G series

General purpose

G100A I G100B I G200C I G200D

Flexibility matters ...

Important features

- Compatibility with various industrial applications
- Advanced control functions
- V/F and Sensorless Vector control methods
- Smart Autotune function
- Software Customization according to the needs of experts
- Special tension control algorithm for use in rolling machines and tension control industry

Technical features

- PID and Hysteresis control
- Torque boost
- Networking via RS485 and Modbus RTU protocol
- Advanced motor protection
- Overload capacity: 150% current for 1 minute
- Linear, cubic, and user defined V/f pattern
- Sensorless vector control (Field Oriented Control)
- Brake resistor control unit

Technical features

- Dwell Function
- Skip Frequency (Jump)
- Energy Saving
- JOG Speed
- Speed Search
- Up/Down
- Start on the Fly
- DC Brake
- 3 - Wire

Flexibility matters ...

Applications

- Conveyors
- Extruders
- Rolling machines
- Injection machines
- Packing machines
- Compressors
- Printing machines
- Knitting machines
- Drilling, turning, and CNC machines
- Fans
- Washing machines

Inputs / Outputs

Power Supply	12 V, 100 mA
Power Supply for potentiometer	10V, 8 mA
Analog Input (Voltage)	2 inputs, 0-10 V
Analog Input (Current)	1 input, 0-20 mA
Digital Input	5(6) programmable inputs, 30V, 5 mA
High speed Input	1 Input, 0-20 kHz, 10 - 24V, 10 mA
Relay Output	1(2) Programmable Relay(s), 250VAC, 1A
Transistor Output	1 Programmable Open Collector Output (NPN) 24 V, 50 mA, 10 kHz
Serial Communication	1 RS-485 Modbus Interface for Xima Touch (LAN Socket)

Model and Spec

Model	Input Voltage	Power		Input Current	Output Current	Output Voltage	Dimensions(mm)		
		HP	kW	A	A		D	W	H
G100 A 004-1	1 phase 220 VAC 50-60 Hz	0.5	0.37	5.6	3	3 phase 220 VAC 0-600 Hz	140	95	155
G100 A 008-1		1	0.75	9.8	5				
G100 A 011-1		1.5	1.1	12	6				
G100 B 015-1		2	1.5	18.5	9		160	103	206
G100 B 022-1		3	2.2	22	11				
G100 B 030-1		4	3	34.7	16.5				
G100 B 008-3	3 phase 380 VAC 50-60 Hz	1	0.75	3.2	3	3 phase 380 VAC 0-600 Hz			
G100 B 015-3		2	1.5	5.4	5				
G100 B 022-3		3	2.2	7.6	7				
G100 B 030-3		4	3	9.7	9				
G100 B 040-3		5.5	4	10.8	10				
G100 B 055-3		7.5	5.5	14.2	13				
G200 C 075-3		10	7.5	21	19		179	132	285
G200 C 110-3		15	11	28.9	26				
G200 C 150-3		20	15	40.3	36				
G200 D 185-3		25	18.5	45.5	38.5		198	205	448
G200 D 220-3		30	22	54	43				
G200 D 300-3		40	30	73	73				

P series

Pump & Booster Pump

P100A I P100B I P200C I P200D

Experience matters ...

Important features

- Special algorithm for booster pump systems
- Ability to operate multiple drives simultaneously with adjustable scheduling
- Dedicated functions for the application of domestic and industrial pumps
- Designed based on experiences and knowledge of the automation specialists

Technical features

- Easy and fast settings (Plug & Play)
- Special functions for Dry mode detection
- Advanced Sleep function to reduce energy consumption when unloaded
- Closed Loop operation and compatibility with various sensor types
- Ability to change the software according to the needs of the industry
- Advanced PID controller
- Networking via RS485 and Modbus RTU protocol

Applications

- Booster Pump
- Industrial and domestic pumps

Inputs / Outputs

Power Supply	12 V, 100 mA
Power Supply for potentiometer	10V, 8 mA
Analog Input (Voltage)	2 inputs, 0-10 V
Analog Input (Current)	1 input, 0-20 mA
Digital Input	5(6) programmable inputs, 30V, 5 mA
High speed Input	1 Input, 0-20 kHz, 10 - 24V, 10 mA
Relay Output	1(2) Programmable Relay(s), 250VAC, 1A
Transistor Output	1 Programmable Open Collector Output (NPN) 24 V, 50 mA, 10 kHz (Used as analog output)
Serial Communication	1 RS-485 Modbus Interface for Xima Touch (LAN Socket)

