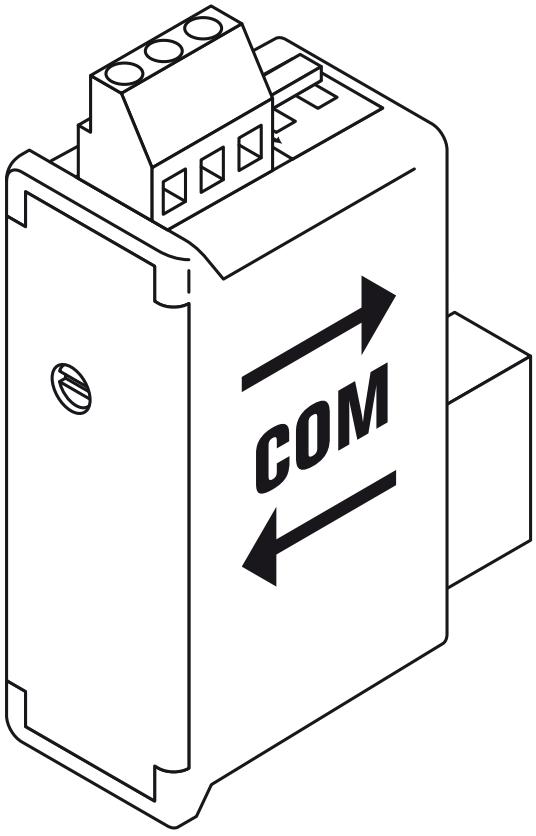
DIRIS A40/A41

RS485 – JBUS/MODBUS®

Operating instructions

F | GB | D | I | NL | E | P



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Contents

PRELIMINARY OPERATIONS

For personnel and product safety please read the contents of these operating instructions carefully before connecting.
Check the following points as soon as you receive the ***DIRIS A40/A41*** package:
• the packing is in good condition,
• the product has not been damaged during transit,
• the product reference number conforms to your order,
• the package contains the product and the operating instructions.

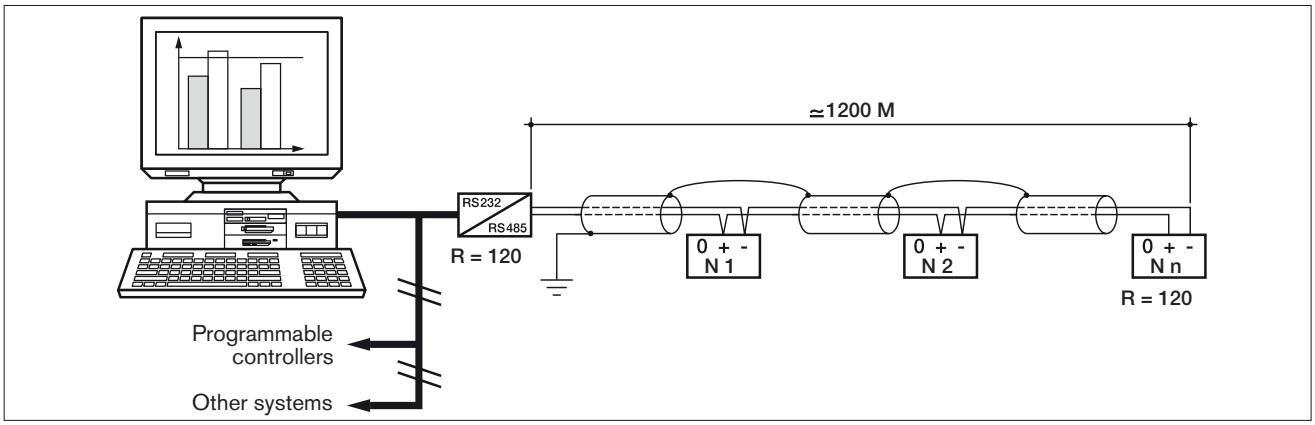
GENERAL INFORMATION

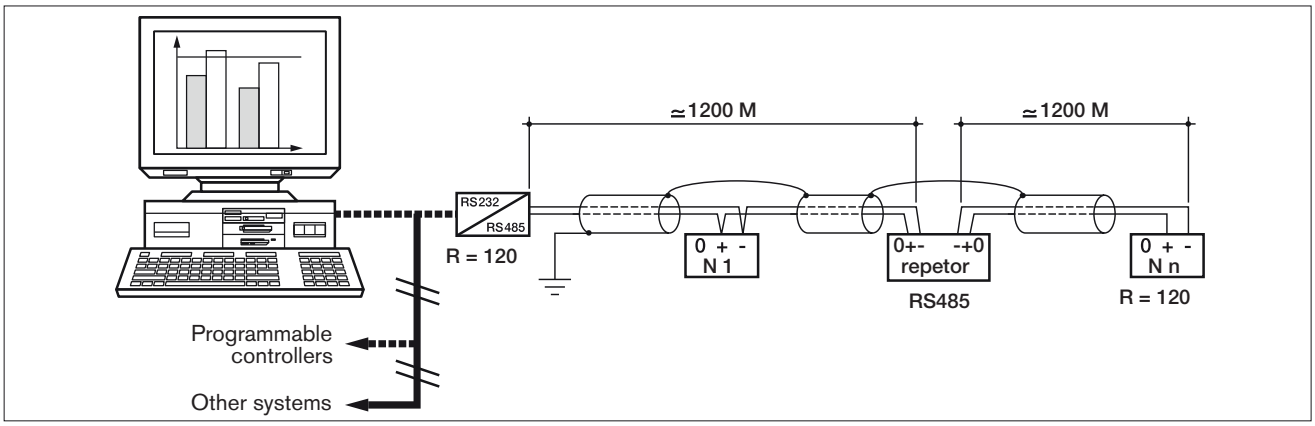
Functions

The optional IP Communication module must be connected to the ***DIRIS A40/A41*** (réf. : 4825 0A40, 4825 0A41, 4825 1A40, 4525 1A41). It provides an RS485 serial link (2 or 3 wires) with JBUS/MODBUS® protocol for the use of ***DIRIS A40/A41*** from a PC or PLC.

General points

For a standard configuration, an RS 485 link is used to connect up to 31 ***DIRIS*** or ***COUNTIS Ci*** with a PC or a PLC over a distance of 1200 metres, using JBUS/MODBUS© protocol.





Recommendations:
You should use a shielded twisted pair (LIYCY type). In a disturbed environment or large network (in terms of length) we recommend the use of a shielded twisted pair (type LIYCY-CY).
A repeater (1 channel) or an arrestor (4 channels) should be used if you intend to exceed the distance (1200 m) and/or maximum number (31) of ***DIRIS***. Please contact us for more information.

NB :
A 120 ohm resistance (found on the additional module) must be fixed at both ends of the link.

Other solutions are available (modem, optical fibre, etc.). Please contact us.

INSTALLATION

CONNECTION

The module is fitted onto the back of the ***DIRIS A40/A41*** in one of the 4 positions provided.

⚠ The ***DIRIS A40/A41*** must be switched off

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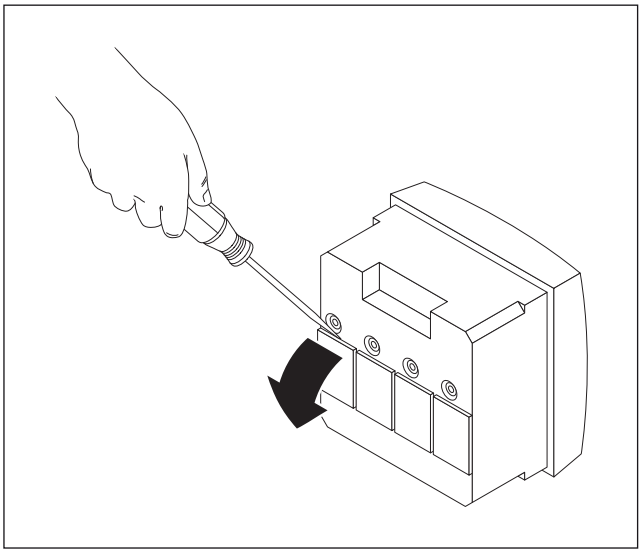

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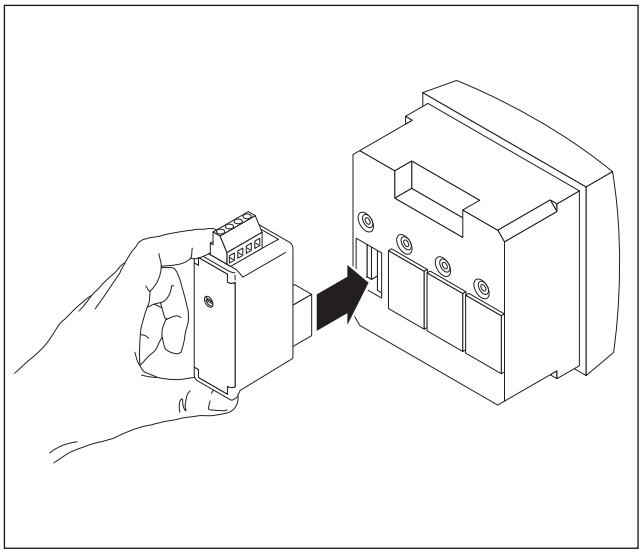
Ç Fix the module in one of the four positions.



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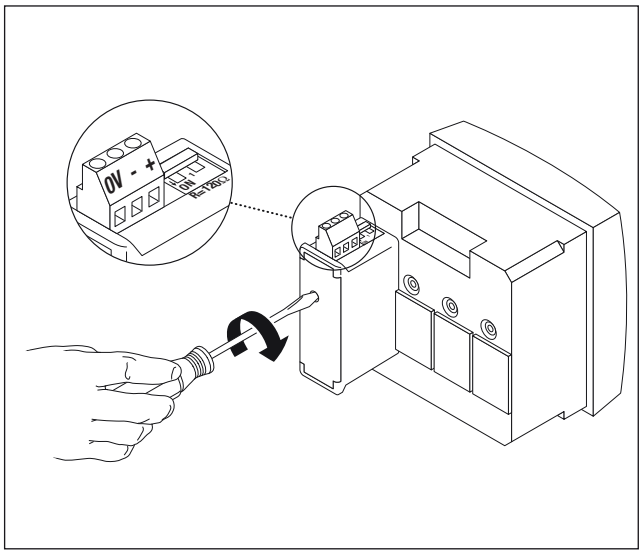
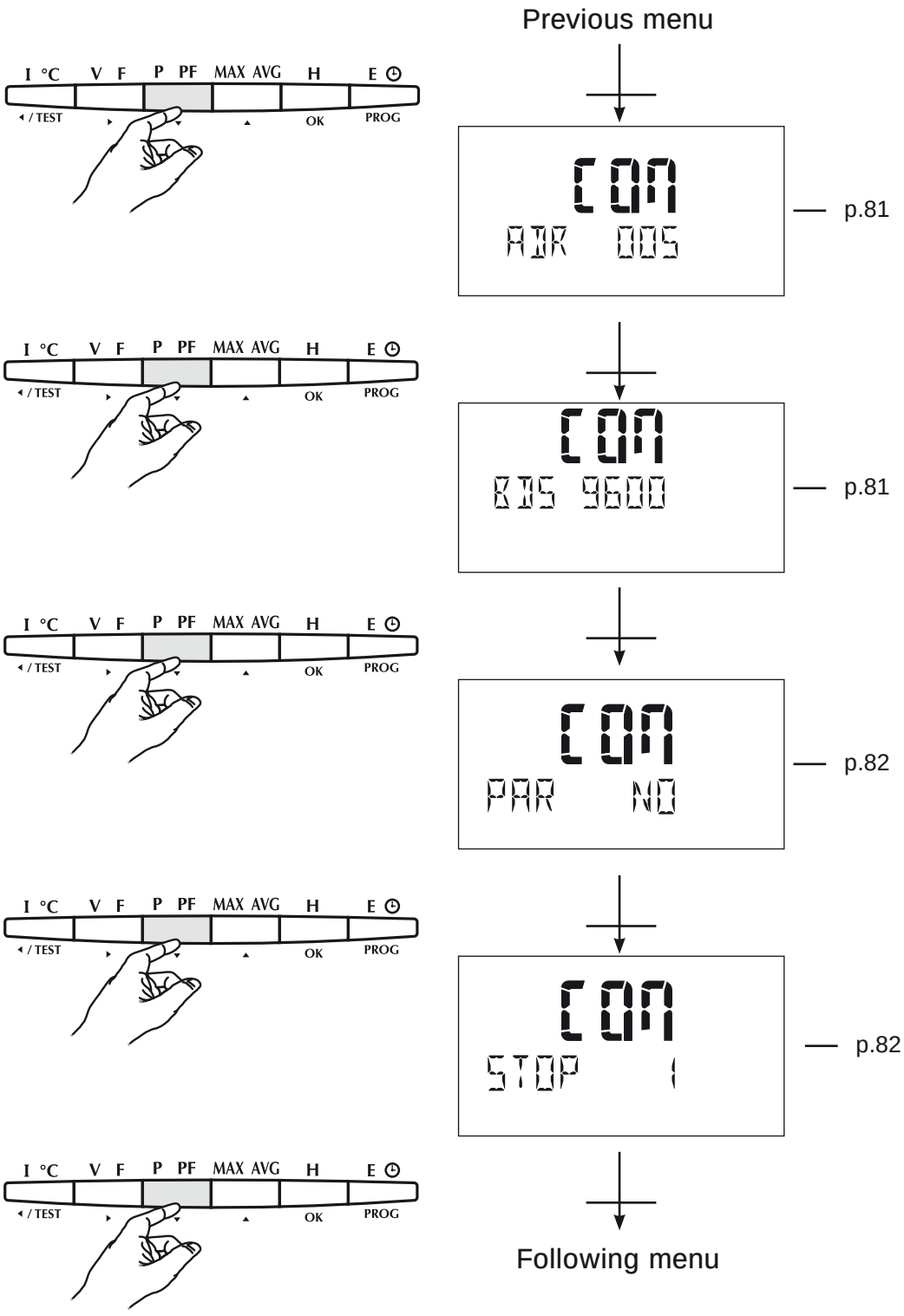


