.__ **U** = Inches and tenths
(Encode in 0.1 in. Increments)

Stroke Length Notes:

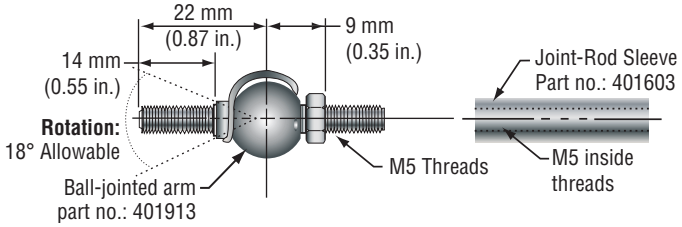
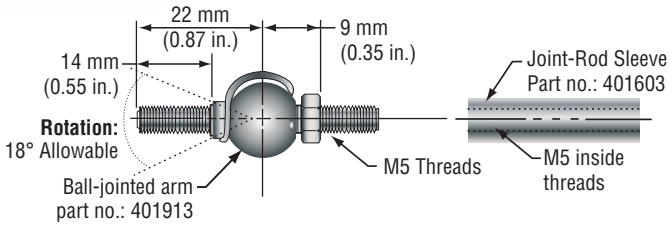
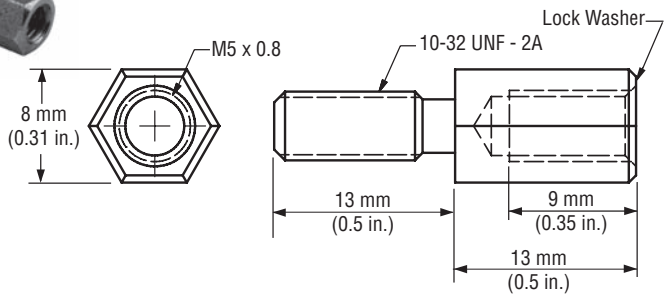
1. Rod-style sensor (model GH) Voltage or Current = 50 mm (2 in.) - 2540 mm (100 in.) *(See 'Note 6' on page 16).*
2. Rod-style sensor (model GH) Digital-pulse = 50 mm (2 in.) - 7620 mm (300 in.)

Half inch O.D. pressure pipe and flange (Optional)

PIPE AND FLANGE SELECTIONS

The half inch O.D. pressure pipe with flange is designed specifically for R-Series and G-Series R-Series sensors. The pressure pipe and flange provide protection from high pressures, as found in hydraulic cylinders, up to 5,000 psi static, 10,000 psi spike. For dimension and details, refer to the product specific data sheet for more information.

MECHANICAL-END CONNECTOR SELECTIONS

Cable Connector and Dimensions	Description and Specifications	Sensor Model Reference	Part number
 	**Joint-rod sleeve** US customary measurement Optional, 1 in.	**RP/GP**	401603
 	**Ball-jointed arm** For use with captive-sliding magnet	**RP/GP**	401913
 	**Threaded adapter** Female M5 to male 10 - 32	**RP/GP**	402849

Mech. End Connectors

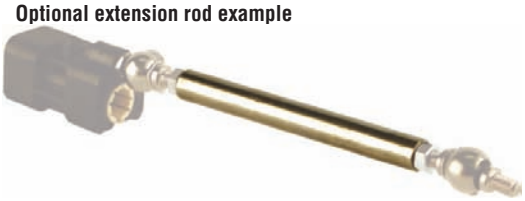
Optional extension rod quick reference chart

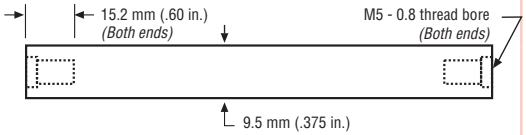
Male rod-end (part no.: 401872) mates with optional extension rods.