Model and Spec

Model	Input Voltage	Power		Input Current	Output Current	Output Voltage	Dimensions(mm)		
		HP	kW	A	A		D	W	H
P100 A 004-1	1 phase 220 VAC 50-60 Hz	0.5	0.37	5.6	3	3 phase 220 VAC 0-600 Hz	140	95	155
P100 A 008-1		1	0.75	9.8	5				
P100 A 011-1		1.5	1.1	12	6				
P100 B 015-1		2	1.5	18.5	9		160	103	206
P100 B 022-1		3	2.2	22	11				
P100 B 030-1		4	3	34.7	16.5				
P100 B 008-3	3 phase 380 VAC 50-60 Hz	1	0.75	3.2	3	3 phase 380 VAC 0-600 Hz			
P100 B 015-3		2	1.5	5.4	5				
P100 B 022-3		3	2.2	7.6	7				
P100 B 030-3		4	3	9.7	9				
P100 B 040-3		5.5	4	10.8	10				
P100 B 055-3		7.5	5.5	14.2	13				
P200 C 075-3		10	7.5	21	19		179	132	285
P200 C 110-3		15	11	28.9	26				
P200 C 150-3		20	15	40.3	36				
P200 D 185-3		25	18.5	45.5	38.5		198	205	448
P200 D 220-3		30	22	54	43				
P200 D 300-3		40	30	73	73				

L series

Lift, Elevator & Crane

L100B I L200C

Power matters ...

Important features

- Powerful design for high-current operation
- Software and hardware optimized for elevators, hoists, and cranes
- Smart Learning algorithm for electric motor model estimation

L100 Technical features

- Open Loop Control for asynchronous motors
- Precise torque control at low speeds
- Autotune automatically on each start
- Distance Approach function to reduce trip time
- Plug & Play function by setting only 3 parameters in most projects
- Brake resistor control unit

L200 Technical features

- Closed Loop control of synchronous and asynchronous motors
- Automatic encoder direction detection in Closed Loop applications
- Specialized Direct Approach function
- Smart Autotune for Gearbox and Gearless setups
- Dedicated HPC controller (Elimination of PID coefficients)
- Brake resistor control unit

Applications

- Lifts and Elevators
- Escalators
- Cranes

Inputs / Outputs

Power Supply	12 V, 100 mA
Power Supply for potentiometer	10V, 8 mA
Digital Input	8 Programmable Inputs, 30 V, 5 mA
Relay Output	3 Programmable Relay(s), 250 VAC, 1 A
Transistor Output	1 Programmable Open Collector Output (NPN) 24 V, 50 mA, 10 kHz
Serial Communication	1 RS-485 Modbus Interface for Xima Touch (LAN Socket)

Model and Spec

Model	Input Voltage	Power		Input Current	Output Current	Output Voltage	Dimensions(mm)		
		HP	kW	A	A		D	W	H
L100 B 015-1	1 phase 220 VAC 50-60 Hz	2	1.5	18.5	9	3 phase 220 VAC 0-600 Hz	160	103	206
L100 B 022-1		3	2.2	22	11				
L100 B 030-1		4	3	34.7	16.5				
L100 B 008-3	3 phase 380 VAC 50-60 Hz	1	0.75	3.2	3	3 phase 380 VAC 0-600 Hz			
L100 B 015-3		2	1.5	5.4	5				
L100 B 022-3		3	2.2	7.6	7				
L100 B 030-3		4	3	9.7	9				
L100 B 040-3		5.5	4	10.8	10				
L100 B 055-3		7.5	5.5	14.2	13				
L200 C 075-3		10	7.5	21	19		179	132	285
L200 C 110-3		15	11	28.9	26				
L200 C 150-3		20	15	40.3	36				

W series

Laundry, Washing Machine

W100B I W200C

Intelligence matters ...

