S u b m e t e r   **N E R I S   (M) D V H 5x**

ACEAN
DIVISION DE SBE FRANCE

SUMMARY

1   PREAMBLE

Dear customer, you already have a three-phase sub-meter (M)DVH5x of the range NERIS. This manual was drafted with the biggest care in order to provide all the information needed to address the counter with the RS485 serial link.
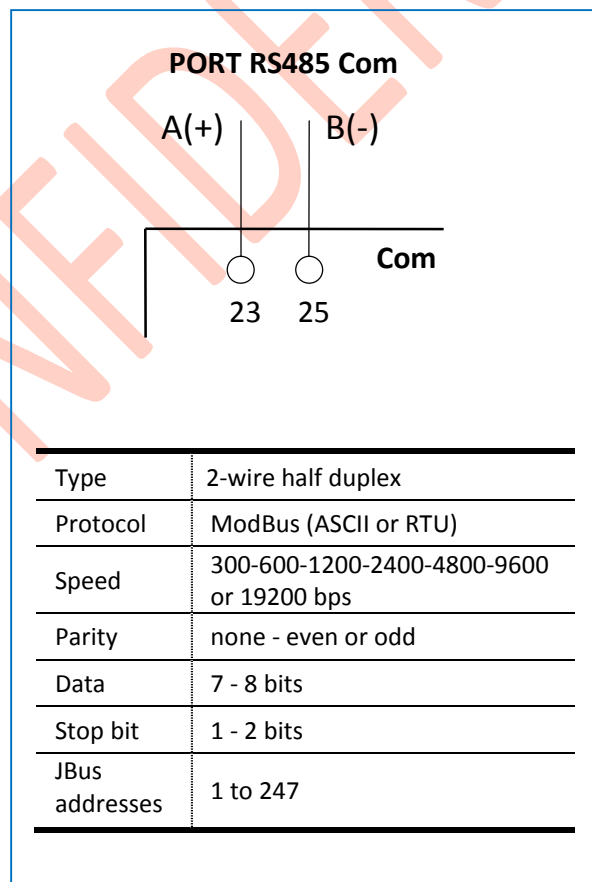
2   RS485 connection

The serial link complies with the RS485 standard. It is asynchronous, differential, bidirectional and half duplex over 2 wires.

It supports the ModBus RTU and ASCII communication protocols.

☞ The different communication settings must be configured locally by the installer.

☞ The wiring for a network of meters must be carried out based on adapted regulations for this type of bus and it is critical that a twisted, shielded and earthed cable is used.

☞ The meter accepts 7 or 8 data bits for each mode (ASCII and RTU) but it is recommended that the 8 bit format is observed for RTU mode and 7 bits for ASCII mode.

☞ The ModBus function 3 is used to read data

PORT RS485 Com

A(+)   B(-)

Com

23   25

Type	2-wire half duplex
Protocol	ModBus (ASCII or RTU)
Speed	300-600-1200-2400-4800-9600 or 19200 bps
Parity	none - even or odd
Data	7 - 8 bits
Stop bit	1 - 2 bits
JBus addresses	1 to 247

3   Mapping

The tables (Mapping) below contain the information required to use the data contained in the meter, using the serial link (Com RS485 PORT).

The first column contains the addresses in hexadecimal of the read and/or write accessible information.

The second column contains the name of each item of information.

The third column contains the number of octets used to memorise each item of information.

The fourth column contains the value in hexadecimal of the information memorised at the address in question. The prefix 0x indicates that the data is encoded in hexadecimal.

The fifth column contains the default value in hexadecimal. The prefix 0x indicates that the data is encoded in hexadecimal.

The sixth column (Observations) provides information to the user of the table about the information contained at the address in question.

The seventh column contains the unit of the value that has been read when the information represents a physical value.

The eighth column contains "Permissions" information.

The permission is presented in R form (read – reading authorised), or W form (write – writing authorised). When the letter R and/or W is followed by "mmi" [man-machine interface] this means that reading and/or writing is only possible using the display and the "Scroll" and "SELECT" buttons. When the letter R and/or W is followed by "com" this means that reading and/or writing is only possible with the "com" link. The letter R and/or W represented by itself means that reading and/or writing is possible indiscriminately with the two methods described above (mmi and com).

Writing in tables must comply with the format of the data represented in the fourth, fifth and sixth columns.

Legend :
White boxes : for (M)DVH5x
Blue boxes : for only MDVH5x
Orange boxes : for only (M)DVH53

Adr. 16 bit word Hexadecimal	Name	No. Octets	Value in Hexadecimal	Default value in Hexadecimal	Observations	Units	Auth.
0002	Manufacturer's identification	4	0x00XXXXXX	0x00414341	3 uppercase characters ASCII values 'A','C','A' --> 0x414341		R
0004	Specific manufacturer's identification (Serial No.)	8	0xXXXXXXXXXXXXXXXX	0xFFFFFFFFFFFFFFFF	max 16 characters (of 0 to F) value in BCD		R
0008	Software version	2	0xXXYY		XX : Major version in hexadecimal YY : Minor version in hexadecimal		R
0009	Manufacturer's manufacturing No.	8	0xXXXXXXXXXXXXXXXX	0xFFFFFFFFFFFFFFFF	max 16 characters (of 0 to F) value in BCD		R
000D	Version of the metrology die	2	0x00XX		version of the AD7758 chip value in hexadecimal		R
000E	Time and initial date	6	0x000000010100	0x000000010100	12 characters value in BCD e.g.: 17h25'35s 19/11/09 --> 172535191109		R
0011	3-wire or 4-wire connection connection type for the meter	2	0xXXXX	0x0201	0x01XX : 3 wires 0x02XX : 4 wires 0xXX01 : direct 0xXX02 : TC		R
0012	Communication RTC module, Eeprom for load curves	2	0xXXXX	0x01FX X defined by the EEprom test	0x00XX : without com 0x01XX : RS485 / ModBus 0x02XX : M-Bus 0x03XX : Lon 0x04XX : RS232 0x05XX : KNX-EIB 0xXXX0 : without RTC module, Eeprom 16kbits without load curves 0xXXX1 : with RTC module, Eeprom 1Mbits with load curves		R

Mapping for metering three-phase (M)DVH5x range NERIS

16 bit word adr. Hexadecimal	Name	No. Octets	Value in Hexadecimal	Default value in Hexadecimal	Observations	Units	Auth.
0013	Reference voltage One	2	0x11XX : 57V 0x18XX : 64V 0x3CXX : 100V 0x46XX : 110 V 0x57XX : 127 V 0xB4XX : 220 V 0xBEXX : 230V 0xC8XX : 240V 0xF8XX : 288V	0xBE28 with 0x28 = 40Vac	0xUnUnVV correlation : UnUn --> Un reference voltage UnUn = Voltage in Volts - 40 value in hexadecimal of VV VV --> phase loss threshold VV = value in hexadecimal from 0 to 200V	V	R
	Phase loss threshold						
0014	Reference current Iref	2	0x01XX : 1A 0x05XX : 5A 0x0AXX : 10A 0xXX01 : 1A 0xXX06 : 6A 0xXX14 : 20A 0xXX3C : 60A 0xXX41 : 65A 0xXX50 : 80A 0xXX64 : 100A	0x0A41	0xIrIrImIm correlation : IrIr --> Iref reference current ImIm --> Imax maximum current value in hexadecimal	A	R
	Maximum Imax current						
0015	Mains power reference frequency	2	0x32 : 50Hz 0x3C : 60Hz 0x41 : class A 0x42 : class B 0x43 : class C	0x3243	0xFFClCl correlation : FF --> mains power reference frequency value in hexadecimal ClCl --> precision class value in ASCII	Hz	R
	Precision						

16 bit word adr. Hexadecimal	Name	No. Octets	Value in Hexadecimal	Default value in Hexadecimal	Observations	Units	Auth.
0016	Authorisation: - change display import / import & export - tariff settings and current tariff writing - changing the metrological constant of the LED - changing the metrological constant of the S0 output - changing the TC ratio - customisation of the S0 output / alarm / test - test on the S0 output or alarm	2	Authorised : Ax bits = 1 Prohibited : Ax bits = 0	0xFF80	Authorisation for level 3 installer 0b00000000 A7A6A5A4A3A2A1A0 correlation : A0 -> import / import & export A1 -> tariff settings A2 -> LED constant A3 -> S0 constant A4 -> TC report A5 -> S0 alarm A6 -> S0 test A7 -> Not used		R
0042	Type of meter	2	0x00XX	0x0001	value in HEXADECIMAL 0x0001=DVH5141 0x0002=DVH5141-M 0x0003=DVH5151 0x0004=DVH5151-M 0x0005=DVH5161 0x0006=DVH5161-M 0x0009=DVH5241 0x0010=DVH5241-M 0x0007=DVH5251 0x0008=DVH5251-M 0x0011=DVH5261 0x0012=DVH5261-M 0x0013=DVH5341 0x0014=DVH5341-M 0x0023=DVH5351 0x0024=DVH5351-M 0x0015=DVH5361 0x0016=DVH5361-M 0x0017=MDVH5181 0x0018=MDVH5181-M 0x0019=MDVH5281 0x0020=MDVH5281-M 0x0021=MDVH5381 0x0022=MDVH5381-M		R

