

REBUS PROTOCOL DCOUMENT

NOTE:-module address by default 0x01

Module Address	Operation	Length	Data	Description	Data Type	Conversion
0x10097001	Save	1	Group ID	To save the data		
0x10083001	Acknowledge	0	-	Confirmation of a successful executed state change or set command.		
0x10084001	Error	1	0x01	Unknown Error (Error during execution of this request.)		
			0x03	Unknown Request (The module does not support this request. Unknown object identifier)		
			0x07	Timeout(Missing command)/Data is not saved		
			0x05	No Data Sent Warning (Set Message had no data entry)		
0x10085101	Result	0...8		Response of a read operation		
0x10092001	write	8		Rectifier on/off		
0x10095001	Read	2		Command to read data from a slave(rectifier) device		
0x10096001	write	5...8		Command to write data to a slave device.		

Continuous Reading Data

0x10095001	read	2	15 05					O/P Voltage – DC Output voltage of the rectifier Example:Vresult = (1519)hex = (5165)decimal, Vresult = 5165*10mV = 51.65 V	Uint_32	10mV
0x10085101	result	4								
0x10095001	read	2	15 06					O/P Current – DC Output current of the rectifier Example:Iresult = (157C)hex = (5500)decimal, Iresult = 5500*10mA = 55A	Uint_32	10mA
0x10085101	result	4								
0x10095001	read	2	15 07					I/P Voltage – AC input voltage of the rectifier Example:Vresult = (0384)hex = (900)decimal, Vresult = 900*100mV = 90V	Uint_32	100mV
0x10085101	result	4								
0x10095001	read	2	15 01					O/P Power – O/P Power deliver by the rectifier Example:Presult = (0BB8)hex = (3000)decimal, Result = 3000*1W = 3000W	Uint_16	1W
0x10085101	result	2								
0x10095001	read	2	15 0F					Ambient Temperature – Ambient temperature in degree Celsius Example:Ambresult = (014a)hex = (330)decimal, ambresult = 330*0.1= 33deg C	Uint_16	0.1deg C
0x10085101	result	2								
0x10095001	read	2	15 0D					Available Power – Remaining power the rectifier is capable of giving	Uint_16	1W
0x10085101	result	2								
0x10095001	read	2	15 1B					O/P Voltage Command – present value of the voltage command that is set Example:Vresult = (88b8)hex = (35000)decimal, Vresult = 35000*1mV = 35V	Uint_32	1mV
0x10085101	result	4								
0x10095001	read	2	15 1A					O/P Current Command – present value of the current command that is set Example:Iresult = (0064)hex = (100)decimal, I result = 100*10mA = 1A	Uint_16	10mA
0x10085101	result	4								
0x10095001	read	2	15 14					Alarm Data1(refer to the Alarm data 1 table)		
0x10085101	result	8								
0x10095001	read	2	15 5A					Alarm Data2(refer to the Alarm data 2 table)		
0x10085101	result	4								

Reading Serial No

0x10095001	read	2	00 14					Serial no 0		
0x10085101	result	8								
0x10095001	read	2	00 15					Serial no 1		
0x10085101	result	8								
0x10095001	read	2	00 16					Serial no 2		
								Example: The complete serial no. of the unit will be: Serial No. (Hex) = 32 35 30 34 33 32 32 38 33 30 30 30 30 30 30 30 34 34 00 00 00 00 00 00 Serial No. (ASCII) = 250432283000000044 (This is serial no. printed on the unit.)		
0x10085101	result	8								

Reading Version Number

0x10095001	read	2	00 17					Version Number Example: Version(hex)=56 32 30 30 30 30 30 30 00 version(ASCII)=V200000		
0x10085101	result	8								

Output Voltage and Current command Setting

0x10096001	write	8	15	64	00	00	81	v	v	cs	Voltage command setting (CS --> Checksum)	Uint_16	10
											Example: To set 52.5V ->52.5*10-->525 ->Value = (525)decimal = (020D)hexa ->Checksum = 0xff - 0x81 - 0x02 - 0x0d =0x6F (if result is negative, then checksum is 2's complement)		
0x10083001	ACK	-											
0x10096001	write	8	15	64	00	00	82	v	v	cs	Current command setting	Uint_16	10
											Example: To set 40.5A ->40.5*10-->405 ->Value = (405)decimal = (0195)hexa ->Checksum = 0xff - 0x82 - 0x01 - 0x95 = 0xE7 (if result is negative, then checksum is 2's complement)		
0x10083001	ACK	-											

One time settable parameter DC output (Note: power restart required)

0x10096001	write	6	0B	0A	00	00	v	v			Program voltage def	Uint_16	10mV
											Example: To set 52.5V ->52.5V/10mV or 52.5 * 100 = 5250 ->(5250)decimal = (1482)hex		
0x10083001	ACK	-											

0x10096001	write	6	0B	0B	00	00	v	v			current limitation def	Uint_16	100mA
											Example: To set 35A ->35A/100mA or 35* 10 = 350 ->(350)decimal = (015E)hex		
0x10083001	ACK	-											