Important features

- Different washing patterns such as wash only, dryer, and user-defined patterns
- Defining the number of times a particular washing pattern is executed
- Defining 10-speed steps and the duration of each step
- Test mode
- External keypad to monitor the state of the drive and parameters modification
- Determining the temperature of the water
- Significant reduction in production costs due to the elimination of external control circuits

Technical features

- Drain valve control
- Protective function for water level control in dryer mode
- Full tank detection input
- Emergency stop and process pause and resume
- Clogged drain pipe detection in drying mode
- Suitable for industrial washing machines up to 250 kg
- Process end notification output
- Definable inputs and outputs

Applications

Washing machines

Inputs / Outputs

Power Supply	12 V, 100 mA
Power Supply for potentiometer	10V, 8 mA
Digital Input	8 Programmable Inputs, 30 V, 5 mA
Relay Output	3 Programmable Relay(s), 250 VAC, 1 A
Transistor Output	1 Programmable Open Collector Output (NPN) 24 V, 50 mA, 10 kHz
Serial Communication	1 RS-485 Modbus Interface for Xima Touch (LAN Socket)

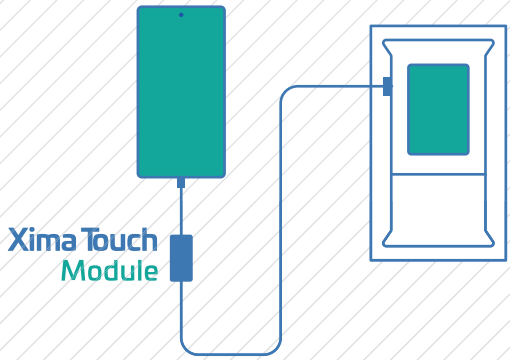
Model and Spec

Model	Input Voltage	Power		Input Current	Output Current	Output Voltage	Dimensions(mm)		
		HP	kW	A	A		D	W	H
W100 B 015-1	1 phase 220 VAC 50-60 Hz	2	1.5	18.5	9	3 phase 220 VAC 0-600 Hz	160	103	206
W100 B 022-1		3	2.2	22	11				
W100 B 030-1		4	3	34.7	16.5				
W100 B 008-3	3 phase 380 VAC 50-60 Hz	1	0.75	3.2	3	3 phase 380 VAC 0-600 Hz			
W100 B 015-3		2	1.5	5.4	5				
W100 B 022-3		3	2.2	7.6	7				
W100 B 030-3		4	3	9.7	9				
W100 B 040-3		5.5	4	10.8	10				
W100 B 055-3		7.5	5.5	14.2	13				
W200 C 075-3		10	7.5	21	19		179	132	285
W200 C 110-3		15	11	28.9	26				
W200 C 150-3		20	15	40.3	36				

Xima Touch

Access matters ...

- Access drive parameters via mobile phone
- Create a Backup file of settings and transfer it to other drives
- Default settings for various industrial applications
- Connect to Xima services center for drive settings by Xima specialists
- Update drive software
- Review previous projects through the installation profile
- Monitor parameters and errors history



Xima for OEMs

Cooperation matters ...

- Technical consulting by Xima automation experts
- Staff training with an official certificate of Technical and Vocational University of Enqelab
- 24 months unconditional warranty for all parts including IGBTs
- Software and hardware customization according to the needs of machine manufacturers
- 10 years after-sales services
- Parameter setting by Xima specialists remotely using XimaTouch software
- Fast and reliable products supply

