

# DYNASERVO

Reliable, Affordable and High Performance



## **Fics Serial Controller SB Ver.3.5** **Standalone Motion Controller with Serial Communications**

*Fics* serial controller **SB** is an intelligent motion controller designed for standalone applications. It can be installed with either **Fics-III** or **Ladder motion** languages and communicates with DYNAX servo drivers via RS485 at 625Kbps or RS422 at 2.5Mbps. Depending on the pre-installed software and the communication interface, *Fics* serial controller SB is classified as

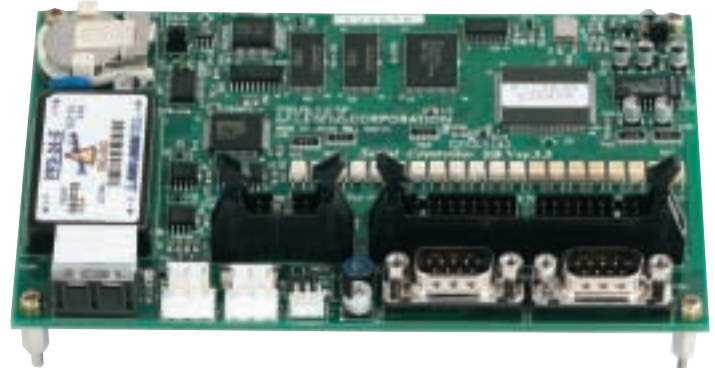
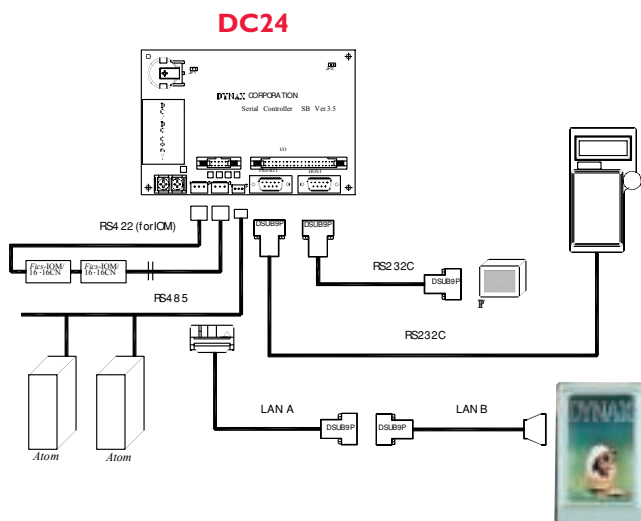
**Fics-Atoms SB Ver.3.5:** *Fics* serial controller with *Fics-III* and RS485 communication

**Fics-SRing SB Ver.3.5:** *Fics* serial controller with *Fics-III* and RS422 communication

**LMC SB Ver.3.5:** *Fics* serial controller with Ladder Motion and RS485 communication

### FEATURES

- Advanced motion control software
  - Multi-axis linear interpolation (*Fics-Atoms*)
  - 3-D linear and 2-D arc & circular interpolations (*Fics-SRing*)
  - High precision PTP control
  - Easy manual operation and programming with *Fics-RT1* or PC
  - BASIC-like or Ladder Motion programming
  - Trapezoidal and S-curve velocity profiles
  - Multi-tasking (8 tasks)
  - 96 variables & 96 system, flag, monitor variables
  - Pallet & matrix functions
- Capable of handling up to 16 axes (*Fics-Atoms* or LMC), or 8 axes (*Fics-SRing*) with AC servo/Stepper motors
- On-board 16DI & 16DO (or 24DI & 8DO)
- Serial network digital input/output expansion (Max 256 bits DI or 256 bits DO)
- Minimal wiring, low cost and high performance



# Fics serial Controller SB Ver.3.5

## Technical Data

- Power Supply: +24V  $\pm$ 5%
- Current Consumption: 0.2A
- Memory Backup: Approx. 3 years
- Working Temperature: 0-50°C
- Working Humidity: 35-85%RH

## Main Power Supply DC24V input

(TB1)

