

SOFTWARE FAMILY: PRIMEAW, 44	SOFTWARE RELEASE: 25.5	PARAMETERS DESCRIPTOR(E2): 23.0
Revision: 0.0 2022/09/21		

GENERAL NOTES	
	CRC calculation standard module R10 CRC

ANALOG INPUT	
	Reading function code: 0x03
	The data received must be added to "Offset" and then multiplied by "Gain". The result can have "Dec" decimal digit.
Example:	
sent received	ADDR=FUNCTION CODE + 01080001+CRC where 0x02B9 = 697(dec)
sent received	(697 + 0) * 0.1 = 69.7 °C
	Probe 1
	1
	0x0222 = 546(dec)
	(546 + 0) * 0.1 = 54.6 °C
	Probe 2

Name	Unit	HEX Read Register	HEX Num. Elements Read	HEX Write Register	HEX Num. Elements Write	Gain	Format	Dec	Offset	Byte ORDER	Format	R / W
Probe 1	par "CF"	010C	0001	\	\	par "rES=dE"-->0.1/par "rES=in"-->1	par "CF=C"; par "rES=dC"-->1/par "rES=in"-->0	(697 + 0) * 0.1 = 69.7 °C	0	H-L	16 bit Signed	R
Probe 2	par "CF"	010D	0001	\	\	par "rES=dE"-->0.1/par "rES=in"-->1	par "CF=C"; par "rES=dC"-->1/par "rES=in"-->0 par "CF=F";	(697 + 0) * 0.1 = 69.7 °C	0	H-L	16 bit Signed	R
Probe 3	par "CF"	010E	0001	\	\	par "rES=dE"-->0.1/par "rES=in"-->1	par "CF=C"; par "rES=dC"-->1/par "rES=in"-->0 par "CF=F";	(697 + 0) * 0.1 = 69.7 °C	0	H-L	16 bit Signed	R
Probe 4	par "CF"	010F	0001	\	\	par "rES=dE"-->0.1/par "rES=in"-->1	par "CF=C"; par "rES=dC"-->1/par "rES=in"-->0 par "CF=F";	(697 + 0) * 0.1 = 69.7 °C	0	H-L	16 bit Signed	R
Regulation probe	par "CF"	0100	0001	\	\	par "rES=dE"-->0.1/par "rES=in"-->1	par "CF=C"; par "rES=dC"-->1/par "rES=in"-->0 par "CF=F";	0	H-L	16 bit Signed	R	
Real time speed VSC1	1 RPM	1000	1000	0001	\	1	0	0	0	H-L	16 bit Unsigned	R
Real time speed VSC2	1 RPM	1000	1607	0001	\	1	0	0	0	H-L	16 bit Unsigned	R

SET POINT	
	Reading function code: 0x03
	Writing function code: 0x10
	The data received must be added to "Offset" and then multiplied by "Gain". The result can have "Dec" decimal digit.
Example:	
sent received	ADDR=0303760001+CRC ADDR=030202A6+CRC where 0x02A6 = 678(dec)
sent received	(678 + 0) * 0.1 = 67.8 °C
	SetPoint reading value
	1
	0x01E7 = 487(dec)
	(487 + 0) * 0.1 = 48.7 °C
	SetPoint written value

Name	Unit	HEX Read Register	HEX Num. Elements Read	HEX Write Register	HEX Num. Elements Write	Gain	Format	Dec	Offset	Byte ORDER	Format	R / W
SetPoint VSC	par "CF"	03E2	0001	03E2	0001	par "rES=dE"-->0.1/par "rES=in"-->1	par "CF=C"; par "rES=dC"-->1/par "rES=in"-->0 par "CF=F";	(678 + 0) * 0.1 = 67.8 °C	0.1	H-L	16 bit Signed	R/W
SetPoint On/Off	par "CF"	0303	0001	0303	0001	par "rES=dE"-->0.1/par "rES=in"-->1	par "CF=C"; par "rES=dC"-->1/par "rES=in"-->0 par "CF=F";	(487 + 0) * 0.1 = 48.7 °C	0.1	H-L	16 bit Signed	R/W