DIRIS 347 A

Ñ Follow indications when connecting the terminal.
Switch on voltage supply.

PROGRAMMING



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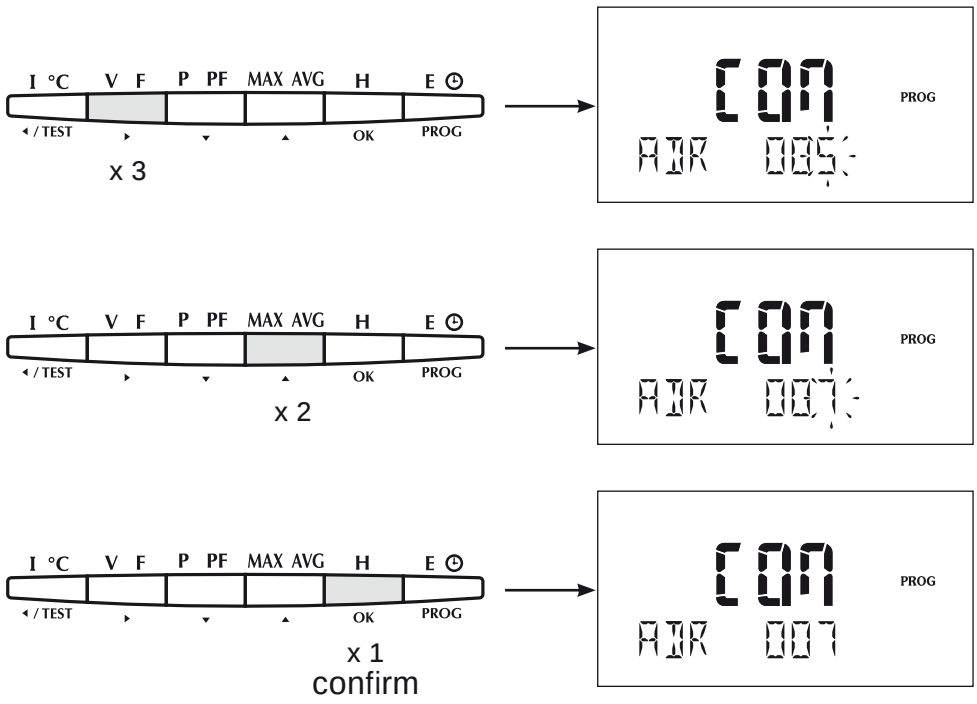
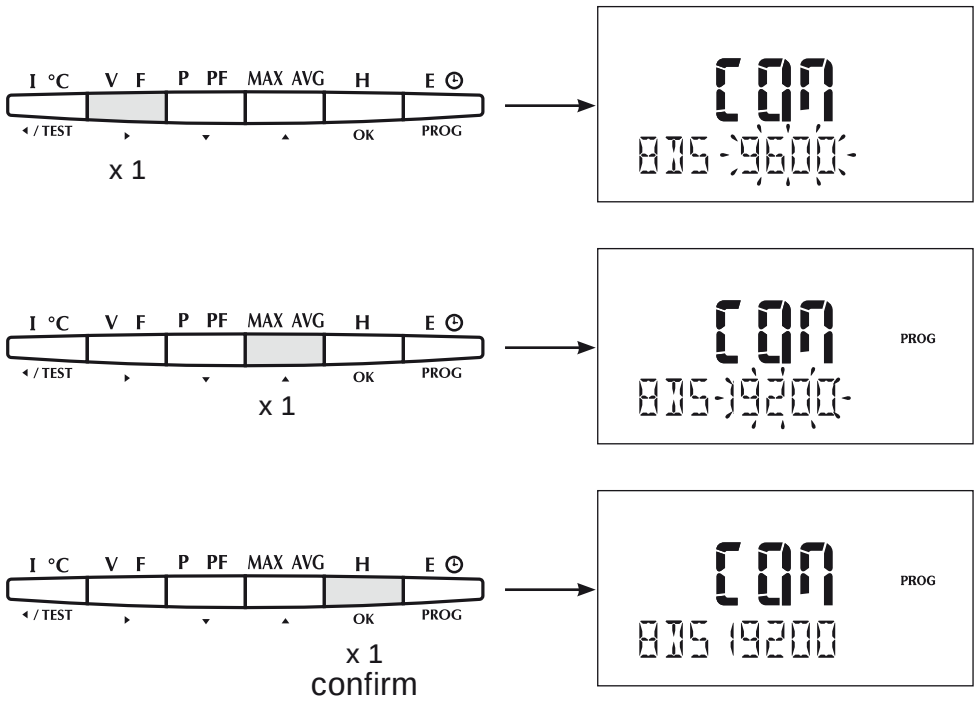
COMMUNICATION ADDRESS

> Example : COM ADR = 7



COMMUNICATION SPEED

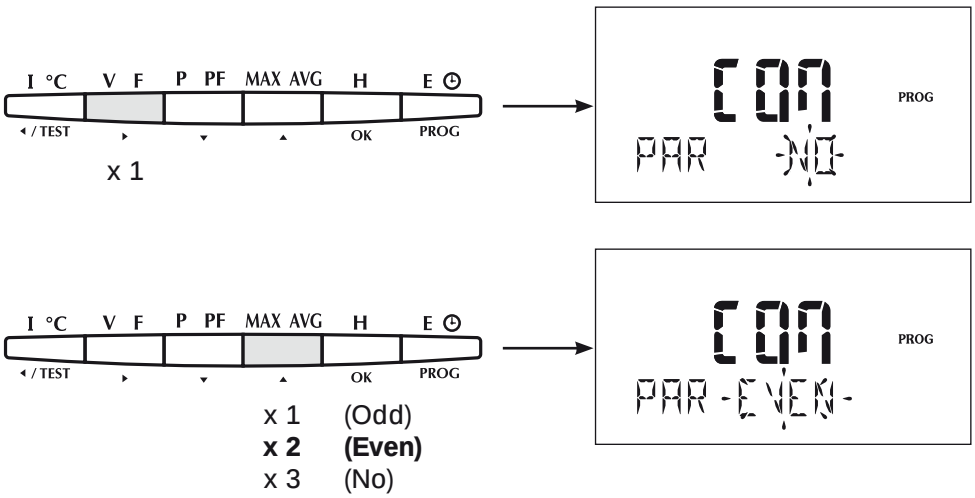
> Example : BDS = 19 200 bauds



PROGRAMMING

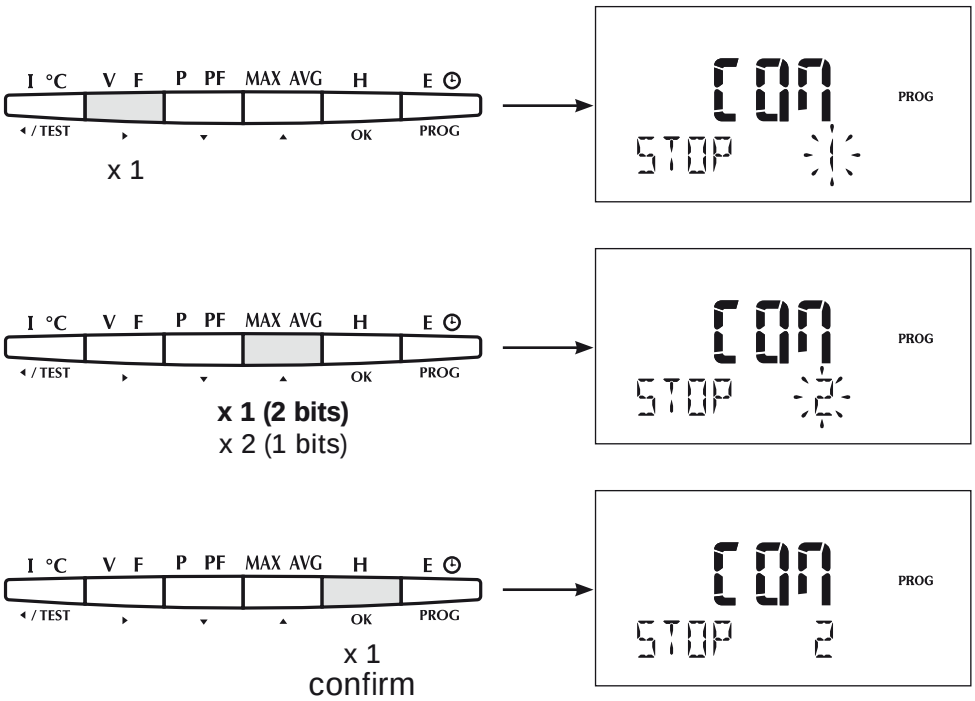
COMMUNICATION PARITY

> Example : PAR = Even



COMMUNICATION STOP BIT

> Example : STOP = 2



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COMMUNICATION

The JBUS/MODBUS® used by the ***DIRIS A40/A41*** involves a dialogue using a master-slave hierarchical structure. There are two possible dialogues:

- the master communicates with a slave (***DIRIS***) and waits for its reply
- the master communicates with all the slaves (***DIRIS***) without waiting for their reply.

The mode of communication is the RTU (Remote Terminal Unit) using hexadecimal characters of at least 8 bits.

THE STANDARD COMMUNICATIONS FRAME

The standard communications frame consists of:

Slave address	Function code	Address	Data	CRC 16

According to the JBUS/MODBUS® protocol, transmission time must be less than 3 silences, i.e. the emission time of 3 characters so that the message is processed by the ***DIRIS***.

To correctly use information, the following functions are important:

3 : to read n words (maximum 128).
6 : to write one word.
8 : to diagnose exchanges between the master and the slave via meters 1, 3, 4, 5 and 6.
16 : to write n words (maximum 128).

NB:
When selecting slave address 0, a message is sent to all the instruments present on the network (only for functions 6 and 16).

Comment :
The response time (time out question/answer) is 250 ms maximum

COMMUNICATION

A : NEW COMMUNICATION TABLE FROM 01/2009

These new tables are available for all new Socomec products on sale from January 2009. The aim is to have common tables for common values, irrespective of the Socomec product. We recommend that you use these new tables whenever possible for developing your applications.