16 bit word adr. Hexadecimal	Name	No. Octets	Value in Hexadecimal	Default value in Hexadecimal	Observations	Units	Auth.
					0x0025=MDVH5191 0x0026=MDVH5191-M 0x0027=MDVH5291 0x0028=MDVH5291-M 0x0029=MDVH5391 0x0030=MDVH5391-M 0x0101=DDH5141 0x0102=DDH5141-M 0x0103=DDH5151 0x0104=DDH5151-M 0x0105=DDH5161 0x0106=DDH5161-M 0x0109=DDH5241 0x0110=DDH5241-M 0x0107=DDH5251 0x0108=DDH5251-M 0x0111=DDH5261 0x0112=DDH5261-M 0x0113=DDH5341 0x0114=DDH5341-M 0x0123=DDH5351 0x0124=DDH5351-M 0x0115=DDH5361 0x0116=DDH5361-M 0x0117=MDDH5181 0x0118=MDDH5181-M 0x0119=MDDH5281 0x0120=MDDH5281-M 0x0121=MDDH5381 0x0122=MDDH5381-M 0x0125=MDDH5191 0x0126=MDDH5191-M 0x0127=MDDH5291 0x0128=MDDH5291-M 0x0129=MDDH5391 0x0130=MDDH5391-M		

16 bit word adr. Hexadecimal	Name	No. Octets	Value in Hexadecimal	Default value in Hexadecimal	Observations	Units	Auth.
0078	Device address for communication	32	0xXXXXXX … XXXX	0x202020….20205F5F5F5F5F5F5F5F " _____ "	32 characters max value in ASCII e.g. : '1','3','b', … ,'8','T' --> 0x313362 … 3854		R/Wihm
0088	Communication protocol RS485 ModBus Response time	2	0x00XX : without com 0x01XX : RS485 mode C 0x02XX : ModBus RTU 0x03XX : ModBus ASCII	0x021E	0xPPXX correlation : PP --> protocol XX --> response time of the meter from 30 to 255ms 0x1E : default hexadecimal value (30ms)		R/Wihm
0089	Data bits number	1	0xXX	0x08FF	0xDD correlation : DD --> Number of data bits hexadecimal value		R/Wihm
	Locking system RS485 access level 3 installer	1	0xXX		locking system for RS485 access only possible using the MMI (man-machine interface) 0x00 : locked 0xFF : Not locked		R/Wihm
008A	Parity bit	2	0xXXXX	0x0101	0xPPSpSp correlation : PP --> Parity bits 0x01 : none 0x02 : even 0x03 : odd --> number of stop bits: hexadecimal value		R/Wihm
	Stop bit number						R/Wihm
008B	Communication speed	2	0xXXXX	0x2580	0xXXXX : value /2 in hexadecimal 0x0096 : 300 0x0258 : 1200 0x04B0 : 2400 0x0960 : 4800 0x12C0 : 9600 0x2580 : 19200 0x4B00 : 38400 0xE09C : 115000	Bits/s	R/Wihm

16 bit word adr. Hexadecimal		No. Octets	Value in Hexadecimal	Default value in Hexadecimal	Observations	Units	Auth.
0090	Level 2 user password	8	0xXXXXXXXX	0x3220202030303030 "2 0000"	0x32XXXXXXXXXXXXXX 8 digital characters or "_" max with MSB = 0x32 value in ASCII : e.g. : '2','3','5', … ,'8','9' --> 0x323335 … 3839		R/W
0098	User level selection	2	0xXXXX	0x0101	0xNNRR correlation : NN --> level 0x01XX : level 1 0x02XX : level 2 RR --> import or import export records 0xXX00 : import only 0xXX01 : import & export		R/W
	Displaying the Import Export records						R/W
0099	Settings for the active tariff upon presence of tariff input voltage and/or upon an RS485 command	2	0xXXXX	0x0006	T4[7:6] T3[5:4] T2[3:2] T1[1:0] Tn[b1:b0] 0b00 : not used 0b01 : T active upon the presence of mains power 0b10 : T active upon the absence of mains power 0b11 : R active upon an RS485 command		R/W
009A	Current tariff	2	0xXXXX	0x0010	0x01 : T1 forced RS485 0x02 : T2 forced RS485 0x03 : T3 forced RS485 0x04 : T4 forced RS485 0x10 : T Auto by mains voltage input		R com W com

16 bit word adr. Hexadecimal	Name	No. Octets	Value in Hexadecimal	Default value in Hexadecimal	Observations	Units	Auth.
009B	LED metrological constant Active power	4	0xXXXXXXXX	0x000003E8	number of pulses per kWh in hexadecimal 10, 100, 250, 500, 1k, 2500, 5k, 10k, 25k, 50k, 100k, 500k, 1000k Default value: Direct connection: 1k pulses/kWh (0x03E8) Connection behind TC : 10 k pulses/kWh (0x2710)		R
009D	Pulse length of LED output Active power	2	0xXXXX	0x001E (30ms)	Pulse length in hexadecimal 30ms then from 50ms to 500ms, in steps of 50ms correlation : XX = pulse length in ms value in hexadecimal		R
009E	S0 output function: Forced output, Pulse output or Alarm output	2	0xXXXX	0x0041	0x0001 : forcing closed contact 0x0002 : test pulse output (2min) Voltage alarm with hysteresis of 5% 0x0011 : exceeding 0x0012 : falling below Current alarm with hysteresis of 5% 0x0021 : exceeding Active power import alarm with hysteresis of 5% 0x0030 : exceeding at least one of the four tariffs 0x0031 : exceeding tariff 1 0x0032 : exceeding tariff 2 0x0033 : exceeding tariff 3 0x0034 : exceeding tariff 4 0x0041 : S0 P import 0x0042 : S0 P export 0x0043 : S0 P import and P export 0x0051 : S0 S import 0x0052 : S0 S export 0x0053 : S0 S import and S export		R/W
009F	Metrological constant for S0 output Active power	4	0xXXXXXXXX	0x000003E8	number of pulses per kWh in hexadecimal 10, 100, 250, 500, 1k, 2500, 5k, 10k, 25k, 50k, 100k, 500k, 1000k Default value: Direct connection: 1k pulses/kWh (0x03E8) Connection behind TC : 10 k pulses/kWh (0x2710)		R/W
00A1	Pulse width of S0 output Active power	2	0xXXXX	0x001E (30ms)	pulse width in hexadecimal 30ms then from 50ms to 500ms, per 50ms step correlation : XX = pulse width in ms value in hexadecimal		R/W

16 bit word adr. Hexadecimal	Name	No. Octets	Value in Hexadecimal	Default value in Hexadecimal	Observations	Units	Auth.
00A2	number of digits for display complemented with or without zero	2	0xXXXX	0x0701	0xDaDaDvDv correlation : DaDa --> number of digits for display: 0x06 : 6 digits without 0 0x07 : 7 digits without 0 0x08 : 8 digits without 0 0x16 : 6 digits with 0 0x17 : 7 digits with 0 0x18 : 8 digits with 0 DvDv --> number of digits after decimal separator 0x00 : 0 digit 0x01 : 1 digit 0x02 : 2 digits 0x03 : 3 digits 0xFF : automatic		R/W
	number of digits for the display after the decimal separator						
00A3	Current transformer ratio (numerator)	2	0xXXXX	0x0001	Value in hexadecimal of primary current : current of 1 to 4500A	A	R/W
00A4	Current transformer ratio (denominator)	2	0xXXXX	0x0001	Value in hexadecimal of secondary current : 0x0001 : TC 1A 0x0005 : TC 1II5 or 5A	A	R/W
00A5	Integration time (average values)	2	0xXXXX	0x10 (10 minute)	value in BCD 0x0010 : 10 min 0x0015 : 15 min 0x0020 : 20 min 0x0030 : 30 min 0x0060 : 60 min	min	R/W
00A6	Alarm - High voltage threshold (in V)	2	0xXXXX	0xFFFF	value in hexadecimal of the voltage in volts	V	R/W
00A7	Alarm - Low voltage threshold (in V)	2	0xXXXX	0x0000	value in hexadecimal of the voltage in volts	V	R/W
00A8	Alarm - High current threshold (in A)	2	0xXXXX	0xFFFF	value in hexadecimal of the current in A	A	R/W
00A9	Alarm - High threshold "P+" tariff 1 (imported active power)	4	0xXXXXXXXX	0xFFFFFFFF	value in hexadecimal of the power in W	W	R/W
00AB	Alarm - High threshold "P+" tariff 2 (imported active power)	4	0xXXXXXXXX	0xFFFFFFFF	value in hexadecimal of the power in W	W	R/W
00AD	Alarm - High threshold "P+" tariff 3 (imported active power)	4	0xXXXXXXXX	0xFFFFFFFF	value in hexadecimal of the power in W	W	R/W

