

# PRODUCT CATALOG

Shenzhen Coolmay Technology Co., Ltd

V22.71











## Amendment Record

Version	Description	Page	Date	Revised by
V20.74	Updated model names	P1	2020-9-8	Lina
V20.91	1. Added wifi function for QM3G-43FH and 50FH 2. Updated detailed models 3. Added ethernet function for CX3G-34M	P1&P3	2020-9-17	Lina
V20.101	Updated the appearance of TK6100FH	P5	2020-10-17	Lina
V20.111	Correct storage data	P1&P5	2020-11-18	Lina
V21.11	1. Correct DO type and load 2. Changed the product picture of EX3G-50KH	P1~P5	2021-01-23	Gracen
V21.41	1. Changed the product picture of QM3G-70KFH and EX3G-50KH, 2. Added L02 series products	P1~P2 P3~P5	2021-04-12	Gracen
V21.42	1. Deleted L02-4NTC50K/100K 2. Correct the suggested model of CX3G	P4	2021-04-27	Gracen
V21.51	1. QM3G AI Type add (optional -5V~5V and -10V~10V) 2. Add the AI/AO type of model L02M24	P1 P3	2021-05-10	Gracen
V21.61	1. Added optional ferroelectric to RAM parameters of QM3G and TK 2. Changed the rear view of QM3G-50FH and EX3G-43H 3. Ethernet port is optional for CX3G-34/64/80 4. L02-4NTC/2LC parameter changed 5. Added model TK6150FH	P1&P2 P4&P5 P7	2021-06-04	Gracen
V21.62	1. The default Mini USB programming port of EX3G-43H is changed to Type-C	P2	2021-06-07	Gracen
V21.63	1. Changed the dimension of EX3G-50KH	P2	2021-06-09	Gracen
V21.71	2. Changed L02 High-speed pulse	P3	2021-07-28	Gracen
V21.81	1. Modify the description of L02-60P	P4	2021-08-12	Gracen
V21.111	1. Modified the description of the optional port of CX3G 2. Modified the high-speed counting of L02 3. Adjusted the sequence of inverter and power supply products	P5 P3 P9~P1 6	2021-11-02	Gracen
V22.51	1. Added the content of I/O of QM3G-70FH / 70KFH / 100FH 2. Added the content of I/O of EX3G-70KH / 100HA 3. Updated L02-4RTD and L02-4NTC sensor types 4. Updated the picture of FX3GC series PLC and the content of default 5. Updated the picture of CM6024 power module 6. Modified the model, dimension and download port of MT 6043H	P1 P2 P4 P6  P10 P8	2022-05-19	Miya
V22.71	1. Added the content of servo drives and servo all-in-one machines 2. Modified the high-speed pulse of L02 PLC 3. Added the content of L02-16EYP 4. Update MT6070HQ, deleted MT6150HA 5. Deleted CM520-0.75/1.5KW 6. Deleted CM15024 7. Deleted CX-WIFI-2NET	P3~P4  P5 P6 P10 P11 P12 P14	2022-07-29	Miya









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## 1.1. QM3G-FH HMI/PLC All-in-one

Model	QM3G-43FH	QM3G-50FH	QM3G-70FH	QM3G-70KFH	QM3G-100FH
Image					
					
Dimension	134*102*34mm	151*96*36mm	200*146*36mm	226*163*35.6mm	275*194*36mm
Cutout size	120*94mm	143*86mm	192*138mm	217*154mm	262*180mm
Power Consumption	4-6W	5-7W	6-7W	6-7W	6-8W
<b>HMI</b>					
Feature	60K colors resistive touch screen, supports portrait display				
Type	4.3"TFT	5"TFT	7.0"TFT	7.0"TFT	10.1"TFT
Display size	97*56mm	108*65mm	154*87mm	154*87mm	222*125mm
Resolution (pixels)	480*272	800*480	Standard: 800*480 Optional: 1024*600 (Model: QM3G-70HD)	800*480	1024*600
RAM	64MB (HMI when stores historical data, optional ferroelectric is required)				
ROM	NOR Flash 8MB		NOR Flash 16MB		
CPU	32bit CPU 408MHz				
Default	Type-C HMI download port (can download PLC program through the USB penetrating function), RS232 port			Type-B HMI download port (can download PLC program through the USB penetrating function), RS232	
Optional COM port	/			1 RS485 (changed from default RS232)	
Software	<a href="#">Coolmay mView HMI Programming Software</a>				
<b>PLC</b>					
I/O	Max 12DI/12DO		Max 24DI/20DO (16MR, Y20-Y23 fixed as MT)	Max 30DI/30DO (28MR, Y22 and Y23 fixed as MT)	
I/O level	Input: Passive NPN, public terminal isolated Transistor output: Low level NPN, COM connect to negative; Relay output: Normally open dry contact				
DO type and load	Relay MR/MOS tube, MOS tube: 2A/point, 4A/4 point COM, 5A/12 point COM; MR: 2A/point, 5A/12 point COM.		Relay (MR) or transistor (MT, Y0-Y3 are MOS) or mixed (MRT) MOS tube: 2A/point, 4A/4 points COM; MT: 0.5A/point, 0.8A/4 points COM, 1.6A/8 points COM; MR: 2A/point, 4A/4 points COM, 5A/12 points COM.		
High-speed counting	Single phase 6 channel 60KHz, or 2 AB 60KHz + 1 AB 10KHz, or 2 ABZ 60KHz + 1 AB phase 10 KHz				
High-speed pulse	8 channels, Y0-Y3 is 100KHz, Y4-Y7 is 10KHz. High-speed counting + high-speed pulse < 480KHz				
Default programming port	1 TYPE-C, 1 RS232			1 Mini USB, 1 RS232	
Optional COM port	1 RS485 or 2 RS485 COM ports (one of which is changed from the default RS232 port); 1 WIFI (occupy default RS232 port)		1 RS485 or 2 RS485 COM ports (RS485 port on HMI and RS232 on PLC will be unavailable)		1 RS485 or 2 RS485 COM ports (one is changed from the default RS232 port)
			CAN (2.0A/B) port, Ethernet port, WIFI (will occupy default RS232 port)		
Analog I/O (optional)	Max 4AI/2AO		Max 12AI/8AO	Max 16AI/8AO	
AI type (optional)	Thermocouple E/E_/K/K_/S/S_/T/T_/J/J_/ PT100/ PT1000/ NTC10K/ NTC50K/ NTC100K/ 0~10V/ 0~5V/ 0~20mA/ 4~20mA/ mixed (QM3G-70FH/70HD/70KFH/100FH optional -5V~5V and -10V~10V)				
AO type (optional)	0~10V /0~5V/ 0~20mA/ 4~20mA/ mixed		0~10V /0~5V/ 0~20mA/ 4~20mA/ mixed/ -5~5V/ -10~10V (2AO for 1 minus voltage)		
Software	Compatible with GX Developer8.86 and <a href="#">GX WORKS 2</a>				
Suggested models: QM3G-43FH/50FH-16MR/24MR/24MT(-4AD2DA-485P/232H) QM3G-70FH/HD-16MR/24MR(-12AD8DA-485P/232H); QM3G-70FH/HD-24MT/44MT/44MRT(-8AD6DA-485P/232H) QM3G-70KFH-38MR/38MT(-16AD8DA-485P/232H) QM3G-70KFH-60MRT/60MT(-5AD2DA-485P/232H) QM3G-100FH-24MR/38MT/44MRT/44MT(-16AD8DA-485P/232H) QM3G-100FH-60MRT/60MT(-5AD2DA-485P/232H)					
* If 30DI/30DO for QM3G-70KFH/100FH, max support 5AI/2AO. If 24DI/20DO, max 16AI/8AO. Detailed info. refer to: <a href="#">"Coolmay QM3G-FH All-in-One User Manual"</a> , <a href="#">"Coolmay CX3G/FX3GC PLC Programming Manual"</a> , <a href="#">"Coolmay TK HMI User Manual"</a>					