1 > TABLE C550 Hex : Main measurements allocated from CT (current transformer) and VT (voltage transformer) values

Decimal address	Hex. address	No. of words	Description	Unit	JBUS function available
50512	C550	2	hour meter	1/100 h	3
50514	C552	2	phase to phase voltage U12	V/100	3
50516	C554	2	phase to phase voltage U23	V/100	3
50518	C556	2	phase to phase voltage U31	V/100	3
50520	C558	2	phase to neutral voltage phase 1	V/100	3
50522	C55A	2	phase to neutral voltage phase 2	V/100	3
50524	C55C	2	phase to neutral voltage phase 3	V/100	3
50526	C55E	2	frequency	Hz/100	3
50528	C560	2	phase current 1	mA	3
50530	C562	2	phase current 2	mA	3
50532	C564	2	phase current 3	mA	3
50534	C566	2	neutral current	mA	3
50536	C568	2	Σ active power +/-	kW/100	3
50538	C56A	2	Σ reactive power +/-	kvar/100	3
50540	C56C	2	Σ apparent power	kVA/100	3
50542	C56E	2	Σ power factor -: leading and + : lagging	0,001	3
50544	C570	2	active power phase 1 +/-	kW/100	3
50546	C572	2	active power phase 2 +/-	kW/100	3
50548	C574	2	active power phase 3 +/-	kW/100	3
50550	C576	2	reactive power phase 1 +/-	kvar/100	3
50552	C578	2	reactive power phase 2 +/-	kvar/100	3
50554	C57A	2	reactive power phase 3 +/-	kvar/100	3
50556	C57C	2	apparent power phase 1	kVA/100	3
50558	C57E	2	apparent power phase 2	kVA/100	3
50560	C580	2	apparent power phase 3	kVA/100	3
50562	C582	2	power factor phase 1 -: leading and + : lagging	0,001	3
50564	C584	2	power factor phase 2 -: leading and + : lagging	0,001	3
50566	C586	2	power factor phase 3 -: leading and + : lagging	0,001	3
50568	C588	2	Reserved for manufacturer	-	3
50570	C58A	2	Reserved for manufacturer	-	3
50572	C58C	2	Reserved for manufacturer	-	3

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A : NEW COMMUNICATION TABLE FROM 01/2009

2 > TABLE C650 Hex : Energy monitoring

Decimal address	Hex. address	No. of words	Description	Unit	JBUS function available
50768	C650	2	hour meter	1/100 h	3
50770	C652	2	Reserved for manufacturer	-	3
50772	C654	2	Reserved for manufacturer	-	3
50774	C656	2	Reserved for manufacturer	-	3
50776	C658	2	Reserved for manufacturer	-	3
50778	C65A	2	Reserved for manufacturer	-	3
50770	C652	2	active energy +	kWh	3
50772	C654	2	reactive energy +	kvarh	3
50774	C656	2	apparent apparente	kVAh	3
50776	C658	2	active energy -	kWh	3
50778	C65A	2	active energy +	kWh	3
50780	C65C	2	No. Compteurs d'Impulsions	-	3
50782	C65E	2	pulse meter 1	-	3
50784	C660	2	pulse meter 2	-	3
50786	C662	2	pulse meter 3	-	3
50788	C664	2	pulse meter 4	-	3
50790	C666	2	pulse meter 5	-	3
50792	C668	2	pulse meter 6	-	3
50794	C66A	2	Reserved for manufacturer	-	3
50796	C66C	2	Reserved for manufacturer	-	3
50798	C66E	2	Reserved for manufacturer	-	3
50800	C670	2	Reserved for manufacturer	-	3
50802	C672	2	S Predicted active power	kW/100	3
50804	C674	2	S Predicted reactive power	kvar/100	3
50806	C676	2	S Predicted apparent power	kVA/100	3
50808	C678	2	Ea+ between 2 tops	0,1 Ws	3
50810	C67A	2	Ea- between 2 tops	0,1 Ws	3
50812	C67C	2	Er+ between 2 tops	0,1 vars	3
50814	C67E	2	Er- between 2 tops	0,1 vars	3
50816	C680	2	Reserved for manufacturer	-	3
50816	C680	1	Reserved for manufacturer	-	3
50817	C681	1	Reserved for manufacturer	-	3

3 > TABLE C750 Hex : Additional measurements allocated from CT values (current transformer) and VT (voltage transformer) values

Decimal address	Hex. address	No. of words	Description	Unit	JBUS function available
51024	C750	2	avg U12	V/100	3
51026	C752	2	avg U23	V/100	3
51028	C754	2	avg U31	V/100	3
51030	C756	2	avg V1	V/100	3
51032	C758	2	avg V2	V/100	3
51034	C75A	2	avg V3	V/100	3
51036	C75C	2	avg F	Hz/100	3
51038	C75E	2	avg I1	mA	3
51040	C760	2	avg I2	mA	3
51042	C762	2	avg I3	mA	3
51044	C764	2	avg In	mA	3
51046	C766	2	avg Σ active power +	kW/100	3
51048	C768	2	avg Σ active power -	kW/100	3
51050	C76A	2	avg Σ reactive power +	kvar/100	3
51052	C76C	2	avg Σ reactive power -	kvar/100	3
51054	C76E	2	avg Σ apparent power	kVA/100	3
51056	C770	2	max/avg U12	V/100	3

A : NEW COMMUNICATION TABLE FROM 01/2009

3 > TABLE C750 Hex (continued)

Decimal address	Hex. address	No. of words	Description	Unit	JBUS function available
51058	C772	2	max/avg U23	V/100	3
51060	C774	2	max/avg U31	V/100	3
51062	C776	2	max/avg V1	V/100	3
51064	C778	2	max/avg V2	V/100	3
51066	C77A	2	max/avg V3	V/100	3
51068	C77C	2	max/avg F	Hz/100	3
51070	C77E	2	max/avg I1	mA	3
51072	C780	2	max/avg I2	mA	3
51074	C782	2	max/avg I3	mA	3
51076	C784	2	max/avg In	mA	3
51078	C786	2	max/avg Σ active power +	kW/100	3
51080	C788	2	max/avg Σ active power -	kW/100	3
51082	C78A	2	max/avg Σ reactive power +	kvar/100	3
51084	C78C	2	max/avg Σ reactive power -	kvar/100	3
51086	C78E	2	max/avg Σ apparent power	kVA/100	3
51088	C790	1	Reserved for manufacturer	-	3
51089	C791	1	Reserved for manufacturer	-	3
51090	C792	1	Reserved for manufacturer	-	3
51091	C793	1	Reserved for manufacturer	-	3
51092	C794	1	Reserved for manufacturer	-	3
51093	C795	1	Reserved for manufacturer	-	3

4 > TABLE C850 Hex : Main measurements not allocated from CT values (current transformer) and VT (voltage transformer) values

CAUTION : using this table involves multiplying values by transformation ratios.

Decimal address	Hex. address	No. of words	Description	Unit	JBUS function available
51280	C850	1	hour meter	h	3
51281	C851	1	phase to phase voltage U12	V/100	3
51282	C852	1	phase to phase voltage U23	V/100	3
51283	C853	1	phase to phase voltage U31	V/100	3
51284	C854	1	phase to neutral voltage 1	V/100	3
51285	C855	1	phase to neutral voltage 2	V/100	3
51286	C856	1	phase to neutral voltage 3	V/100	3
51287	C857	1	frequency	Hz/100	3
51288	C858	1	phase current 1	mA	3
51289	C859	1	phase current 3	mA	3
51291	C85B	1	neutral current	mA	3
51292	C85C	1	Σ active power +/-	kW/100	3
51293	C85D	1	Σ reactive power +/-	kvar/100	3
51294	C85E	1	Σ apparent power +/-	kVA/100	3
51295	C85F	1	Σ power factor L/C -: leading and + : lagging	0,001	3
51296	C860	1	phase active power 1 +/-	kW/100	3
51297	C861	1	phase active power 2 +/-	kW/100	3
51298	C862	1	phase active power 3 +/-	kW/100	3
51299	C863	1	phase reactive power 1 +/-	kvar/100	3
51300	C864	1	phase reactive power 2 +/-	kvar/100	3
51301	C865	1	phase reactive power 3 +/-	kvar/100	3
51302	C866	1	phase apparent power 1	kVA/100	3
51303	C867	1	phase apparent power 2	kVA/100	3
51304	C868	1	phase apparent power 3	kVA/100	3

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A : NEW COMMUNICATION TABLE FROM 01/2009

4 > TABLE C850 Hex

Decimal address	Hex. address	No. of words	Description	Unit	JBUS function available
51305	C869	1	phase power factor 1 -: leading and + : lagging	0,001	3
51306	C86A	1	phase power factor 2 -: leading and + : lagging	0,001	3
51307	C86B	1	phase power factor 3 -: leading and + : lagging	0,001	3
51308	C86C	1	Reserved for manufacturer	-	3
51309	C86D	1	Reserved for manufacturer	-	3
51310	C86E	1	Reserved for manufacturer	-	3
51311	C86F	1	Ea+	MWh	3
51312	C870	1	Reserved for manufacturer	-	3
51313	C871	1	ER+	MWh	3

5 > TABLE C900Hex : Temperature measurements

Decimal address	Hex. address	No. of words	Description	Unit	JBUS function available
51456	C900	1	Internal temperature sensor present 0 : no - 1 : yes	-	3
51457	C901	1	Temperature module	°C	3
51458	C902	1	External temperature sensors (1 to 5max)	-	3
51459	C903	1	extern temperature 1	°C	3
51460	C904	1	extern temperature 2	°C	3
51461	C905	1	extern temperature 3	°C	3
51462	C906	1	extern temperature 4	°C	3
51463	C907	1	extern temperature 5	°C	3

6 > TABLE C950Hex : Harmonics

Decimal address	Hex. address	No. of words	Description	Unit	JBUS function available
			THD		
51536	C950	1	thd U12	0,001	3
51537	C951	1	thd U23	0,001	3
51538	C952	1	thd U31	0,001	3
51539	C953	1	thd V1	0,001	3
51540	C954	1	thd V2	0,001	3
51541	C955	1	thd V3	0,001	3
51542	C956	1	thd I1	0,001	3
51543	C957	1	thd I2	0,001	3
51544	C958	1	thd I3	0,001	3
51545	C959	1	thd In	0,001	3
			Current		
51546	C95A	1	Max rank		3
51547	C95B	1	Harmonic I1 row 3	0,001	3
51548	C95C	1	Harmonic I2 row 3	0,001	3
51549	C95D	1	Harmonic I3 row 3	0,001	3
51550	C95E	1	Harmonic IN row 3	0,001	3
51551	C95F	1	Harmonic I1 row 5	0,001	3
51552	C960	1	Harmonic I2 row 5	0,001	3
51553	C961	1	Harmonic I3 row 5	0,001	3
51554	C962	1	Harmonic IN row 5	0,001	3
51555	C963	1	Harmonic I1 row 7	0,001	3

A : NEW COMMUNICATION TABLE FROM 01/2009

6 > TABLE C950Hex (continued)

