

Large Capacity Controller **X-SEL**



A Compact Yet Powerful Controller with a Maximum Output of 2400 W

A new high-performance controller series capable of controlling six axes

1 Maximum output of 2400 W (Reference: IAI's conventional general-purpose type – 1600 W, compact type – 800 W)

Six 400W single-axis robots or three 750W single-axis robots can be operated simultaneously.

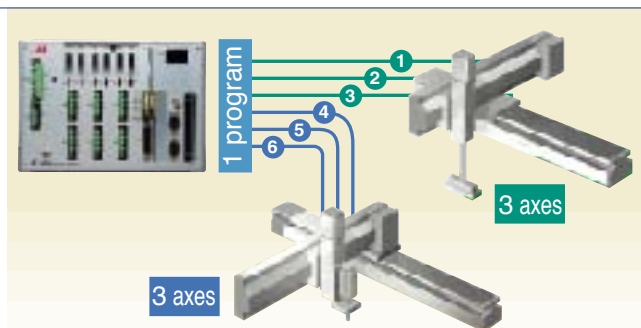


2 "Global Specification" corresponding to Safety Category 4

The "Global Specification" provides an external safety circuit, instead of incorporating a drive-power cutoff circuit into the controller. This design ensures correspondence to Safety Category 4 under ISO 13849-1.

3 Capable of driving one to six axes

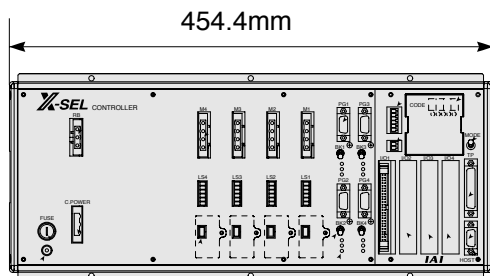
A maximum of six axes can be operated complementarily using only one controller unit.
Six axes are operated with a single program, allowing easy programming.



4 Compact and high performance

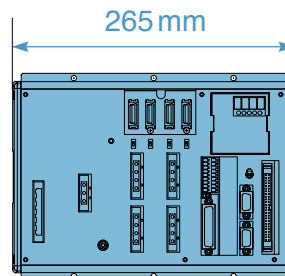
A slim design of approx. 40% the volume of IAI's conventional controller (X-SEL general-purpose controller)
Significantly higher speed compared with IAI's conventional controller (the command processing time is nearly half)
Connectable to DeviceNet, CC-Link, Ethernet and other networks

Conventional product



XSEL-K (general-purpose type) 4 axes, 1.6 Kw

New product



XSEL-P 4 axes, 2.4 Kw

Models

XSEL - P - 3 - 400AL - 200AL - 60ABL - DV - NI - EEE - 2 - 3

① ② ③ ④ (Axis 1) ④ (Axis 2) ④ (Axis 3) ⑤ ⑥ ⑦ ⑧ ⑨

① Series	② Controller type	③ Number of axes	④ Details of axis 1 to axis 6						⑤ Network (dedicated slot)	⑥ Standard I/O (Slot 1)	⑦ Expansion I/O slots			⑧ Flat cable length	⑨ Power-supply voltage
			Motor Output	Encoder type	Brake	Creep	Home senso	Synchronization designation			Slot 2	Slot 3	Slot 4		
XSEL	P (Standard) Q (Global)	1 (1 axis)	20 (20W) 30D (30W for DS) 30D (30W for RS)	I (Incremental) A (Absolute)	Not Specified (w/o brake)	Not Specified (w/o creep)	Not Specified (w/ home sensor)	Not Specified (No synchronization) M (Master-axis designation) S (Slave-axis designation)	Not Specified (No network) DV DeviceNet 256/256 board CC-Link 256/256 board PR ProfiBus 256/256 board ET Ethernet Data communication board	E (Not used)	E (Not used)	E (Not used)	E (Not used)	2 : 2 m (Standard) 3 : 3 m 5 : 5 m 0 : None	3: Three-phase 200V
		2 (2 axes)	60 (60W)							C	C	C	C		
		3 (3 axes)	100 (100W)							CC-Link connection 16/16 board	CC-Link connection 16/16 board	CC-Link connection 16/16 board	CC-Link connection 16/16 board		
		4 (4 axes)	150 (150W)							N1	N1	N1	N1		
		5 (5 axes)	200 (200W)							N2	N2	N2	N2		
		6 (6 axes)	30 (300W)							N3	N3	N3	N3		
		400 (400W)	Expansion I/O NPN 32/16							Expansion I/O NPN 32/16	Expansion I/O NPN 32/16	Expansion I/O NPN 32/16	Expansion I/O NPN 32/16		
		600 (600W)	Expansion I/O NPN 16/32							Expansion I/O NPN 16/32	Expansion I/O NPN 16/32	Expansion I/O NPN 16/32	Expansion I/O NPN 16/32		
		750 (750W)	Expansion I/O PNP 32/16							Expansion I/O PNP 32/16	Expansion I/O PNP 32/16	Expansion I/O PNP 32/16	Expansion I/O PNP 32/16		
			Expansion I/O PNP 16/32							Expansion I/O PNP 16/32	Expansion I/O PNP 16/32	Expansion I/O PNP 16/32	Expansion I/O PNP 16/32		
			Expansion I/O PNP 48/48							Expansion I/O PNP 48/48	Expansion I/O PNP 48/48	Expansion I/O PNP 48/48	Expansion I/O PNP 48/48		