## 1.2. EX3G HMI/PLC All-in-one

Model	EX3G-43H	EX3G-50KH	EX3G-70KH	EX3G-100HA
Image				
				
Dimension	134*102*32mm	151*96*36mm	226*163*35.6mm	275*194*36mm
Cutout size	120*94mm	143*86mm	217*154mm	262*180mm
Power Consumption	4-6W	5-7W	6-7W	6-8W
Features	Support interrupt, linear arc interpolation, PID auto-tuning. 32K program capacity, 32K retentive register			
<b>HMI</b>				
Display	60K colors resistive touch screen; H/KH series can be portrait display			60K colors resistive touch screen
Type	4.3" TFT	5" TFT	7" TFT	10.1" TFT
Display size	97*56mm	108*65mm	154*87mm	222*133mm
Resolution (pixels)	480*272	800*480	800*480	1024*600
RAM	64MB			128MB
ROM	128MB			
Operation system	WINCE 5.0 version			WINCE 7.0 version
CPU	ARM9 core 400MHz			CORTEX A8 720MHz-1GHz
Default	1 Type-C (HMI download port); 1 USB 2.0 port		1 Type-B (HMI download port); 1 USB 2.0 port	
Optional COM port	1 RS232 port		1 RS485 or 1RS232 port Ethernet port (can not coexist with PLC Ethernet port)	
Audio	Optional			
Software	<a href="#">CoolMayHMI HMI programming software</a>			
<b>PLC</b>				
I/O level	Input: Passive NPN, public terminal isolated Transistor output (MT): Low level NPN, COM connect to negative; Relay output (MR): Normally open dry contact			
I/O	Max 12DI/12DO		Max 30DI/30DO (28MR, Y2 and Y23 fixed as MT)	
DO type and load	Relay MR/MOS tube, MOS tube: 2A/point, 4A/4 point COM, 5A/12 point COM; MR: 2A/point, 5A/12 point COM.		Relay (MR) or transistor (MT, Y0-Y3 are MOS) or mixed (MRT) MOS tube: 2A/point, 4A/4 points COM; MT: 0.5A/point, 0.8A/4 points COM, 1.6A/8 points COM; MR: 2A/point, 4A/4 points COM, 5A/12 points COM.	
High-speed counting	6 channels single-phase 60KHz, or 2 channels AB (Z) phase 60KHz + 1 channel AB phase 10KHz			
High-speed pulse	8 channels, Y0-Y3 is 100KHz, Y4-Y7 is 10KHz High-speed counting + high-speed pulse < 480KHz			
Default programming port	1 Type-C programming port; 1 RS232		1 Mini USB programming port; 1 RS232	
Optional COM port	1 RS485 or 2 RS485 COM ports (one is changed from the default RS232 port)		1 RS485 or 2 RS485 COM ports (one is changed from the default RS232 port), CAN (2.0A/B), Ethernet port (can not coexist with HMI Ethernet port), WIFI (will occupy the default RS232)	
Analog I/O (optional)	Max 4AI/2AO		Max 16AI/8AO	
AI type (optional)	Type E/E_/K/K_/S/S_/T/T_/J/J_/ thermocouple/ PT100/ PT1000/ NTC10K/ NTC50K/ NTC100K/ 0~10V/ 0~5V/ 0~20mA/ 4~20mA/ mixed		Type E/E_/K/K_/S/S_/T/T_/J/J_/ thermocouple/ PT100/ PT1000/ NTC10K/ NTC50K/ NTC100K/ 0~10V/ 0~5V/ -5V~5V/ -10V~10V/ 0~20mA/ 4~20mA/ mixed	
AO type (optional)	0~10V /0~5V/ 0~20mA/ 4~20mA/ mixed		0~10V /0~5V/ 0~20mA/ 4~20mA/ mixed/ -5~5V/ -10~10V (2DA for 1 minus voltage)	
Software	Compatible with GX Developer8.86 and <a href="#">GX WORKS 2</a>			
Suggested models:	EX3G-43H/50KH-16MR/24MR/24MT(-4AD2DA-485P/232H) EX3G-70KH/100HA-16MR/24MR/44MT/44MRT(-16AD8DA-485P/232H) EX3G-70KH/100HA-60MT/60MRT(-5AD2DA-485P/232H)			
	* If 30DI/30DO for EX3G-70KH/100HA, max support 5AI/2AO. If 24DI/20DO, max 16AI/8AO.			
Detailed info. refer to:	<a href="#">EX3G HMI/PLC all in one programming manual</a> <a href="#">EX3G HMI/PLC all in one user manual</a> <a href="#">CoolmayHMI user manual</a>			