Sensor models with captive-sliding magnet

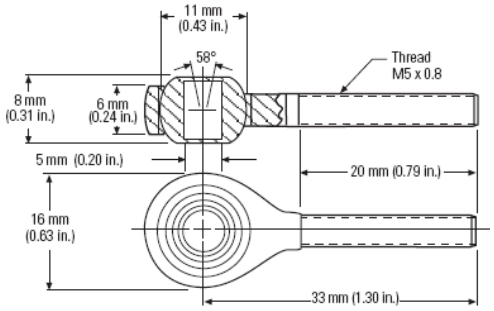
RP	GP	EP	Extension rod length	Part number
●	●	●	60.3 mm (2.375 in.)	401768-2
●	●	●	85.7 mm (3.375 in.)	401768-3
●	●	●	111.1 mm (4.375 in.)	401768-4
●	●	●	161.9 mm (6.375 in.)	401768-6
●	●	●	187.3 mm (7.375 in.)	401768-7
●	●	●	212.7 mm (8.375 in.)	401768-8
●	●	●	238.1 mm (9.375 in.)	401768-9
●	●	●	263.5 mm (10.375 in.)	401768-10
●	●	●	314.3 mm (12.375 in.)	401768-12
●	●	●	365.1 mm (14.375 in.)	401768-14
●	●	●	390.5 mm (15.375 in.)	401768-15
●	●	●	466.7 mm (18.375 in.)	401768-18
●	●	●	517.5 mm (20.375 in.)	401768-20
●	●	●	542.9 mm (21.375 in.)	401768-21
●	●	●	619.1 mm (24.375 in.)	401768-24
●	●	●	771.5 mm (30.375 in.)	401768-30
●	●	●	923.9 mm (36.375 in.)	401768-36
●	●	●	1076.3 mm (42.375 in.)	401768-42
●	●	●	1228.7 mm (48.375 in.)	401768-48
●	●	●	1533.5 mm (60.375 in.)	401768-60

Optional extension rod example





Male rod end (part no.: 401872)

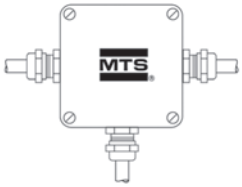
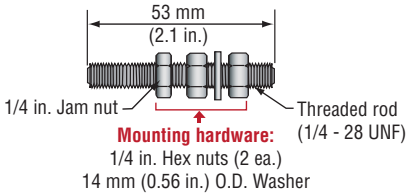
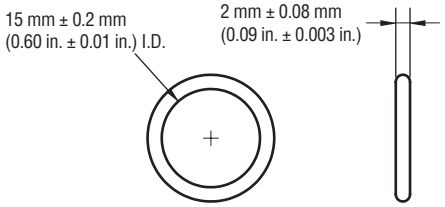
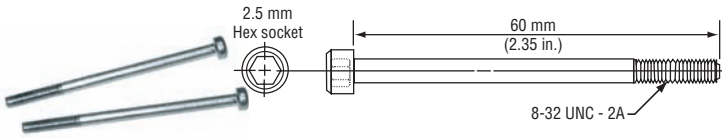


Note:

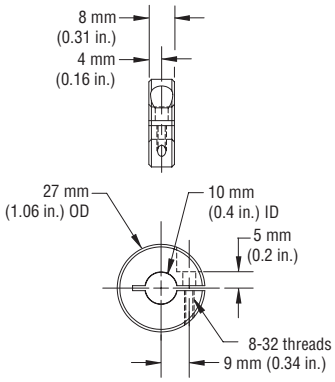
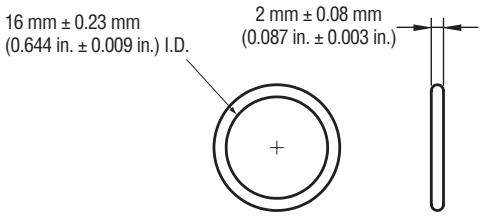
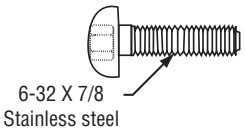
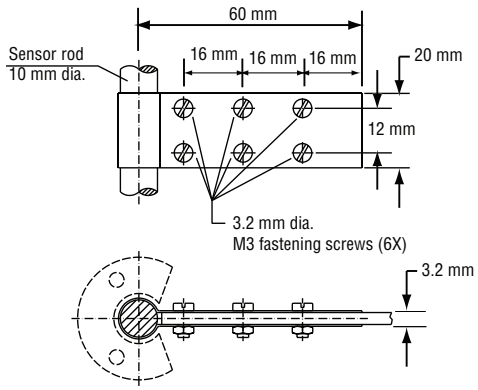
If your application requires a magnet that is not shown, contact the Factory and consult Applications Engineering for custom or additional non standard magnet options.

Extension Rods

OPTIONAL INSTALLATION HARDWARE

Hardware and Dimensions	Description and Specifications	Sensor Model Reference	Part number
	**Profibus filter box** **Dimensions:** 80 mm (3.5 in.) X 75 mm (2.95 in.) 58 mm (2.28 in.) **Application:** EMC conformal feeding of 24 Vdc supply voltage into the Profibus-DP hybrid cable	**RP/RH** Profibus	252916
 	**Stud end** **Type:** Hex nuts, (2X), jam nut and washer Material: Stainless steel **Application:** Rod and cylinder mounting	**ER**	251975
 	**O-Ring** **Material:** Fluoroelastomer 75 ± 5 durometer **Dimensions:** Metric flange with M18 X 1.5 threads **Application:** Use with style M housings	**GH/RH**	401133
	**Electronics housing screw** **Type:** 8-32 UNC - 2A **Application:** GHB and RHB and LH/GH models with pressure housing	**GHB/RHB**	402617
	**Hex-jam nut** **Type:** 3/4-16 UNF **Material:** Stainless steel with nylon insert **Application:** T and S style housings	**GH/RH**	500015
	**Hex-jam nut** **Type:** M18 X 1.5 threads **Material:** Stainless steel **Application:** Use for M style housing	**GH/RH**	500018