16 bit word adr. Hexadecimal	Name	No. Octets	Value in Hexadecimal	Default value in Hexadecimal	Observations	Units	Auth.
00AF	Alarm - High threshold "P+" tariff 4 (imported active power)	4	0xXXXXXXXX	0xFFFFFFFF	value in hexadecimal of the power in W	W	R/W
00B1	Activation delay of the voltage alarm	2	0xXXXX	0x0005	from 5s to 120s XX = delay in seconds value in hexadecimal		R/W
00B2	Load curves to save	4	0xXXXXXXXX	0x0000FFFF	0x0000 X4X3 X2X1 with X2X1 = 2 pages of 32-bits data and X4X3 = 2 pages of 16-bits data Value of Xi (page i of 32-bits data) : 0x0 = P+ 0x1 = P- 0x2 = Q1 0x3 = Q2 0x4 = Q3 0x5 = Q4 0x6 = S+ 0x7 = S- 0x8 = Q+ 0x9 = Q- 0xF = Not used Value of Xj (page j of 16-bits data) : 0x0 = V1 0x1 = V2 0x2 = V3 0x3 = I1 0x4 = I2 0x5 = I3 0x6 = Cos Phi x 100 0xF = Not used		R/W

16 bit word adr. Hexadecimal	Name	No. Octets	Value in Hexadecimal	Default value in Hexadecimal	Observations	Units	Auth.
00B4	Authorisation - Reading of tariff configuration - resetting partial, monthly and monthly -1 indexes - resetting min and max values - selecting load curves - resetting load curves - changing communication settings - updating the current date and time	2	Authorised : Ax bits = 1 Prohibited : Ax bits = 0	0x0000	Authorisation for level 2 user 0b00000000 0A6A5A4A3A2A1A0 correlation : A0 --> Reading tariff configuration A1 --> reset index A2 --> reset min max values A3 --> Cdc selection A4 --> reset Cdc A5 --> change com settings A6 --> uppercase date and time		R/W
00B5	Identification of the specific customer	8	0xXXXXXXXXXXXXXXXX	0x2020202020202020	8 ASCII characters		Rcom/ Wcom
00B9	Event change of the oldest transformation ratio (the sixteenth)	8	0xDDDDDDDD (date/time) + 0xDDDD (new denominator) + 0xNNNN (new numerator)	0x0000000000000000	Date/time on 4 bytes in Unix format of the event representing seconds since the 01/01/1970 00:00 New denominator on 2 bytes in hexadecimal New numerator on 2 bytes in hexadecimal		R
00BD	Events change of transformation ratio (the fifteenth to the second)	112	0xDDDDDDDD (date/time) + 0xDDDD (new denominator) + 0xNNNN (new numerator)	0x0000000000000000	Date/time on 4 bytes in Unix format of the event representing seconds since the 01/01/1970 00:00 New denominator on 2 bytes in hexadecimal New numerator on 2 bytes in hexadecimal		R
00F5	Event change of the most recent transformation ratio (the first)	8	0xDDDDDDDD (date/time) + 0xDDDD (new denominator) + 0xNNNN (new numerator)	0x0000000000000000	Date/time on 4 bytes in Unix format of the event representing seconds since the 01/01/1970 00:00 New denominator on 2 bytes in hexadecimal New numerator on 2 bytes in hexadecimal		R
00F9	Simplified MMI	2	0xXXXX	0x0000	0x0000 : classical MMI 0x0001 : simplified MMI		R/W

16 bit word adr. Hexadecimal	Name	No. Octets	Value in Hexadecimal	Default value in Hexadecimal	Observations	Units	Auth.
0178	ID of the twelfth event (the oldest)	6	0xEEEE (ID event) + 0xDDDDDDDD (date)		0xEEEEDDDDDDDD with EEEE = event marked by this state Voltage alarm : 0bXXXX XXXX XXXX XXX1 : exceedance 0bXXXX XXXX XXXX XX1X : falling below Current alarm : 0bXXXX XXXX XXXX X1XX : exceedance Import active power alarm : 0bXXXX XXXX XXXX 1XXX : exceeding at least one of the four tariffs 0bXXXX XXXX XXX1 XXXX : exceeding tariff 1 0bXXXX XXXX XX1X XXXX : exceeding tariff 2 0bXXXX XXXX X1XX XXXX : exceeding tariff 3 0bXXXX XXXX 1XXX XXXX : exceeding tariff 4 Miscellaneous: 0bXXXX XXX1 XXXX XXXX : disconnection of power supply 0bXXXX XX1X XXXX XXXX : disconnection phase 1 0bXXXX X1XX XXXX XXXX : disconnection phase 2 0bXXXX 1XXX XXXX XXXX : disconnection phase 3 0bXXX1 XXXX XXXX XXXX : power-up 0bXX1X XXXX XXXX XXXX : RTC shut-down 0bX1XX XXXX XXXX XXXX : error on program checksum 0b1XXX XXXX XXXX XXXX : error on data checksum 0xEEEEDDDDDDDD with DDDDDDDD = date in Unix format of the event representing seconds since the 01/01/1970 00:00		R
	Date of the twelfth event (the oldest)						
017B	ID and date of the penultimate eleventh event	60	0xEEEE (event ID) + 0xDDDDDDDD (date)		Same as above		R
0199	ID of the most recent event (the first)	6	0xEEEE (event ID) + 0xDDDDDDDD (date)		same as above		R
	Date of the more recent event (the first)						

Hexadecimal 16 bit word adr.	Name	No. Octets	Value in Hexadecimal From	to	Default value in hexadecimal	Observations	Units	Auth.
01C1	"P+" cumulative index in tariff 1 (imported active energy in Wh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 Wh max then back to 0	Wh	R
01C4	"P-" cumulative index in tariff 1 (exported active energy in Wh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 Wh max then back to 0	Wh	R
01C7	"Q1" cumulative index in tariff 1 (reactive energy in VARh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VARh max then back to 0	VARh	R
01CA	"Q2" cumulative index in tariff 1 (reactive energy in VARh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VARh max then back to 0	VARh	R
01CD	"Q3" cumulative index in tariff 1 (reactive energy in VARh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VARh max then back to 0	VARh	R
01D0	"Q4" cumulative index in tariff 1 (reactive energy in VARh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VARh max then back to 0	VARh	R
01D3	"S+" cumulative index in tariff 1 (imported apparent energy in VAh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VAh max then back to 0	VAh	R
01D6	"S-" cumulative index in tariff 1 (exported apparent energy in VAh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VAh max then back to 0	VAh	R
01D9	"P+" cumulative index in tariff 2 (imported active energy in Wh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 Wh max then back to 0	Wh	R
01DC	"P-" cumulative index in tariff 2 (exported active energy in Wh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 Wh max then back to 0	Wh	R
01DF	"Q1" cumulative index in tariff 2 (reactive energy in VARh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VARh max then back to 0	VARh	R
01E2	"Q2" cumulative index in tariff 2 (reactive energy in VARh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VARh max then back to 0	VARh	R
01E5	"Q3" cumulative index in tariff 2 (reactive energy in VARh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VARh max then back to 0	VARh	R
01E8	"Q4" cumulative index in tariff 2 (reactive energy in VARh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VARh max then back to 0	VARh	R
01EB	"S+" cumulative index in tariff 2 (imported apparent energy in VAh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VAh max then back to 0	VAh	R
01EE	"S-" cumulative index in tariff 2 (exported apparent energy in VAh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VAh max then back to 0	VAh	R