## 2.1 Servo driver C600S

Model	C600S-40	C600S-75
Image		
Dimension	160*135*42	
Installation dimension	150*27	
output power	0.05KW~0.4KW	0.75KW~1KW
Adaptive motor	CN7J-060430A3KUAA or CN7J-060430A3KVBA (with brake)	CN7J-080830A3KUAA or CN7J-080830A3KVBA (with brake)
Main circuit input power supply	Single-phase AC220V-15%~+10% 50/60Hz	
Communication mode	Comes with 1 RS485, supports standard modbus RTU protocol	
Digital quantity	Comes with 4DI/4DO, user-defined, supports NPN or PNP connection	
Control mode	0: Position control mode; 1: Speed control mode; 2: Torque control mode; 3: Position-speed hybrid control mode; 4: Position-torque hybrid control mode; 5: Speed-torque hybrid control mode	
Protection function	Overspeed/main power overvoltage and undervoltage/overcurrent/overload/encoder abnormality/control power abnormality/position out of tolerance	
Monitoring function	Speed/current position/command pulse accumulation/position deviation/motor torque/motor current/running status, etc.	
Control input	1: Servo enable 2: Alarm clear 3: CCW drive prohibition 4: CW drive prohibition 5: Deviation counter is cleared 6: Command pulse prohibited 7: CCW torque limit 8: CW torque limit	
Control output	Servo ready/servo alarm/positioning complete/mechanical brake	
Energy consumption braking	Support built-in and external	
Applicable load	Less than 3 times of motor inertia	
Display operation	5-digit LED digital tube display, 4 operation keys	
Position control	Input mode	0: Pulse + direction 1: CCW/CWpulse 2: A/BTwo phase quadrature pulse 3: Internal position control
	Input electronic gear ratio	Gear ratio molecule: 1-32767 Denominator of gear ratio: 1-32767
Detailed info. refer to: <a href="#">Coolmay C600S AC Servo Manual</a> <a href="#">Coolmay C600S Servo Drive User Manual</a>		

## 2.2 Servo PLC All-in-one














Model	MX3G-C40-32MT	MX3G-C75-32MT
Image		
Dimension	160*135*42	
Installation dimension	150*27	
Servo		
output power	0.05KW~0.4KW	0.75KW~1KW
Adaptive motor	CN7J-060430A3KUAA or CN7J-060430A3KVBA (with brake)	CN7J-080830A3KUAA or CN7J-080830A3KVBA (with brake)
Main circuit input power supply	Single-phase AC220V-15%~+10% 50/60Hz	
Input power	Main circuit power supply: single-phase AC220V, voltage range 200V~240V, 50/60Hz Control loop power supply: provided by internal conversion, no external power supply required	
Communication method	Comes with 1 RS485 (terminal A B), supports standard modbus RTU protocol (connected with internal PLC)	
Control mode	0: Position control mode; 1: Speed control mode; 2: Torque control mode; 3: Position-speed hybrid control mode; 4: Position-torque hybrid control mode; 5: Speed-torque hybrid control mode	
Protection function	Overspeed/main power overvoltage and undervoltage/overcurrent/overload/encoder abnormality/control power abnormality/position out of tolerance	
Monitoring function	Speed/current position/command pulse accumulation/position deviation/motor torque/motor current/running status, etc.	
Control input	1: Servo enable 2: Alarm clear 3: CCW drive prohibition 4: CW drive prohibition 5: Deviation counter is cleared 6: Command pulse prohibited 7: CCW torque limit 8: CW torque limit	
Control output	Servo ready/servo alarm/positioning complete/mechanical brake	
Energy consumption braking	Support built-in and external	
Applicable load	Less than 3 times of motor inertia	
Display operation	5-digit LED digital tube display, 4 operation keys	
Encoder feedback	17-bit single-turn absolute encoder	
PLC		
PLC logic supply voltage	DC24V	
I/O	Fixed 16DI/16DO, all programmable and universal	
I/O level	Input: passive NPN, common terminal connected to 24V+; output MT: low level NPN, COM connected to negative	
DO type and load	MOS tube: 2A/point, 4A/4 points COM, 5A/12 points COM;	
High-speed counting	Conventional 2 channel single-phase 60KHz + 4 channel 10KHz or 1-way AB(Z) phase 30KHz + 1 channel AB(Z) phase 5KHz	
High-speed pulse	Conventional 4 channel Y0-Y1 is 100KHz, Y2-Y3 is 50KHz; (wherein, the internal servo of Y0 is occupied) High-speed counting + high-speed pulse total can not exceed 300KHz	
Communication port	Comes with 1 RS485 (terminal A1 B1) (support modbus protocol, RS protocol, etc.)	
Software	Compatible with <a href="#">GX Works2/GX Developer8.86Q</a>	
Detailed info. refer to: <a href="#">Coolmay MX3G-C40 C75-32M Servo PLC All-in-One Manual</a> <a href="#">Coolmay MX3G-C40 C75 Servo All-in-One User Manual</a>		

