





















Non-contacting Sensors (비접촉식 기술 방식)













| Model (모델) | Diameter (직경) | Electrical angle (측정각도) | Resolution (분해능) | Repeatability (반복성) | IP rate (보호등급) | Features (특징) | Link |
|--|--------------------|-------------------------|------------------|---------------------|----------------|---|----------------------------|
| Vert-X 05E  | 48x15mm | 360° | 12bits | ≤0.1° | IP 68 | <ul style="list-style-type: none"> Flat design(5mm) Measuring system only 6mm from the edge. | Vert-X 05E |
| Vert-X 13E  | 13mm | 360° | 12, 14bits | ≤0.1° | IP 69 | <ul style="list-style-type: none"> Very compact dimensions Infinite mechanical life | Vert-X 13E |
| Vert-X 22E  | 22mm | 360° | 12, 14bits | ≤0.1° | IP 69 | <ul style="list-style-type: none"> Non contacting measuring method Infinite mechanical life | Vert-X 22E |
| Vert-X 27E  | 27mm | 360° | 12, 14bits | ≤0.1° | IP 69 | <ul style="list-style-type: none"> Compact dimensions Infinite mechanical life | Vert-X 27E |
| Vert-X 31E  | 48x35mm | 360° | 14 bits | ≤0.1° | IP 68 | <ul style="list-style-type: none"> Very compact dimensions Infinite mechanical life | Vert-X 31E |
| Vert-X 32E  | 48x38mm 48x51mm | 360° | 16 bits | ≤0.1° | IP 68 | <ul style="list-style-type: none"> Non-contacting measuring method Infinite mechanical life | Vert-X 32E |
| Vert-X 37E  | 37mm | 360° | 12, 14bits | ≤0.1° | IP 69 | <ul style="list-style-type: none"> Robust design Non contacting measuring method | Vert-X 37E |
| Vert-X 90E  | 90mm | 360° | 12, 14bits | ≤0.1° | IP 69 | <ul style="list-style-type: none"> Very robust design, Sealed aluminum housing Applications under adverse ambient conditions possible | Vert-X 90E |


Contactless Angle Sensors (비접촉 측정 방식)

| Model (모델) | Diameter (직경) | Electrical angle (측정각도) | Resolution (분해능) | Repeatability (반복성) | IP rate (보호등급) | Features (특징) | Link |
|---|---------------|-------------------------|------------------|---------------------|----------------|---|---------------------------|
| Vert-X 13  | 13mm | 360° | 12, 14bits | ≤0.1° | IP 54, 65 | <ul style="list-style-type: none"> Very compact dimensions Contactless measuring method | Vert-X 13 |
| Vert-X 16  | 16mm | 360° | 12, 14bits | ≤0.1° | IP 54, 65 | <ul style="list-style-type: none"> Very compact dimensions Contactless measuring method | Vert-X 16 |
| Vert-X 21  | 22mm | 360° | 12, 14bits | ≤0.1° | IP 54, 65 | <ul style="list-style-type: none"> Contactless measuring method | Vert-X 21 |
| Vert-X 22  | 22mm | 360° | 12, 14bits | ≤0.1° | IP 54, 67 | <ul style="list-style-type: none"> Robust design, sealed stainless steel housing Applications under adverse ambient conditions possible | Vert-X 22 |
| Vert-X 24  | 22mm | 360° | 12 bits | ≤0.1° | IP 54, 67 | <ul style="list-style-type: none"> Compact dimensions Simple adjustment (elongated holes) | Vert-X 24 |
| Vert-X 28  | 28mm | 360° | 14 bits | ≤0.1° | IP 54, 65 | <ul style="list-style-type: none"> Simple adjustment (elongated holes) | Vert-X 28 |