0x10096001	write	6	0B	0D	00	00	v	v			Program voltage start up	Uint_16	10mV
											Example: To set 52.5V ->52.5V/10mV or 52.5 * 100 = 5250 ->(5250)decimal = (1482)hex		
0x10083001	ACK	-											

0x10096001	write	6	0B	0E	00	00	v	v			Current Limit Start-up	Uint_16	100mA
											Example: To set 35A ->35A/100mA or 35* 10 = 350 ->(350)decimal = (015E)hex		
0x10083001	ACK	-											

One time settable parameter VAC input (Note: power restart required)

0x10096001	write	6	0B	12	00	00	v	v			VACin Low Off – Input under voltage cut off	Uint_16	100mV
											Example: To set 90VAC Input under voltage cut off ->100V/100mV or 100* 10 = 1000 ->(1000)decimal = (03E8)hex		
0x10083001	ACK	-											

0x10096001	write	6	0B	13	00	00	v	v			VACin Low On - Input under voltage recovery	Uint_16	100mV
											Example: To set 105VAC Input under voltage recovery ->105V/100mV or 105* 10 = 1050 ->(1050)decimal = (041A)hex		
0x10083001	ACK	-											

0x10096001	write	6	0B	16	00	00	v	v			VACin High ON – input over voltage recovery	Uint_16	100mV
											Example: To set 265VAC Input under voltage cut off ->265V/100mV or 265* 10 = 2650 ->(2650)decimal = (0A5A)hex		
0x10083001	ACK	-											

0x10096001	write	6	0B	17	00	00	v	v			VACin High OFF – input over voltage cut off	Uint_16	100mV
											Example: To set 270VAC Input under voltage cut off ->270V/100mV or 270* 10 = 2700 ->(2700)decimal = (0A8C)hex		
0x10083001	ACK	-											

Saving the One time settable parameters

0x10097001	write	1	0B								NOTE: After transmitting one write command for one time settable parameter, the next write command should be sent within 100ms time and then save command should be sent after writing all the settable parameters.		
0x10083001	ACK	-											

Rectifier ON/OFF Command

0x10092001	write	8	15	64	00	00	84	A5	00	D6	Turn off rectifier		
0x10083001	ACK	-											
0x10092001	write	8	15	64	00	00	84	00	00	7B	Turn on rectifier		
0x10083001	ACK	-											

Module Address Assigning

0x08000054	RX	8	52	45	43	20	55	49	44	20	The rectifier keeps sending address frames every one second		
0x08000054	TX	8	01	00	00	00	00	00	00	00	Module address assignment		
0x10083001	ACK	-									Note:Rectifier keep sending frames with respect to serial number of the rectifier.		

Reconfiguration Module Address Assigning – Important Step

0x10096001	write	6	01	20	00	00	00	00			Erasing the module address		
0x10083001	ACK	-											
0x10097001	save	1	01								Save data to flash and Restart the rectifier		
0x10083001	ACK	-											
0x08000054	TX	8	02	00	00	00	00	00	00	00	change the module address as required		
0x10083002	ACK	-											

To Identify Unknown Module Address

0x11111111	TX	0									If module address is Unknown, To identify If we send will get reply with the acknowledgement which contain module address.		
0x10083001	ACK	-											

ALARAM Data-1

Bit 63	Bit 62	Bit 61	Bit 60	Bit 59	Bit 58	Bit 57	Bit 56
No load	RFD	RFD	Fan Fail	Fuse broken	RFD	Short circuit	RFD
Bit 55	Bit 54	Bit 53	Bit 52	Bit 51	Bit 50	Bit 49	Bit 48
RFD	RFD	OCP	RFD	RFD	RFD	Hardware OVP	Software OVP
Bit 47	Bit 46	Bit 45	Bit 44	Bit 43	Bit 42	Bit 41	Bit 40
RFD	RFD	RFD	RFD	RFD	RFD	RFD	RFD
Bit 39	Bit 38	Bit 37	Bit 36	Bit 35	Bit 34	Bit 33	Bit 32
RFD	RFD	RFD	Ambient OTP	SR Mosfet Otp	LLC Mosfet Otp	RFD	PFC Mosfet Otp
Bit 31	Bit 30	Bit 29	Bit 28	Bit 27	Bit 26	Bit 25	Bit 24
RFD	RFD	RFD	RFD	RFD	RFD	RFD	RFD
Bit 23	Bit 22	Bit 21	Bit 20	Bit 19	Bit 18	Bit 17	Bit 16
OTP Latch	Temperature Derating	AC Derating	Current Mode	Power Mode	Voltage mode	RFD	OVP Latch
Bit 15	Bit 14	Bit 13	Bit 12	Bit 11	Bit 10	Bit 9	Bit 8
RFD	RFD	RFD	RFD	RFD	RFD	RFD	RFD
Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
RFD	RFD	RFD	RFD	RFD	RFD	RFD	RFD

Note :- Subject to change without notice.