Hexadecimal 16 bit word adr.	Name	No. Octets	Value in Hexadecimal		Default value in Hexadecimal	Observations	Units	Auth.
			From	to				
01F1	"P+" cumulative index in tariff 3 (imported active energy in Wh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 Wh max then back to 0	Wh	R
01F4	"P-" cumulative index in tariff 3 (exported active energy in Wh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 Wh max then back to 0	Wh	R
01F7	"Q1" cumulative index in tariff 3 (reactive energy in VARh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VARh max then back to 0	VARh	R
01FA	"Q2" cumulative index in tariff 3 (reactive energy in VARh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VARh max then back to 0	VARh	R
01FD	"Q3" cumulative index in tariff 3 (reactive energy in VARh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VARh max then back to 0	VARh	R
0200	"Q4" cumulative index in tariff 3 (reactive energy in VARh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VARh max then back to 0	VARh	R
0203	"S+" cumulative index in tariff 3 (imported apparent energy in VAh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VAh max then back to 0	VAh	R
0206	"S-" cumulative index in tariff 3 (exported apparent energy in VAh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VAh max then back to 0	VAh	R
0209	"P+" cumulative index in tariff 4 (imported active energy in Wh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 Wh max then back to 0	Wh	R
020C	"P-" cumulative index in tariff 4 (exported active energy in Wh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 Wh max then back to 0	Wh	R
020F	"Q1" cumulative index in tariff 4 (reactive energy in VARh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VARh max then back to 0	VARh	R
0212	"Q2" cumulative index in tariff 4 (reactive energy in VARh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VARh max then back to 0	VARh	R
0215	"Q3" cumulative index in tariff 4 (reactive energy in VARh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VARh max then back to 0	VARh	R
0218	"Q4" cumulative index in tariff 4 (reactive energy in VARh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VARh max then back to 0	VARh	R
021B	"S+" cumulative index in tariff 4 (imported apparent energy r in VAh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VAh max then back to 0	VAh	R
021E	"S-" cumulative index in tariff 4 (exported apparent energy in VAh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VAh max then back to 0	VAh	R

Mapping for metering three-phase (M)DVH5x range NERIS

Hexadecimal 16 bit word adr.	Name	No. Octets	Value in Hexadecimal From	to	Default value in Hexadecimal	Observations	Units	Auth.
0393	"Q+" cumulative positive index total (reactive energy in VARh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 Wh max then back to 0	VARh	R
0396	"Q+" cumulative positive index in tariff 1 (reactive energy in VARh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 Wh max then back to 0	VARh	R
0399	"Q+" cumulative positive index in tariff 2 (reactive energy in VARh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VARh max then back to 0	VARh	R
039C	"Q+" cumulative positive index in tariff 3 (reactive energy in VARh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VARh max then back to 0	VARh	R
039F	"Q+" cumulative positive index in tariff 4 (reactive energy in VARh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VARh max then back to 0	VARh	R
03A2	"Q-" cumulative negative index total (reactive energy in VARh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VARh max then back to 0	VARh	R
03A5	"Q-+" cumulative negative index in tariff 1 (reactive energy in VARh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VAh max then back to 0	VARh	R
03A8	"Q-+" cumulative negative index in tariff 2 (reactive energy in VARh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VAh max then back to 0	VARh	R
03AB	"Q-+" cumulative negative index in tariff 3 (reactive energy in VARh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 Wh max then back to 0	VARh	R
03AE	"Q-+" cumulative negative index in tariff 4 (reactive energy in VARh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 Wh max then back to 0	VARh	R

Hexadecimal 16 bit word adr.	Name	No. Octets	Value in Hexadecimal From	to	Default value in Hexadecimal	Observations	Units	Auth.
0221	Partial index "P+" in tariff 1 (imported active energy in Wh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 Wh max then back to 0	Wh	R/W
0224	Partial index "P-" in tariff 1 (exported active energy in Wh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 Wh max then back to 0	Wh	R/W
0227	Partial index "Q1" in tariff 1 (reactive energy in VARh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VARh max then back to 0	VARh	R/W
022A	Partial index "Q2" in tariff 1 (reactive energy in VARh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VARh max then back to 0	VARh	R/W
022D	Partial index "Q3" in tariff 1 (reactive energy in VARh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VARh max then back to 0	VARh	R/W
0230	Partial index "Q4" in tariff 1 (reactive energy in VARh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VARh max then back to 0	VARh	R/W
0233	Partial index "S+" in tariff 1 (imported apparent energy in VAh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VAh max then back to 0	VAh	R/W
0236	Partial index "S-" in tariff 1 (exported apparent energy in VAh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VAh max then back to 0	VAh	R/W
0239	Partial index "P+" in tariff 2 (imported active energy in Wh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 Wh max then back to 0	Wh	R/W
023C	Partial index "P-" in tariff 2 (exported active energy in Wh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 Wh max then back to 0	Wh	R/W
023F	Partial index "Q1" in tariff 2 (reactive energyin VARh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VARh max then back to 0	VARh	R/W
0242	Partial index "Q2" in tariff 2 (reactive energy in VARh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VARh max then back to 0	VARh	R/W
0245	Partial index "Q3" in tariff 2 (reactive energyin VARh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VARh max then back to 0	VARh	R/W
0248	Partial index "Q4" in tariff 2 (reactive energy in VARh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VARh max then back to 0	VARh	R/W
024B	Partial index "S+" in tariff 2 (imported apparent energy in VAh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VAh max then back to 0	VAh	R/W
024E	Partial index "S-" in tariff 2 (exported apparent energy in VAh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VAh max then back to 0	VAh	R/W

Hexadecimal 16 bit word adr.	Name	No. Octets	Value in Hexadecimal From	to	Default value in Hexadecimal	Observations	Units	Auth.
0251	Partial index "P+" in tariff 3 (imported active energy in Wh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 Wh max then back to 0	Wh	R/W
0254	Partial index "P-" in tariff 3 (exported active energy in Wh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 Wh max then back to 0	Wh	R/W
0257	Partial index "Q1" in tariff 3 (reactive energy in VARh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VARh max then back to 0	VARh	R/W
025A	Partial index "Q2" in tariff 3 (reactive energy in VARh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VARh max then back to 0	VARh	R/W
025D	Partial index "Q3" in tariff 3 (reactive energy in VARh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VARh max then back to 0	VARh	R/W
0260	Partial index "Q4" in tariff 3 (reactive energy in VARh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VARh max then back to 0	VARh	R/W
0263	Partial index "S+" in tariff 3 (imported apparent energy in VAh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VAh max then back to 0	VAh	R/W
0266	Partial index "S-" in tariff 3 (exported apparent energy in VAh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VAh max then back to 0	VAh	R/W
0269	Partial index "P+" in tariff 4 (imported active energy in Wh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 Wh max then back to 0	Wh	R/W
026C	Partial index "P-" in tariff 4 (exported active energy in Wh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 Wh max then back to 0	Wh	R/W
026F	Partial index "Q1" in tariff 4 (reactive energy in VARh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VARh max then back to 0	VARh	R/W
0272	Partial index "Q2" in tariff 4 (reactive energy in VARh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VARh max then back to 0	VARh	R/W
0275	Partial index "Q3" in tariff 4 (reactive energy in VARh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VARh max then back to 0	VARh	R/W
0278	Partial index "Q4" in tariff 4 (reactive energy in VARh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VARh max then back to 0	VARh	R/W
027B	Partial index "S+" in tariff 4 (imported apparent energy in VAh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VAh max then back to 0	VAh	R/W
027E	Partial index "S-" in tariff 4 (exported apparent energy in VAh)	6	0x000000000000	0x00174876E7FF	0x000000000000	value in hexadecimal 99 999 999 999 VAh max then back to 0	VAh	R/W