## 3.1 L02 PLC



Model		LO2M32T	LO2M32R	LO2M24T	LO2M24R
Image					
Programming language		Ladder diagram(LD) / Instruction list / Sequential function chart(SFC)			
Program capacity		32k steps			
Storage capacity	Date (D)	[D0~D127] 128points General / [D128~D7999] 7872points Retentive / [D8000~D8511]512points Special			
	Expansion(R)	[R0~R22999] 23000points Support power-down retention / [R23000~R23999] 1000points Internal use			
Expansion model		Max limit of 31 units: max 12 analog input/output respectively			
Max I/O		FX3U mode: 512 points; FX3G mode: 256 points (the sum of input and output points)			
CPU Digital I/O		16DI / 16DO		12DI/ 12DO	
CPU analog I/O		/		4AI/4AO	
AI Type		/		2*0-10V, 2*0-20mA(4-20mA)	
AO Type		/		2*0-10V, 2*0-20mA(4-20mA)	
Timer T		[T0~T199] 200points 100ms General / [ T250~T255] 6points 100ms Retentive [T246~T249] 4points 1ms cumulative Retentive / [T256~T319] 64points 1ms General [T200~T245] 46points 10ms General			
		※The 10ms timer is affected by the scan period. If the scan period is 12ms,the timer becomes 12ms and executes once.			
16-bit counter C		[CO~C15] 16points General			
32-bit counter C		[C200~C219] 20points General		[C220~C234] 15points Retentive	
		[C235~C245 Single phase single counting][C246~C250 single phase double counting] [C251~C255 Two-phase double counting]			
High-speed pulse		4-channels 150KHz+4-channels 50KHz			
High-speed counter		Single phase 6 channels 60KHz, or AB(Z) phase 2 channels 60KHz+AB phase 1 channel 10KHz			
Do type		LO2M32T/LO2M24T: Transistor output, load maximum 500mA, low level NPN, COM connected to negative LO2M32R/LO2M24R: Relay output, load maximum 2A, dry contact, COM can be connected to positive ornegative			
Default COM		Type-C, RS-232, RS-485*2, Ethernet, CAN			
Protocol		Programming port Modbus RTU, Modbus TCP, Modbus UDP, freeport protocol, CAN, Ethernet/IP, BD board			
Data backup function No battery storage	Program	Flash ROM			
	Retentive area	MRAM has no write limit			
Calendar(RTC)		Commercially available batteries CR1620(optional)			
Self-diagnosis		CPU abnormalities, internal memory problems, etc			
Rated input voltage		24VDC(± 10%)			
Software		Compatible with <a href="#">GX WORKS 2</a>			
Detailed info. refer to <a href="#">Coolmay L02 Series PLC Programming Manual</a> <a href="#">L02 Series PLC Controller User Manual</a>					





## 3.2 L02 PLC Modules

Sort	Model	Image	Description
Power supply Module	L02-60P		Input: 100-240VAC, 50/60Hz AC power input. Output (for L02 series products): 24VDC/1.5A, 36W Output (for other products): 24VDC/0.5A, 12W
Digital input Module	L02-8EX		DC24V, 6mA, 8 points input, push-type terminal
	L02-16EX		DC24V, 6mA, 16 points input, push-type terminal
	L02-32EX		DC24V, 6mA, 32 points input, horn block terminal
Digital output Module	L02-8EYT		30VDC, 2A/point; 2A/4point COM, 8 points transistor output, push-type terminal
	L02-8EYR		Below AC220V / Below DC30V, 2A/point, 4A/4point COM, 8 points relay output, push-type terminal
	L02-16EYT		30VDC, 2A/point; 2A/4point COM, 16 points transistor output, push-type terminal
	L02-16EYR		Below AC220V / Below DC30V, 2A/point, 4A/4point COM, 16 points relay output, push-type terminal
	L02-16EYP		220VAC/30VDC, 0.5A/point, 16DO, relay and PNP outputs, push-type terminals
	L02-32EYT		30VDC, 2A/point; 2A/4point COM, 32 points transistor output, horn block terminal
Digital input output mixed Module	L02-16ET		DC24V, 6mA, 8 points input; 30VDC, 2A/point; 2A/4point COM, 8 points transistor output, push-type terminal
	L02-16ER		DC24V, 6mA, 8 points input; Below AC220V / Below DC30V, 2A/point, 4A/4point COM, 8 points relay output, push-type terminal
	L02-32ET		DC24V, 6mA, 16 points input; 30VDC, 2A/point; 2A/4point COM, 16 points transistor output, horn block terminal
Analog output Module	L02-4DA		4-channel analog signal output 16-bit resolution 0~5V, 0~10V, 0~20mA
Analog input Module	L02-4AD		channel analog signal input 16-bit resolution 0~10V, 0~5V, 0~20mA, -20~20mA
Analog input output mixed Module	L02-4AD2DA		4-channel analog signal input; 16-bit resolution 0~10V, 0~5V, 4~20mA, 0~20mA 2-channel analog signal output; 16-bit resolution 0~5V, 0~10V, 0~20mA
Temperature Module	L02-4RTD		4-channel 2-wire or 3-wire RTD temperature sensing Sensor type: Pt100; Resolution: 0.1°C/0.1°F (16 bit converter)
	L02-4TC	4-channel thermocouple temperature sensing Sensor type: J, K, S, T, E; Resolution: 0.1°C/0.1°F (16 bit converter)	
	L02-4NTC	4-channel thermistor temperature sensing Sensor type: NTC10K (Default B value 3435); Resolution: 0.1°C/0.1°F (16 bit converter)	
Weighing/Load cell Module	L02-2LC		2-channel 4-wire load cell Characteristic values: 1, 2, 4, 6, 20, 40, 80 mV/V Accuracy error value: one ten thousandth (1/10000) ADC resolution: 23 bits
Ethernet/IP Module	L02-EIP		Built-in two Ethernet interfaces, support switch function Support Ethernet/IP protocol, remotely expand I/O available.
Detailed info. refer to <a href="#">L02 Series AIO Module User Manual</a> , <a href="#">L02 Series DIO Module User Manual</a> , <a href="#">L02-EIP Module User Manual</a>			