More Technical Information

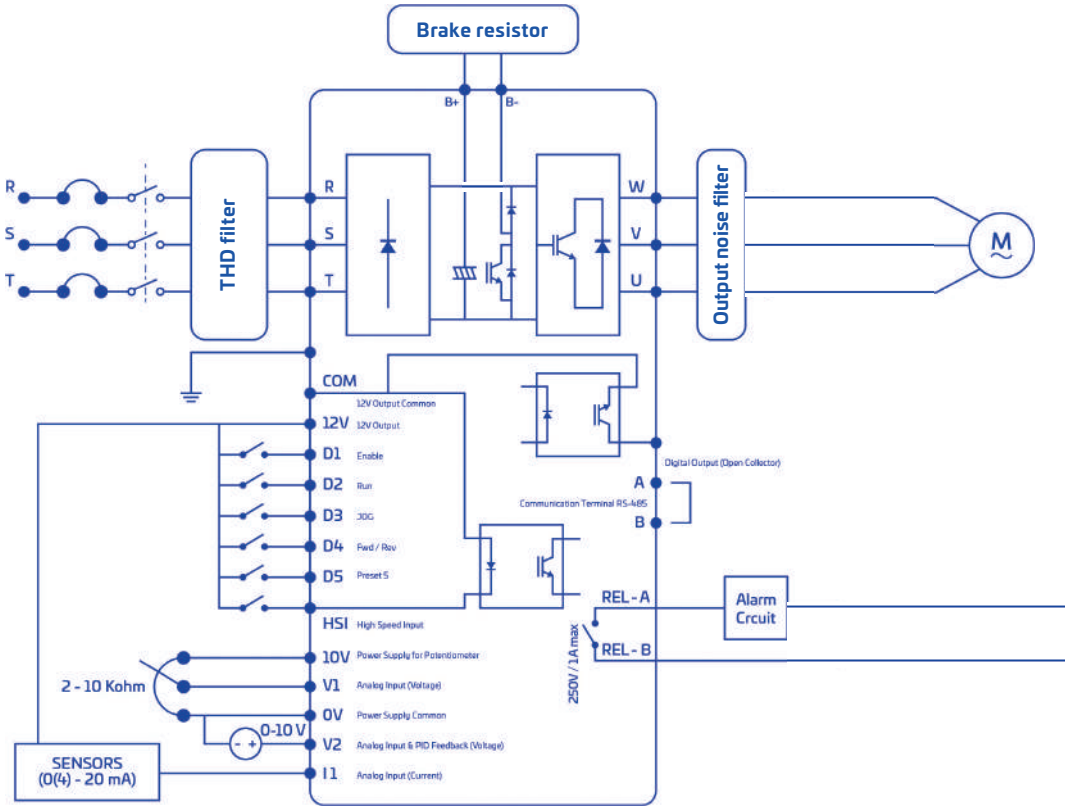
Power (kW)	Input Voltage	Brake Resistor			Breaker		AC Fuse		AC Reactor	
		Resistor (Ohm)		Power (W)	Current (A)	Voltage (V)	Current (A)	Voltage (V)	Inductance (mH)	Current (A)
		MIN	MAX							
0.37	1 phase 220 VAC 50-60 Hz	30	50	50	16	220	10	500	3.6	5.25
0.75		30	100	100	20	220	10	500	2	10.5
1.1		30	80	150	20	220	15	500	1.7	14.8
1.5		30	60	200	32	220	15	500	1.1	18.93
2.2		30	40	300	32	220	25	500	0.9	25.32
3		30	60	400	50	220	40	500	0.58	31.84
0.75	3 phase 380 VAC 50-60 Hz	50	220	75	6	380	10	500	6.25	3.36
1.5		50	220	150	10	380	10	500	3.7	5.67
2.2		50	180	250	16	380	10	500	2.6	7.99
3		50	120	300	20	380	20	500	2.1	10.2
4		50	100	400	20	380	20	500	1.85	11.36
5.5		50	80	600	32	380	20	500	1.41	14.92
7.5		50	120	800	32	380	30	500	0.95	22.07
11		50	160	1100	50	380	35	500	0.69	30.46
15		20	30	1500	63	380	45	500	0.49	42.89
18.5		10	20	2000	100	380	50	500	0.44	45.5
22		10	20	2300	125	380	63	500	0.37	54
30		10	20	3100	150	380	80	500	0.27	73

Protections	
Stall Prevention	Acceleration/ Deceleration/ Operation
Overcurrent	180% Rated Current for 30 s
Overload Warning	150% Rated Current for 1 min
Motor Thermal Protection	Overload Curve
Overvoltage	VDC>750 V (380V Class) VDC>390 V (220V Class)
Undervoltage	VDC<350 V (380V Class) VDC<200 V (220V Class)
Overheat	Protection by Thermistor
Grounding	Protection by DC Current Sensor
Phase Loss	Input - Output
Momentary Power Loss	10 ms at Nominal Voltage and Power

