| | | | | | | |
|---|---|---|---|---|---|---|
| | 0.4 | 0.75 | 0.75 | 0.75 | 1.2 | 1.5 |
| | 2.5 | 3.0 | 3.0 | 3.0 | 5.0 | 6.0 |
| 0 | 3000 | 3000 | 2000 | 3000 | 3000 | 3000 |
| 0 | 4000 | 4000 | 2500 | 4000 | 3500 | 3500 |
| 7 | 1.27 | 2.39 | 3.5 | 2.4 | 4 | 5 |
| | 3.8 | 7.1 | 10.5 | 7.1 | 12 | 15 |
| | 28 | 48 | 48 | 51 | 54 | 62 |
| 7 | 0.5 | 0.8 | 0.8 | 0.8 | 0.8 | 0.83 |
| $10^{-4}$ | $0.438\times10^{-4}$ | $0.24\times10^{-3}$ | $0.24\times10^{-3}$ | $0.24\times10^{-3}$ | $0.54\times10^{-3}$ | $0.63\times10^{-3}$ |
| | 3.49 | 2.88 | 2.88 | 3.2 | 1.09 | 1.03 |
| 2 | 8.47 | 6.4 | 6.4 | 7.0 | 3.3 | 3.43 |
| 3 | 2.4 | 2.22 | 2.22 | 2.2 | 3.0 | 3.33 |
| | 1.78 | 2.86 | 2.86 | 3.4 | 5.5 | 6.1 |
| 2500 | | | | | | |
| 4 | | | | | | |
| Class B(130℃) | | | | | | |
| IP64 | IP65 | | | | | |
| -20℃~+50℃ | | | | | | |
| Related humidity <90% (no condensation) | | | | | | |

| 220V | | | | 380V | | | |
|---|---|---|---|---|---|---|---|
| 130ST- | | | 180ST- | 180ST- | | | |
| M10015 | M07725 | M15015 | M19015 | M21520 | M27015 | M35015 | M48015 |
| □□-21P5 | □□-22P0 | □□-22P3 | □□-23P0 | □□-44P5 | □□-44P3 | □□-45P5 | □□-47P5 |
| 0044 | 0043 | 0046 | 0052 | 0150 | 0151 | 0152 | 0153 |
| 1.5 | 2.0 | 2.3 | 3.0 | 4.5 | 4.3 | 5.5 | 7.5 |
| 6.0 | 7.5 | 9.5 | 12.0 | 9.5 | 10 | 12.0 | 20.0 |
| 1500 | 2500 | 1500 | 1500 | 2000 | 1500 | 1500 | 1500 |
| 2000 | 3000 | 2000 | 2000 | 3000 | 2000 | 2000 | 2000 |
| 10 | 7.7 | 15 | 19 | 21.5 | 27 | 35 | 48 |
| 25 | 22 | 30 | 47 | 53 | 67 | 70 | 96 |
| 103 | 68 | 114 | 97 | 140 | 172 | 113 | 156 |
| 1.67 | 1.03 | 1.58 | 1.58 | 2.26 | 2.7 | 1.84 | 2.4 |
| $1.94\times10^{-3}$ | $1.53\times10^{-3}$ | $2.77\times10^{-3}$ | $3.80\times10^{-3}$ | $4.7\times10^{-3}$ | $6.1\times10^{-3}$ | $8.6\times10^{-3}$ | $9.5\times10^{-3}$ |
| 1.29 | 1.01 | 1.1 | 0.4 | 0.71 | 0.796 | 0.21 | 0.273 |
| 5.07 | 2.94 | 4.45 | 2.42 | 4 | 4.83 | 1.57 | 2.14 |
| 3.93 | 3.80 | 4.05 | 6 | 5.6 | 6 | 7.47 | 7.8 |
| 11.5 | 10 | 14.4 | 20.5 | 22.2 | 25.5 | 30.5 | 40 |
| 2500 | | | | | | | |
| 4 | | | | | | | |
| Class B(130℃) | | | | | | | |
| IP65 | | | | | | | |
| -20℃~+50℃ | | | | | | | |
| Related humidity <90% (no condensation) | | | | | | | |

## rive

| tched drive | Voltage level |
|---|---|
| 20P2-AS | single-phase/3-phase 220V |
| 20P4 | single-phase 220V |
| 20P4-AS/-A/-B | single-phase/3-phase 220V |
| 20P7 | single-phase 220V |
| 20P7-AS/-A/-B | single-phase/3-phase 220V |
| 20P7-AS/-A/-B | single-phase/3-phase 220V |
| 20P7 | single-phase 220V |
| 20P7-AS/-A/-B | single-phase/3-phase 220V |
| 21P5 | single-phase 220V |
| 21P5-A | 3-phase 220V |
| 21P5-B | |
| 21P5-AS | |