Pin	Signal	IN/OUT	Pin	Signal	IN/OUT
1	+24V	IN	2	GND	-

## LED

LED1(green)	Power ON
LED2(red)	7180 CH1 (LAN) Transfer error
LED3(green)	7180 CH1 (LAN) Receiving
LED4(red)	7180 CH2 (IOM) Transfer error
LED5(green)	7180 CH2 (IOM) Receiving

## RS485 Communication

[CN1] H3P-SHF-AA,SHF-001T-0.8SS(JST)

Pin	Signal	IN/OUT
1	D485+	IN/OUT
2	D485-	IN/OUT
3	GND	-

## Host Communication:RS232C

[CN2] HDEB-9S,HDE-CTF(HIROSE)

Pin	Signal	IN/OUT	Pin	Signal	IN/OUT
1	NC	-	6	NC	-
2	RXD	IN	7	RTS	OUT
3	TXD	OUT	8	CTS	IN
4	NC	-	9	NC	-
5	GND	-			

## Fics-IOM Interface:RS422

[CN5] VHR-3N,SVH-21T-1.1(JST)

Pin	Signal	IN/OUT
1	SD+	OUT
2	SD-	OUT
3	GND	-

[CN6] VHR-3N,SVH-21T-1.1(JST)

Pin	Signal	IN/OUT
1	RD+	IN
2	RD-	IN
3	GND	-

## LAN Communication:RS422

[CN7] HIF3BA-10D-2.54R(HIROSE)

Pin	Signal	IN/OUT	Pin	Signal	IN/OUT
1	SD+	OUT	2	SD-	OUT
3	GND	-	4	NC	-
5	RD+	IN	6	RD-	IN
7	GND	-	8	NC	-
9	NC	-	10	NC	-

## I/O Connector – 24DI/8DO or 16DI/16DO

[CN4] HIF3BA-40D-2.54R(HIROSE)

Pin	Signal Name	IN/OUT	Pin	Signal Name	IN/OUT
1	+24V	IN	2	+24V	IN
3	DI:01-0	IN	4	DI:01-1	IN
5	DI:01-2	IN	6	DI:01-3	IN
7	DI:01-4	IN	8	DI:01-5	IN
9	DI:01-6	IN	10	DI:01-7	IN
11	DI:02-0	IN	12	DI:02-1	IN
13	DI:02-2	IN	14	DI:02-3	IN
15	DI:02-4	IN	16	DI:02-5	IN
17	DI:02-6	IN	18	DI:02-7	IN
19	DI:03/DO:2-0	IN/OUT	20	DI:03/DO:2-1	IN/OUT
21	DI:03/DO:2-2	IN/OUT	22	DI:03/DO:2-3	IN/OUT
23	DI:03/DO:2-4	IN/OUT	24	DI:03/DO:2-5	IN/OUT
25	DI:03/DO:2-6	IN/OUT	26	DI:03/DO:2-7	IN/OUT
27	24V GND	-	28	24V GND	-
29	DO:01-0	OUT	30	DO:01-1	OUT
31	DO:01-2	OUT	32	DO:01-3	OUT
33	DO:01-4	OUT	34	DO:01-5	OUT
35	DO:01-6	OUT	36	DO:01-7	OUT
37	NC	-	38	NC	-
39	NC	-	40	NC	-

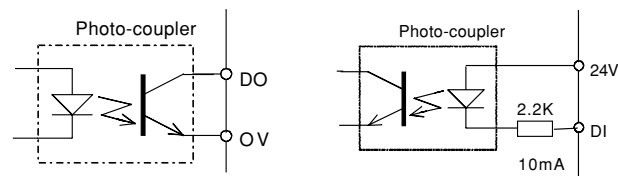
## Fics-RTI RS232C Communication

[CN3] HDEB-9S,HDE-CTF(HIROSE)

[Male on board side]

Pin	Signal	IN/OUT	Pin	Signal	IN/OUT
1	NC	-	6	DSR	IN
2	RXD	IN	7	NC	-
3	TXD	OUT	8	NC	-
4	DTR	OUT	9	+5V	OUT
5	GND	-			

## I/O Circuits



## Attachments

Connectors CN1,CN4,CN5,and CN6 are attached. Use twist paired cables for RS485 and RS422 communications.