Decimal address	Hex. address	No. of words	Description	Unit	JBUS function available
51556	C964	1	Harmonic I2 row 7	0,001	3
51557	C965	1	Harmonic I3 row 7	0,001	3
51558	C966	1	Harmonic IN row 7	0,001	3
51559	C967	1	Harmonic I1 row 9	0,001	3
51560	C968	1	Harmonic I2 row 9	0,001	3
51561	C969	1	Harmonic I3 row 9	0,001	3
51562	C96A	1	Harmonic IN row 9	0,001	3
51563	C96B	1	Harmonic I1 row 11	0,001	3
51564	C96C	1	Harmonic I2 row 11	0,001	3
51565	C96D	1	Harmonic I3 row 11	0,001	3
51566	C96E	1	Harmonic IN row 11	0,001	3
51567	C96F	1	Harmonic I1 row 13	0,001	3
51568	C970	1	Harmonic I2 row 13	0,001	3
51569	C971	1	Harmonic I3 row 13	0,001	3
51570	C972	1	Harmonic IN row 13	0,001	3
51571	C973	1	Harmonic I1 row 15	0,001	3
51572	C974	1	Harmonic I2 row 15	0,001	3
51573	C975	1	Harmonic I3 row 15	0,001	3
51574	C976	1	Harmonic IN row 15	0,001	3
51575	C977	1	Harmonic I1 row 17	0,001	3
51576	C978	1	Harmonic I2 row 17	0,001	3
51577	C979	1	Harmonic I3 row 17	0,001	3
51578	C97A	1	Harmonic IN row 17	0,001	3
51579	C97B	1	Harmonic I1 row 19	0,001	3
51580	C97C	1	Harmonic I2 row 19	0,001	3
51581	C97D	1	Harmonic I3 row 19	0,001	3
51582	C97E	1	Harmonic IN row 19	0,001	3
51583	C97F	1	Harmonic I1 row 21	0,001	3
51584	C980	1	Harmonic I2 row 21	0,001	3
51585	C981	1	Harmonic I3 row 21	0,001	3
51586	C982	1	Harmonic IN row 21	0,001	3
51587	C983	1	Harmonic I1 row 23	0,001	3
51588	C984	1	Harmonic I2 row 23	0,001	3
51589	C985	1	Harmonic I3 row 23	0,001	3
51590	C986	1	Harmonic IN row 23	0,001	3
51591	C987	1	Harmonic I1 row 25	0,001	3
51592	C988	1	Harmonic I2 row 25	0,001	3
51593	C989	1	Harmonic I3 row 25	0,001	3
51594	C98A	1	Harmonic IN row 25	0,001	3
51595	C98B	1	Harmonic I1 row 27	0,001	3
51596	C98C	1	Harmonic I2 row 27	0,001	3
51597	C98D	1	Harmonic I3 row 27	0,001	3
51598	C98E	1	Harmonic IN row 27	0,001	3
51599	C98F	1	Harmonic I1 row 29	0,001	3
51600	C990	1	Harmonic I2 row 29	0,001	3
51601	C991	1	Harmonic I3 row 29	0,001	3
51602	C992	1	Harmonic IN row 29	0,001	3
51603	C993	1	Harmonic I1 row 31	0,001	3
51604	C994	1	Harmonic I2 row 31	0,001	3
51605	C995	1	Harmonic I3 row 31	0,001	3
51606	C996	1	Harmonic IN row 31	0,001	3
51607	C997	1	Harmonic I1 row 33	0,001	3
51608	C998	1	Harmonic I2 row 33	0,001	3
51609	C999	1	Harmonic I3 row 33	0,001	3

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A : NEW COMMUNICATION TABLE FROM 01/2009

6 > TABLE C950Hex (continued)

Decimal address	Hex. address	No. of words	Description	Unit	JBUS function available
51610	C99A	1	Harmonic IN row 33	0,001	3
51611	C99B	1	Harmonic I1 row 35	0,001	3
51612	C99C	1	Harmonic I2 row 35	0,001	3
51613	C99D	1	Harmonic I3 row 35	0,001	3
51614	C99E	1	Harmonic IN row 35	0,001	3
51615	C99F	1	Harmonic I1 row 37	0,001	3
51616	C9A0	1	Harmonic I2 row 37	0,001	3
51617	C9A1	1	Harmonic I3 row 37	0,001	3
51618	C9A2	1	Harmonic IN row 37	0,001	3
51619	C9A3	1	Harmonic I1 row 39	0,001	3
51620	C9A4	1	Harmonic I2 row 39	0,001	3
51621	C9A5	1	Harmonic I3 row 39	0,001	3
51622	C9A6	1	Harmonic IN row 39	0,001	3
51623	C9A7	1	Harmonic I1 row 41	0,001	3
51624	C9A8	1	Harmonic I2 row 41	0,001	3
51625	C9A9	1	Harmonic I3 row 41	0,001	3
51626	C9AA	1	Harmonic IN row 41	0,001	3
51627	C9AB	1	Harmonic I1 row 43	0,001	3
51628	C9AC	1	Harmonic I2 row 43	0,001	3
51629	C9AD	1	Harmonic I3 row 43	0,001	3
51630	C9AE	1	Harmonic IN row 43	0,001	3
51631	C9AF	1	Harmonic I1 row 45	0,001	3
51632	C9B0	1	Harmonic I2 row 45	0,001	3
51633	C9B1	1	Harmonic I3 row 45	0,001	3
51634	C9B2	1	Harmonic IN row 45	0,001	3
51635	C9B3	1	Harmonic I1 row 47	0,001	3
51636	C9B4	1	Harmonic I2 row 47	0,001	3
51637	C9B5	1	Harmonic I3 row 47	0,001	3
51638	C9B6	1	Harmonic IN row 47	0,001	3
51639	C9B7	1	Harmonic I1 row 49	0,001	3
51640	C9B8	1	Harmonic I2 row 49	0,001	3
51641	C9B9	1	Harmonic I3 row 49	0,001	3
51642	C9BA	1	Harmonic IN row 49	0,001	3
51643	C9BB	1	Harmonic I1 row 51	0,001	3
51644	C9BC	1	Harmonic I2 row 51	0,001	3
51645	C9BD	1	Harmonic I3 row 51	0,001	3
51646	C9BE	1	Harmonic IN row 51	0,001	3
51647	C9BF	1	Harmonic I1 row 53	0,001	3
51648	C9C0	1	Harmonic I2 row 53	0,001	3
51649	C9C1	1	Harmonic I3 row 53	0,001	3
51650	C9C2	1	Harmonic IN row 53	0,001	3
51651	C9C3	1	Harmonic I1 row 55	0,001	3
51652	C9C4	1	Harmonic I2 row 55	0,001	3
51653	C9C5	1	Harmonic I3 row 55	0,001	3
51654	C9C6	1	Harmonic IN row 55	0,001	3
51655	C9C7	1	Harmonic I1 row 57	0,001	3
51656	C9C8	1	Harmonic I2 row 57	0,001	3
51657	C9C9	1	Harmonic I3 row 57	0,001	3
51658	C9CA	1	Harmonic IN row 57	0,001	3
51659	C9CB	1	Harmonic I1 row 59	0,001	3
51660	C9CC	1	Harmonic I2 row 59	0,001	3
51661	C9CD	1	Harmonic I3 row 59	0,001	3
51662	C9CE	1	Harmonic IN row 59	0,001	3
51663	C9CF	1	Harmonic I1 row 61	0,001	3

A : NEW COMMUNICATION TABLE FROM 01/2009

6 > TABLE C950Hex (continued)

Decimal address	Hex. address	No. of words	Description	Unit	JBUS function available
51664	C9D0	1	Harmonic I2 row 61	0,001	3
51665	C9D1	1	Harmonic I3 row 61	0,001	3
51666	C9D2	1	Harmonic IN row 61	0,001	3
51667	C9D3	1	Harmonic I1 row 63	0,001	3
51668	C9D4	1	Harmonic I2 row 63	0,001	3
51669	C9D5	1	Harmonic I3 row 63	0,001	3
51670	C9D6	1	Harmonic IN row 63	0,001	3
Phase to phase voltage					
51671	C9D7	1	Max rank		3
51672	C9D8	1	Harmonic U12 row 3	0,001	3
51673	C9D9	1	Harmonic U23 row 3	0,001	3
51674	C9DA	1	Harmonic U31 row 3	0,001	3
51675	C9DB	1	Harmonic U12 row 5	0,001	3
51676	C9DC	1	Harmonic U23 row 5	0,001	3
51677	C9DD	1	Harmonic U31 row 5	0,001	3
51678	C9DE	1	Harmonic U12 row 7	0,001	3
51679	C9DF	1	Harmonic U23 row 7	0,001	3
51680	C9E0	1	Harmonic U31 row 7	0,001	3
51681	C9E1	1	Harmonic U12 row 9	0,001	3
51682	C9E2	1	Harmonic U23 row 9	0,001	3
51683	C9E3	1	Harmonic U31 row 9	0,001	3
51684	C9E4	1	Harmonic U12 row 11	0,001	3
51685	C9E5	1	Harmonic U23 row 11	0,001	3
51686	C9E6	1	Harmonic U31 row 11	0,001	3
51687	C9E7	1	Harmonic U12 row 13	0,001	3
51688	C9E8	1	Harmonic U23 row 13	0,001	3
51689	C9E9	1	Harmonic U31 row 13	0,001	3
51690	C9EA	1	Harmonic U12 row 15	0,001	3
51691	C9EB	1	Harmonic U23 row 15	0,001	3
51692	C9EC	1	Harmonic U31 row 15	0,001	3
51693	C9ED	1	Harmonic U12 row 17	0,001	3
51694	C9EE	1	Harmonic U23 row 17	0,001	3
51695	C9EF	1	Harmonic U31 row 17	0,001	3
51696	C9F0	1	Harmonic U12 row 19	0,001	3
51697	C9F1	1	Harmonic U23 row 19	0,001	3
51698	C9F2	1	Harmonic U31 row 19	0,001	3
51699	C9F3	1	Harmonic U12 row 21	0,001	3
51700	C9F4	1	Harmonic U23 row 21	0,001	3
51701	C9F5	1	Harmonic U31 row 21	0,001	3
51702	C9F6	1	Harmonic U12 row 23	0,001	3
51703	C9F7	1	Harmonic U23 row 23	0,001	3
51704	C9F8	1	Harmonic U31 row 23	0,001	3
51705	C9F9	1	Harmonic U12 row 25	0,001	3
51706	C9FA	1	Harmonic U23 row 25	0,001	3
51707	C9FB	1	Harmonic U31 row 25	0,001	3
51708	C9FC	1	Harmonic U12 row 27	0,001	3
51709	C9FD	1	Harmonic U23 row 27	0,001	3
51710	C9FE	1	Harmonic U31 row 27	0,001	3
51711	C9FF	1	Harmonic U12 row 29	0,001	3
51712	CA00	1	Harmonic U23 row 29	0,001	3
51713	CA01	1	Harmonic U31 row 29	0,001	3
51714	CA02	1	Harmonic U12 row 31	0,001	3
51715	CA03	1	Harmonic U23 row 31	0,001	3
51716	CA04	1	Harmonic U31 row 31	0,001	3

GB

A : NEW COMMUNICATION TABLE FROM 01/2009

6 > TABLE C950Hex (continued)

Decimal address	Hex. address	No. of words	Description	Unit	JBUS function available
51717	CA05	1	Harmonic U12 row 33	0,001	3
51718	CA06	1	Harmonic U23 row 33	0,001	3
51719	CA07	1	Harmonic U31 row 33	0,001	3
51720	CA08	1	Harmonic U12 row 35	0,001	3
51721	CA09	1	Harmonic U23 row 35	0,001	3
51722	CA0A	1	Harmonic U31 row 35	0,001	3
51723	CA0B	1	Harmonic U12 row 37	0,001	3
51724	CA0C	1	Harmonic U23 row 37	0,001	3
51725	CA0D	1	Harmonic U31 row 37	0,001	3
51726	CA0E	1	Harmonic U12 row 39	0,001	3
51727	CA0F	1	Harmonic U23 row 39	0,001	3
51728	CA10	1	Harmonic U31 row 39	0,001	3
51729	CA11	1	Harmonic U12 row 41	0,001	3
51730	CA12	1	Harmonic U23 row 41	0,001	3
51731	CA13	1	Harmonic U31 row 41	0,001	3
51732	CA14	1	Harmonic U12 row 43	0,001	3
51733	CA15	1	Harmonic U23 row 43	0,001	3
51734	CA16	1	Harmonic U31 row 43	0,001	3
51735	CA17	1	Harmonic U12 row 45	0,001	3
51736	CA18	1	Harmonic U23 row 45	0,001	3
51737	CA19	1	Harmonic U31 row 45	0,001	3
51738	CA1A	1	Harmonic U12 row 47	0,001	3
51739	CA1B	1	Harmonic U23 row 47	0,001	3
51740	CA1C	1	Harmonic U31 row 47	0,001	3
51741	CA1D	1	Harmonic U12 row 49	0,001	3
51742	CA1E	1	Harmonic U23 row 49	0,001	3
51743	CA1F	1	Harmonic U31 row 49	0,001	3
51744	CA20	1	Harmonic U12 row 51	0,001	3
51745	CA21	1	Harmonic U23 row 51	0,001	3
51746	CA22	1	Harmonic U31 row 51	0,001	3
51747	CA23	1	Harmonic U12 row 53	0,001	3
51748	CA24	1	Harmonic U23 row 53	0,001	3
51749	CA25	1	Harmonic U31 row 53	0,001	3
51750	CA26	1	Harmonic U12 row 55	0,001	3
51751	CA27	1	Harmonic U23 row 55	0,001	3
51752	CA28	1	Harmonic U31 row 55	0,001	3
51753	CA29	1	Harmonic U12 row 57	0,001	3
51754	CA2A	1	Harmonic U23 row 57	0,001	3
51755	CA2B	1	Harmonic U31 row 57	0,001	3
51756	CA2C	1	Harmonic U12 row 59	0,001	3
51757	CA2D	1	Harmonic U23 row 59	0,001	3
51758	CA2E	1	Harmonic U31 row 59	0,001	3
51759	CA2F	1	Harmonic U12 row 61	0,001	3
51760	CA30	1	Harmonic U23 row 61	0,001	3
51761	CA31	1	Harmonic U31 row 61	0,001	3
51762	CA32	1	Harmonic U12 row 63	0,001	3
51763	CA33	1	Harmonic U23 row 63	0,001	3
51764	CA34	1	Harmonic U31 row 63	0,001	3
Phase to neutral voltage					
51765	CA35	1	Max rank		3
51766	CA36	1	Harmonic V1 row 3	0,001	3
51767	CA37	1	Harmonic V2 row 3	0,001	3
51768	CA38	1	Harmonic V3 row 3	0,001	3
51769	CA39	1	Harmonic V1 row 5	0,001	3