| Motor type | Motor code | Matched drive | Voltage level |
|---|---|---|---|
| MS-110ST-M05030-21P5 | 0032 | DS2-21P5 | single-phase 220V |
| | | DS2-21P5-A | 3-phase 220V |
| | | DS2-21P5-B | |
| | | DS2-21P5-AS | |
| MS-130ST-M06025-21P5 | 0042 | DS2-21P5 | single-phase 220V |
| | | DS2-21P5-A | 3-phase 220V |
| | | DS2-21P5-B | |
| | | DS2-21P5-AS | |
| MS-130ST-M10015-21P5 | 0044 | DS2-21P5 | single-phase 220V |
| | | DS2-21P5-A | 3-phase 220V |
| | | DS2-21P5-B | |
| | | DS2-21P5-AS | |
| MS-130ST-M07725-22P0 | 0043 | DS2-22P3-A | 3-phase 220V |
| MS-130ST-M15015-22P3 | 0046 | DS2-22P3-A | |
| MS-180ST-M19015-23P0 | 0052 | DS2-23P0-A | |
| MS-180ST-M21520-44P5 | 0150 | DS2-45P5-A | 3-phase 380V |
| MS-180ST-M27015-44P3 | 0151 | | |
| MS-180ST-M35015-45P5 | 0152 | | |
| MS-180ST-M48015-47P5 | 0153 | DS2-47P5-A | |



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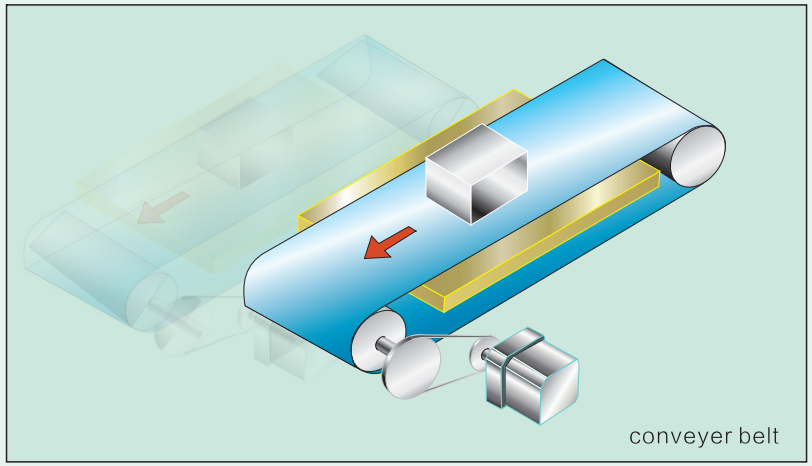
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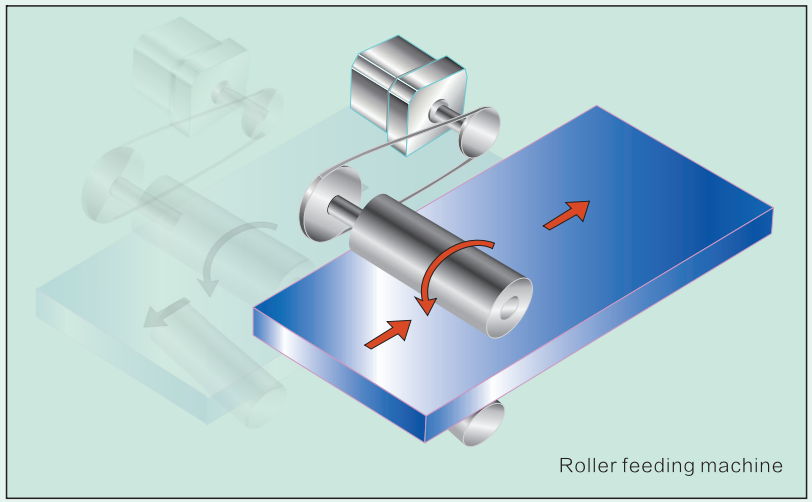
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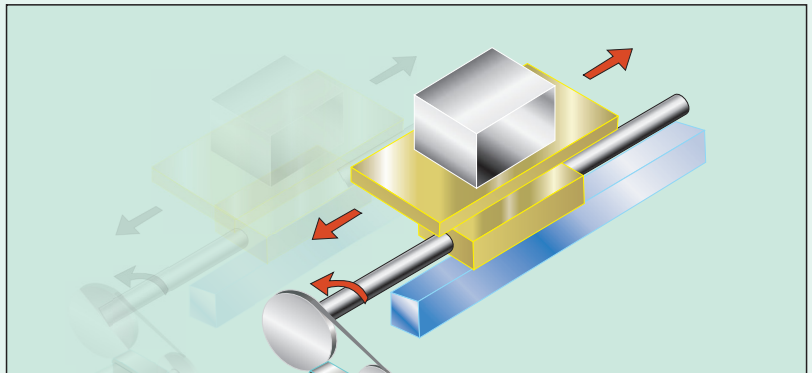
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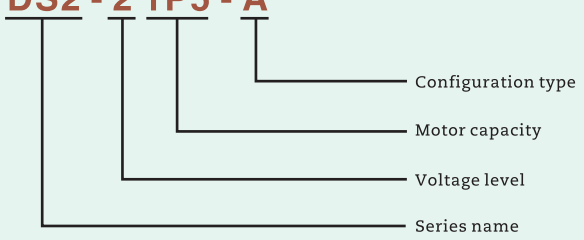