Mapping for metering three-phase (M)DVH5x range NERIS

Hexadecimal 16 bit word adr.	Name	No. Octets	Value in Hexadecimal	Default value in Hexadecimal	Observations	Units	Auth.
0281	Monthly index "P+" in tariff 1 (imported active energy in Wh)	4	0xXXXXXXXX	0x00000000	value in hexadecimal 4 294 967 295 Wh max	Wh	R/W
0283	Monthly index "P-" in tariff 1 (exported active energy in Wh)	4	0xXXXXXXXX	0x00000000	value in hexadecimal 4 294 967 295 Wh max	Wh	R/W
0291	Monthly index "P+" in tariff 2 (imported active energy in Wh)	4	0xXXXXXXXX	0x00000000	value in hexadecimal 4 294 967 295 Wh max	Wh	R/W
0293	Monthly index "P-" in tariff 2 (exported active energy in Wh)	4	0xXXXXXXXX	0x00000000	value in hexadecimal 4 294 967 295 Wh max	Wh	R/W
02A1	Monthly index "P+" in tariff 3 (imported active energy in Wh)	4	0xXXXXXXXX	0x00000000	value in hexadecimal 4 294 967 295 Wh max	Wh	R/W
02A3	Monthly index "P-" in tariff 3 (exported active energy in Wh)	4	0xXXXXXXXX	0x00000000	value in hexadecimal 4 294 967 295 Wh max	Wh	R/W
02B1	Monthly index "P+" in tariff 4 (imported active energy in Wh)	4	0xXXXXXXXX	0x00000000	value in hexadecimal 4 294 967 295 Wh max	Wh	R/W
02B3	Monthly index "P-" in tariff 4 (exported active energy in Wh)	4	0xXXXXXXXX	0x00000000	value in hexadecimal 4 294 967 295 Wh max	Wh	R/W
02C1	Monthly index -1 "P+" in tariff 1 (imported active energy in Wh)	4	0xXXXXXXXX	0x00000000	value in hexadecimal 4 294 967 295 Wh max	Wh	R/W
02C3	Monthly index -1 "P-" in tariff 1 (exported active energy in Wh)	4	0xXXXXXXXX	0x00000000	value in hexadecimal 4 294 967 295 Wh max	Wh	R/W
02D1	Monthly index -1 "P+" in tariff 2 (imported active energy in Wh)	4	0xXXXXXXXX	0x00000000	value in hexadecimal 4 294 967 295 Wh max	Wh	R/W
02D3	Monthly index -1 "P-" in tariff 2 (exported active energy in Wh)	4	0xXXXXXXXX	0x00000000	value in hexadecimal 4 294 967 295 Wh max	Wh	R/W
02E1	Monthly index -1 "P+" in tariff 3 (imported active energy in Wh)	4	0xXXXXXXXX	0x00000000	value in hexadecimal 4 294 967 295 Wh max	Wh	R/W
02E3	Monthly index -1 "P-" in tariff 3 (exported active energy in Wh)	4	0xXXXXXXXX	0x00000000	value in hexadecimal 4 294 967 295 Wh max	Wh	R/W
02F1	Monthly index -1 "P+" in tariff 4 (imported active energy in Wh)	4	0xXXXXXXXX	0x00000000	value in hexadecimal 4 294 967 295 Wh max	Wh	R/W
02F3	Monthly index -1 "P-" in tariff 4 (exported active energy in Wh)	4	0xXXXXXXXX	0x00000000	value in hexadecimal 4 294 967 295 Wh max	Wh	R/W

Hexadecimal 16 bit word adr.	Name	No. Octets	Value in Hexadecimal	Default value in Hexadecimal	Observations	Units	Auth.
0301	Max voltage V1	2	0xXXXX	0x0000	value in hexadecimal 0x120 --> 288V	V	R/W
0302	Max voltage V2	2	0xXXXX	0x0000	value in hexadecimal 0x120 --> 288V	V	R/W
0303	Max voltage V3	2	0xXXXX	0x0000	value in hexadecimal 0x120 --> 288V	V	R/W
0304	Max imported current Phase 1	2	0xXXXX	0x0000	value in hexadecimal 0x1194 --> 4500A	A	R/W
0305	Max imported current Phase 2	2	0xXXXX	0x0000	value in hexadecimal 0x1194 --> 4500A	A	R/W
0306	Max imported current Phase 3	2	0xXXXX	0x0000	value in hexadecimal 0x1194 --> 4500A	A	R/W
0307	Max imported current phase 1 + 2 + 3	2	0xXXXX	0x0000	value in hexadecimal 0x1194 --> 4500A	A	R/W
0308	Max exported current Phase 1	2	0xXXXX	0x0000	value in hexadecimal 0x1194 --> 4500A	A	R/W
0309	Max exported current Phase 2	2	0xXXXX	0x0000	value in hexadecimal 0x1194 --> 4500A	A	R/W
030A	Max exported current Phase 3	2	0xXXXX	0x0000	value in hexadecimal 0x1194 --> 4500A	A	R/W
030B	Max exported current phase 1 + 2 + 3	2	0xXXXX	0x0000	value in hexadecimal 0x1194 --> 4500A	A	R/W
030C	Max imported active power phase 1	4	0xXXXXXXXX	0x00000000	value in hexadecimal 0x00000000 : default value 0x0013C680 --> 1,296,000W	W	R/W
030E	Max imported active power phase 2	4	0xXXXXXXXX	0x00000000	value in hexadecimal 0x0013C680 --> 1 296 000W	W	R/W
0310	Max imported active power phase 3	4	0xXXXXXXXX	0x00000000	value in hexadecimal 0x0013C680 --> 1 296 000W	W	R/W
0312	Max imported active power phase 1 + 2 + 3	4	0xXXXXXXXX	0x00000000	value in hexadecimal 0x003B5380 --> 3 888 000W	W	R/W
0314	Max exported active power phase 1	4	0xXXXXXXXX	0x00000000	value in hexadecimal 0x0013C680 --> 1 296 000W	W	R/W
0316	Max exported active power phase 2	4	0xXXXXXXXX	0x00000000	value in hexadecimal 0x0013C680 --> 1 296 000W	W	R/W
0318	Max exported active power phase 3	4	0xXXXXXXXX	0x00000000	value in hexadecimal 0x0013C680 --> 1 296 000W	W	R/W
031A	Max exported active power phase 1 + 2 + 3	4	0xXXXXXXXX	0x00000000	value in hexadecimal 0x003B5380 --> 3 888 000W	W	R/W
031C	Min power factor phase 1 + 2 + 3 / Max power factor phase 1 + 2 + 3	2	0xmmMM	0x6400	0xmmMM with : mm --> min value mm --> max value Example for max. : value from 0.00 to 1.00 in hexadecimal 0xXX40 --> 0.64	/	R/W
031D	Current date and time	6	0x000000010100	0x000000010100	12 character value in BCD e.g. : 17h25'35s 19/11/09 --> 172535191109	/	R/W

Hexadecimal 16 bit word adr.	Name	No. Octets	Value in Hexadecimal	Default value in Hexadecimal	Observations	Units	Auth.
0320	Instantaneous voltage V1	2	0xXXXX	0x0000	value in hexadecimal 0x120 --> 288V	V	R
0321	Instantaneous voltage V2	2	0xXXXX	0x0000	value in hexadecimal 0x120 --> 288V	V	R
0322	Instantaneous voltage V3	2	0xXXXX	0x0000	value in hexadecimal 0x120 --> 288V	V	R
0323	Instantaneous voltage U12	2	0xXXXX	0x0000	value in hexadecimal 0x1F4 --> 500V	V	R
0324	Instantaneous voltage U23	2	0xXXXX	0x0000	value in hexadecimal 0x1F4 --> 500V	V	R
0325	Instantaneous voltage U31	2	0xXXXX	0x0000	value in hexadecimal 0x1F4 --> 500V	V	R
0326	Instantaneous current phase 1	2	0xXXXX	0x0000	value in hexadecimal 0x1194 --> 4500A	A	R
0327	Instantaneous current phase 2	2	0xXXXX	0x0000	value in hexadecimal 0x1194 --> 4500A	A	R
0328	Instantaneous current phase 3	2	0xXXXX	0x0000	value in hexadecimal 0x1194 --> 4500A	A	R
0329	Instantaneous import active power P+	4	0xXXXXXXXX	0x000000	value in hexadecimal 0x3B5380 --> 3 888 000W	W	R
032B	Instantaneous export active power P-	4	0xXXXXXXXX	0x000000	value in hexadecimal 0x3B5380 --> 3 888 000W	W	R
032D	Instantaneous reactive power Q1	4	0xXXXXXXXX	0x000000	value in hexadecimal 0x3B5380 --> 3 888 000VAR	VAR	R
032F	Instantaneous reactive power Q2	4	0xXXXXXXXX	0x000000	value in hexadecimal 0x3B5380 --> 3 888 000VAR	VAR	R
0331	Instantaneous reactive power Q3	4	0xXXXXXXXX	0x000000	value in hexadecimal 0x3B5380 --> 3 888 000VAR	VAR	R
0333	Instantaneous reactive power Q4	4	0xXXXXXXXX	0x000000	value in hexadecimal 0x3B5380 --> 3 888 000VAR	VAR	R
0335	Instantaneous import apparent power S+	4	0xXXXXXXXX	0x000000	value in hexadecimal 0x3B5380 --> 3 888 000VA	VA	R
0337	Instantaneous export apparent power S-	4	0xXXXXXXXX	0x000000	value in hexadecimal 0x3B5380 --> 3 888 000VA	VA	R
0339	Instantaneous power factor phase 1 + 2 + 3	2	0xXXXX	0x00	value from 0.00 to 1.00 in hexadecimal 0x40 --> 0.64		R
033A	Instantaneous mains power frequency in Hz	2	0xXXXX	0x00	value in hexadecimal 0x32 --> 50Hz	Hz	R
033B	Instantaneous Tg Phi	2	0xXXXX	0x00	signed value x 100 in hexadecimal -90° to 90° --> -9000 to 9000		R