A : NEW COMMUNICATION TABLE FROM 01/2009

6 > TABLE C950Hex (continued)

Decimal address	Hex. address	No. of words	Description	Unit	JBUS function available
51770	CA3A	1	Harmonic V2 row 5	0,001	3
51771	CA3B	1	Harmonic V3 row 5	0,001	3
51772	CA3C	1	Harmonic V1 row 7	0,001	3
51773	CA3D	1	Harmonic V2 row 7	0,001	3
51774	CA3E	1	Harmonic V3 row 7	0,001	3
51775	CA3F	1	Harmonic V1 row 9	0,001	3
51776	CA40	1	Harmonic V2 row 9	0,001	3
51777	CA41	1	Harmonic V3 row 9	0,001	3
51778	CA42	1	Harmonic V1 row 11	0,001	3
51779	CA43	1	Harmonic V2 row 11	0,001	3
51780	CA44	1	Harmonic V3 row 11	0,001	3
51781	CA45	1	Harmonic V1 row 13	0,001	3
51782	CA46	1	Harmonic V2 row 13	0,001	3
51783	CA47	1	Harmonic V3 row 13	0,001	3
51784	CA48	1	Harmonic V1 row 15	0,001	3
51785	CA49	1	Harmonic V2 row 15	0,001	3
51786	CA4A	1	Harmonic V3 row 15	0,001	3
51787	CA4B	1	Harmonic V1 row 17	0,001	3
51788	CA4C	1	Harmonic V2 row 17	0,001	3
51789	CA4D	1	Harmonic V3 row 17	0,001	3
51790	CA4E	1	Harmonic V1 row 19	0,001	3
51791	CA4F	1	Harmonic V2 row 19	0,001	3
51792	CA50	1	Harmonic V3 row 19	0,001	3
51793	CA51	1	Harmonic V1 row 21	0,001	3
51794	CA52	1	Harmonic V2 row 21	0,001	3
51795	CA53	1	Harmonic V3 row 21	0,001	3
51796	CA54	1	Harmonic V1 row 23	0,001	3
51797	CA55	1	Harmonic V2 row 23	0,001	3
51798	CA56	1	Harmonic V3 row 23	0,001	3
51799	CA57	1	Harmonic V1 row 25	0,001	3
51800	CA58	1	Harmonic V2 row 25	0,001	3
51801	CA59	1	Harmonic V3 row 25	0,001	3
51802	CA5A	1	Harmonic V1 row 27	0,001	3
51803	CA5B	1	Harmonic V2 row 27	0,001	3
51804	CA5C	1	Harmonic V3 row 27	0,001	3
51805	CA5D	1	Harmonic V1 row 29	0,001	3
51806	CA5E	1	Harmonic V2 row 29	0,001	3
51807	CA5F	1	Harmonic V3 row 29	0,001	3
51808	CA60	1	Harmonic V1 row 31	0,001	3
51809	CA61	1	Harmonic V2 row 31	0,001	3
51810	CA62	1	Harmonic V3 row 31	0,001	3
51811	CA63	1	Harmonic V1 row 33	0,001	3
51812	CA64	1	Harmonic V2 row 33	0,001	3
51813	CA65	1	Harmonic V3 row 33	0,001	3
51814	CA66	1	Harmonic V1 row 35	0,001	3
51815	CA67	1	Harmonic V2 row 35	0,001	3
51816	CA68	1	Harmonic V3 row 35	0,001	3
51817	CA69	1	Harmonic V1 row 37	0,001	3
51818	CA6A	1	Harmonic V2 row 37	0,001	3
51819	CA6B	1	Harmonic V3 row 37	0,001	3
51820	CA6C	1	Harmonic V1 row 39	0,001	3
51821	CA6D	1	Harmonic V2 row 39	0,001	3
51822	CA6E	1	Harmonic V3 row 39	0,001	3
51823	CA6F	1	Harmonic V1 row 41	0,001	3

A : NEW COMMUNICATION TABLE FROM 01/2009

6 > TABLE C950Hex (continued)

Decimal address	Hex. address	No. of words	Description	Unit	JBUS function available
51824	CA70	1	Harmonic V2 row 41	0,001	3
51825	CA71	1	Harmonic V3 row 41	0,001	3
51826	CA72	1	Harmonic V1 row 43	0,001	3
51827	CA73	1	Harmonic V2 row 43	0,001	3
51828	CA74	1	Harmonic V3 row 43	0,001	3
51829	CA75	1	Harmonic V1 row 45	0,001	3
51830	CA76	1	Harmonic V2 row 45	0,001	3
51831	CA77	1	Harmonic V3 row 45	0,001	3
51832	CA78	1	Harmonic V1 row 47	0,001	3
51833	CA79	1	Harmonic V2 row 47	0,001	3
51834	CA7A	1	Harmonic V3 row 47	0,001	3
51835	CA7B	1	Harmonic V1 row 49	0,001	3
51836	CA7C	1	Harmonic V2 row 49	0,001	3
51837	CA7D	1	Harmonic V3 row 49	0,001	3
51838	CA7E	1	Harmonic V1 row 51	0,001	3
51839	CA7F	1	Harmonic V2 row 51	0,001	3
51840	CA80	1	Harmonic V3 row 51	0,001	3
51841	CA81	1	Harmonic V1 row 53	0,001	3
51842	CA82	1	Harmonic V2 row 53	0,001	3
51843	CA83	1	Harmonic V3 row 53	0,001	3
51844	CA84	1	Harmonic V1 row 55	0,001	3
51845	CA85	1	Harmonic V2 row 55	0,001	3
51846	CA86	1	Harmonic V3 row 55	0,001	3
51847	CA87	1	Harmonic V1 row 57	0,001	3
51848	CA88	1	Harmonic V2 row 57	0,001	3
51849	CA89	1	Harmonic V3 row 57	0,001	3
51850	CA8A	1	Harmonic V1 row 59	0,001	3
51851	CA8B	1	Harmonic V2 row 59	0,001	3
51852	CA8C	1	Harmonic V3 row 59	0,001	3
51853	CA8D	1	Harmonic V1 row 61	0,001	3
51854	CA8E	1	Harmonic V2 row 61	0,001	3
51855	CA8F	1	Harmonic V3 row 61	0,001	3
51856	CA90	1	Harmonic V1 row 63	0,001	3
51857	CA91	1	Harmonic V2 row 63	0,001	3
51858	CA92	1	Harmonic V3 row 63	0,001	3

7 > TABLE E000 Hex : Primary configuration

Decimal address	Hex. address	No. of words	Description	Unit	JBUS function available
57344	E000	1	Network type : 0 : 1BL 1 : 2BL 2 : 3BL 3 : 3NBL 4 : 4BL 5 : 4NBL	–	3; 6; 16
57345	E001	1	CT secondary : 1: 1 A 5: 5 A	A	3; 6; 16
57346	E002	1	CT primary	A	3; 6; 16
57347	E003	1	Neutral current input on CT : 0 : No 1: Yes	–	3; 6; 16
57348	E004	1	CTN secondary : 1: 1 A 5: 5 A	A	3; 6; 16
57349	E005	1	CTN primary	A	3; 6; 16
57350	E006	1	Voltage input on TP : 0 : No 1: Yes	–	3; 6; 16

A : NEW COMMUNICATION TABLE FROM 01/2009

7 > TABLE E000 Hex (continued)

Decimal address	Hex. address	No. of words	Description	Unit	JBUS function available
57351	E007	1	TP secondary : 60 : 60 V 100 : 100 V 110 : 110 V 115 : 115 V 120 : 120 V 173 : 173 V 190 : 190 V	V	3; 6; 16
57352	E008	2	TP primary	V	3; 6; 16
57354	E00A	1	Synchronisation start 0 : internal - 1 : external	–	3; 6; 16
57355	E00B	1	Internal synchronisation of mean powers P+/- Q+/- : 300 : 5mn - 480 : 8mn - 600 : 10mn 900 : 15mn - 1200 : 20mn - 1800 : 30mn	s	3; 6; 16

8 > TABLE E110 Hex : Ethernet configuration

Decimal address	Hex. address	No. of words	Description	Unit	JBUS function available
57616	E110	1	Ethernet Adress IP Class A (0-255)	–	3; 6; 16
57617	E111	1	Ethernet Adress IP Class B (0-255)	–	3; 6; 16
57618	E112	1	Ethernet Adress IP Class C (0-255)	–	3; 6; 16
57619	E113	1	Ethernet Adress IP Class D (0-255)	–	3; 6; 16
57620	E114	1	Ethernet GATE Class A (0-255)	–	3; 6; 16
57621	E115	1	Ethernet GATE Class B (0-255)	–	3; 6; 16
57622	E116	1	Ethernet GATE Class C (0-255)	–	3; 6; 16
57623	E117	1	Ethernet GATE Class D (0-255)	–	3; 6; 16
57624	E118	1	Ethernet MASK Class A (0-255)	–	3; 6; 16
57625	E119	1	Ethernet MASK Class B (0-255)	–	3; 6; 16
57626	E11A	1	Ethernet MASK Class C (0-255)	–	3; 6; 16
57627	E11B	1	Ethernet MASK Class D (0-255)	–	3; 6; 16
57628	E11C	1	Use of DHCP 0 : No - 1 : Yes	–	3; 6; 16
57629	E11D	1	Reserved for manufacturer	–	3; 6; 16
57630	E11E	1	JBUS RTU over Ethernet 0 : No - 1 ; Yes	–	3; 6; 16
57631	E11F	1	JBUS/MODBUS gateway speed > Ethernet 0 = 2400 bps - 1 = 4800 bps - 2 = 9600 bps 3 = 19200 bps - 4 = 38400 bps	–	3; 6; 16
57632	E120	1	JBUS/MODBUS gateway parity > Ethernet 0 = none 1 = even 2 = odd	0 = none 1 = even 2 = odd	
57633	E121	1	JBUS/MODBUS gateway stop bits > Ethernet	-	3; 6; 16
57634	E122	1	Time out Jbus / Modbus > Ethernet	500 ms	3; 6; 16
57635	E123	1	JBUS slave address (RS485 & RTU over Ethernet)	1-247	3; 6; 16

A : NEW COMMUNICATION TABLE FROM 01/2009

9 > TABLE E220 Hex : Ethernet configuration

Decimal address	Hex. address	No. of words	Description	Unit	JBUS function available
57856	E200	1	Action : 0xA1 : Eeprom backup configuration 0xB2 : Product Reset	-	6; 16