### 3.3 CX3G PLC

Model	CX3G-16M	CX3G-24M	CX3G-32M	CX3G-48M	CX3G-34M	CX3G-64M	CX3G-80M
Image							
Dimension	85*90*36mm	130*90*36mm		200*90*36mm		290*90*36mm	
Cutout size	77*99mm	122*99mm		192*99mm		282*99mm	
Installation	Fixed hole installation and DIN-Rail (35mm )						
Features	Support interrupt, linear arc interpolation, PID auto-tuning. 32K program capacity, 32K retentive register						
I/O level	Input: Passive NPN, public terminal isolated Transistor output: NPN Relay output: Normally open dry contact						
Digital I/O	8DI/8DO	12DI/12DO	16DI/16DO	24DI/24DO	18DI/16DO	32DI/32DO	40DI/40DO
DO type and load	Relay(MR) or transistor(MT) or mixed(MRT) MOS tube: 2A/point, 4A/4 point COM; Transistor MT: 0.5A/point, 0.8A/4 point COM, 1.6A/8 point COM; MR: 2A/point, 4A/4 point COM, 5A/8 point COM. (CX3G-16MRT: Default Y0, Y1 is transistor output, maximum 6 relay outputs)						
High speed counting	Single phase 6 channel 60KHz, or 2 AB 60KHz + 1 AB 10KHz, or 2 ABZ 60KHz + 1 AB phase 10 KHz						
High speed pulse	8 channels 10KHz	8 channels, Y0-Y3 is 100KHz, Y4-Y7 is 10KHz					
	High-speed counting + high-speed pulse < 480KHz						
Analog I/O (optional)	Null	6AI/4AO	2AI	8AI/4AO	12AI/8AO	16AI/8AO	4AI/4AO
AI type (optional)	Null	Type E/E_/K/K_/S/S_/T/T_/J/J_ thermocouple / PT100/ PT1000/ NTC10K/ NTC50K/ NTC100K/ 0~10V/ 0~5V/ 0-20mA/ 4-20mA/ -5V~5V/ -10V~10V					
AO type (optional)	Null	0~10V/ 0~5V/ 0~20mA/ 4~20mA -5~5V/ -10~10V (2DA for 1 minus voltage)					
Default	1 Mini type B USB programming port, 1 RS232 programming port (Interface terminal is mouse female port with 8 holes), 2 RS485 COM ports						
Optional	Default 2 RS485 COM ports can be customized as 1 RS485, 1 RS232 COM ports, or 1 RS485 COM port, 1 CAN (2.0A/B), or 1 RS232 COM port, 1 CAN (2.0A/B). For CX3G-48M: Ethernet port is optional.				Default 2 RS485 COM ports can be customized as 1 RS485, 1 RS232 COM ports. CAN (2.0A/B) port is optional, Ethernet port is optional.		
Software	Compatible with <a href="#">GX WORKS 2</a>						
Suggested models: CX3G-16MT/MRT(-485/232) CX3G-24MT/MR/MRT(-6AD4DA -485/232) CX3G-32MT/MR/MRT(-2AD -485/232) CX3G-34MT/MR/MRT(-12AD8DA -485/232) CX3G-48MT/MR/MRT(-8AD4DA -485/232) CX3G-64MT/MR/MRT(-16AD8DA -485/232) CX3G-80MT/MR/MRT(-4AD4DA -485/232)							
*If the analog input of CX3G-24M is 8AD, the maximum digital input is 10DI *If the analog quantity of CX3G-32M is 2AD 2DA, the maximum digital quantity is 16DI 14DO Detailed info. refer to <a href="#">COOLMAY CX3G PLC Programming Manual</a> <a href="#">CX3G PLC user manual</a>							