General Technical Features	
Display	4 Seven Segments, 4 LEDs
Keypad	6 (9) Keys
Output Frequency Range	0 – 800.0 Hz
Frequency Resolution	0.001 Hz (0.1Hz display)
PWM Frequency	2.0 – 10.0 KHz
PWM Modulation	Space vector
PWM Resolution	>11 bit
ADC Resolution	12 bit / 4 Msps
DSP	32 bit Motor Control
Control Sampling Frequency	1000 Hz
Input Frequency	47 – 63 Hz
Input Voltage	200-260 (1ph) / 330-460 (3ph)
Output Voltage	0 – Input Voltage
Efficiency (PF=1, Vout=Vin)	> 97.5%
Phase Short Circuit Protection	To phase, Ground, +Bus, -Bus
Brake	DC Brake, Dynamic Brake
Voltage Limit Threshold (if enabled)	380 V(1ph) / 700V(3ph)
Brake ON Voltage	370 V(1ph) / 690 V (3ph)
Brake OFF Voltage	365 V(1ph) / 680 V (3ph)
Over Voltage Fault	400 V(1ph) / 720 V (3ph)
Current Limit Threshold	Adjustable
Over Current Threshold	2 x Drive Rated Current
Analog Voltage Input Impedance	14.3 Kohm
Analog Current Input Impedance	150 ohm
Digital Input Impedance	9.5 Kohm
12 V Output Voltage	12 – 14 V
12 V Supply Output Impedance	5 ohm (PTC Protected)
Torque Control Response	<200 ms
Start Torque	150% Rated Output Torque/ 0.5 Hz
Torque Control Precision	± 0.5% Rated Output Torque

Environmental Condition	
Ambient Temperature	-10 < Ta < 50 C
Humidity	< 85%
Altitude	Below 1000m without derating
Vibration	0.5 g X, Y, Z

Schematic



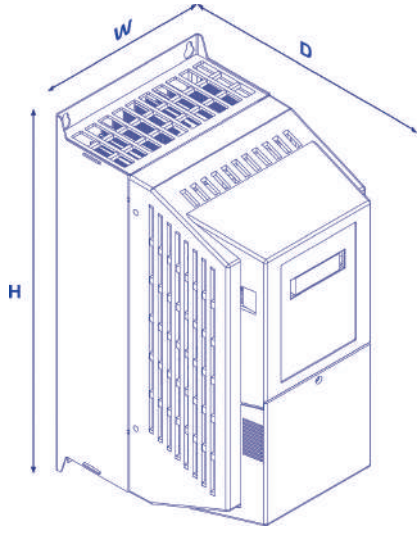
Designation

XIMA - L XXX - X -XXX - X

G L P W	General Purpose Lift, Elevator & Crane Pump & Booster Wasdasd	Frame Size A, B, C & D	Power Rating (kW)*10	Number of Input Phase

Graphical Dimension For Frames A,B, C, D

Case Type	Dimension (mm)			Weight (kg)
	H	W	D	
A	155	95	140	< 1.6
B	206	103	160	< 2.2
C	285	132	179	< 3.6
D	450	190	205	< 0.0



Accessories

	External Keypad	4 Seven-segment display 8 Digital keys 1 Digital Potentiometer LAN Socket for connection to drive
	Xima Touch module (Micro-USB)	Micro-USB socket for connection to cell phone LAN Socket for connection to drive
	Xima Touch module (USB)	USB socket for connection to cell phone LAN Socket for connection to drive
	PG-EnDat (Encoder Card for Elevator Application)	EnDat Encoder card for ECN 1313 and ECN413 Encoder for PM motors control 2 analog and 1 serial signals (A, B, clock and data) 5 Vdc supply 13 bit resolution (24 bit resolution using software implementation)
	PG-SinCos (Encoder Card for Elevator Application)	SinCos Encoder card for ERN1387 Encoder for PM motors control 4 analog signals (A, B, C and D) 5 Vdc supply 13 bit resolution (24 bit resolution using software implementation)
	PG-i5 (Encoder Card for Elevator Application)	Incremental Encoder card for asynchronous motors control 5 Vdc supply A & B signals 13 bit resolution
	PG-i12 (Encoder Card for Elevator Application)	Incremental Encoder card for asynchronous motors control 12 Vdc supply A & B signals 13 bit resolution