COMMUNICATION

B : OLD COMMUNICATION TABLE BEFORE 01/2009

LIST OF PARAMETERS TO BE DISPLAYED (FUNCTION 3)

Table of values with allocated current and voltage winf-ding ratios on 2 words

Decimal address	Hexa. address	Number of words	Text	Unit
768	300	2	Phase 1 current	mA
770	302	2	Phase 2 current	mA
772	304	2	Phase 3 current	mA
774	306	2	Neutral current	mA
776	308	2	Phase to phase voltage U12	V/100
778	30A	2	Phase to phase voltage U23	V/100
780	30C	2	Phase to phase voltage U31	V/100
782	30E	2	Phase to neutral voltage phase 1	V/100
784	310	2	Phase to neutral voltage phase 2	V/100
786	312	2	Phase to neutral voltage phase 3	V/100
788	314	2	Frequency	Hz/100
790	316	2	Σ active power +/-	kW/100
792	318	2	Σ reactive power +/-	kvar/100
794	31A	2	Σ apparent power	kVA/100
796	31C	2	Σ power factor -: leading and +: lagging	0.001
798	31E	2	Active power phase 1 +/-	kW/100
800	320	2	Active power phase 2 +/-	kW/100
802	322	2	Active power phase 3 +/-	kW/100
804	324	2	Reactive power phase 1 +/-	kvar/100
806	326	2	Reactive power phase 2 +/-	kvar/100
808	328	2	Reactive power phase 3 +/-	kvar/100
810	32A	2	Apparent power phase 1	kVA/100
812	32C	2	Apparent power phase 2	kVA/100
814	32E	2	Apparent power phase 3	kVA/100
816	330	2	Power factor phase 1 -: leading and +: lagging	0.001
818	332	2	Power factor phase 2 -: leading and +: lagging	0.001
820	334	2	Power factor phase 3 -: leading and +: lagging	0.001
822	336	2	avg I1	mA
824	338	2	avg I2	mA
826	33A	2	avg I3	mA
828	33C	2	avg Σ active power +	kW/100
830	33E	2	avg Σ active power -	kW/100
832	340	2	avg Σ reactive power +	kvar/100
834	342	2	avg Σ reactive power -	kvar/100
836	344	2	avg Σ apparent power	kVA/100
838	346	2	max/avg I1	mA
840	348	2	max/avg I2	mA
842	34A	2	max/avg I3	mA
844	34C	2	max/avg Σ active power +	kW/100
846	34E	2	max/avg Σ active power -	kW/100
848	350	2	max/avg Σ reactive power +	kvar/100
850	352	2	max/avg Σ reactive power -	kvar/100
852	354	2	max/avg Σ apparent power	kVA/100
854	356	2	hour meter	1/100 h
856	358	2	Active energy +	kWh
858	35A	2	Reactive energy +	kvarh
860	35C	2	Apparent energy	kVAh
862	35E	2	Active energy -	kWh
864	360	2	Reactive energy -	kvarh

LIST OF PARAMETERS TO BE DISPLAYED (FUNCTION 3)

Address available with the Monitoring or Control/Command option

Decimal address	Hexa. address	Number of words	Text	Unit
866	362	2	Input pulse meter 1	–
868	364	2	Input pulse meter 2	–
870	366	2	Number of impulse meters	–
872	368	2	Current alarm : 0 : no alarm 1 : I 2 : U 3: ΣP+ 4: ΣQ+ 5: ΣS 6: F 7 : ΣPFL 8 : thd I 9 : thd U 10 : In 11 : HOUr 12 : V 13 : thd In 14 : thd V 15 : ΣP- 16 : ΣQ- 17 : Σ PFC 18 : T°C 1 19 : T°C 2 20 : T°C 3 21 : T°C internal 22 : T°C predicted 23 : T°C predicted 24 : T°C predicted	–
874	36A	2	Current overrun : 0 : no alarm 1 : I 2 : U 3: ΣP+ 4: ΣQ+ 5: ΣS 6: F 7 : ΣPFL 8 : thd I 9 : thd U 10 : In 11 : HOUr 12 : V 13 : thd In 14 : thd V 15 : ΣP- 16 : ΣQ- 17 : Σ PFC 18 : T°C 1 19 : T°C 2 20 : T°C 3 21 : T°C internal 22 : T°C predicted 23 : T°C predicted 24 : T°C predicted	–
876	36C	2	Number of inputs-outputs Low-order: number of inputs High-order: number of outputs	-

LIST OF PARAMETERS TO BE DISPLAYED (FUNCTION 3)

Address available with the Monitoring or Control/Command option (continued)

Decimal address	Hexa. address	Number of words	Text	Unit
878	36E	2	Status of inputs-outputs 0 : status input 1 (0 = open, 1 = closed) bit 1 : status input 2 (0 = open, 1 = closed) bit 2 : status input 3 (0 = open, 1 = closed) bit 3 : status input 4 (0 = open, 1 = closed) bit 4 : status input 5 (0 = open, 1 = closed) bit 5 : status input 6 (0 = open, 1 = closed) bit 16 : status output 1 (0 = open, 1 = closed) bit 17 : status output 2 (0 = open, 1 = closed) bit 18 : status output 3 (0 = open, 1 = closed) bit 19 : status output 4 (0 = open, 1 = closed) bit 20 : status output 5 (0 = open, 1 = closed) bit 21 : status output 6 (0 = open, 1 = closed)	–

Instant value display

Decimal address	Hexa. address	Number of words	Text	Unit
880	370	2	System value for current	mA
882	372	2	System value for phase-to-phase voltage	V/100
884	374	2	System value for phase-to-neutral voltage	V/100
886	376	2	avg U12	V/100
888	378	2	avg U23	V/100
890	37A	2	avg U31	V/100
892	37C	2	avg V1	V/100
894	37E	2	avg V2	V/100
896	380	2	avg V3	V/100
898	382	2	avg F	Hz/100
900	384	2	max/avg U12	V/100
902	386	2	max/avg U23	V/100
904	388	2	max/avg U31	V/100
906	38A	2	max/avg V1	V/100
908	38C	2	max/avg V2	V/100
910	38E	2	max/avg V3	V/100
912	390	2	max/avg F	Hz/100
914	392	2	avg In	mA
916	394	2	max/avg In	mA
918	396	2	Mean positive active power between 2 signals	0.1 kW
920	398	2	Mean negative active power between 2 signals	0.1 kW
922	39A	2	Mean positive reactive power between 2 signals	0.1 kvar
924	39C	2	Mean negative reactive power between 2 signals	0.1 kvar
926	39E	2	Predicted total active power	0,1 kvar
928	3A0	2	Predicted total reactive power	0,1 kvar
930	3A2	2	Predicted total apparent power	0,1 kvar

Zone size: 164 words (decimal) or A4 (hexadecimal).

Example:
To display all the values for ***DIRIS*** number 5 in one inquiry, the following frame should be sent:

Slave	Function	High-order address	Low-order address	High-order word n°	Low-order word n°	CRC 16
05	03	03	00	00	9E	C5A2

LIST OF PARAMETERS TO BE DISPLAYED (FUNCTION 3)

Table of values without allocated current and voltage winding ratios on 1 word

Decimal address	Hexa. address	Number of words	Text	Unit
1792	700	1	Phase 1 current	mA
1793	701	1	Phase 2 current	mA
1794	702	1	Phase 3 current	mA
1795	703	1	Neutral current	mA
1796	704	1	Phase to phase voltage U12	V/10
1797	705	1	Phase to phase voltage U23	V/10
1798	706	1	Phase to phase voltage U31	V/10
1799	707	1	Phase to neutral voltage phase 1	V/10
1800	708	1	Phase to neutral voltage phase 2	V/10
1801	709	1	Phase to neutral voltage phase 3	V/10
1802	70A	1	Frequency	Hz/100
1803	70B	1	Σ active power +/-	W
1804	70C	1	Σ reactive power +/-	var
1805	70D	1	Σ apparent power +/-	kVA
1806	70E	1	Σ power factor L/C -: leading and +: lagging	0.001
1807	70F	1	Active power phase 1 +/-	W
1808	710	1	Active power phase 2 +/-	W
1809	711	1	Active power phase 3 +/-	W
1810	712	1	Reactive power phase 1 +/-	W
1811	713	1	Reactive power phase 2 +/-	var
1812	714	1	Reactive power phase 3 +/-	var
1813	715	1	Apparent power phase 1	VA
1814	716	1	Apparent power phase 2	VA
1815	717	1	Apparent power phase 3	VA
1816	718	1	Power factor phase 1 L/C -: leading and +: lagging	0.001
1817	719	1	Power factor phase 2 L/C -: leading and +: lagging	0.001
1818	71A	1	Power factor phase 3 L/C -: leading and +: lagging	0.001
1819	71B	1	avg I1	mA
1820	71C	1	avg I2	mA
1821	71D	1	avg I3	mA
1822	71E	1	avg Σ active power +	W
1823	71F	1	avg Σ active power -	W
1824	720	1	avg Σ reactive power +	var
1825	721	1	avg Σ reactive power -	var
1826	722	1	avg Σ apparent power	VA
1827	723	1	max/avg I1	mA
1828	724	1	max/avg I2	mA
1829	725	1	max/avg I3	mA
1830	726	1	max/avg Σ active power +	W
1831	727	1	max/avg Σ active power -	W
1832	728	1	max/avg Σ reactive power +	var
1833	729	1	max/avg Σ reactive power -	var
1834	72A	1	max/avg Σ apparent power	VA
1835	72B	1	Active energy + < 10000	kWh

LIST OF PARAMETERS TO BE DISPLAYED (FUNCTION 3)

Decimal address	Hexa. address	Number of words	Text	Unit
1836	72C	1	Active energy + > 10000	kWh
1837	72D	1	Reactive energy + < 10000	kvarh
1838	72E	1	Reactive energy + > 10000	kvarh
1839	72F	1	Apparent energy < 10000	kVAh
1840	730	1	Apparent energy > 10000	kVAh
1841	731	1	Active energy - < 10000	kWh
1842	732	1	Active energy - >10000	kWh
1843	733	1	Reactive energy - < 10000	kvarh
1844	734	1	Reactive energy - > 10000	kvarh
1845	735	1	Input pulse meter 1 < 10000	–
1846	736	1	Input pulse meter 1 > 10000	–
1847	737	1	Input pulse meter 2 < 10000	–
1848	738	1	Input pulse meter 2 > 10000	–
1849	739	1	Input pulse meter 3 < 10000	–
1850	73A	1	Input pulse meter 3 > 10000	–
1851	73B	1	Input pulse meter 4 < 10000	–
1852	73C	1	Input pulse meter 4 > 10000	–
1853	73D	1	Input pulse meter 5 < 10000	–
1854	73E	1	Input pulse meter 5 > 10000	–
1855	73F	1	Input pulse meter 6 < 10000	–
1856	740	1	Input pulse meter 6 > 10000	–
1857	741	1	Average value of currents	mA
1858	742	1	Average value of phase to phase voltages	V/10
1859	743	1	Average value of phase to neutral voltages	V/10
1860	744	1	avg U12	V/10
1861	745	1	avg U23	V/10
1862	746	1	avg U31	V/10
1863	747	1	avg V1	V/10
1864	748	1	avg V2	V/10
1865	749	1	avg V3	V/10
1866	74A	1	avg F	Hz/100
1867	74B	1	max/avg U12	V/10
1868	74C	1	max/avg U23	V/10
1869	74D	1	max/avg U31	V/10
1870	74E	1	max/avg V1	V/10
1871	74F	1	max/avg V2	V/10
1872	750	1	max/avg V3	V/10
1873	751	1	max/avg F	Hz/100
1874	752	1	thd I1	0.10%
1875	753	1	thd I2	0.10%
1876	754	1	thd I3	0.10%
1877	755	1	thd In	0.10%
1878	756	1	thd U12	0.10%
1879	757	1	thd U23	0.10%
1880	758	1	thd U31	0.10%
1881	759	1	thd V1	0.10%
1882	75A	1	thd V2	0.10%
1883	75B	1	thd V3	0.10%

LIST OF PARAMETERS TO BE DISPLAYED (FUNCTION 3)

Decimal address	Hexa. address	Number of words	Text	Unit
1884	75C	1	Mean positive active power between 2 signals	W
1885	75D	1	Mean negative active power between 2 signals	W
1886	75E	1	Mean positive reactive power between 2 signals	var
1887	75F	1	Mean negative reactive power between 2 signals	var
1888	760	1	Reserved	–
1889	761	1	Reserved	–
1890	762	1	Average values In	mA
1891	763	1	In max	mA
1892	764	1	Predicted total active power	W
1893	765	1	Predicted total reactive power	var
1894	766	1	Predicted total apparent power	VA

Zone size: 103 words (decimal) or 67 (hexadecimal).

