

PRODUCT DESCRIPTION

SPECTEC's Explosion Proof / Flame Proof sensors are designed for installation in hazardous locations. They are offered in a wide variety of configurations as outlined on page 2. Custom sensors can also be created to meet specific needs.

INSTALLATION

CAUTION!!! This sensor MUST be installed following the details specified in the Instruction Manual Document #85047Xcg.

GENERAL SPECIFICATIONS

- Construction:** 300 Series Stainless Steel
 Solid Epoxy Encapsulation
- Lead Wires or Cable:** 22 to 24 AWG
 PVC insulated Shielded Cable, See Page 2
- Output Voltage:** See Page 2 (25 mA maximum current sinking)
- DIGISPEC HALL SENSORS, H Magnet & HF Gear actuated**
- Supply Voltage(Vs):** 5 to 27 Vdc @ ≤15 mA (Single output)
 5 to 27 Vdc @ ≤30 mA (Dual output)
 5 to 27 Vdc @ ≤45 mA (Directional output)
 (approx. 15mA per output channel)
- Frequency Range:** 0 Hz to ~20 kHz
- Air Gap:** **H:** ~.50" (12mm) max when triggered by
 ø10mm, 3000 Gauss magnet
HF: ~.16" (4mm) max for 5dp gear
 ~.015" (0.4mm) max for 48dp gear
 (with max magnetization of ~1500 Gauss)
- Directional** **5V** (or 10V, Vs depending on Output Signal)
K or Q Sensor type: (Target moving toward alignment mark)
0V (0.06V max)
 (target moving away from alignment mark)

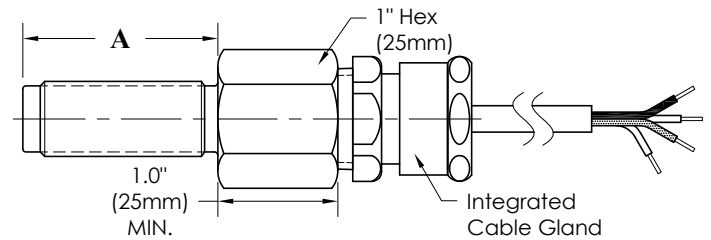
DIGISPEC MAGNETIC VRS SENSORS, Gear actuated

- Supply Voltage(Vs):** 8 to 30 Vdc @ ≤15 mA
- Frequency Range:** ~5 Hz to 40 kHz
- Air Gap:** ~0.10" (2.5mm) max for 5dp gear
 ~0.015" (0.4mm) max for 48dp gear
 (based on magnetization of >1300 Gauss)

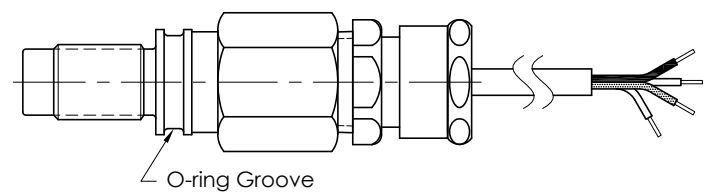
DIGISPEC RF SENSORS, Ferrous or Aluminum target actuated

- Supply Voltage(Vs):** 11 to 30 Vdc @ ≤20 mA
- Frequency Range:** 0.1 Hz to 5 kHz Depending on target mass
- Air Gap:** ~0.20" (5mm) max Depending on target mass

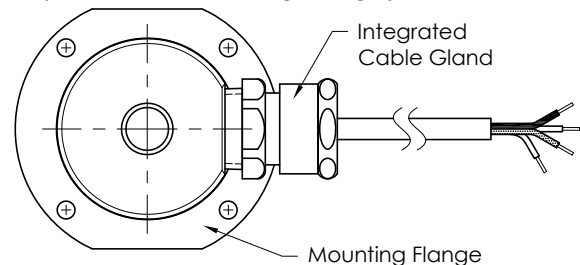
Y shell type



CUSTOM shell type per customer requirements (example shell type with o-ring groove)



(example mounting flange)



CERTIFICATIONS for XP2cg

- ATEX & IECEx:** II 2 G Ex db IIC T6...T4 Gb
 FM16ATEX0086X & IECEx FMG 16.0035X
- T4 @ -40°C ≤ T_{amb} ≤ +90°C**
T5 @ -40°C ≤ T_{amb} ≤ +77°C
T6 @ -40°C ≤ T_{amb} ≤ +62°C
- CE:** Compliance with
 EN55011, EN50082-2