Main Specifications







	Standard		Global	
	Axis 1 to axis 4	Axis 5 to axis 6	Axis 1 to axis 4	Axis 5 to axis 6
Total output when maximum number of axes are connected	2400W			
Control power input	Single-phase 200/230VAC -15%, +10%			
Motor power input	Three-phase 200/230VAC -10%, +10%			
Power capacity (*1)	MAX 4878VA (600W x 4 axes)	MAX 4998VA (400W x 6 axes)	MAX 4878VA (600W x 4 axes)	MAX 4998VA (400W x 6 axes)
Safety circuit configuration	Redundant design not supported		Redundant design supported	
Drive-power cutoff method	Internal relay cutoff		External safety circuit	
Enable input	Contact-B input (internal power supply)		Contact-B input (external power supply, redundancy)	
Position detection method	Incremental encoder/absolute encoder			
Speed setting (*2)	1 mm/sec ~ 2000 mm/sec			
Acceleration/deceleration setting (*2)	0.01 G ~ 1 G			
Program language	Super SEL language			
Number of program steps	6000 steps (total)			
Number of positions	4000 positions (total)			
Number of programs (multitasking)	64 programs (16 programs)			
Operating temperature/humidity	0~40°C, 10%~95% (non-condensing)			
Weight (*3)	5.2 kg	5.7 kg	4.5 kg	5 kg

*1 Based on the maximum wattage of each connected axis.

*2 The maximum limit will vary depending on the actuator type.

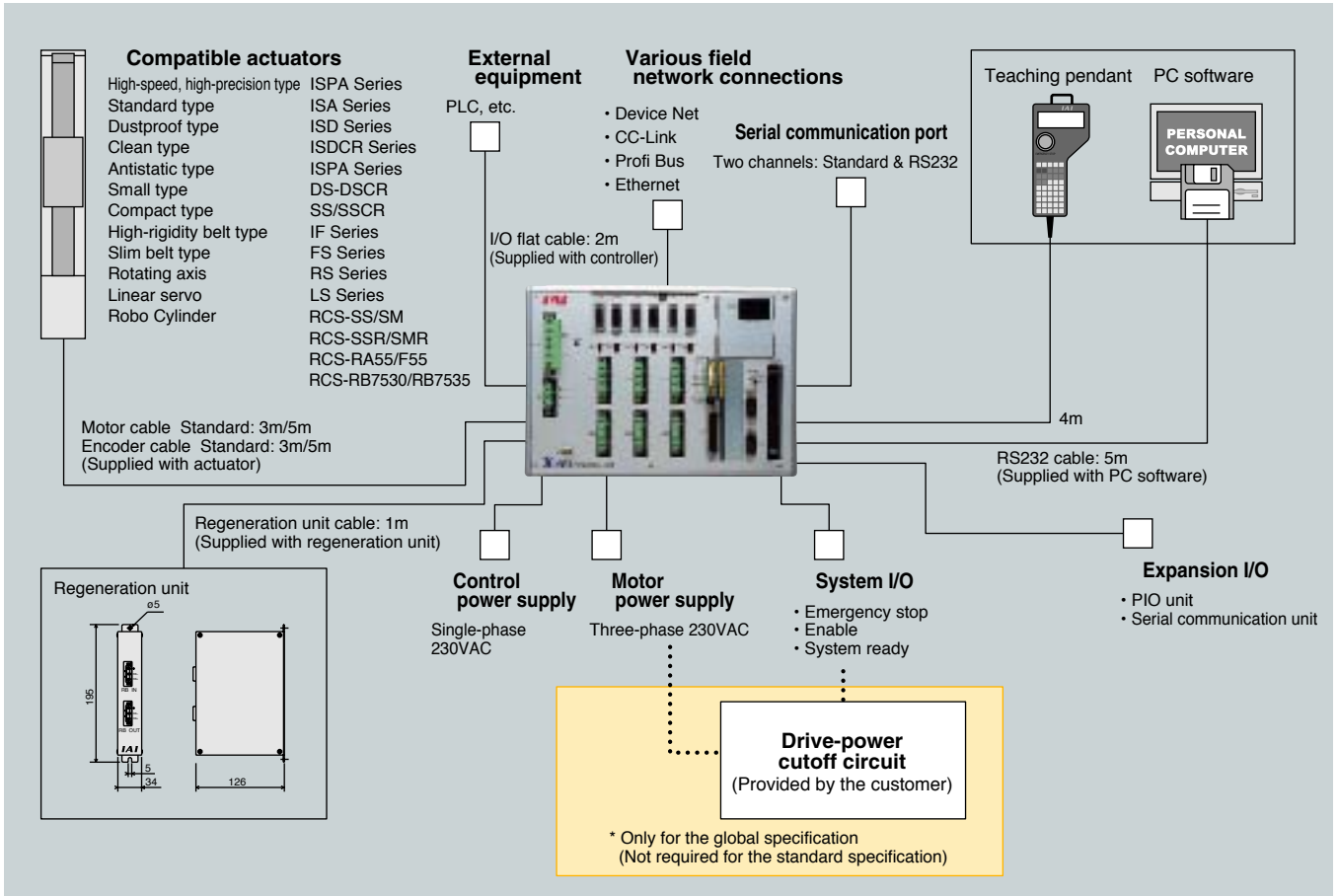
*3 Including the absolute battery, brake mechanism and expansion I/O box.