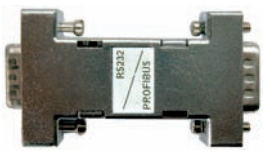
OPTIONAL INSTALLATION HARDWARE

Hardware and Dimensions	Description and Specifications	Sensor Model Reference	Part number
 	**Collar** **Material:** 304 Stainless steel **Application:** Pressure housing and float 251447	GH/RH	560777
 	**O-Ring** **Material:** Fluoroelastomer 75 ± 5 durometer **Dimensions:** Std. flange with 3/4-16 UNF threads **Application:** T and S style housings	GH/RH	560315
 	**Magnet mounting screws** **Type:** 6-32 X 7/8 Material: Stainless steel **Application:** Standard ring magnet mounting (part no,: 201542) 4 required or open-ring magnet mounting (part no.: 251416-2)	RP/GP	560357
 	**Fixing clip** Material: Brass, non magnetic **Application:** Used to secure open-ring magnet	RH/GH	561481

PROGRAMMING TOOLS

Programming selections	Description and Specifications	Sensor Model Reference	Part number
	**R-Series Analog hand-held Programmer** **Application:** Adjusting setpoints 1 and 2 for R-Series Analog output sensor models with single magnets	**RP/RH** Analog	253124
	**R-Series Analog Cabinet Programmer** **Application:** Adjusting setpoints 1 and 2 for R-Series Analog output sensor models with single magnets and features snap-in mounting on standard 35 mm DIN rail. This programmer can be permanently mounted in a control cabinet and includes a program/run switch.	**RP/RH** Analog	253408
	**R-Series Analog Programming Kit** Kit includes: Interface converter box, power supply, setup software and cabling. **Application:** Programming software for R-Series Analog output sensor models	**RP/RH** Analog	253309-1
	**R-Series SSI Programming Kit** Kit includes: Interface converter box, power supply, setup software and cabling. **Application:** Programming software for R-Series SSI output sensor models	**RP/RH** SSI	253310-1
	**R-Series Profibus Node and Field Address Programmer** **Application:** Node and field address Programming for R-Series Profibus output sensor models	**RP/RH** Profibus	280640

PROGRAMMING TOOLS

Programming selections	Description and Specifications	Sensor Model Reference	Part number
	**R-Series CANbus Field Address Programmer** **Application:** Field address Programming for R-Series CANopen output sensor models	**RP/RH** CANopen	252382-D62
	**G-Series Analog output Programmer** **Application:** Programming for G-Series Analog output sensor models	**GP/GH** Analog	253853
	**R-Series SSI Programming Kit** Kit includes: Interface converter box, power supply, setup software and cabling. **Application:** Programming software for R-Series Analog output sensor models	**GP/GH** Analog	253311-1
	**G-Series Setup software Programming Kit** Kit includes: Interface converter box, power supply, setup software and cabling. **Application:** Programming software for G-Series Digital output sensor models	**GP/GH** Digital-Pulse (PWM)	253312-1
	**Profibus master simulator**. **Application:** Function and diagnostic data verification and to perform slave address adjustments for R-Series Profibus output sensor models	**RP/RH** Profibus	401727

Field Programming

Document Part Number: 550929, Revision C 09-10

MTS®
SENSORS

MTS Systems Corporation
Sensors Division

3001 Sheldon Drive
Cary, North Carolina
27513, USA
Tel.: +1-800-633-7609
Fax: +1-919-677-2343
+1-800-498-4442
e-mail: sensorsinfo@mts.com
http://www.mtssensors.com

MTS Sensor Technologie
GmbH & Co. KG

Auf dem Schüffel 9
D - 58513 Lüdenscheid, Germany
Tel.: +49-2351-9587-0
Fax: +49-2351-56491
e-mail: info@mtssensor.de
http://www.mtssensor.de

MTS Sensors Technology
Corporation

737 Aihara-cho, Machida-shi
Tokyo 194-0211, Japan
Tel.: +81-42-775-3838
Fax: +81-42-775-5516
e-mail: info@mtssensor.co.jp
http://www.mtssensor.co.jp