Example :
To read 177 645 kWh, the following message should be sent :

Slave	Function	High-order address	Low-order address	High-order word n°	Low-order word n°	CRC 16
05	03	07	2B	00	02	B4F3

DIRIS A40/A41 reply:

Slave	Function	Number of bytes	Word 1 < 10000	Word 2 > 10000	CRC 16
05	03	04	IDDD	11	6FD6
			7645	**17**	

Example:
To display all the values for ***DIRIS*** number 5 in one inquiry, the following frame should be sent:

Slave	Function	High-order address	Low-order address	High-order word n°	Low-order word n°	CRC 16
05	03	07	00	00	64	44D1

LIST OF PARAMETERS TO BE DISPLAYED (FUNCTION 3)

Alarm event log

Decimal address	Hexa. address	Number of words	Text	Unit
1280	500	1	Current alarm OUT 1 lower threshold: 0 : no alarm 1 : I1 2 : I2 3 : I3 4 : In 5 : U12 6 : U23 7 : U31 8 : ΣP+ 9 : ΣQ+ 10 : ΣS 11 : F 12 : ΣPFL 15 : thd I1 16 : thd I2 17 : thd I3 18 : thd U12 19 : thd U23 20 : thd U31 21 : HOUR 22 : V1 23 : V2 24 : V3 25 : thd In 26 : thd V1 27 : thd V2 28 : thd V3 29 : ΣP- 30 : ΣQ- 31 : ΣPFC 32 : T°C 1 33 : T°C 2 34 : T°C 3 35 : T°C internal 36 : ΣP predicted 37 : ΣQ predicted 38 : ΣS predicted	–
1281	501	2	Current alarm OUT 1 lower threshold value	–
1283	503	1	Current alarm OUT 1 upper threshold: 0 : no alarm 1 : I1 2 : I2 3 : I3 4 : In 5 : U12 6 : U23 7 : U31 8 : ΣP+ 9 : ΣQ+ 10 : ΣS 11 : F 12 : ΣPFL 15 : thd I1	–

LIST OF PARAMETERS TO BE DISPLAYED (FUNCTION 3)

Alarm event log (continued)

Decimal address	Hexa. address	Number of words	Text	Unit
			16 : thd I2 17 : thd I3 18 : thd U12 19 : thd U23 20 : thd U31 21 : HOUR 22 : V1 23 : V2 24 : V3 25 : thd In 26 : thd V1 27 : thd V2 28 : thd V3 29 : ΣP- 30 : ΣQ- 31 : ΣPFC 32 : T°C 1 33 : T°C 2 34 : T°C 3 35 : T°C internal 36 : ΣP predicted 37 : ΣQ predicted 38 : ΣS predicted	
1284	504	2	Current alarm OUT 1 upper threshold value	–
1286	506	1	Duration	s.
1287	507	1	Alarm 1 OUT 1 ower threshold: 0 : no alarm 1 : I1 2 : I2 3 : I3 4 : In 5 : U12 6 : U23 7 : U31 8 : ΣP+ 9 : ΣQ+ 10 : ΣS 11 : F 12 : ΣPFL 15 : thd I1 16 : thd I2 17 : thd I3 18 : thd U12 19 : thd U23 20 : thd U31 21 : HOUR 22 : V1 23 : V2 24 : V3 25 : thd In 26 : thd V1 27 : thd V2 28 : thd V3 29 : ΣP-	–

LIST OF PARAMETERS TO BE DISPLAYED (FUNCTION 3)

Alarm event log (continued)

Decimal address	Hexa. address	Number of words	Text	Unit
			30 : ΣQ- 31 : ΣPFC 32 : T°C 1 33 : T°C 2 34 : T°C 3 35 : T°C internal 36 : ΣP predicted 37 : ΣQ predicted 38 : ΣS predicted	
1288	508	2	Alarm 1 OUT 1ower threshold value	–
1290	50A	1	Alarm 1 OUT 1 threshold value: 0 : no alarm 1 : I1 2 : I2 3 : I3 4 : In 5 : U12 6 : U23 7 : U31 8 : ΣP+ 9 : ΣQ+ 10 : ΣS 11 : F 12 : ΣPFL 15 : thd I1 16 : thd I2 17 : thd I3 18 : thd U12 19 : thd U23 20 : thd U31 21 : HOUR 22 : V1 23 : V2 24 : V3 25 : thd In 26 : thd V1 27 : thd V2 28 : thd V3 29 : ΣP- 30 : ΣQ- 31 : ΣPFC 32 : T°C 1 33 : T°C 2 34 : T°C 3 35 : T°C internal 36 : ΣP predicted 37 : ΣQ predicted 38 : ΣS predicted	–
1291	50B	2	Alarm 1 OUT 1 upper threshold value	–
1293	50D	1	Duration	s.
1294	50E	1	Alarm 2 OUT 1 lower threshold 0 : no alarm 1 : I1 2 : I2	–

LIST OF PARAMETERS TO BE DISPLAYED (FUNCTION 3)

Alarm event log (continued)

Decimal address	Hexa. address	Number of words	Text	Unit
			3 : I3 4 : In 5 : U12 6 : U23 7 : U31 8 : ΣP+ 9 : ΣQ+ 10 : ΣS 11 : F 12 : ΣPFL 15 : thd I1 16 : thd I2 17 : thd I3 18 : thd U12 19 : thd U23 20 : thd U31 21 : HOUR 22 : V1 23 : V2 24 : V3 25 : thd In 26 : thd V1 27 : thd V2 28 : thd V3 29 : ΣP- 30 : ΣQ- 31 : ΣPFC 32 : T°C 1 33 : T°C 2 34 : T°C 3 35 : T°C internal 36 : ΣP predicted 37 : ΣQ predicted 38 : ΣS predicted	
1295	50F	2	Alarm 2 OUT 1 lower threshold value	–
1297	511	1	Alarm 2 OUT 1 threshold value: 0 : no alarm 1 : I1 2 : I2 3 : I3 4 : In 5 : U12 6 : U23 7 : U31 8 : ΣP+ 9 : ΣQ+ 10 : ΣS 11 : F 12 : ΣPFL 15 : thd I1 16 : thd I2 17 : thd I3 18 : thd U12 19 : thd U23	–

LIST OF PARAMETERS TO BE DISPLAYED (FUNCTION 3)

Alarm event log (continued)

Decimal address	Hexa. address	Number of words	Text	Unit
			20 : thd U31 21 : HOUR 22 : V1 23 : V2 24 : V3 25 : thd In 26 : thd V1 27 : thd V2 28 : thd V3 29 : ΣP- 30 : ΣQ- 31 : ΣPFC 32 : T°C 1 33 : T°C 2 34 : T°C 3 35 : T°C internal 36 : ΣP predicted 37 : ΣQ predicted 38 : ΣS predicted	
1298	512	2	Alarm 2 OUT 1 upper threshold value	–
1300	514	1	Duration	s.
1301	515	1	Alarm 3 OUT 1 lower threshold 0 : no alarm 1 : I1 2 : I2 3 : I3 4 : In 5 : U12 6 : U23 7 : U31 8 : ΣP+ 9 : ΣQ+ 10 : ΣS 11 : F 12 : ΣPFL 15 : thd I1 16 : thd I2 17 : thd I3 18 : thd U12 19 : thd U23 20 : thd U31 21 : HOUR 22 : V1 23 : V2 24 : V3 25 : thd In 26 : thd V1 27 : thd V2 28 : thd V3 29 : ΣP- 30 : ΣQ- 31 : ΣPFC 32 : T°C 1 33 : T°C 2	–

LIST OF PARAMETERS TO BE DISPLAYED (FUNCTION 3)

Alarm event log (continued)

Decimal address	Hexa. address	Number of words	Text	Unit
			34 : T°C 3 35 : T°C internal 36 : ΣP predicted 37 : ΣQ predicted 38 : ΣS predicted	
1302	516	2	Alarm 3 OUT 1 lower threshold value	–
1304	518	1	Alarm 3 OUT 1 threshold value: 0 : no alarm 1 : I1 2 : I2 3 : I3 4 : In 5 : U12 6 : U23 7 : U31 8 : ΣP+ 9 : ΣQ+ 10 : ΣS 11 : F 12 : ΣPFL 15 : thd I1 16 : thd I2 17 : thd I3 18 : thd U12 19 : thd U23 20 : thd U31 21 : HOUR 22 : V1 23 : V2 24 : V3 25 : thd In 26 : thd V1 27 : thd V2 28 : thd V3 29 : ΣP- 30 : ΣQ- 31 : ΣPFC 32 : T°C 1 33 : T°C 2 34 : T°C 3 35 : T°C internal 36 : ΣP predicted 37 : ΣQ predicted 38 : ΣS predicted	–
1305	519	2	Alarm 3 OUT 1 upper threshold value	–
1307	51B	1	Duration	s.
1308	51C	1	Current alarm OUT 2 lower threshold: 0 : no alarm 1 : I1 2 : I2 3 : I3 4 : In 5 : U12 6 : U23	–

LIST OF PARAMETERS TO BE DISPLAYED (FUNCTION 3)

Alarm event log (continued)

Decimal address	Hexa. address	Number of words	Text	Unit
			7 : U31 8 : ΣP+ 9 : ΣQ+ 10 : ΣS 11 : F 12 : ΣPFL 15 : thd I1 16 : thd I2 17 : thd I3 18 : thd U12 19 : thd U23 20 : thd U31 21 : HOUR 22 : V1 23 : V2 24 : V3 25 : thd In 26 : thd V1 27 : thd V2 28 : thd V3 29 : ΣP- 30 : ΣQ- 31 : ΣPFC 32 : T°C 1 33 : T°C 2 34 : T°C 3 35 : T°C internal 36 : ΣP predicted 37 : ΣQ predicted 38 : ΣS predicted	
1309	51D	2	Current alarm OUT 2 lower threshold value	–
1311	51F	1	Current alarm OUT 2 upper threshold: 0 : no alarm 1 : I1 2 : I2 3 : I3 4 : In 5 : U12 6 : U23 7 : U31 8 : ΣP+ 9 : ΣQ+ 10 : ΣS 11 : F 12 : ΣPFL 15 : thd I1 16 : thd I2 17 : thd I3 18 : thd U12 19 : thd U23 20 : thd U31 21 : HOUR 22 : V1 23 : V2	–

LIST OF PARAMETERS TO BE DISPLAYED (FUNCTION 3)

Alarm event log (continued)

Decimal address	Hexa. address	Number of words	Text	Unit
			24 : V3 25 : thd In 26 : thd V1 27 : thd V2 28 : thd V3 29 : ΣP- 30 : ΣQ- 31 : ΣPFC 32 : T°C 1 33 : T°C 2 34 : T°C 3 35 : T°C internal 36 : ΣP predicted 37 : ΣQ predicted 38 : ΣS predicted	
1312	520	2	Current alarm OUT 2 upper threshold value	–
1314	522	1	Duration	s.
1315	523	1	Alarm 1 OUT 2 lower threshold: 0 : no alarm 1 : I1 2 : I2 3 : I3 4 : In 5 : U12 6 : U23 7 : U31 8 : ΣP+ 9 : ΣQ+ 10 : ΣS 11 : F 12 : ΣPFL 15 : thd I1 16 : thd I2 17 : thd I3 18 : thd U12 19 : thd U23 20 : thd U31 21 : HOUR 22 : V1 23 : V2 24 : V3 25 : thd In 26 : thd V1 27 : thd V2 28 : thd V3 29 : ΣP- 30 : ΣQ- 31 : ΣPFC 32 : T°C 1 33 : T°C 2 34 : T°C 3 35 : T°C internal 36 : ΣP predicted 37 : ΣQ predicted	–

