CNCmakers Limited

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DAT SERIES AC SERVO DRIVER

Characteristics:

DAT series AC servo driver including DAT2030C, DAT2050C and DAT2075C are developed with universal serial bus, absolute encoder interface, it is a brand new product which realizes real-time communication between the AC servo drivers and the CNC controller, and the accuracy of speed and position is improved remarkably. DAT series AC servo drivers are the best solution for CNC machines and other automation facilities.

- With GSKLink universal serial bus, realizes remote servo debugging and real-time monitoring.
- Use absolute encoder (BISS, 17bit/round, 12bit/round) as position feedback, not only improves the accuracy of speed and position, further more, CNC machines use CNC controller with GSKLink universal serial bus and DAT series AC servo drivers can be run without Zero Point Switches.
- Max. frequency of position pulse is 1MHz, with 0.1um type CNC realizes 0.1um grade accuracy.
- Realize speed advance control, which improves the dynamic response and reduces the following error.
- Improves braking current and shorten braking time. Outer brake resistance is also acceptable to suit the high speed start and stop, and high inertia load.
- Improves the power fail detecting and brake control, so the brake act faster when power fail.

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Specifications:

Model	DAT2030C	DAT2050C	DAT2075C
Suitable motor Power (kW)	1.0~1.5	1.6~3.9	4~6
Oversize(mm) (W×H×L)	263×115×197		300×105×240
Input power	3 phases AC （85%~110%）×220 V 50 Hz /60Hz		
Speed Ratio	5000:1		
Volatility	< ±0.01%		
Speed frequency response	≤ ±0.005° （when using 17bit absolute encoder）		
Control mode	①Manual ② JOG run ③ Inner speed ④ Outer speed ⑤ Position ⑥Zero set, etc.		
Inner speed mode	4 speeds are defined by parameter, select speeds by input signals		
Outer speed mode	2 kinds of outer speed orders: ①-10V~+10V analog voltage dictates speed and direction ②0V~+10V analog voltage dictates speed, direction selected by input signal		
Position control	Input mode ①pulse + direction ② CCW pulse/ CW pulse ③ 2 phases A/B quadrature pulse Max. pulse frequency: 1MHz; Electric gear ratio 1/32767~32767		
Position feedback input	uses 17bit/round, 12bit/round absolute encoder with power failure memory, BISS bus interface. DAT2075C is compatible with incremental encoder, A/B/Z/U/V/W differential signal, 5000 lines		
GSKLink bus interface	1Mbps differential universal serial bus, position, speed, I/O status, parameter real-time transmission, etc.		
Control input	①servo enable ② alarm release ③ CCW drive forbid ④ CW drive forbid ⑤ Zero SPD ⑥ warp counter cleanup/ speed select 1 ⑦ dictate pulse forbid/speed select 2 ⑧ CCW torque limit ⑨ CW torque limit ⑩ General input, etc.		
Control output	①servo prepared output ② servo alarm output ③ positioned output/ speeded output ④Brake release output ⑤ Zero output ⑥ General output ⑦ Z axis pulse feedback output, etc.		
Protection function	Overspeed, main power overvoltage/ undervoltage, overcurrent, overload, brake abnormity, encoder singularity, control power unconventionality, position warp, etc		
Display, operation	4 keys can be use for Manual, JOG and parameter editing, setting, input, and backup, etc. 6bits LED, displays speed, current position, command pulse accumulation, position deviation, motor torque, motor current, rotor absolute position, input and output signal status, etc.		
Brake mode	Dynamic braking, inner brake resistance, optional outer brake		