

PRODUCT CATALOG

Shenzhen Coolmay Technology Co., Ltd

V21.111











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 |








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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 |
| HMI | | | | | |
| 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 | Coolmay mView HMI Programming Software | | | | |
| PLC | | | | | |
| I/O | Max 12DI/12DO | | Max 24DI/20DO (max 16MR) | Max 30DI/30DO (max 28MR) | |
| 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 GX WORKS 2 | | | | |
| 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: " Coolmay QM3G-FH All-in-One User Manual ", " Coolmay CX3G/FX3GC PLC Programming Manual ", " Coolmay TK HMI User Manual " | | | | | |














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 | | | |
| HMI | | | | |
| 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 | CoolMayHMI HMI programming software | | | |
| PLC | | | | |
| 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 | 12DI/12DO | | 12DI/12DO or 20DI/18DO or 24DI/20DO | |
| 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 GX WORKS 2 | | | |
| 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: | EX3G HMI/PLC all in one programming manual EX3G HMI/PLC all in one user manual CoolmayHMI user manual | | | |

2.1.1 L02 PLC



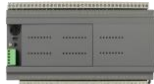

| Model | | LO2M32T | LO2M32R | LO2M24T | LO2M24R |
|---|----------------|--|---|---|---|
| Image | |  |  |  |  |
| Programming language | | Ladder diagram(LD) / Instruction list / Sequential function chart(SFC) | | | |
| Program capacity | | 32k steps | | | |
| Storage capacity | Date (D) | [D0~D127] 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-axis 200KHz+4-axis 50KHz (Y0-Y3 each 200KHz; Y4-Y7 each 50KHz, total should not be over 200KHz) | | | |
| 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, freoport 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 GX WORKS 2 | | | |
| Detailed info. refer to Coolmay L02 Series PLC Programming Manual L02 Series PLC Controller User Manual | | | | | |

2.1.2 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 |
| | L02-32EYT |  | 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/Pt1000; 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; 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 [L02 Series AIO Module User Manual](#), [L02 Series DIO Module User Manual](#), [L02-EIP Module User Manual](#)













2.2. 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 GX WORKS 2 | | | | | | | |
| 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 COOLMAY CX3G PLC Programming Manual CX3G PLC user manual | | | | | | | | |













2.3. 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 | 1 Mini type B USB programming port, 1 RS422 programming port for MR models, 1 RS232 programming port for MT models (Interface terminal is 8 holes mouse female port) | | |
| Optional | 2 RS485 COM ports, 1 CAN(2.0A/B) | 1 RS485 COM port | / |
| Software | Compatible with GX WORKS 2 / 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 CX3G FX3GC PLC Programming Manual FX3GC User Manual | | | |




3.1. 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 ² | 400cd/m ² | 300cd/m ² | | | 450cd/m ² |
| | Contrast ratio | 400:1 | | | | | |
| | Backlight | LED | | | | | |
| | Backlight time | 60,000 hours | | | | | |
| | Display color | 65536 colors | | | | | |
| Storage | Touch type | 4-wire resistive panel | | | | | |
| | ROM | NOR Flash 8MB | | NOR Flash 16MB | | | |
| | RAM | 64MB (HMI when stores historical data, optional ferroelectric is required) | | | | | |
| Interface | CPU | 32bit CPU 408MHz | | | | | |
| | 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 | CoolMay mView HMI programming software Detailed info. refer to Coolmay TK Series HMI Programming Manual CoolMay TK HMI User Manual | | | | | | |




