

FGM3D シリーズ高性能 3 軸フラックスゲートセンサ仕様

| | 標準仕様 | | | | | | | 校正仕様 | 水中仕様 | |
|-------------------|--------------------------------------|---------------|-------------|-------------|-------------|-------------|---------------|---------------------------------------|------------------------------|--------|
| | FGM3D/4 | FGM3D/75 | FGM3D/100 | FGM3D/125 | FGM3D/250 | FGM3D/500 | FGM3D/1000 | FGM3D/125-C3T | FGM3D UW | |
| 測定レンジ | ±4,000 nT | ±75,000 nT | ±100,000 nT | ±125,000 nT | ±250,000 nT | ±500,000 nT | ±1,000,000 nT | ± 125,000 nT | See standard version | |
| 各軸の基準点 | 次項図 1 参照 (端から 14.5/34.5/54.5mm) | | | | | | | 次項図 2 参照 (端から 4.5/34.5/54.5mm) | 次項図 3 参照 (端から 34/54/74mm) | |
| 全体の基準点 | 端から 4.5 mm | | | | | | | | 端から 54mm | |
| 軸間の偏差 | | | | | | | | ≤ ±0.5° | | |
| 全体の偏差 | | | | | | | | ≤ ±1° | | |
| 分解能 | | | | | | | | < 150 pT | | |
| ノイズ [0.1 … 10 Hz] | | | | | | | | < 15 pT _{rms} /√Hz @0.1…10Hz | | |
| カットオフ周波数 (帯域幅) | | | | | | | | 2 kHz (DC…2 kHz) | | |
| 温度ドリフト | | | | | | | | ≤ ± 0.3 nT/K | | |
| 零誤差 | | | | | | | | ≤ ±5 nT | | |
| 測定の相対誤差 | ±0.1 % | | | | | | | ±0.5 % | ±0.1 % | 標準仕様参照 |
| 安定性 | | | | | | | | < 5 nT | | |
| 直線性 | | | | | | | | < 20 ppm | | |
| 感度 | 2.5 V/μT | 1.33… V/μT | 0.1 V/μT | 0.08V/μT | 0.04V/μT | 0.02V/μT | 0.01V/μT | 0.08 V/μT | 標準仕様参照 | |
| 追加巻 (補償) | n.a. | | | | | | | 6.3 mA / 70 μT (max. 10mA) | | n.a. |
| 校正ジャンプ | n.a. | | | | | | | -10 μT / 軸 | | n.a. |
| 供給電圧 | | | | | | | | ±12 V … ±15 V | | |
| 消費電流 | ±26 mA | | | | | | | 最大 ±40 mA 公称 ±30 mA | | 標準仕様参照 |
| 出力 | | | | | | | | ±10 V @FS | | |
| 出力インピーダンス | | | | | | | | < 1 Ω | | |
| 動作温度 | | | | | | | | -20 °C to +75 °C | | |
| 保管温度 | | | | | | | | -40 °C to +80 °C | | |
| 寸法 | 矩形 26mm x 26mm x 149mm | | | | | | | 円筒 Ø45mm x 263mm | | |
| 重量 (ケーブルを含まず) | 112g | | | | | | | 130g | | 470g |
| 防水性 | IP65 | | | | | | | IP68K 最深 100m | | |
| 振動安定性 | BV044 (in parts) | | | | | | | | | |
| オプション | | | | | | | | | | |
| 低ノイズ / 分解能改善 | ≤ 8 pT _{rms} /√Hz / < 70 pT | | | | | n.a. | | ≤ 8 pT _{rms} /√Hz / < 70 pT | | 標準仕様参照 |
| 直交性改善 | 軸間の偏差: ≤ ±0.1° 全体の偏差: ≤ ±0.12° | | | | | | | | | |
| 拡張帯域幅 | n.a. | 3 kHz / 4 kHz | | | n.a. | | | n.a. | | 標準仕様参照 |
| 特注ハウジング | 可能な特徴: 正方形、円筒形、追加の取り付け点、特定の材料、色など | | | | | | | | | 深度に依存 |

(version 1.01)