### 3.4 FX3GC PLC

Model	FX3GC-16M Communication/analog extension module can be customized	FX3GC-30M-485	FX3GC-32M
Image			
Dimension	90*60*32mm		
Installation	DIN-Rail (35mm ) mounting		
Features	Support interrupt, linear arc interpolation, PID auto-tuning. 32K program capacity, 32K retentive register		
I/O level	Input: Passive NPN, public terminal isolated Transistor Output: NPN   Relay output: NO contact		
Digital I/O	8DI/8DO	16DI/14DO	16DI/16DO
DO type and load	Relay(MR)/ Transistor (MT)/ Mixed (MRT) MOS tube: 2A/point, 5A/8point COM; MR: 2A/point, 5A/8point COM.	Relay MR/ transistor MT (Y0-Y7 is MOS tube)/ mixed output MRT MOS tube: 2A/point, 5A/8 point COM; Transistor MT: 0.5A/point, 1.6A/8 point COM; MR: 2A/point, 5A/8 point COM.	
High-speed counting	Single phase 6 channel 60KHz, or 2 AB 60KHz + 1 AB 10KHz, or 2 ABZ 60KHz + 1 AB phase 10 KHz		
High-speed pulse	8 channels,Y0-Y3 is 100KHz, Y4-Y7 is 10KHz High-speed counting + high-speed pulse < 480KHz		
Analog I/O (optional)	6AI/4AO or 8AI/4AO or 8AI/6AO	NULL	
AI type (optional)	Type E/E_/K/K_/S/S_/T/T_/J/J_ thermocouple / PT100/ PT1000/ NTC10K/ NTC50K/ NTC100K/ 0~10V/ 0~5V/ 0-20mA/ 4-20mA -5V~5V/ -10V~10V/ mixed	/	
AO type (optional)	0-10V/ 0-5V/ 0-20mA/ 4-20mA -5~5V/ -10~10V (2DA for 1 minus voltage)	/	
Default	With two PLC programming ports(1 Mini type B USB port, for faster download speed; 1 RS232 programming port , with 8-hole mouse head base as the interface terminal)		
Optional	2 RS485 COM ports, 1 CAN(2.0A/B)	1 RS485 COM port	/
Software	Compatible with <a href="#">GX WORKS 2</a> / GX Developer8.86		
Suggested models: FX3GC-16/32MT/MR/MRT      FX3GC-30MT/MR/MRT(-485)			
Analog and COM package of FX3GC-16M: 2 RS485, 1 CAN, 6AD4DA, or 1 RS485, 1 CAN port, 8AD4DA, or 1 RS485, 8AD/6DA, or 2 RS485, 1 CAN			
Detailed info. refer to <a href="#">CX3G FX3GC PLC Programming Manual</a> <a href="#">FX3GC User Manual</a>			



## 4.1 TK Color Touchscreen HMI

Model	TK6037FH	TK6043FH	TK6050FH	TK6070FH	TK6100FH	TK6150FH	
Image	Front						
	Rear						
Specs	Dimension	88*88*25mm	134*102*34mm	151*96*36mm	200*146*36mm	275*194*36mm	386*300*40mm
	Cutout size	72*72mm	120*94mm	143*86mm	192*138mm	262*180mm	366*280mm
	Display size	73*56mm	97*56mm	108*65mm	154*87mm	222*125mm	305*229mm
	Weight(kg)	Appox. 0.3 kg	Appox. 0.33 kg	Appox. 0.33 kg	Appox. 0.54 kg	Appox. 0.7 kg	Appox. 3.3 kg
Display	Display	3.5" TFT	4.3" TFT	5" TFT	7.0" TFT	10.1" TFT	15" TFT
	Resolution (pixels)	320*240	480*272	800*480	Standard: 800*480 Optional: 1024*600 (Model: TK6070HD)	1024*600	1024*768
	Brightness	300cd/m <sup>2</sup>	400cd/m <sup>2</sup>	300cd/m <sup>2</sup>			450cd/m <sup>2</sup>
	Contrast ratio	400:1					
	Backlight	LED					
	Backlight time	60,000 hours					
	Display color	65536 colors					
	Touch type	4-wire resistive panel					
Storage	ROM	NOR Flash 8MB		NOR Flash 16MB			
	RAM	64MB (HMI when stores historical data, optional ferroelectric is required)					
	CPU	32bit CPU 408MHz					
Interface	Download port	Type-C, RS232, RS485			Type-B, RS232, RS485	Type-C, RS232, RS485	
	COM port	1 RS232, 1 RS485					
	Optional	NULL	1 WIFI (occupy default RS485 port)				
	Protocol	RS232/RS485 supports MODBUS, free port and common PLC communication Protocol					
Calendar	Yes						
Input Voltage	12-24VDC±10%<150mA @ 24VDC						
Consumption	42mA/24V	72mA/24V	85mA/24V	107mA/24V	145mA/24V	400mA/24V	
Protection Class	IP65 (front panel)						
Temperature	Ambient environment: 0~50°C   Storage environment: -20~70°C						
Humidity	20%~90% RH						
Certification	CE					NULL	
Software	<a href="#">CoolMay mView HMI programming software</a> Detailed info. refer to <a href="#">Coolmay TK Series HMI Programming Manual</a> <a href="#">CoolMay TK HMI User Manual</a>						






## 4.2 MT Color Touchscreen HMI

Model		MT6037H	MT6043HQ	MT6050H	MT6070HQ	MT6100HA
Image	Front					
	Rear					
Specs	Dimension	88*88*25mm	134*102*34mm	146*88*25mm	212*146*36mm	275*194*36mm
	Cutout size	72*72mm	120*94mm	137*72mm	192*138mm	262*180mm
	Display size	73*56mm	97*56mm	108*65mm	154*87mm	222*125mm
	Weight(kg)	Approx. 0.3 kg	Approx. 0.33 kg	Approx. 0.33 kg	Approx. 0.54 kg	Approx. 0.7 kg
Display	Display	3.5" TFT	4.3" TFT	5" TFT	7" TFT	10.1" TFT
	Resolution (pixels)	320*240	480*272	800*480	800*480	1024*600
	Brightness	300cd/m <sup>2</sup>				
	Contrast ratio	400:1				
	Backlight	LED				
	Backlight time	60,000 h				
	Display color	65536 true colors				
Touch type	4-wire resistive panel					
Storage	ROM	128MB				
	RAM	64MB				128MB
	CPU	ARM9 core 400MHz				CORTEX A8 720MHz-1GHz
Operating system	WINCE 5.0				WINCE 7.0	
Interface	USB port	USB 2.0×1 (USB port and can be connected to external USB flash drive, mouse, etc.)				
	Download port	Yes (Mini type B male port cable for program download)	TYPE-C	Yes (Mini type B male port cable for program download)	TYPE-C	Type-B port download program
	Ethernet port	Optional				
	COM port	1 RS232 and 1 RS485				
	Protocol	Support MODBUS, free port and common PLC communication Protocol				
Audio	Optional					
Calendar	Yes					
Input Voltage	Default as DC12~24±10%V					
Consumption	100mA*24V	150mA*24V	150mA*24V	200mA*24V	280mA*24V	
Protection Class	IP65 (front panel)					
Temperature	Ambient environment: 0~50°C   Storage environment: -20~70°C					
Humidity	20%~90% RH					
Certification	CE					
Software	<a href="#">CoolMay HMI programming software</a> Detailed info. refer to <a href="#">CoolMay HMI user manual</a> , <a href="#">CoolMay HMI programming manual</a>					


