
General

CSUX1CU

CSU-X1

Specifications

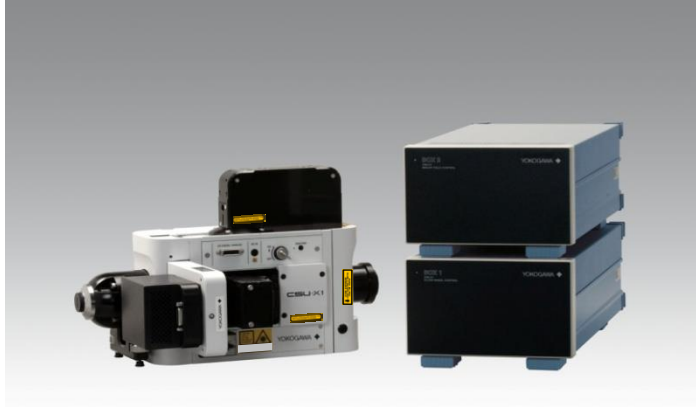
CSU Control Unit

GS 80C01C02-01E

■ General description

CSU-X1 was developed as an advanced model in succession to our conventional CSU10B/22 models which have been widely used as a standard tool for live cell imaging.

Control Unit CSUX1CU is the controller for CSU-X1, which has many motorized functions.



■ Feature

1. 3 types of Control Unit, CSUX1CU-F1 to control CSUX1FW-6P, CSUX1CU-F2 to control CSUX1FW-12P and CSUX1CU-B1 to control Bright Field related functions.
2. CSUX1CU-F1 can control up to 2 sets of CSUX1FW-6P and CSUX1CU-F2 can control up to 2 sets of CSUX1FW-12P.
3. CSUX1CU-B1 can control BrightField/Confocal path switching and Camera port switching.
4. All types can control disk rotation speed, 3 position dichroic mirror switching (except for manual model) and shutter open/close.
5. All functions are controlled on command through RS232C communication with PC.
6. Safety interlock is available to connect the detection circuit with the connector on the Control Unit.

■ Specifications

1. Specifications of Control Unit CSUX1CU

Item	Specification
Rotation speed control	Standard model: 1,500~5,000rpm (Max.1,000fps) High-Speed model: 1,500~10,000rpm (Max.2,000fps) Possible for command control of rotation speed setting Rotation speed setting/reading resolution: 1,500~5,000rpm: 1rpm 5,000~10,000rpm: 2rpm External sync is possible by pulse signal input via external signal input terminal External output terminal can send 12 pulse per one rotation
DM change	Command control of changing up to 3 DM positions in the DM Block
Shutter control	Command control or external line control of shutter on/off
External I/O control	Digital I/O: TTL Input 4CH, Contact Input 4CH, Open Collector output 4CH, Contact output 4CH External shutter control, synchronization control of CSU rotation speed, synchronization signal output, etc. Analogue input: 8 ports, 0~5V, 8Bit (0~255), Response 100ms Analogue output: 4 ports, 0~5V, 8Bit (0~255), Response 10ms
Filter Wheel control (CSUX1CU-F1/F2)	Command control of filter positions One control unit controls up to two filter wheels
Bright Field/ Camera port control (CSUX1CU-B1)	Command control of light path switching (confocal/non-confocal) Switch between the 1 st camera port and the 2 nd camera port
Interlock key	Installed: Manual shutter switch becomes valid External shutter control from PC through control unit becomes possible. Uninstalled: Shutter closes, motor stops and manual shutter switch becomes invalid
Communication	Connection: 1.Connect control unit cable to the remote interlock connector of CSU-X1 head 2.Connect control unit and PC through RS232C serial cable 3.Possible to connect and control two control units through daisy chain. Conditions: Speed: 115,200 bps Data bit: 8 Parity check: None Stop bit : 1 Line-feed character: CR Separating character: colon or space Case sensitivity: Yes
Commands	Shown in the command list
Power consumption	Rated supply voltage: 100~240VAC Power voltage range: 90~264VAC Rated supply frequency: 50/60Hz Maximum electric power consumption: 200VA
Accessory	AC100VAC Power cord set(PSE,UL,CSA Certified) *1 Ferrite core (only for CSUX1CU-B1) Bright Field1 connection cable (only for CSUX1CU-B1) Bright Field2 connection cable(only for CSUX1CU-B1) CSU connection cable RS232C cable (cross) Interlock key for control unit
Dimension	213(W) × 132(H) × 465(L) mm
Weight	5.2kg

*1: This power cord set is for Japan and North America. For use in other countries, please prepare a certified Power cord set for the country.

2. Environment

Item	Specification
Environment	1.Operation temperature and humidity range 15~40°C, 20~75%RH. No condensation. 2. Altitude: Lower than 2000m, Indoor use only 3. General environment -10~60°C 20~90%RH No condensation.

■ Conformity

CE marking:

EMC Directive:

Emission: EN61326-1 ClassA, EN61000-3-2, EN61000-3-3

Immunity: EN61326-1 Basic Immunity Requirement

Low Voltage Directive: EN61010-1, Overvoltage category II, Pollution Degree 2

RoHS Directive:EN50581

■ Groval Environmental Action

Lead free solder is used.

No use of Cr+6 for chromium plating

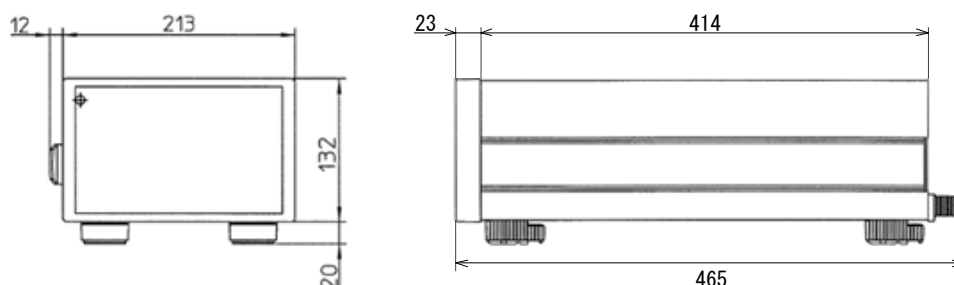
WEEE Directive (2012/19/EC) marking requirement

■ Model and Suffix Code (MS Code)

Model	Basic code		
CSUX1CU			
Main unit	-F1	Filter wheel 6P control	
	-F2	Filter wheel 12P control	
	-B1	Bright field control	
Language of label	-J	Japanese (with AC power cord set)	
	-E	English (without AC power cord set)	

■ Dimension

Same dimension for all model



■ Trade Mark

CSU is the registered trade mark or trade mark of Yokogawa Electric Corporation.

■ Contact Information

Please contact the dealer for inquiries about this product.

Manufacturer

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