

Revision: C

Discrete Input Read Only
Bit Access
Read Only
16-bit
Word

Input Register Access
Read/Write Bit

Coil Access
Read/Write
16-bit
Word

Register Access

Read Exception Status Read Only
byte access.
Single
byte total.

★ = Supported Function Codes

				Function Codes			
				code	Sub code	(hex)	Section
Data Access	Bit access	Physical Discrete Inputs	Read Discrete Inputs	★ 02		02	6.2
		Internal Bits Or Physical coils	Read Coils	★ 01		01	6.1
			Write Single Coil	★ 05		05	6.5
			Write Multiple Coils	★ 15		0F	6.11
	16 bits access	Physical Input Registers	Read Input Register	★ 04		04	6.4
		Internal Registers Or Physical Output Registers	Read Holding Registers	★ 03		03	6.3
			Write Single Register	★ 06		06	6.6
			Write Multiple Registers	★ 16		10	6.12
			Read/Write Multiple Registers	★ 23		17	6.17
			Mask Write Register	★ 22		16	6.16
			Read FIFO queue	★ 24		18	6.18
	File record access	Read File record	★ 20		14	6.14	
		Write File record	★ 21		15	6.15	
	Diagnostics	Read Exception status	★ 07		07	6.7	
		Diagnostic	★ 08	00-18,20	08	6.8	
Get Com event counter		★ 11		0B	6.9		
Get Com Event Log		★ 12		0C	6.10		
Report Server ID		★ 17		11	6.13		
Other	Read device Identification	★ 43	14	2B	6.21		
	Encapsulated Interface Transport	43	13,14	2B	6.19		
	CANopen General Reference	43	13	2B	6.20		

* = Required by Modbus standard.
+ = Stored in EEPROM.

When discrete inputs and coils are mapped into registers, the most significant bit is always at the lowest discrete input/coil address (big endian).

Description	Function Codes:							Values	Notes	730	
	Discrete Input (R)	Input Register (R)	Coil (R/W)	Holding Register (R/W)	ID (R)	Exception Status (R)	Diagnostics			Supported	Factory Default
Auto/Manual State	1						0 or 1		x	N/A	
Drive Fault Status	2						0 or 1		x	N/A	
Actual speed		0					0 to 65535		x	N/A	
General Fault	3						0 or 1	1) Malfunctioning pickup or improper pickup connection. 2) Current limit reached. 3) Undervoltage lockout. 4) Thermal Shutdown.	x	N/A	
Ambient Temperature		3							x	N/A	
Alarm Flags											
Accel/Decel Ramp In Progress	19	4					0 or 1		x	N/A	

Target Speed = 0	22		0 or 1		x	N/A
Inhibit Function is Activated	26		0 or 1		x	N/A
"Run" Condition	29		0 or 1		x	N/A
Inhibit	0		0 = Inhibit off. 1 = Inhibit on.		x+	0
Motor Direction	1		0 = Reverse. 1 = Forward.		x+	1
Power Up Target Speed Selection	0		0 = Zero, 1 = Prev. Value, 2 = Power Up Target		x+	1
Target Speed	7		0 to 10000	To be saved to EEPROM after set period of time.	x+	0
Power Up Target Speed	8		0 to 10000		x+	0
Accel	9		0 to 9999		x+	4999
Decel	10		0 to 9999		x+	1
Sensor PPR	11		1 to 60		x+	1
Device Address	13		1 to 247		x+	1
Baud Rate Index	14		0 to 12		x+	8
Parity	15		0 to 2		x+	2
Direction at start-up	73		0 = Forward, 1 = Prev. Value, 2 = Reverse		x+	1
Inhibit at start-up	74		0 = Off, 1 = Prev. Value, 2 = On		x+	1
Device Identification						
Vendor Name*	0				x	N/A
Product Code*	1				x	N/A
Major Minor Revision*	2		HW [Version]/SW [Version]	Example: HW A/SW 0.7RC	x	N/A
Vendor url	3				x	N/A
Product Name	4				x	N/A
Model Name	5					
User Application Name	6					
Exception Status Bits		Bit Pos.				
Fault		1	0 or 1		x	N/A
Diagnostics						
Return Query Data (echo)		0	N/A	Loopback Restart UART. Deactivate listen only.	x	N/A
Restart Communications Option		1	0 or 255		x	N/A
Return Diagnostic Register		2	0 to 65535	No replies will sent. Ignores commands.	x	N/A
Force Listen Only Mode		4	N/A		x	N/A
Clear Counters and Diagnostic Register		10	N/A		x	N/A
Return Bus Message Count		11	0 to 65535		x	N/A
Return Bus Communication Error Count		12	0 to 65535		x	N/A
Return Bus Exception Error Count		13	0 to 65535		x	N/A
Return Server Message Count		14	0 to 65535		x	N/A
Return Server No Response Count		15	0 to 65535		x	N/A
Return Server NAK Count		16	0 to 65535		x	N/A
Return Server Busy Count		17	0 to 65535		x	N/A
Return Bus Character Overrun Count		18	0 to 65535		x	N/A
Clear Overrun Counter and Flag		20	N/A		x	N/A
Device Identification						
Vendor Name*	0				x	N/A
Product Code*	1				x	N/A
Major Minor Revision*	2		HW [Version]/SW [Version]	Example: HW A/SW 0.7RC	x	N/A
Vendor url	3				x	N/A
Product Name	4				x	N/A
Model Name	5					
User Application Name	6					
Exception Status Bits		Bit Pos.				
Current Limit		0				
Fault		1	0 or 1		x	N/A
Alarm 1		2				
Alarm 2		3				
Diagnostics						
Return Query Data (echo)		0	N/A	Loopback Restart UART. Deactivate listen only.	x	N/A
Restart Communications Option		1	0 or 255		x	N/A

Return Diagnostic Register	2	0 to 65535	No replies will sent. Ignores commands.	x	N/A
Force Listen Only Mode	4	N/A		x	N/A
Clear Counters and Diagnostic Register	10	N/A		x	N/A
Return Bus Message Count	11	0 to 65535		x	N/A
Return Bus Communication Error Count	12	0 to 65535		x	N/A
Return Bus Exception Error Count	13	0 to 65535		x	N/A
Return Server Message Count	14	0 to 65535		x	N/A
Return Server No Response Count	15	0 to 65535		x	N/A
Return Server NAK Count	16	0 to 65535		x	N/A
Return Server Busy Count	17	0 to 65535		x	N/A
Return Bus Character Overrun Count	18	0 to 65535		x	N/A
Clear Overrun Counter and Flag	20	N/A		x	N/A