Hexadecimal 16 bit word adr.	Name	No. Octets	Value in Hexadecimal	Default value in Hexadecimal	Observations	Units	Auth.
033C	Average voltage V1	2	0xXXXX	0x0000	value in hexadecimal 0x120 --> 288V	V	R
033D	Average voltage V2	2	0xXXXX	0x0000	value in hexadecimal 0x120 --> 288V	V	R
033E	Average voltage V3	2	0xXXXX	0x0000	value in hexadecimal 0x120 --> 288V	V	R
033F	Average voltage U12	2	0xXXXX	0x0000	value in hexadecimal 0x1F4 --> 500V	V	R
0340	Average voltage U23	2	0xXXXX	0x0000	value in hexadecimal 0x1F4 --> 500V	V	R
0341	Average voltage U31	2	0xXXXX	0x0000	value in hexadecimal 0x1F4 --> 500V	V	R
0342	Average current phase 1	2	0xXXXX	0x0000	value in hexadecimal 0x1194 --> 4500A	A	R
0343	Average current phase 2	2	0xXXXX	0x0000	value in hexadecimal 0x1194 --> 4500A	A	R
0344	Average current phase 3	2	0xXXXX	0x0000	value in hexadecimal 0x1194 --> 4500A	A	R
0345	Average import active power P+	4	0xXXXXXXXX	0x000000	value in hexadecimal 0x3B5380 --> 3 888 000W	W	R
0347	Average export active power P-	4	0xXXXXXXXX	0x000000	value in hexadecimal 0x3B5380 --> 3 888 000W	W	R
0349	Average reactive power Q1	4	0xXXXXXXXX	0x000000	value in hexadecimal 0x3B5380 --> 3 888 000VAR	VAR	R
034B	Average reactive power Q2 i	4	0xXXXXXXXX	0x000000	value in hexadecimal 0x3B5380 --> 3 888 000VAR	VAR	R
034D	Average reactive power Q3	4	0xXXXXXXXX	0x000000	value in hexadecimal 0x3B5380 --> 3 888 000VAR	VAR	R
034F	Average reactive power Q4	4	0xXXXXXXXX	0x000000	value in hexadecimal 0x3B5380 --> 3 888 000VAR	VAR	R
0351	Average import apparent power S+	4	0xXXXXXXXX	0x000000	value in hexadecimal 0x3B5380 --> 3 888 000VA	VA	R
0353	Average export apparent power S-	4	0xXXXXXXXX	0x000000	value in hexadecimal 0x3B5380 --> 3 888 000VA	VA	R
0355	Average power factor phase 1 + 2 + 3	2	0xXXXX	0x00	value from 0.00 to 1.00 in hexadecimal 0x40 --> 0.64		R
0356	Average mains power frequency in Hz	2	0xXXXX	0x00	value in hexadecimal 0x32 --> 50Hz	Hz	R
0357	Averages Tg Phi	2	0xXXXX	0x00	signed value x 100 in hexadecimal -90° to 90° --> -9000 to 9000		R

Mapping for metering three-phase (M)DVH5x range NERIS

Hexadecimal 16 bit word adr.	Name	No. Octets	Value in Hexadecimal	Default value in Hexadecimal	Observations	Units	Auth.
0358	Absence of voltage phase 1	2	0xXXXX		XXXX = 0000 --> phase 1 absent XXXX = 0001 --> phase 1 present		R
0359	Absence of voltage phase 2	2	0xXXXX		XXXX = 0000 --> phase 2 absent XXXX = 0001 --> phase 2 present		R
035A	Absence of voltage phase 3	2	0xXXXX		XXXX = 0000 --> phase 3 absent XXXX = 0001 --> phase 3 present		R
035B	Phase error	2	0xXXXX		XXXX = 0000 --> rotation 3 phases OK XXXX = 0001 --> rotation 3 phases NOK		R
035C	Index total "P+" (import active energy in Wh)	6	0x000000000000 to 0x00174876E7FF	0x000000000000	Value in hexadecimal 99 999 999 999 Wh max then return in 0	Wh	R
035F	Index total "P-" (export active energy in Wh)	6	0x000000000000 to 0x00174876E7FF	0x000000000000	Value in hexadecimal 99 999 999 999 Wh max then return in 0	Wh	R
0362	Index total "Q1" (reactive energy in VARh)	6	0x000000000000 to 0x00174876E7FF	0x000000000000	Value in hexadecimal 99 999 999 999 VARh max then return in 0	VARh	R
0365	Index total "Q2" (reactive energy in VARh)	6	0x000000000000 to 0x00174876E7FF	0x000000000000	Value in hexadecimal 99 999 999 999 VARh max then return in 0	VARh	R
0368	Index total "Q3" (reactive energy in VARh)	6	0x000000000000 to 0x00174876E7FF	0x000000000000	Value in hexadecimal 99 999 999 999 VARh max then return in 0	VARh	R
036B	Index total "Q4" (reactive energy in VARh)	6	0x000000000000 to 0x00174876E7FF	0x000000000000	Value in hexadecimal 99 999 999 999 VARh max then return in 0	VARh	R
036E	Index total "S+" (import apparent energy in VAh)	6	0x000000000000 to 0x00174876E7FF	0x000000000000	Value in hexadecimal 99 999 999 999 VAh max then return in 0	VAh	R
0371	Index total "S-" (export apparent energy in VAh)	6	0x000000000000 to 0x00174876E7FF	0x000000000000	Value in hexadecimal 99 999 999 999 VAh max then return in 0	VAh	R
0374	Instantaneous voltage V1	2	0xXXXX	0x0000	value in hexadecimal 0xB40 --> 288V	1/10 V	R
0375	Instantaneous voltage V2	2	0xXXXX	0x0000	value in hexadecimal 0x B40 --> 288V	1/10 V	R
0376	Instantaneous voltage V3	2	0xXXXX	0x0000	value in hexadecimal 0x B40 --> 288V	1/10 V	R
0377	Instantaneous voltage U12	2	0xXXXX	0x0000	value in hexadecimal 0x1388 --> 500V	1/10 V	R
0378	Instantaneous voltage U23	2	0xXXXX	0x0000	value in hexadecimal 0x1388 --> 500V	1/10 V	R
0379	Instantaneous voltage U31	2	0xXXXX	0x0000	value in hexadecimal 0x1388 --> 500V	1/10 V	R

