

SPEDESTER Series

QUICK REFERENCE GUIDE

Spedester series Digital DC Drives come with an extensive range of standard software blocks, it can take control of the most demanding motion control tasks. Designed for industrial applications, Spedester operates on three phase 230, 460, 575 VAC input.

The Spedester series is available in two basic types:

- **D2Q1** - Non Regenerative (Two Quadrant) up to **350 HP**
- **D4Q1** - Fully Regenerative (Four Quadrant) up to **300 HP**

Ratings: **5 - 350 HP**

Input: 230 VAC \pm 10%, 3 \emptyset , 50/60Hz \pm 5%

Output: 0-240 VDC armature, 150VDC field

Input: 460 VAC \pm 10%, 3 \emptyset , 50/60Hz \pm 5%

Output: 0-500 VDC armature, 300VDC field

Overload Capacity:

150% for 25 seconds

Armature Voltage:

1.2 times VAC Supply

Field Voltage:

Fully configurable, 0 to 0.9 x Aux. AC Supply

Torque (current) limit:

Adjustable from 0 to 150% of rating.

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Analogue Inputs:

8 in total, resolution 5mV+sign,
All inputs are fully configurable,
have programmable thresholds,
have four voltage ranges (5/10/20/30V),
have over voltage protection,
also can be used as digital i/p's.

Analogue Outputs:

4 in total, resolution 2.5mV+sign,
one armature current output,
three fully configurable,
all outputs have short circuit protection.

Digital Inputs:

17 in total, all are fully configurable.

Digital Output:

7 in total, max 32V, - 350mA,
All are fully configurable,
short circuit protected,
over temperature & over voltage protected.

Speed Regulation:

(percent of base speed with 95% load change)
+ 2.0% with armature feedback
+ 0.1% with tachometer feedback.

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Protection:

Interline device networks,
High energy MOV's
Instantaneous over-current
Field failure & over-current
Motor over temperature
Thyrister stack over-temperature
Mains supply phase loss
Mains synchronization loss
Armature over-volts
Speed feedback failure
Stall protection
Standstill logic
Thyrister "trigger" failure
Digital output short circuit

Standard Software Functions:

Full suite of center winding macros
Motorized pot simulator with memory
2 x PID's (undedicated)
2 x Summers (undedicated)
2 x Filters (undedicated)
Delay timer
Current Profiling
Spindle Orientation
Jog/Crawl functions
Dual Motor swap
Latch
Linear or S ramp

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Slack take up
Batch counter
Auto self-tune current loop
3 user programmable drive configurations.

Monitoring:

All analog input & output voltages,
All digital input & output states,
Tachometer voltage
Motor armature voltage
Output power,
AC supply voltage,
First fault latched and automatically displayed,
Fault automatically saved at power off.

Dimensions & Weight:

3 - 30 HP, 230 VAC:

5 - 60 HP, 460 VAC:

11.4" (H) x 8.5" (W) x 6.9" (D)

Weight: 11 lbs

40 - 75 HP, 230 VAC:

75 - 150 HP, 460 VAC

16.1" (H) x 8.5" (W) x 8.6" (D)

Weight: 25 lbs

100 - 150 HP, 230 VAC:

200 - 350 HP, 230 VAC

19.9" (W) x 8.5" (H) x 11.6" (D)

Weight: 38 lbs

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| SPEDESTER Series Model Selection Table | | | | |
|---|--------------|-----------------------------|-----------------------------------|-------------------------------------|
| HP | Input | Armature DC Amps | Non -Regen. Model D2Q1 | Full - Regen. Model D4Q1 |
| 3 | 230 VAC | 12 | D2Q1-50 | D4Q1-50 |
| 5 | 230 VAC | 24 | D2Q1-100 | D4Q1-100 |
| 5 | 460 VAC | 12 | D2Q1-50 | D4Q1-50 |
| 10 | 230 VAC | 36 | D2Q1-200 | D4Q1-200 |
| 10 | 460 VAC | 24 | D2Q1-100 | D4Q1-100 |
| 15 | 230 VAC | 67 | D2Q1-300 | D4Q1-300 |
| 15 | 460 VAC | 30 | D2Q1-150 | D4Q1-150 |
| 20 | 230 VAC | 72 | D2Q1-400 | D4Q1-400 |
| 20 | 460 VAC | 36 | D2Q1-200 | D4Q1-200 |
| 25 | 230 VAC | 99 | D2Q1-500 | D4Q1-500 |
| 25 | 460 VAC | 51 | D2Q1-250 | D4Q1-250 |
| 30 | 230 VAC | 123 | D2Q1-600 | D4Q1-600 |
| 30 | 460 VAC | 67 | D2Q1-300 | D4Q1-300 |
| 40 | 230 VAC | 155 | D2Q1-750 | D4Q1-750 |
| 40 | 460 VAC | 72 | D2Q1-400 | D4Q1-400 |
| 50 | 230 VAC | 205 | D2Q1-1000 | D4Q1-1000 |
| 50 | 460 VAC | 99 | D2Q1-500 | D4Q1-500 |
| 60 | 230 VAC | 240 | D2Q1-1250 | D4Q1-1250 |
| 60 | 460 VAC | 123 | D2Q1-600 | D4Q1-600 |
| 75 | 230 VAC | 270 | D2Q1-1500 | D4Q1-1500 |
| 75 | 460 VAC | 155 | D2Q1-750 | D4Q1-750 |
| 100 | 230 VAC | 400 | D2Q1-2000 | D4Q1-2000 |
| 100 | 460 VAC | 205 | D2Q1-1000 | D4Q1-1000 |
| 125 | 230 VAC | 430 | D2Q1-2500 | D4Q1-2500 |
| 125 | 460 VAC | 240 | D2Q1-1250 | D4Q1-1250 |
| 150 | 230 VAC | 530 | D2Q1-3000 | D4Q1-3000 |
| 150 | 460 VAC | 270 | D2Q1-1500 | D4Q1-1500 |
| 200 | 460 VAC | 400 | D2Q1-2000 | D4Q1-2000 |
| 250 | 460 VAC | 430 | D2Q1-2500 | D4Q1-2500 |
| 300 | 460 VAC | 530 | D2Q1-3000 | D4Q1-3000 |
| 350 | 460 VAC | 630 | D2Q1-3500 | N/A |

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FEATURES:

- * UL, cUL and CE approved.
- * Free drive configuration and monitoring software.
- * Extremely flexible block diagram, including unique configuration checker, "detects shorting of user programmed block diagram output connections.
- * Fail safe automatic 'Revert to AVF' on speed feedback failure.
- * Ultra compact size offering significant panel space savings.
 - * Five feedback transducer options as standard.
 - * Non volatile trip alarm memory, even after power down.
 - * Built in 'Oscilloscope' output for full parameter monitoring.
- * Three fully independent, user programmable drive configurations.
- * Extensive, multi function programmable I/O with over 36 digital & analog input / output combinations.
 - * Full suite of center winding macros included.
- * Built in system application blocks with description connection points.
 - * Electronic regenerative stopping facility on most Non-Regen. (2Q) models.
- * In-depth fault monitoring and comprehensive system alarms.
- * Serial communications to allow off site programming and remote diagnostics.
- * Diagnostics facility available from on-board display & "in-built meter".
 - * On-board fully controlled field with five operating modes.