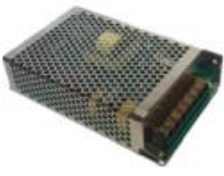



3.2. MT Color Touchscreen HMI

| Model | | MT6037H | MT6043H | MT6050H | MT6070H | MT6100HA | MT6150HA | |
|------------------|--|--|---|---|--|---|---|--|
| Image | Front |  |  |  |  |  |  | |
| | Rear |  |  |  |  |  |  | |
| Specs | Dimension | 88*88*25mm | 134*102*32mm | 146*88*25mm | 212*148*40mm | 275*194*36mm | 365*290*36mm | |
| | Cutout size | 72*72mm | 120*94mm | 137*72mm | 194*138mm | 262*180mm | 352*279mm | |
| | Display size | 73*56mm | 97*56mm | 108*65mm | 154*87mm | 222*125mm | 304*228mm | |
| | Weight(kg) | Approx. 0.3 kg | Approx. 0.33 kg | Approx. 0.33 kg | Approx. 0.54 kg | Approx. 0.7 kg | Approx. 3.414 kg | |
| Display | Display | 3.5" TFT | 4.3" TFT | 5" TFT | 7" TFT | 10.1" TFT | 15.0" TFT | |
| | Resolution (pixels) | 320*240 | 480*272 | 800*480 | 800*480 | 1024*600 | 1024*768 | |
| | Brightness | 300cd/m ² | | | | | 450cd/m ² | |
| | 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 | | | | 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 | | | Yes (Type B male port cable for program download) | | | |
| | 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 | 500mA*24V | | |
| Protection Class | IP65 (front panel) | | | | | | | |
| Temperature | Ambient environment: 0~50°C Storage environment: -20~70°C | | | | | | | |
| Humidity | 20%~90% RH | | | | | | | |
| Certification | CE | | | | | | | |
| Software | CoolMay HMI programming software Detailed info. refer to CoolMay HMI user manual , CoolMay HMI programming manual | | | | | | | |


4. Inverter / Variable Frequency Drive (VFD)

| Model | CM520-0.75/1.5KW | CM540-0.75/1.5/4.0KW | CM540-5.5/7.5/11KW |
|---|---|---|---|
| Image |  |  |  |
| Dimension L*W*Hmm | 86*114*143 | 118*156*185 | 247*160*176 |
| Weight | 0.9kg | 2.0kg | 3.7kg |
| Basic Function | | | |
| Maximum frequency | Vector control: 0~600Hz | | 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 tome: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. | | |
| <p>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.</p> <p>The above models are all iron shells. For detailed dimensions, please contact us Detail info refer to: Coolmay CM520 VFD user manual Coolmay CM540-Inverter user manual</p> | | | |






5. Power Supply

| Model | | CX6024-12-5 | CX2024 | CM6024 | CM15024 |
|---------------------|--|---|---|--|---|
| Image | Front |  |  |  |  |
| | Back |  |  | |  |
| Installation | Standard guide rail installation and can be installed on NS35/7.5 or NS35 guide slot | | | | Screw fixation, vertically or paralleled installation |
| Dimension | 85*90*36mm | 65*90*36mm | 90*60*32mm | 159*97*38mm | |
| Connection mode | 7.62 barrier terminal | | | 5P-7.62 barrier terminal | 7P-9.5 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 | 6.5A | |
| Impulse current | 30A/ 230VAC | | | | 60A/ 230VAC |
| Output accuracy | ±1% | | | | |
| Output efficiency | 86% | 85% | 86% | 89% | |
| No-load consumption | <0.5W | | | | |
| Defensive function | Short circuit/ over voltage/ overload protection | | | | |
| Manuals | Coolmay power supply user manual | | | | |


6. 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: Coolmay CM-4TM User Manual | | |

7. 485/232 to Network Module

| Model | CM-WIFI | CM-GPRS | CX-GPRS-G (supports GPS location) | CX-WIFI-2NET | 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 | 2.412 GHz~2.484 GHz | 5 modes 12 channels |
| Network standards | 802.11 b/g/n | GSM/ GPRS/ EDGE | GSM/ GPRS/ EDGE | 802.11 b/g/n | 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 300bps~460800bps Ethernet: 100Mbps | RS232, RS485 300~230400bps |
| Network type | STA/ AP/ STA + AP | GSM/ GPRS/ EDGE | GSM/ GPRS/ EDGE | Station/ AP mode | 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/ ARP/ ICMP/ DHCP/ 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) | Web server/ AT instruction | Serial port/ network/ message AT instruction (configuration software is offered) |
| Transmit power | 300~460800bps | 2400~921600bps | | 300~460800bps | 300~230400bps |
| Manuals | CM-WIFI user manual CM-GPRS user manual CM-WIFI-2NET user manual CX-4G user manual | | | | |
| Software | Visual serial port CM-VCOM CM-GPRS module setting software CM-NET module setting software CX-4G module setting software | | | | |





8. 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 | CM-RFM user manual |

9. 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.: Fiber to CAN, RS485, RS232 User Manual | | |

10. 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 WORKS 2 | |
| Refer info: CM-OP Offline programming module user manual | | |

11. 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 | Coolmay Amplifier User Manual | | |