The following is an example of CRC generation using C language. The function takes two arguments:
Unsigned char* data ← a pointer to the message buffer
Unsigned char length ← the quantity of bytes in the message buffer
The function returns the CRC value as a type of unsigned integer.

```
Unsigned int crc_chk(unsigned char* data, unsigned char length)
    {
    int j;
    unsigned int reg_crc=0Xffff;
    while(length--){
       reg_crc ^= *data++;
       for(j=0;j<8;j++){
       if(reg_crc & 0x01){    /* LSB(b0)=1 */
          reg_crc=(reg_crc>>1) ^ 0Xa001;
       }else{
          reg_crc=reg_crc >>1;
       }
    }
 }

 return reg_crc;                    // return register CRC
```

3. Address list

Content	Address	Function	
AC drive Parameters	GGnnH	GG means parameter group, nn means parameter number, for example, the address of Pr 4-01 is 0401H.	
Command Write only	2000H	Bit0~3	0: No function
			1: Stop
			2: Run
			3: Jog + Run
		Bit4~5	00B: No function
			01B: FWD
			10B: REV
			11B: Change direction
		Bit6~7	00B: 1st accel/decel
			01B: 2nd accel/decel
			10B: 3rd accel/decel
			11B: 4th accel/decel
		Bit08~11	0000B: master speed
			0001B: 1st accel/decel.
			0010B: 2nd accel/decel
			0011B: 3rd accel/decel
			0100B: 4th accel/decel
			0101B: 5th accel/decel
			0110B: 6th accel/decel
			0111B: 7th accel/decel
			1000B: 8th accel/decel
			1001B: 9th accel/decel
			1010B: 10th accel/decel

			1011B: 11th accel/decel
			1100B: 12th accel/decel
			1101B: 13th accel/decel
			1110B: 14th accel/decel
			1111B: 15th accel/decel
		Bit12	1: enable bit06-11 function
		Bit13~14	00B: No function
			01B: operated by digital keypad
			10B: operated by Pr.00-21 setting
			11B: change operation source
		Bit15	Reserved
	2001H	Frequency command	
	2002H	Bit 0	Bit 0
		Bit 1	Bit 1
		Bit 2	Bit 2
		Bit 3-15	Bit 3-15
Status monitor Read only	2100H	Error code: refer to Pr.06-17 to Pr.06-22	
	2101H	Bit0	AC Drive Operation Status
		Bit1	00b: Drive stops 01b: Drive decelerating 10b: Drive standby 11b: Drive operating
		Bit2	1: Jog command
		Bit3	Operation Direction
		Bit4	00b: FWD run 01b: from REV run to FWD run 10b: REV run 11b: from FWD run to REV run
		Bit8	1: Master frequency Controlled by communication interface
		Bit9	1: Master frequency controlled by analog signal
		Bit10	1: Operation command controlled by communication interface
		Bit11	1: Parameters have been locked
		Bit12	1: enable to copy parameter from keypad
		Bit13~15	Reserved
	2102H	Frequency command (F)	
	2103H	Output frequency (H)	
	2104H	Output current (AXXX.X)	
	2105H	DC-BUS Voltage (UXXX.X)	
	2106H	Output voltage (EXXX.X)	
	2107H	Current step number of Multi-Step Speed Operation	
	2109H	Counter value	
	210AH	Power Factor Angle (XXX.X)	
	210BH	Output Torque (%)	
	210CH	Actual motor speed (rpm)	
	210DH	Reserved	
	210EH	Reserved	
	210FH	Power output (X.XXX)	
	2116H	Multi-function display (Pr.00-04)	
	211BH	Max. setting frequency	
	2200H	Display output current (A)	
	2201H	Display counter value of TRG terminal (c)	
	2202H	Display actual output frequency (H)	
	2203H	Display DC-BUS voltage (u)	

	2204H	Display output voltage of U, V, W (E)
	2205H	Display output power angle of U, V, W (n)
	2206H	Display actual motor speed kW of U, V, W (P)
	2207H	Display motor speed in rpm estimated by the drive or encoder feedback (r00: positive speed, -00: negative speed)
	2208H	Display positive/negative output torque N-m estimated by the drive (t0.0: positive torque, -0.0: negative torque)
	2209H	Reserved
	220AH	Display PID feedback value after enabling PID function in % (b)
	220BH	Display signal of AVI1 analog input terminal, 0-10V corresponds to 0-100% (1.) (as NOTE 2)
	220CH	Display signal of ACI analog input terminal, 4-V20mA/0-10V corresponds to 0-100% (2.) (as NOTE 2)
	220DH	Display signal of AVI2 analog input terminal, 0V~10V corresponds to -100~100% (3.) (as NOTE 2)
	220EH	Display the IGBT temperature of drive power module in °C (c.)
	220FH	Display the temperature of capacitance in °C (i.)
	2210H	The status of digital input (ON/OFF), refer to Pr.02-12.
	2211H	The status of digital output (ON/OFF), refer to Pr.02-18.
	2212H	Display the multi-step speed that is executing (S)
	2213H	The corresponding CPU pin status of digital input (d.) (as NOTE 3)
	2214H	The corresponding CPU pin status of digital output (O.) (as NOTE 4)
	2215H	Reserved
	2216H	Reserved
	2217H	Reserved
	2218H	Reserved
	2219H	Display times of counter overload (0.)
	221AH	Display GFF in % (G.)
	221BH	Reserved
	221CH	Display PLC register D1043 data (C)
	221DH	Reserved
	221EH	User page displays the value in physical measure
	221FH	Output Value of Pr.00-05

4. Exception response:

The AC motor drive is expected to return a normal response after receiving command messages from the master device. The following depicts the conditions when no normal response is replied to the master device.

The AC motor drive does not receive the messages due to a communication error; thus, the AC motor drive has no response. The master device will eventually process a timeout condition.

The AC motor drive receives the messages without a communication error, but cannot handle them. An exception response will be returned to the master device and an error message “CExx” will be displayed on the keypad of AC motor drive. The xx of “CExx” is a decimal code equal to the exception code that is described below.

In the exception response, the most significant bit of the original command code is set to 1, and an exception code which explains the condition that caused the exception is returned.