SENSYS FGM3D Diagram and Pin Layout Matrix

| Sensor | Schematic view of sensor Side view with dimension, reference edge and centre of sensing elements | Connector layout Number of pins | Pin layout version Assignment of pins | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------|---|------------------------------------|--|-----|--------|-------|---|-------------------|--------|---|-------------------|-------|---|------------------|------|---|------------------|--------|---|------------------|--------|---|----------------|--------|---|----------------|-------------|---|----------------|-------|---|----|-------|----|-------------------|--------|----|---------------------|-------------|----|------|-------------|
| FGM3D | <p style="text-align: center;">● centre of sensing elements</p> <p style="text-align: center;">Figure 1</p> | | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Pin</th> <th>Signal</th> <th>Color</th> </tr> </thead> <tbody> <tr><td>1</td><td>0V</td><td>Black</td></tr> <tr><td>2</td><td>-15V</td><td>Brown</td></tr> <tr><td>3</td><td>+15V</td><td>Red</td></tr> <tr><td>4</td><td>B_{COM}</td><td>Orange</td></tr> <tr><td>5</td><td>B_X</td><td>Yellow</td></tr> <tr><td>6</td><td>B_Y</td><td>Green</td></tr> <tr><td>7</td><td>B_Z</td><td>Blue</td></tr> </tbody> </table> | Pin | Signal | Color | 1 | 0V | Black | 2 | -15V | Brown | 3 | +15V | Red | 4 | B _{COM} | Orange | 5 | B _X | Yellow | 6 | B _Y | Green | 7 | B _Z | Blue | | | | | | | | | | | | | | | |
| Pin | Signal | Color | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 0V | Black | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | -15V | Brown | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | +15V | Red | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | B _{COM} | Orange | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | B _X | Yellow | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | B _Y | Green | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | B _Z | Blue | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FGM3D/125-C3T | <p style="text-align: center;">● Zentrum der Achsen</p> <p style="text-align: center;">Figure 2</p> | | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Pin</th> <th>Signal</th> <th>Color</th> </tr> </thead> <tbody> <tr><td>1</td><td>Z_{TEST}</td><td>White</td></tr> <tr><td>2</td><td>Y_{TEST}</td><td>Grey</td></tr> <tr><td>3</td><td>Z_{OUT}</td><td>Blue</td></tr> <tr><td>4</td><td>Y_{OUT}</td><td>Green</td></tr> <tr><td>5</td><td>X_{OUT}</td><td>Yellow</td></tr> <tr><td>6</td><td>OUT</td><td>Orange</td></tr> <tr><td>7</td><td>+15V</td><td>Red</td></tr> <tr><td>8</td><td>-15V</td><td>Brown</td></tr> <tr><td>9</td><td>0V</td><td>Black</td></tr> <tr><td>10</td><td>X_{TEST}</td><td>Purple</td></tr> <tr><td>11</td><td>CAL_{TEST}</td><td>Brown/white</td></tr> <tr><td>12</td><td>TEST</td><td>White/black</td></tr> </tbody> </table> | Pin | Signal | Color | 1 | Z _{TEST} | White | 2 | Y _{TEST} | Grey | 3 | Z _{OUT} | Blue | 4 | Y _{OUT} | Green | 5 | X _{OUT} | Yellow | 6 | OUT | Orange | 7 | +15V | Red | 8 | -15V | Brown | 9 | 0V | Black | 10 | X _{TEST} | Purple | 11 | CAL _{TEST} | Brown/white | 12 | TEST | White/black |
| Pin | Signal | Color | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Z _{TEST} | White | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | Y _{TEST} | Grey | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | Z _{OUT} | Blue | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | Y _{OUT} | Green | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | X _{OUT} | Yellow | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | OUT | Orange | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | +15V | Red | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | -15V | Brown | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | 0V | Black | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | X _{TEST} | Purple | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | CAL _{TEST} | Brown/white | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | TEST | White/black | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FGM3D UW | <p style="text-align: center;">● centre of sensing elements</p> <p style="text-align: center;">Figure 3</p> | | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Pin</th> <th>Signal</th> <th>Color</th> </tr> </thead> <tbody> <tr><td>1</td><td>Shield</td><td>Shield</td></tr> <tr><td>2</td><td>GND</td><td>White</td></tr> <tr><td>3</td><td>-15V</td><td>Red</td></tr> <tr><td>4</td><td>+15V</td><td>Green</td></tr> <tr><td>5</td><td>Return GND</td><td>Grey</td></tr> <tr><td>6</td><td>B_X</td><td>Blue</td></tr> <tr><td>7</td><td>B_Y</td><td>White/black</td></tr> <tr><td>8</td><td>B_Z</td><td>Black</td></tr> </tbody> </table> | Pin | Signal | Color | 1 | Shield | Shield | 2 | GND | White | 3 | -15V | Red | 4 | +15V | Green | 5 | Return GND | Grey | 6 | B _X | Blue | 7 | B _Y | White/black | 8 | B _Z | Black | | | | | | | | | | | | |
| Pin | Signal | Color | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | Shield | Shield | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | GND | White | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | -15V | Red | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | +15V | Green | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | Return GND | Grey | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | B _X | Blue | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | B _Y | White/black | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | B _Z | Black | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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