| Model (모델) | Diameter (직경) | Electrical angle (측정각도) | Resolution (분해능) | Repeatability (반복성) | IP rate (보호등급) | Features (특징) | Link |
|-------------|--|-------------------------|------------------|---------------------|----------------|--|-------------|
| Vert-X 28HD |  28mm | 360° | 14 bits | ≤0.1° | IP 68, 69K | <ul style="list-style-type: none"> Robust design, sealed stainless steel housing (up to IP69K) Simple adjustment (elongated holes) | Vert-X 28HD |
| Vert-X 37 |  33mm | 360° | 12, 14bits | ≤0.1° | IP 54, 69 | <ul style="list-style-type: none"> Very robust design, sealed stainless steel housing (IP68) | Vert-X 37 |
| Vert-X 51 |  51mm | 360° | 16 bits | ≤0.1° | IP 54, 67 | <ul style="list-style-type: none"> Robust design CANopen Interface available | Vert-X 51 |
| Vert-X 88 |  88mm | 360° | 16 bits | ≤0.1° | IP 68, 69k | <ul style="list-style-type: none"> Very robust design, sealed aluminum housing(up to IP69k) | Vert-X 88 |

Potentiometer Conductive Plastic




| Model (모델) | Housing Diameter (외경) | Electrical angle (측정각도) | Repeatability (반복성) | Linearity (선형성) | Life time (수명) | IP rate (보호등급) | Features (특징) | Link |
|-----------------------------|--|-------------------------|---------------------|-----------------|----------------|----------------|--|---------------------------|
| PL 20 |  20mmx16mm | 315° | | ±3% | 1,000,000회 | IP 67 | <ul style="list-style-type: none"> Small dimensions | PL 20 |
| PL 130 |  13 mm | 300° | max. 0.2° | ±2.5% | 500,000회 | IP 50 | <ul style="list-style-type: none"> Long life Very good resolution | PL 130 |
| PL 240 |  20 mm | 270 ° | max. 0.1° | ±2% | 500,000회 | IP 50 | <ul style="list-style-type: none"> Long life Very good resolution | PL 240 |
| PL 290 |  20mm | 270° | max. 0.1° | ±2% | 500,000회 | IP 50 | <ul style="list-style-type: none"> El. connection directly on PCB | PL 290 |
| PL 300 |  22mm | 340 ° | max. 0.1° | ±0.25% | 5,000,000회 | IP 50 | <ul style="list-style-type: none"> Bushing mount: 3/8" Panel mount Very good resolution | PL 300 |
| PL 310 |  22 mm | 340° | max. 0.1° | ±1% | 5,000,000회 | IP 54 | <ul style="list-style-type: none"> Small dimensions Synchro flange Design flexibility | PL310 |
| PL 320 |  22 mm | 340° | max. 0.1° | ±1% | 5,000,000회 | IP 54 | <ul style="list-style-type: none"> Small dimensions Design flexibility | PL320 |
| PL 330 |  22 mm | 340° | max. 0.1° | ±0.25% | 5,000,000회 | | <ul style="list-style-type: none"> Synchro flange Design flexibility | PL330 |
| PL 340 |  22 mm | 340° | max. 0.1° | ±1% | 5,000,000회 | IP 54 | <ul style="list-style-type: none"> Plastic housing | PL340 |
| GL 60/100 /200/300 /400/500 |  6/ 10/ 20/ 30/ 40/ 50 mm | 150°/ 340°/ 354° | max. 0.1° | ±0.25% | 5,000,000회 | IP 63 | <ul style="list-style-type: none"> Hollow shaft | GL 60/100/200/300/400/500 |
| WAL 200 |  22mm | 280° | 0.3° | ±1% | 2,000,000회 | IP 50 | <ul style="list-style-type: none"> Hollow shaft Flat design | WAL200 |
| WAL 300 /305 |  32mm | 340° | max. 0.3° | ±0.5% | 2,000,000회 | IP 50 | <ul style="list-style-type: none"> Hollow shaft | WAL300 /305 |
| WAL 600 | 64mm | 90° | max. 0.3° | ±3% | 1,500,000회 | IP 50 | <ul style="list-style-type: none"> Hollow shaft Flat design Mounting strabs | WAL600 |
| WRL | 340° | 340° | max. 0.1° | ±1% | 5,000,000회 | | <ul style="list-style-type: none"> Minimal space requirements | WRL |

| Model (모델) | Housing Diameter (외경) | Electrical angle (측정각도) | Repeatability (반복성) | Linearity (선형성) | Life time (수명) | IP rate (보호등급) | Features (특징) | Link |
|--------------------|---|-------------------------|---------------------|-----------------|----------------|----------------|--|-------------------|
| ML 06/10/25/50/100 |  6mm | 2160° | 3.6° | ±2% | 15,000,000회 | IP 65 | <ul style="list-style-type: none"> Turns: 6; 10; 25; 50; 100 Long life | ML06/10/25/50/100 |