conveyer belt



Roller feeding machine






| | |
|---|---|
| | Type AS (with DI |
| Matched motor capacity | 0P2 |
| | 0P4 |
| | 0P7 |
| | 1P5 |
| | 2P3 |
| | 3P0 |
| | 5P5 |
| | 7P5 |
| Voltage level | 2 |
| | 4 |

## Specifications of servo drive

| Item | | | | Specification |
|---|---|---|---|---|
| basic spec | | input power | | 0.2~0.75 KW: single-phase 220V 0.75~1.5KW: single-phase/3-phase 22 |
| | | feedback | | incremental 2500 ppr |
| | | using condition | use/storage temperature | 0 ~ +50 ℃/-20 ~ +85 ℃ |
| | | | use/storage humidity | below 90% RH (no condensation) |
| | | | vibration/impact toleration | 4.9m/s² / 19.6m/s² |
| speed torque control mode | performance | speed control range | | 1:4000 (lower limit of speed control range, not stop at rated torque load |
| | | speed change | load change | 0~100% load: below ±0.01% (at rated speed) |
| | | | voltage change | rated voltage ±10%: 0% (at rated speed) |
| | | | temperature change | 20±25° C: below ±0.1% (at rated speed) |
| | | frequency features | | 250Hz(JL≤JM) |
| | | soft start time | | 0~65535ms (set acceleration and deceleration) |
| | input signal | | | set through RS485 communication, DC10V/rated speed, torque (set thro |
| position control mode | performance | feedforward compensation | | 0~100% (resolution is 1%) |
| | | positioning end width | | 0~250 command unit (resolution is 1 command unit) |
| | input signal | command pulse | input pulse type | sign+pulse, CW/CCW pulse |
| | | | input pulse mode | open collector, difference drive |
| | | | input pulse frequency | open collector 200kbps; difference drive 500kbps |
| | | control signal | | clear signal (/CLR) |
| I/O signal | position output | | output mode | normal type: no DS2-□2P□-A: open collector outp<br>DS2-2□P□-B: difference output DS2-2□P□-AS: difference output |
| | | | divider ratio | 1:1 |
| | input signal | | external input terminals | up to 6 input terminals |
| | | | changeable signal distribution | /S-ON、/P-CON、/P-OT、/N-OT、/ALM-RST、/PCL、/NCL、/SPD-D、/SPD /SPD-B、/C-SEL、/ZCLAMP、/CLR、/INHIBIT、/G-SEL、/CHGSTP |
| | output signal | | external output terminals | up to 3 output terminals |
| | | | changeable signal distribution | /COIN、/V-CMP、/TGON、/S-RDY、/CLT、/VLT、/BK、/WARN、/NEAR、 |
| Built-in function | dynamic brake (DB) | | | no |
| | regeneration function | | | built-in regeneration unit, external regeneration resistor |
| | over range limit | | | when P-OT, N-OT act, deceleration stop or inertia stop |
| | electronic gear | | | 0.01≤B/A≤100 |
| | protection function | | | program error, parameter error, over voltage, under voltage, regenerati speed, analog input error, position deviation overflow, output short cir encoder error, overload, power-off when running, write parameter erro |
| | LED display | | | charging, power supply, 7-segment LED × 5 (built-in digital operation f |
| | communication | COM1 | connection device | RS232, connect to PC |
| | | | serial port parameter | baud rate 19200; data bit 8; stop bit 1; communication protocol: Modbus |
| | | | function | debug online |
| | | COM2 | connection device | RS485, connect to PLC, HMI, PC |
| | | | serial port parameter | serial port parameters can be set, communication protocol: Modbus-RT |
| | | | main function | state display, user parameters settings, monitor display, alarm display |

## Configuration of servo drive

| Series | Type | Input power | Analog input | Digital input | Digital output | Position command input mode | | | AB phase feed | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Difference | 24VOC | 5VOC | Difference | |
| DS2 | DS2-20P4 | 1PH 220V 50HZ | × | 2 | 2 | × | √ | × | × | |
| | DS2-20P7 | | | | | | | | | |
| | DS2-21P5 | | × | 4 | 3 | × | √ | × | × | |
| | DS2-21P5-A | 3PH 220V 50HZ | √ | 6 | 3 | √ | √ | √ | × | |
| | DS2-22P3-A | | | | | | | | | |
| | DS2-23P0-A | | | | | | | | | |
| | DS2-45P5-A | | | | | | | | | |