

| Model | Outline Drawing | Specifications |
|-------|-----------------|----------------|
|-------|-----------------|----------------|

| <div><div>ANALOG INTERFACE</div><div></div></div>      | <table><tr><th>Select<br/>選擇</th><th>Signal Type<br/>信號類型</th><th>Supply Voltage<br/>工作電壓</th><th>Output Signal<br/>輸出信號</th></tr><tr><td><input type="checkbox"/></td><td>0505</td><td>5V±10%</td><td rowspan="2">0-5V</td></tr><tr><td><input type="checkbox"/></td><td>DC05</td><td>9-30V</td></tr><tr><td><input type="checkbox"/></td><td>2410</td><td rowspan="3">15-30V</td><td>0-10V</td></tr><tr><td><input type="checkbox"/></td><td>2442</td><td>4-20mA</td></tr><tr><td><input type="checkbox"/></td><td>2420</td><td>0-20mA</td></tr><tr><td><input type="checkbox"/></td><td>PWM</td><td>5V±10%</td><td>PWM</td></tr></table> | Select<br>選擇                                                  | Signal Type<br>信號類型   | Supply Voltage<br>工作電壓 | Output Signal<br>輸出信號 | <input type="checkbox"/> | 0505 | 5V±10% | 0-5V | <input type="checkbox"/> | DC05 | 9-30V | <input type="checkbox"/> | 2410 | 15-30V | 0-10V | <input type="checkbox"/> | 2442 | 4-20mA | <input type="checkbox"/> | 2420 | 0-20mA | <input type="checkbox"/> | PWM | 5V±10% | PWM |
|--------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------|------------------------|-----------------------|--------------------------|------|--------|------|--------------------------|------|-------|--------------------------|------|--------|-------|--------------------------|------|--------|--------------------------|------|--------|--------------------------|-----|--------|-----|
| Select<br>選擇                                           | Signal Type<br>信號類型                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Supply Voltage<br>工作電壓                                        | Output Signal<br>輸出信號 |                        |                       |                          |      |        |      |                          |      |       |                          |      |        |       |                          |      |        |                          |      |        |                          |     |        |     |
| <input type="checkbox"/>                               | 0505                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 5V±10%                                                        | 0-5V                  |                        |                       |                          |      |        |      |                          |      |       |                          |      |        |       |                          |      |        |                          |      |        |                          |     |        |     |
| <input type="checkbox"/>                               | DC05                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 9-30V                                                         |                       |                        |                       |                          |      |        |      |                          |      |       |                          |      |        |       |                          |      |        |                          |      |        |                          |     |        |     |
| <input type="checkbox"/>                               | 2410                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 15-30V                                                        | 0-10V                 |                        |                       |                          |      |        |      |                          |      |       |                          |      |        |       |                          |      |        |                          |      |        |                          |     |        |     |
| <input type="checkbox"/>                               | 2442                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                               | 4-20mA                |                        |                       |                          |      |        |      |                          |      |       |                          |      |        |       |                          |      |        |                          |      |        |                          |     |        |     |
| <input type="checkbox"/>                               | 2420                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                               | 0-20mA                |                        |                       |                          |      |        |      |                          |      |       |                          |      |        |       |                          |      |        |                          |      |        |                          |     |        |     |
| <input type="checkbox"/>                               | PWM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 5V±10%                                                        | PWM                   |                        |                       |                          |      |        |      |                          |      |       |                          |      |        |       |                          |      |        |                          |      |        |                          |     |        |     |
| <div><div>INCREMENTAL INTERFACE</div><div></div></div> | <div><div>SERIAL PERIPHERAL INTERFACE</div><div></div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <div><div>SERIAL SYNCHRONOUS INTERFACE</div><div></div></div> |                       |                        |                       |                          |      |        |      |                          |      |       |                          |      |        |       |                          |      |        |                          |      |        |                          |     |        |     |

|                                  | N13B  | N13D  | N22A  | N22B  | N22C  | N22E  | N36C  | N50   |
|----------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Mechanical Speed<br>機械轉速 (RPM)   | ≤4000 | ≤1000 | ≤1000 | ≤4000 | ≤6000 | ≤1000 | ≤8000 | ≤8000 |
| Operating Life<br>工作壽命 (Million) | 15    | 5     | 15    | 10    | 15    | 5     | 15    | 15    |
| Ball Bearings<br>軸承              | 2     | /     | /     | /     | 2     | /     | 2     | 2     |

| SPECIFICATIONS 規 格              |             |                                     |                                 |                          |                          |
|---------------------------------|-------------|-------------------------------------|---------------------------------|--------------------------|--------------------------|
| Mechanical Angle                | 機械角度        | 360°                                | Housing                         | 外殼                       | Anodized Aluminium       |
| Electrical Angle                | 電氣角度        | 0 ~ 360°                            | Shaft                           | 軸                        | Stainless Steel          |
| Starting Torque                 | 起動扭矩        | 50gf.cm                             | Protection                      | 防護等級                     | IP 40                    |
| Operating Temperature           | 工作溫度        | -40°C ~ +85°C                       |                                 |                          |                          |
| Version                         | Analogue(A) | Incremental(I)                      | SPI(P)                          | SSI(Y)                   |                          |
| Electrical Angle                | 電氣角度        | 20 ~ 360°                           | /                               | 0 ~ 360°                 | 0 ~ 360°                 |
| Resolution                      | 分辨率         | 4096 Steps (12 Bit)                 | 4096 Steps (12 Bit)             | 16383 Steps (14 Bit)     | 4096 Steps (12 Bit)      |
| Supply Voltage                  | 工作電壓        | 5V±10% / DC9-30V / DC15-30V         | 5V±10% / DC9 - 30V              | 5V±10%                   | 5V±10% / DC9 - 30V       |
| Output Signal                   | 輸出信號        | 0505 / 2410 / 0-20mA / 4-20mA / PWM | 5V TTL; 5V/24V - Open Collector | Absolute SPI             | SSI 5V / 24V             |
| Electrical Speed                | 電氣轉速        | ≤ 160 RPM                           | ≤ 1600 RPM                      | ≤ 800 RPM                | ≤ 1600 RPM               |
| Frequency Response              | 頻率          | /                                   | 10KHz                           | 5KHz                     | 10KHz                    |
| Supply Current                  | 工作電流        | < 25mA                              | < 30mA                          | < 30mA                   | < 30mA                   |
| Cable                           | 線材          | 3 Core Flat Cable(150mm)            | 5 Core Flat Cable(150mm)        | 5 Core Flat Cable(150mm) | 6 Core Flat Cable(150mm) |
| Pulses                          | 脈衝數         | /                                   | 2 ~ 128, 256, 512, 1024 PPR     | /                        | /                        |
| Independent Linearity Tolerance | 獨立          | 0.5%                                | /                               | /                        | /                        |
| Terminals (N36C ONLY)           | 端子          | 3 Pins                              | 5 Pins                          | 5 Pins                   | 6 Pins                   |