Hexadecimal 16 bit word adr.	Name	No. Octets	Value in Hexadecimal	Default value in Hexadecimal	Observations	Units	Auth.
037A	Instantaneous current phase 1	2	0xXXXX	0x0000	value in hexadecimal 0xAFC8 --> 4500A	1/10 A	R
037B	Instantaneous current phase 2	2	0xXXXX	0x0000	value in hexadecimal 0xAFC8 --> 4500A	1/10 A	R
037C	Instantaneous current phase 3	2	0xXXXX	0x0000	value in hexadecimal 0xAFC8 --> 4500A	1/10 A	R
037D	Instantaneous mains power frequency in Hz	2	0xXXXX	0x00	value in hexadecimal 0x1F4 --> 50Hz	1/10 Hz	R
037E	Average voltage V1	2	0xXXXX	0x0000	value in hexadecimal 0xB40 --> 288V	1/10 V	R
037F	Average voltage V2	2	0xXXXX	0x0000	value in hexadecimal 0xB40 --> 288V	1/10 V	R
0380	Average voltage V3	2	0xXXXX	0x0000	value in hexadecimal 0xB40 --> 288V	1/10 V	R
0381	Average voltage U12	2	0xXXXX	0x0000	value in hexadecimal 0x1388 --> 500V	1/10 V	R
0382	Average voltage U23	2	0xXXXX	0x0000	value in hexadecimal 0x1388 --> 500V	1/10 V	R
0383	Average voltage U31	2	0xXXXX	0x0000	value in hexadecimal 0x1388 --> 500V	1/10 V	R
0384	Average current phase 1	2	0xXXXX	0x0000	value in hexadecimal 0x AFC8 --> 4500A	1/10 A	R
0385	Average current phase 2	2	0xXXXX	0x0000	value in hexadecimal 0x AFC8 --> 4500A	1/10 A	R
0386	Average current phase 3	2	0xXXXX	0x0000	value in hexadecimal 0x AFC8 --> 4500A	1/10 A	R
0387	Average mains power frequency in Hz	2	0xXXXX	0x00	value in hexadecimal 0x1F4 --> 50Hz	1/10 Hz	R
0388	Max voltage V1	2	0xXXXX	0x0000	value in hexadecimal 0xB40 --> 288V	1/10 V	R
0389	Max voltage V2	2	0xXXXX	0x0000	value in hexadecimal 0xB40 --> 288V	1/10 V	R
038A	Max voltage V3	2	0xXXXX	0x0000	value in hexadecimal 0xB40 --> 288V	1/10 V	R
038B	Max imported current Phase 1	2	0xXXXX	0x0000	value in hexadecimal 0xAFC8 --> 4500A	1/10 A	R
038C	Max imported current Phase 2	2	0xXXXX	0x0000	value in hexadecimal 0xAFC8 --> 4500A	1/10 A	R
038D	Max imported current Phase 3	2	0xXXXX	0x0000	value in hexadecimal 0xAFC8 --> 4500A	1/10 A	R
038E	Max imported current phase 1 + 2 + 3	2	0xXXXX	0x0000	value in hexadecimal 0xAFC8 --> 4500A	1/10 A	R

Hexadecimal 16 bit word adr.	Name	No. Octets	Value in Hexadecimal	Default value in Hexadecimal	Observations	Units	Auth.
038F	Max exported current Phase 1	2	0xXXXX	0x0000	value in hexadecimal 0xAFC8 --> 4500A	1/10 A	R
0390	Max exported current Phase 2	2	0xXXXX	0x0000	value in hexadecimal 0xAFC8 --> 4500A	1/10 A	R
0391	Max exported current Phase 3	2	0xXXXX	0x0000	value in hexadecimal 0xAFC8 --> 4500A	1/10 A	R
0392	Max exported current phase 1 + 2 + 3	2	0xXXXX	0x0000	value in hexadecimal 0xAFC8 --> 4500A	1/10 A	R
03E9	Maximal Reactive power Q+ for the current month	4	0xXXXXXXXX	0x00000000	Value in hexadecimal 0x3B5380 --> 3 888 000VAR	VAr	R
0568	Sum of active maximum import tariff 1 Powers in the last 12 months of age	4	0xXXXXXXXX	0x00000000		W	R

Hexadecimal 16 bit word adr.	Name	No. Octets	Value in Hexadecimal	Default value in Hexadecimal	Observations	Units	Auth.
1000	ptr_adr_etat 32-bit data n°1	2	0xXXXX		Points to the address (16-bit words) of the checksum of the structure "st_etat n" most recent		R
1001	pt_data & st_etat 32-bit data n°1	40560			Data points and status data structure n°1		R
5F39	ptr_adr_etat 32-bit data n°2	2	0xXXXX		Points to the address (16-bit words) of the checksum of the structure "st_etat n" most recent		R
5F3A	pt_data & st_etat 32-bit data n°2	40560			Data points and status data structure n°2		R
AE72	ptr_adr_etat 16-bit data n°3	2	0xXXXX		Points to the address (16-bit words) of the checksum of the structure "st_etat n" most recent		R
AE73	pt_data & st_etat 16-bit data n°3	20400			Data points and status data structure n°3		R
D64B	ptr_adr_etat 16-bit data n°4	2	0xXXXX		Points to the address (16-bit words) of the checksum of the structure "st_etat n" most recent		R
D64C	pt_data & st_etat 16-bit data n°4	20400			Data points and status data structure n°4		R

16 bit word adr. Hexadecimal	Name	No. Octets	Value in Hexadecimal	Default value in Hexadecimal	Observations	Units	Auth.
0400	Maximum active power imported for all tariffs (the oldest)	8	0xPPPPPPPP (Maximum power) + 0xDDDDDDDD (date)		0xPPPPPPPPDDDDDDDD with PPPPPPPP = Maximum power measured in the month, in Watts with DDDDDDDD = date in Unix format of the event representing seconds since the 01/01/1970 00:00		R
	Date of the fifteenth month (the oldest)						
0404	Maximum active power imported for all tariffs of the penultimate eleventh event	104	0xPPPPPPPP (Maximum power) + 0xDDDDDDDD (date)		Same as above		R
0438	Maximum active power imported for all tariffs (the first)	8	0xPPPPPPPP (Maximum power) + 0xDDDDDDDD (date)		same as above		R
	Date of the first month (the first)						
043C	Maximum active power imported for tariff 1 (the oldest)	8	0xPPPPPPPP (Maximum power) + 0xDDDDDDDD (date)		0xPPPPPPPPDDDDDDDD with PPPPPPPP = Maximum power measured in the month, in Watts with DDDDDDDD = date in Unix format of the event representing seconds since the 01/01/1970 00:00		R
	Date of the fifteenth month (the oldest)						
0440	Maximum active power imported for tariff 1 of the penultimate eleventh event	104	0xPPPPPPPP (Maximum power) + 0xDDDDDDDD (date)		Same as above		R
0474	Maximum active power imported for tariff 1 (the first)	8	0xPPPPPPPP (Maximum power) + 0xDDDDDDDD (date)		same as above		R
	Date of the first month (the first)						
0478	Maximum active power imported for tariff 2 (the oldest)	8	0xPPPPPPPP (Maximum power) + 0xDDDDDDDD (date)		0xPPPPPPPPDDDDDDDD with PPPPPPPP = Maximum power measured in the month, in Watts with DDDDDDDD = date in Unix format of the event representing seconds since the 01/01/1970 00:00		R
	Date of the fifteenth month (the oldest)						
047C	Maximum active power imported for tariff 2 of the penultimate eleventh event	104	0xPPPPPPPP (Maximum power) + 0xDDDDDDDD (date)		Same as above		R
04B0	Maximum active power imported for tariff 2 (the first)	8	0xPPPPPPPP (Maximum power) + 0xDDDDDDDD (date)		same as above		R
	Date of the first month (the first)						

16 bit word adr. Hexadecimal	Name	No. Octets	Value in Hexadecimal	Default value in Hexadecimal	Observations	Units	Auth.
04B4	Maximum active power exported for all tariffs (the oldest)	8	0xPPPPPPPP (Maximum power) + 0xDDDDDDDD (date)		0xPPPPPPPPDDDDDDDD with PPPPPPPP = Maximum power measured in the month, in Watts with DDDDDDDD = date in Unix format of the event representing seconds since the 01/01/1970 00:00		R
	Date of the fifteenth month (the oldest)						
04B8	Maximum active power exported for all tariffs of the penultimate eleventh event	104	0xPPPPPPPP (Maximum power) + 0xDDDDDDDD (date)		Same as above		R
04EC	Maximum active power exported for all tariffs (the first)	8	0xPPPPPPPP (Maximum power) + 0xDDDDDDDD (date)		same as above		R
	Date of the first month (the first)						
04F0	Maximum active power exported for tariff 1 (the oldest)	8	0xPPPPPPPP (Maximum power) + 0xDDDDDDDD (date)		0xPPPPPPPPDDDDDDDD with PPPPPPPP = Maximum power measured in the month, in Watts with DDDDDDDD = date in Unix format of the event representing seconds since the 01/01/1970 00:00		R
	Date of the fifteenth month (the oldest)						
04F4	Maximum active power exported for tariff 1 of the penultimate eleventh event	104	0xPPPPPPPP (Maximum power) + 0xDDDDDDDD (date)		Same as above		R
0528	Maximum active power exported for tariff 1 (the first)	8	0xPPPPPPPP (Maximum power) + 0xDDDDDDDD (date)		same as above		R
	Date of the first month (the first)						
052C	Maximum active power exported for tariff 2 (the oldest)	8	0xPPPPPPPP (Maximum power) + 0xDDDDDDDD (date)		0xPPPPPPPPDDDDDDDD with PPPPPPPP = Maximum power measured in the month, in Watts with DDDDDDDD = date in Unix format of the event representing seconds since the 01/01/1970 00:00		R
	Date of the fifteenth month (the oldest)						
0530	Maximum active power exported for tariff 2 of the penultimate eleventh event	104	0xPPPPPPPP (Maximum power) + 0xDDDDDDDD (date)		Same as above		R
0564	Maximum active power exported for tariff 2 (the first)	8	0xPPPPPPPP (Maximum power) + 0xDDDDDDDD (date)		same as above		R
	Date of the first month (the first)						