X-SEL Series Product Lineup

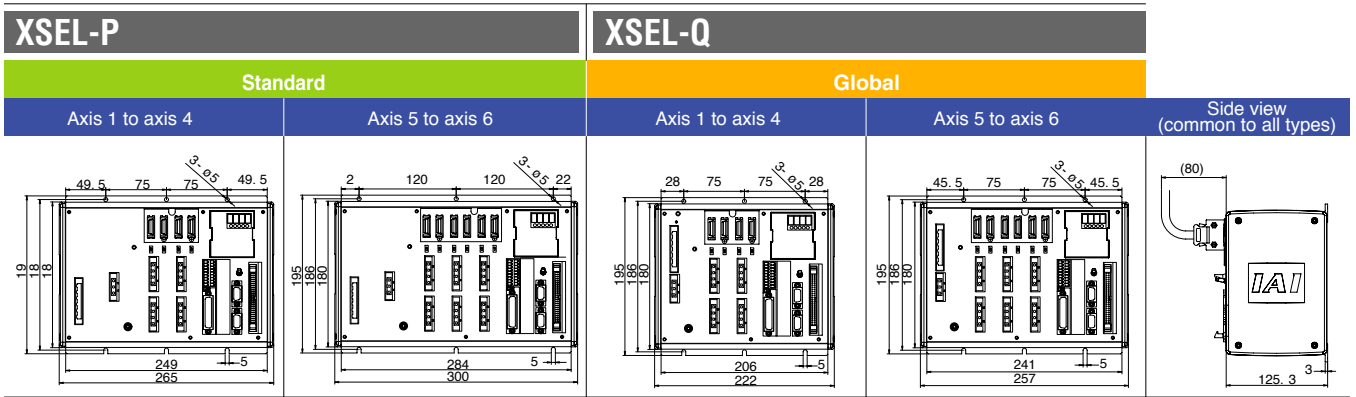
	XSEL-J	XSEL-K	XSEL-KE	XSEL-KT	XSEL-P	XSEL-Q
	Compact type	General-purpose type	CE-compatible type	Global specification (Safety Category 4)	Large-capacity type, standard specification	Large-capacity type, global specification (Safety Category 4)
						
Operating method	Program operation					
Programs	64 programs (6000 steps)					
Number of positions	3000 positions			4000 positions		
Maximum number of connectable axes	4 axes			6 axes		
Maximum output	0.8 kw	1.6 kw	1.6 kw	1.6 kw	2.4 kw	2.4 kw
Power supply	Single-phase 100VAC / Single-phase 200VAC				Three-phase 200VAC	Three-phase 200VAC
Safety category	B			Corresponds to Category 4	B	Corresponds to Category 4
Safety standard	—	—	CE	ANSI (*1)	CE	CE, ANSI (*1)

*1 To support ANSI, the ANSI-compatible teaching pendant (IA-T-XA) is required.

System Configuration



External Dimensions



In the case of the following specifications, the overall width will follow the table below (mounting hole positions are the same).

	Standard		Global	
	Axis 1 to axis 4	Axis 5 to axis 6	Axis 1 to axis 4	Axis 5 to axis 6
With absolute battery/brake unit *1	285	340	242	297
With I/O expansion base *2	338	373	295	330
With I/O expansion base + absolute battery/brake unit *3	358	413	315	370

*1 With absolute battery or brake, or absolute battery with brake.
 *2 When expansion I/Os are added.
 *3 With absolute battery or brake, or absolute battery with brake, plus expansion I/Os.