Potentiometer Wire Wound

| Model (모델) | Housing Diameter (외경) | Electrical angle (측정각도) | Repeatability (반복성) | Linearity (선형성) | Life time (수명) | IP rate (보호등급) | Features (특징) | Link |
|------------|---|--------------------------|---------------------|-----------------|----------------|----------------|---|---------|
| PD200 |  20mm | 268°/ 278° 298°/ 318° | max. 0.35°...1° | ±0.4% | 100,000회 | IP 67 | <ul style="list-style-type: none"> Small dimensions | PD200 |
| PD200HW |  20mm | 268°/ 278° 298°/ 318° | max 0.35°...1° | ±0.4% | 100,000회 | IP 67 | <ul style="list-style-type: none"> 200,000 movements Excellent linearity ±0.4% | PD200HW |
| PD210 |  20mm | 268°/ 278° 298°/ 318° | max 0.35°...1° | ±0.4% | 100,000회 | IP 67 | <ul style="list-style-type: none"> 200,000 movements Extremely low susceptibility | PD210 |
| PD210HW |  20mm | 268°/ 278° 298°/ 318° | max 0.35°...1° | ±0.4% | 100,000회 | IP 67 | <ul style="list-style-type: none"> 200,000 movements Excellent linearity ±0.4% | PD210HW |
| PD280 |  20mm | 312° | 0.35°...75° | ±0.4% | 100,000회 | IP 50 | <ul style="list-style-type: none"> Small dimensions | PD280 |
| PD550 |  55x55mm | 268°...355° | max. 1° | ±0.25% | 200,000회 | IP 50 | <ul style="list-style-type: none"> Flat design | PD550 |
| PD550HW |  55x55mm | 268°...355° | max. 1° | ±0.25% | 200,000회 | IP 50 | <ul style="list-style-type: none"> Flat design Stackable | PD550HW |
| PD2310 |  22mm | 3600 ° | 0.7°...1° | ±0.15% | 1,000,000회 | IP 50 | <ul style="list-style-type: none"> Bushing mount: 10mm Available in 3, 5 and 10 turns Multi-turn wirewound potentiometer 6mm shaft diameter | PD2310 |

Potentiometer Cermet

| Model (모델) | Housing Diameter (외경) | Electrical angle (측정각도) | Repeatability (반복성) | Linearity (선형성) | Life time (수명) | IP rate (보호등급) | Features (특징) | Link |
|------------|---|-------------------------|---------------------|-----------------|----------------|----------------|---|------------|
| PC20 |  20mmX16mm | 315° | 0.4° | ±2.5% | 50,000회 | IP 67 | <ul style="list-style-type: none"> High operate temperature -25~125°C | PC20 |
| PC90 |  9 mm | 300° | 0.4° | ±3% | 2,000회 | IP 67 | <ul style="list-style-type: none"> High operate temperature -25~125°C | PC90 |
| PC 260/262 |  20 mm | 270° | 0.1° | ±2% | 50,000회 | IP 54 | <ul style="list-style-type: none"> High operate temperature -25~125°C Very small Size | PC 260/262 |

Linear Transducer

| Model (모델) | Distance angle (측정거리) | Repeatability (반복성) | Linearity (선형성) | Life time (수명) | IP rate (보호등급) | Features (특징) | Link |
|--|-----------------------|---------------------|-----------------|----------------|----------------|---|------------|
| KL/KLR  | 10, 25, 50, 75, 100mm | max. 0.05mm | ±1%...±0.25% | 10,000,000회 | IP 65 | <ul style="list-style-type: none"> • Compact dimensions • With or without return spring | KL/KLR |
| LAL200/400  | 20, 40mm | max. 0.1mm | ±1% | 2,000회 | | <ul style="list-style-type: none"> • Integrable on PCB • Compact dimensions | LAL200/400 |
| WL  | 10, 25, 50, 75, 100mm | max. 0.1mm | ±1%...±0.25% | 10,000,000회 | | <ul style="list-style-type: none"> • High life • Minimal space requirements | WL |