## 5. Inverter / Variable Frequency Drive (VFD)

Model	CM540-0.75/1.5/4.0KW	CM540-5.5/7.5/11KW
Image		
Dimension L*W*Hmm	118*156*185	247*160*176
Weight	2.0kg	3.7kg
<b>Basic Function</b>		
Maximum frequency	Vector control: 0~600Hz   V/F control: 0~3200Hz	
Carrier frequency	0.8kHz~12kHz. The carrier frequency automatically adjusted based on the load features.	
Input frequency resolution	Digital setting: 0.01Hz Analog setting: Maximum frequency ×0.025%	
Control mode	Open-loop vector control (SVC), Closed-loop vector control (FVC), VF control.	
Startup torque	G type: 0.25Hz/150% (SVC), 0Hz/180%(FVC), P type: 0.5Hz/100%	
Speed range	1:200(SVC), 1:1000(FVC)	
Speed stability accuracy	±0.5%(SVC), ±0.02%(FVC)	
Torque control precision	±5% (SVC) (above 10Hz), ±3%(FVC)	
Overload capacity	G type: 150% rated current 60s. 180% rated current 3s. P type: 120% rated current 60s. 150% rated current 3s.	
Torque boost	Automatic torque boost. Manual torque boost 0.1%~30.0%	
V/F curve	Five modes: Straight-line, Multi-points, Square V/F, V/F separation, V/F Semi-separation	
V/F Separation	Two modes: complete separation, semi-separation	
Ramp mode	Straight-line ramp and S-curve ramp. Four kinds of acceleration/deceleration time with the range of 0.0~6500.0s	
DC injection braking	DC braking frequency: 0.00Hz~maximum, braking time: 0.0s~36.0s. Braking action current value: 0.0%~100.0%	
Jog control	Jog frequency: 0.00Hz~50.00Hz Jog acceleration and deceleration time:0.0s~6500.0s	
Simple PLC, multistage speed operation	It implements up to 16 speeds via the simple PLC function or combination of DI terminal states.	
Built-in PID	It can keep constant output voltage automatically when the mains voltage changes.	
Automatic voltage regulation (AVR)	Automatically maintain a constant output voltage when grid voltage changes.	
Over voltage/Over current loss of speed control	Automatic limit of the current and voltage during the operation, prevent frequent over current and over voltage	
Rapid current limit	Minimizing over-current fault and protect the normal operation of converter.	
Torque limit and control	"Excavator" characteristics, automatic limit of the torque during the operation, to prevent frequent over-current trip. Closed-loop vector mode torque control can be achieved.	
Other models: CM540-15/ 18.5/ 22KW, CM540-30/ 37KW CM540-45/ 55/ 75KW, CM540-90/ 110KW CM540-132/ 160/ 185KW, CM540-200/ 220/ 250/ 280KW CM540-315/ 350KW. The above models are all iron shells. For detailed dimensions, please contact us Detail info refer to: <a href="#">Coolmay CM540-Inverter user manual</a>		

## 6. Power Supply





Model		CX6024-12-5	CX2024	CM6024
Image	Front			
	Back			
Installation	Standard guide rail installation and can be installed on NS35/7.5 or NS35 guide slot			
Dimension	85*90*36mm	65*90*36mm	90*60*32mm	
Connection mode	7.62 barrier terminal		5P-7.62 barrier terminal	
Input voltage	88~264VAC or 125~373VDC			
Input frequency	47~63HZ			
Output voltage	DC24V/ DC12V/ DC5V	DC24V		
Output current	1A	0.8A	2.5A	
Impulse current	30A/ 230VAC			
Output accuracy	±1%			
Output efficiency	86%	85%	86%	
No-load consumption	<0.5W			
Defensive function	Short circuit/ over voltage/ overload protection			
Manuals	<a href="https://en.coolmay.com/">Coolmay power supply user manual</a>			

## 7. Multi-channel Temperature Control Module


Model	CM-4TMS	CM-4TMR
Image		
Installation	DIN-Rail	
Measuring range	-200.00°C~1350.00°C	
Channels	4 channels	
Input type	Thermal resistance DPT100Ω, JPT100Ω 3 wire Thermocouple K, J, E, T, L, N, U, R, S, B, C, G and PLII (13 types)	
Measurement accuracy	Below (PV±0.5% or ±1°C the larger one) ±1bit	
Control output	SSR: 22VDC ±3V Max.30mA	Relay: 250VAC 3A constantly keep off
Connection method	Pluggable terminals	
Communication protocol	RS485, MODBUS-RTU	
Supply voltage	24VDC (±10%)	
Maximum input current	200mA	
Consumption power	5W (Maximum load)	
Sampling period	100ms	
Withstand voltage	1000VAC 50/60Hz last for 1 min (between the input terminal and the power terminal)	
Withstand Vibration	5 ~ 55Hz(cycle 1min) amplitude 0.75mm. X, Y, Z each direction 2 hours	
Dimension	90.0*64.0*32.5 mm	
Working condition	Ambient temperature: 0°C~50°C   Storage temperature: -20°C~60°C	
Net weight	Approx 135~152g	
Detailed info. refer to: <a href="#">Coolmay CM-4TM User Manual</a>		