16 bit word adr. Hexadecimal	Name	No. Octets	Value in Hexadecimal	Default value in Hexadecimal	Observations	Units	Auth.
0580	1st automatic change of tariff active / inactive Tariff to be applied Hours and minutes of the beginning of tariff range Duration of the tariff range Day of the week	8	0xXX (active/inactive) + 0xYY (Tariff) + 0xHHMM (Hours and minutes of the beginning of tariff range) + 0xhhmm (Duration of the tariff range) + 0xZZZZ (day)	0x0001000000000001	0xXXYYHHMMhhmmZZZZ with XX = Active (01) or Inactive (00) with YY = Tariff 1 (01) , Tariff 2 (02), Tariff 3 (03), Tariff 4 (04) with HHMM in BCD with hhmm in BCD with ZZZZ = day of the week 0x0001 = Monday 0x0002 = Tuesday		R/W
0584	2st automatic change of tariff active / inactive Tariff to be applied Hours and minutes of the beginning of tariff range Duration of the tariff range Day of the week	8	0xXX (active/inactive) + 0xYY (Tariff) + 0xHHMM (Hours and minutes of the beginning of tariff range) + 0xhhmm (Duration of the tariff range) + 0xZZZZ (day)	0x0001000000000001	0xXXYYHHMMhhmmZZZZ with XX = Active (01) or Inactive (00) with YY = Tariff 1 (01) , Tariff 2 (02), Tariff 3 (03), Tariff 4 (04) with HHMM in BCD with hhmm in BCD with ZZZZ = day of the week 0x0001 = Monday 0x0002 = Tuesday		R/W
0588 to 05EF	3rd to last one tariff range	Same as above	Same as above	Same as above	Same as above		Same as above

| 16 bit word adr. Hexadecimal	Name	No. Octets	Value in Hexadecimal	Default value in Hexadecimal	Observations	Units	Auth.
05F0	1st public holiday active/inactive Tariff to be applied Date of the public holiday	6	0xXX (active/inactive) + 0xYY (Tariff) + 0xDDMMYYYY (date of the public holiday)	0x000101012015	0xXXYYDDMMYYYY with XX = Active (01) or Inactive (00) with YY = Tariff 1 (01) , Tariff 2 (02), Tariff 3 (03), Tariff 4 (04) with DDMMYYYY in BCD		R/W
05F3	2nd public holiday active/inactive Tariff to be applied Date of the public holiday	6	0xXX (active/inactive) + 0xYY (Tariff) + 0xDDMMYYYY (date of the public holiday)	0x000101012015	0xXXYYDDMMYYYY with XX = Active (01) or Inactive (00) with YY = Tariff 1 (01) , Tariff 2 (02), Tariff 3 (03), Tariff 4 (04) with DDMMYYYY in BCD		R/W
05F6 to 07CF	3rd to 160th public holiday	Same as above	Same as above	Same as above	Same as above		Same as above
07D1	Name of public holiday (160 names)	3200	0xXXXX...	0x20202020....	20 ASCII characters per name		R/W

4   Annexe A : LOAD CURVES

4.1 Contruction of load curve

A load curve is in the form of a FIFO linking data and statutes; the oldest data will be overwritten by the newest.

- A measurement curve consists of the following elements:
    - A pointer to the last block configuration (also called "state structure")
    - A sequence of data blocks
    - State structures
- A data block represents a quantity averaged over the integration time set. It can be truncated at certain events (power failure, start etc).
- Data recording must be a full time "modulo" the integration time. For example, with an integration time of 10 minutes, the points are at 2:10 p.m, 2:20 p.m., 2:30 p.m..
- Data recording is done on the integration time elapsed. Example: a point of the load curve at 8.30 corresponds to the magnitude averaged between 8.20 and 8:30.
- A status structure consists of:
    - **points:** unsigned 16-bit integer, number of registered items corresponding to this state
    - **id:** identifier, nature of greatness (8-bit unsigned integer):
        - 0 : P+
        - 1 : P-
        - 2 : Q1
        - 3 : Q2
        - 4 : Q3
        - 5 : Q4
        - 6 : S+
        - 7 : S-
        - 20 : V1
        - 21 : V2
        - 22 : V3
        - 23 : I1
        - 24 : I2
        - 25 : I3
    - **int:** integration time, in minutes, of the following values (8-bit unsigned integer):
        - 10 minutes
        - 15 minutes
        - 20 minutes
        - 30 minutes
        - 60 minutes
    - **event ID:** event marked by the state (16-bit unsigned integer)
        - 0 : current state
        - 1 : change date (old)

2 : change of date (new)

3 : power cut

4 : power-on

5 : configuration change (integration time)

6 : configuration change (nature of the greatness)

- o **date:** date of the event (Unix format, 32 bit unsigned integer representing seconds since 01/01/1970 00:00)
- o **CHK:** Simple checksum of the state structure, not including the checksum.
- The size of the configuration structure, shown in the mapping (required for the calculation of the total number of bytes read).
  - o General appearance of a configuration structure:
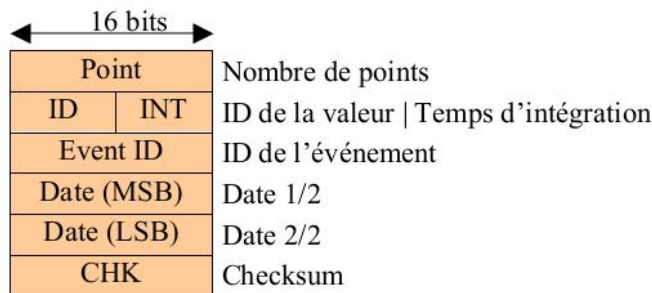
  - o General appearance of load curve:
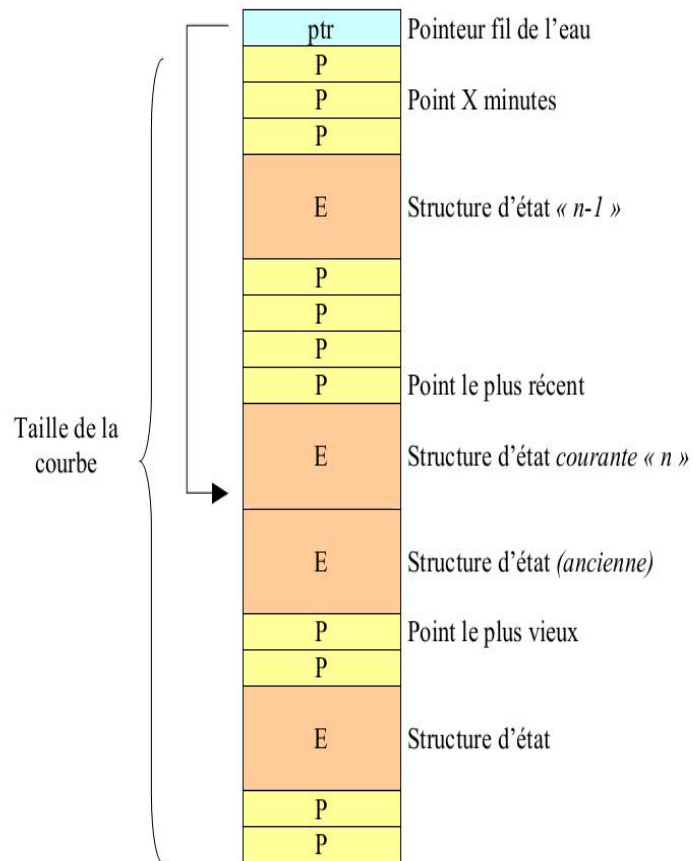
- The reading of the curve of load is made in a circular way, in the decreasing order of the addresses and from the structure of state " In progress " to obtain the values from the most recent in the oldest.

4.2 Operating Rules

- The pointer always points to the checksum of the latest state structure
- The date in the state structure pointed to indicate the date of the event or the last recorded point
- Each reading a configuration structure, check that the number of words read total does not exceed the size of the trace, so as not to loop therein.

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