FEATURE SELECTION for XP2cg-abdefg

| SPECTEC P/N | a Sensor Type | b Shell Type (See Page 1) | d Mounting Thread | e Mounting Thread Length | f Output Signal | g Lead Wires |
|---------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| XP2cg- Active Sensor, Cable Gland Style | M - <i>Digispec</i> Magnetic VRS (30mV Sensitivity is standard) | Y | 1 - 1/2-20 UNF 2 - 5/8-18 UNF 3 - 11/16-24 UNEF 4 - 3/4-16 UNF 5 - 3/4-20 UNEF 6 - M12x1 7 - M16x1.5 8 - M18x1 9 - M18x1.5 | 1 - 1.1" (28mm) 3 - 2.0" (51mm) — 5 - 3.0" (76mm) 6 - 4.0" (101mm) 7 - 6.0" (152mm) 8 - 8.0" (203mm) 9 - 10.0" (254mm) | 1 - 0-5V, NPN(TTL) 2 - 0-10V, NPN 3 - 0-Vs, NPN 4 - 0-Vs, NPN OC 5 - 0-Vs, PNP OC 6 - 0-Vs, NPN/PNP 7 - 0-5V, NPN/PNP | 1 - 12" (.3m) 2 - 36" (1m) 3 - 120" (3m) 4 - 198" (5m) 5 - 396" (10m) 22 to 24 AWG Shielded Cable (depending on shell size and sensor type) Polyvinyl chloride (PVC) insulation Red - Supply Black - Common White - Output A Green or Green/Yellow - Shell Ground Orange - Output B Blue - Direction White w/Black - Unused (connect to Earth) Shield - Floating (Not connected to shell, please ground to instrumentation) NOTE: Other lead wire lengths are available. |
| | R - <i>Digispec</i> RF | | | | | |
| | <i>Digispec</i> Hall Sensor H Style (Magnet Actuated) (Omnipolar activation [either pole] is standard) | | | | | |
| | H - Single output | | | | | |
| | J - Dual output | | | | | |
| | K - Directional output | | | | | |
| | <i>Digispec</i> Hall Sensor HF Style (Gear Actuated) | | | | | |
| | F - Single output | | | | | |
| | D - Dual output | | | | | |
| | Q - Directional output | | | | | |

Variants: (Contact sales for additional details)

XP2cg-abdefg-300G The magnetization level (in Gauss) for low magnetic drag sensors is designated as a suffix to the part number. The standard magnetic level does not require a suffix. (Only for *Digispec* Magnetic VRS sensor and Hall Sensor HF Style [Gear])

XP2cg-Fbdefg-HFd A differential style Hall sensor option for use in high vibration environments is designated by suffix to the part number. Frequency Range is 15 Hz to ~30kHz. Dual and Direction output options are also available. (Only for *Digispec* Hall Sensor HF Style [Gear])

XP2cg-Hbdefg-S or **-N** or **-L** Alternatives to the polar activation type for Magnet Actuated Hall Effect Sensor is designated as a suffix to the part number. (S = South pole, N = North pole, L = Latch [requires North-South alternating]) (Only for *Digispec* Hall Sensor H Style [Magnet])

P/N Examples:

XP2cg-MY2313 Digispec Magnetic VRS Sensor, Y shell type, 5/8-18 x 2.0" thread, 0-5V NPN, 120" cable

XP2cg-DY8645 Dual Gear Actuated HF Hall Sensor, Y shell type, M18x1 - 101mm thread, 0-Vs NPN OC, 10m cable

Please Note: Some combinations of options are not possible, please contact sales with any questions.

Customizations: Some minor customizations to the above Shell Types are possible (e.g. O-ring groove, long thread relief, etc.). Customer specific housing designs and mounting flanges are also possible. However, these customizations are still required to conform to all appropriate standards and meet the requirements of the design approval. Contact sales for suitability. Details on custom models are listed below.

SPECIALTY & CUSTOM MODELS:

| | | | | | |
|-----------------|-------------------|--------|-------------------|--------------|-----------------|
| XP2cg-MF-1 | H - Single Output | CUSTOM | Customer specific | 0-Vs NPN, OC | 120" (3m) Cable |
| XP2cg-MF-2 | H - Single Output | CUSTOM | Customer specific | 0-Vs NPN, OC | 120" (3m) Cable |
| XP2cg-MF-2-5m | | | | | 198" (5m) Cable |
| XP2cg-TITAN | H - Single Output | CUSTOM | Customer specific | 0-Vs NPN | 120" (3m) Cable |
| XP2cg-TITAN-5m | | | | | 198" (5m) Cable |
| XP2cg-TITAN2 | | | | | J - Dual Output |
| XP2cg-TITAN2-5m | 198" (5m) Cable | | | | |

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