## 8. 485/232 to Network Module

Model	CM-WIFI	CM-GPRS	CX-GPRS-G (supports GPS location)	CX-4G
Image				
Installation	Standard guide rail installation and can be installed on NS35/7.5 or NS32 guide slot			
Dimension	90*60*32mm			65*90*36mm
Wiring	Power and RS232/485 applies pluggable terminals			
Frequency range	2.412GHz ~ 2.484GHz	850/ 900/ 1800/ 1900MHz GSM	850/ 900/ 1800/ 1900MHz GSM	5 modes 12 channels
Network standards	802.11 b/g/n	GSM/ GPRS/ EDGE	GSM/ GPRS/ EDGE	TDD-LTE/ FDD-LTE WCDMA/ TD-SCDMA/ GSM/ GPRS/ EDGE
Data interface	RS232, RS485 300bps~460800bps	RS232, RS485 2400bps~921600bps	RS232, RS485 2400bps~921600bps	RS232, RS485 300~230400bps
Network type	STA/ AP/ STA + AP	GSM/ GPRS/ EDGE	GSM/ GPRS/ EDGE	TDD-LTE/ FDD-LTE WCDMA/ TD-SCDMA GSM/ GPRS/ EDGE
Network protocol	IPv4, TCP/ UDP/ HTTP	TCP/ UDP/ DNS/ HTTP	TCP/ UDP/ DNS/ HTTP	TCP/ UDP/ DNS/ HTTP
User configuration	Web page/ Serial port AT command	Serial port/ network/ message AT instruction (configuration software is offered)	Serial port/ network/ message AT instruction (configuration software is offered)	Serial port/ network/ message AT instruction (configuration software is offered)
Transmit power	300~460800bps	2400~921600bps		300~230400bps
Manuals	<a href="#">CM-WIFI user manual</a> <a href="#">CM-GPRS user manual</a> <a href="#">CM-WIFI-2NET user manual</a> <a href="#">CX-4G user manual</a>			
Software	Visual serial port CM-VCOM CM-GPRS module setting software CM-NET module setting software CX-4G module setting software			





## 9. Radio Frequency Module

Model	CM-RFM
Image	
Frequency Range	430~450Mhz
Installation	Standard rail mounting for mounting on NS35/7.5 or NS35 guide slot
Dimension	90*60*32mm
Modulation way	GFSK
Serial port speed	1200, 2400, 4800, 9600, 19200, 38400, 115200bps
Channel spacing	150kHz
Transmission rate	1~100Kbps
Transmission power	Max 20dBm (100mw), 9 level adjustable power
Receiver sensitivity	-114dBm (@10Kbps, dev=25kHz, BER<0.1%)
Cache space	Dual 256 bytes
Transmission distance	1~2 kilometers @10kbps, 20dBm, open space
Wiring	Power 3.50 Pluggable terminals and RS485 applies 3.81 Pluggable terminals
Manuals	<a href="#">CM-RFM user manual</a>

## 10. Fiber to CAN/ RS485/ RS232 Module

Model		Fiber to CAN/RS485/RS232 Module
Image	Front	
	Back	
Maximum fiber length		80 Kilometers
Baud rate		0~1 Mbps
Optical ports		ST, SC or FC interface single fiber or dual fiber
Net weight		100g
Dimension		106mm (L) * 65mm (W) * 35mm (H)
Cutout size		98 mm * 57 mm
Working environment temperature		-40°C ~ +85°C
Humidity		≤ 95% RH
Installation		Din-Rail, wall hanging, plane fixed
Refer info.: <a href="#">Fiber to CAN, RS485, RS232 User Manual</a>		

## 11. CM-OP Offline Programming Module

Model		CM-OP Offline programming module
Image	Front	 
	Side、Rear	 
Installation	35mm standard rail mounting, handheld equipment	
Connection method	MICRO USB&RS485/RS232	
Protocol	Programming port protocol	
Power supply	Built-in 2000mAH lithium battery	
Charging voltage	5V	
Maximum input current	50mA	
Static power	<0.5W	
Net Weight	50g	
Dimension	90*64*33mm	
Working temperature	-20°C~85°C	
Programming software	Compatible with PLC programming software GX8.52 and <a href="#">WORKS 2</a>	
Refer info: <a href="#">CM-OP Offline programming module user manual</a>		

## 12. Amplification Module

Model	CM-MOS	CM-SSR	CM-REY
	Transistor amplification module	Solid state amplification module	Intermediate amplifier module
Image			
Installation	Standard guide rail installation and can be installed on NS35/7.5 or NS32 guide slot		
Dimension	89.5*79*32.5mm		
Connection mode	5.08 pluggable terminal		
Input voltage	DC24V		
Input type	NPN		
Working voltage	DC12~30V	AC100~250V	DC/AC0~250V
Output current	5A	5A	15A
Max. Output current	10A	10A	16A
Output method	MOS	Zero-crossing trigger	Relay tip
Output points	6I/6O		
Output type	NPN		
Protection method	optoelectronic isolation, FWD protection	optoelectronic isolation, RC absorption circuit	Relay-isolated, 400V piezoresistor
Manuals	<a href="#">Coolmay Amplifier User Manual</a>		