DIGITAL INPUT	
	Reading function code: 0x01
	Meaning single element
	ON = 0x0001 OFF = 0x0000
Name	HEX Read Register
Digital input 1 status	020D
Digital input 2 status	020E

DIGITAL OUTPUT	
	Reading function code: 0x01
	Meaning single element
	ON = 0x0001 OFF = 0x0000
Name	HEX Read Register
ON/OFF output status	0206
Defrost 1 output status	0205
Defrost 2 output status	022D
Aux output status	0207
Light output status	0208
Fan output status	0209
Aux output status	020C
Door open status	020B
Compressor 1 output status	0204
Compressor 2 output status	022C
Buzzer status	0230
Condenser fan output status	020A
Heater's output status	022F

DEVICE STATUS	
	Reading function code: 0x01
	Meaning single element
	ON = 0x0001 OFF = 0x0000
Name	HEX Read Register
Device ON	0209
Defrost status	0201
Pull down status	022B
Keyboard lock/unlock	0218
Alarm muting	0227
Emergency status	0228
Holiday status	022A
Test mode set point used	0231

ALARMS	
	Reading function code: 0x01
	Meaning single element
	ON = 0x0001 OFF = 0x0000
Name	HEX Read Register
Probe 1 error	0223
Probe 2 error	0224
Probe 3 error	0225
Probe 4 error	0226
High temperature alarm	0217
Low temperature alarm	021A
Condenser high temperature alarm	021B

Condenser low temperature alarm	021C	0001								R
External cooling Alarm	021D	0001								R
Lock alarm	021E	0001								R
Door open alarm	0220	0001								R
EEPROM failure	0222	0001								R
Pressure switch alarm	021F	0001								R
Real time clock configuration error	0221	0001								R
Embraco compressor Error	0232	0001								R
Secop compressor Error	0233	0001								R
Compressor 1 communication	0234	0001								R
Compressor 2 communication alarm	0235	0001								R

[Read Output]

Reading function code: 0x03
Writing function code: 0x10

Name	Address Register	HEX	Num. Elements Read							R/W
VSC Communication Alarm	1601	0001								R
VSC 1: Voltage	1603	0001								R
VSC 1: Power	1604	0001								R
VSC 1: Temperature	1605	0001								R
VSC 1: Alarm Code	1606	0001								R
VSC 2: Voltage	1608	0001								R
VSC 2: Power	1609	0001								R
VSC 2: Temperature	160A	0001								R
VSC 2: Alarm	160B	0001								R
VSF G1 Requested Speed	1700	0001								R
VSF G2 Requested Speed	1701	0001								R
VSF G1-1 Speed	1702	0001								R
VSF G1-2 Speed	1703	0001								R
VSF G2-1 Speed	1704	0001								R
VSF G2-2 Speed	1705	0001								R
VSF G1-1 Error	1706	0001								R
VSF G1-2 Error	1707	0001								R
VSF G2-1 Error	1708	0001								R
VSF G2-2 Error	1709	0001								R
VSF G1-1 Alarm	170A	0001								R
VSF G1-2 Alarm	170B	0001								R
VSF G2-1 Alarm	170C	0001								R
VSF G2-2 Alarm	170D	0001								R

[COMMANDS]

Writing function code: 0x05
Meaning single element
ON = 0x FF00
OFF = 0x 0000

Name	Register	Value	Modbus Command							R/W
Device ON	0200	FF00	0200FF00							W
Device OFF	0201	0000	0201FF00							W
Defrost ON	0201	FF00	0201FF00							W
Pull Down ON	022B	FF00	022BF00							W
Pull Down OFF	022B	0000	022B0000							W
Pull Down	022B	FF00	0227FF00							W
Alarm Muting	0227	FF00	0227FF00							W
Thawing ON	0202	FF00	0202FF00							W
Energy saving OFF	0202	0000	02020000							W
Light ON	0208	FF00	0208FF00							W
Light OFF	0208	0000	02080000							W
Aux ON	020C	FF00	020CFF00							W
Aux OFF	020C	0000	020C0000							W
Holiday ON	022A	FF00	022AFF00							W
Holiday OFF	022A	0000	022AA000							W