LIST OF PARAMETERS TO BE DISPLAYED (FUNCTION 3)

Alarm event log (continued)

Decimal address	Hexa. address	Number of words	Text	Unit
			38 : ΣS predicted	
1316	524	2	Alarm 1 OUT 2 lower threshold value :	–
1318	526	1	Alarm 1 OUT 2 upper threshold: 0 : no alarm 1 : I1 2 : I2 3 : I3 4 : In 5 : U12 6 : U23 7 : U31 8 : ΣP+ 9 : ΣQ+ 10 : ΣS 11 : F 12 : ΣPFL 15 : thd I1 16 : thd I2 17 : thd I3 18 : thd U12 19 : thd U23 20 : thd U31 21 : HOUR 22 : V1 23 : V2 24 : V3 25 : thd In 26 : thd V1 27 : thd V2 28 : thd V3 29 : ΣP- 30 : ΣQ- 31 : ΣPFC 32 : T°C 1 33 : T°C 2 34 : T°C 3 35 : T°C internal 36 : ΣP predicted 37 : ΣQ predicted 38 : ΣS predicted	
1319	527	2	Alarm 1 OUT 2 upper threshold value	–
1321	529	1	Duration	s.
1322	52A	1	Alarm 2 OUT 2 lower threshold: 0 : no alarm 1 : I1 2 : I2 3 : I3 4 : In 5 : U12 6 : U23 7 : U31 8 : ΣP+ 9 : ΣQ+ 10 : ΣS	

LIST OF PARAMETERS TO BE DISPLAYED (FUNCTION 3)

Alarm event log (continued)

Decimal address	Hexa. address	Number of words	Text	Unit
			11 : F 12 : ΣPFL 15 : thd I1 16 : thd I2 17 : thd I3 18 : thd U12 19 : thd U23 20 : thd U31 21 : HOUR 22 : V1 23 : V2 24 : V3 25 : thd In 26 : thd V1 27 : thd V2 28 : thd V3 29 : ΣP- 30 : ΣQ- 31 : ΣPFC 32 : T°C 1 33 : T°C 2 34 : T°C 3 35 : T°C internal 36 : ΣP predicted 37 : ΣQ predicted 38 : ΣS predicted	
1323	52B	2	Alarm 2 OUT 2 lower threshold value	–
1325	52D	1	Alarm 2 OUT 2 upper threshold: 0 : no alarm 1 : I1 2 : I2 3 : I3 4 : In 5 : U12 6 : U23 7 : U31 8 : ΣP+ 9 : ΣQ+ 10 : ΣS 11 : F 12 : ΣPFL 15 : thd I1 16 : thd I2 17 : thd I3 18 : thd U12 19 : thd U23 20 : thd U31 21 : HOUR 22 : V1 23 : V2 24 : V3 25 : thd In 26 : thd V1 27 : thd V2	–

LIST OF PARAMETERS TO BE DISPLAYED (FUNCTION 3)

Alarm event log (continued)

Decimal address	Hexa. address	Number of words	Text	Unit
			28 : thd V3 29 : ΣP- 30 : ΣQ- 31 : ΣPFC 32 : T°C 1 33 : T°C 2 34 : T°C 3 35 : T°C internal 36 : ΣP predicted 37 : ΣQ predicted 38 : ΣS predicted	
1326	52E	2	Alarm 2 OUT 2 upper threshold value	–
1328	530	1	Duration	s
1329	531	1	Alarm 3 OUT 2 lower threshold: 0 : no alarm 1 : I1 2 : I2 3 : I3 4 : In 5 : U12 6 : U23 7 : U31 8 : ΣP+ 9 : ΣQ+ 10 : ΣS 11 : F 12 : ΣPFL 15 : thd I1 16 : thd I2 17 : thd I3 18 : thd U12 19 : thd U23 20 : thd U31 21 : HOUR 22 : V1 23 : V2 24 : V3 25 : thd In 26 : thd V1 27 : thd V2 28 : thd V3 29 : ΣP- 30 : ΣQ- 31 : ΣPFC 32 : T°C 1 33 : T°C 2 34 : T°C 3 35 : T°C internal 36 : ΣP predicted 37 : ΣQ predicted 38 : ΣS predicted	
1330	532	2	Alarm 3 OUT 2 lower threshold value	–
1332	534	1	Alarm 3 OUT 2 upper threshold: 0 : no alarm	

LIST OF PARAMETERS TO BE DISPLAYED (FUNCTION 3)

Alarm event log (continued)

Decimal address	Hexa. address	Number of words	Text	Unit
			1 : I1 2 : I2 3 : I3 4 : In 5 : U12 6 : U23 7 : U31 8 : ΣP+ 9 : ΣQ+ 10 : ΣS 11 : F 12 : ΣPFL 15 : thd I1 16 : thd I2 17 : thd I3 18 : thd U12 19 : thd U23 20 : thd U31 21 : HOUR 22 : V1 23 : V2 24 : V3 25 : thd In 26 : thd V1 27 : thd V2 28 : thd V3 29 : ΣP- 30 : ΣQ- 31 : ΣPFC 32 : T°C 1 33 : T°C 2 34 : T°C 3 35 : T°C internal 36 : ΣP predicted 37 : ΣQ predicted 38 : ΣS predicted	
1333	535	2	Alarm 3 OUT 2 upper threshold value	–
1335	537	1	Duration	s.
1336	538	1	Status inputs 1 and 2 plus 3, 4, 5, 6	–
1337	539	1	Current alarm OUT 3 lower threshold : 0 : no alarm 1 : I1 2 : I2 3 : I3 4 : In 5 : U12 6 : U23 7 : U31 8 : ΣP+ 9 : ΣQ+ 10 : ΣS 11 : F 12 : ΣPFL 15 : thd I1	

LIST OF PARAMETERS TO BE DISPLAYED (FUNCTION 3)

Alarm event log (continued)

Decimal address	Hexa. address	Number of words	Text	Unit
			16 : thd I2 17 : thd I3 18 : thd U12 19 : thd U23 20 : thd U31 21 : HOUR 22 : V1 23 : V2 24 : V3 25 : thd In 26 : thd V1 27 : thd V2 28 : thd V3 29 : ΣP- 30 : ΣQ- 31 : ΣPFC 32 : T°C 1 33 : T°C 2 34 : T°C 3 35 : T°C internal 36 : ΣP predicted 37 : ΣQ predicted 38 : ΣS predicted	
1338	53A	2	Current alarm OUT 3 lower threshold value	–
1340	53C	1	Current alarm OUT 3 upper threshold: 0 : no alarm 1 : I1 2 : I2 3 : I3 4 : In 5 : U12 6 : U23 7 : U31 8 : ΣP+ 9 : ΣQ+ 10 : ΣS 11 : F 12 : ΣPFL 15 : thd I1 16 : thd I2 17 : thd I3 18 : thd U12 19 : thd U23 20 : thd U31 21 : HOUR 22 : V1 23 : V2 24 : V3 25 : thd In 26 : thd V1 27 : thd V2 28 : thd V3 29 : ΣP- 30 : ΣQ-	–

LIST OF PARAMETERS TO BE DISPLAYED (FUNCTION 3)

Alarm event log (continued)

Decimal address	Hexa. address	Number of words	Text	Unit
			31 : ΣPFC 32 : T°C 1 33 : T°C 2 34 : T°C 3 35 : T°C internal 36 : ΣP predicted 37 : ΣQ predicted 38 : ΣS predicted	
1341	53D	2	Current alarm OUT 3 upper threshold value	–
1343	53F	1	Duration	s.
1344	540	1	Current alarm OUT 4 lower threshold : 0 : no alarm 1 : I1 2 : I2 3 : I3 4 : In 5 : U12 6 : U23 7 : U31 8 : ΣP+ 9 : ΣQ+ 10 : ΣS 11 : F 12 : ΣPFL 15 : thd I1 16 : thd I2 17 : thd I3 18 : thd U12 19 : thd U23 20 : thd U31 21 : HOUR 22 : V1 23 : V2 24 : V3 25 : thd In 26 : thd V1 27 : thd V2 28 : thd V3 29 : ΣP- 30 : ΣQ- 31 : ΣPFC 32 : T°C 1 33 : T°C 2 34 : T°C 3 35 : T°C internal 36 : ΣP predicted 37 : ΣQ predicted 38 : ΣS predicted	
1345	541	2	Current alarm OUT 4 lower threshold value	–
1347	543	1	Current alarm OUT 4 upper threshold: 0 : no alarm 1 : I1 2 : I2 3 : I3	–

LIST OF PARAMETERS TO BE DISPLAYED (FUNCTION 3)

Alarm event log (continued)

Decimal address	Hexa. address	Number of words	Text	Unit
			4 : In 5 : U12 6 : U23 7 : U31 8 : ΣP+ 9 : ΣQ+ 10 : ΣS 11 : F 12 : ΣPFL 15 : thd I1 16 : thd I2 17 : thd I3 18 : thd U12 19 : thd U23 20 : thd U31 21 : HOUR 22 : V1 23 : V2 24 : V3 25 : thd In 26 : thd V1 27 : thd V2 28 : thd V3 29 : ΣP- 30 : ΣQ- 31 : ΣPFC 32 : T°C 1 33 : T°C 2 34 : T°C 3 35 : T°C internal 36 : ΣP predicted 37 : ΣQ predicted 38 : ΣS predicted	
1348	544	2	Current alarm OUT 4 upper threshold value	–
1350	546	1	Duration	s.
1351	547	1	Current alarm OUT 5 lower threshold: 0 : no alarm 1 : I1 2 : I2 3 : I3 4 : In 5 : U12 6 : U23 7 : U31 8 : ΣP+ 9 : ΣQ+ 10 : ΣS 11 : F 12 : ΣPFL 15 : thd I1 16 : thd I2 17 : thd I3 18 : thd U12 19 : thd U23	–

LIST OF PARAMETERS TO BE DISPLAYED (FUNCTION 3)

Alarm event log (continued)

Decimal address	Hexa. address	Number of words	Text	Unit
			20 : thd U31 21 : HOUR 22 : V1 23 : V2 24 : V3 25 : thd In 26 : thd V1 27 : thd V2 28 : thd V3 29 : ΣP- 30 : ΣQ- 31 : ΣPFC 32 : T°C 1 33 : T°C 2 34 : T°C 3 35 : T°C internal 36 : ΣP predicted 37 : ΣQ predicted 38 : ΣS predicted	
1352	548	2	Current alarm OUT 5 lower threshold value	–
1354	54A	1	Current alarm OUT 5 upper threshold: 0 : no alarm 1 : I1 2 : I2 3 : I3 4 : In 5 : U12 6 : U23 7 : U31 8 : ΣP+ 9 : ΣQ+ 10 : ΣS 11 : F 12 : ΣPFL 15 : thd I1 16 : thd I2 17 : thd I3 18 : thd U12 19 : thd U23 20 : thd U31 21 : HOUR 22 : V1 23 : V2 24 : V3 25 : thd In 26 : thd V1 27 : thd V2 28 : thd V3 29 : ΣP- 30 : ΣQ- 31 : ΣPFC 32 : T°C 1 33 : T°C 2 34 : T°C 3	

LIST OF PARAMETERS TO BE DISPLAYED (FUNCTION 3)

Alarm event log (continued)

Decimal address	Hexa. address	Number of words	Text	Unit
			35 : T°C internal 36 : ΣP predicted 37 : ΣQ predicted 38 : ΣS predicted	
1355	54B	2	Current alarm OUT 5 upper threshold value	–
1357	54D	1	Duration	s.
1358	54E	1	Current alarm OUT 6 lower threshold : 0 : no alarm 1 : I1 2 : I2 3 : I3 4 : In 5 : U12 6 : U23 7 : U31 8 : ΣP+ 9 : ΣQ+ 10 : ΣS 11 : F 12 : ΣPFL 15 : thd I1 16 : thd I2 17 : thd I3 18 : thd U12 19 : thd U23 20 : thd U31 21 : HOUR 22 : V1 23 : V2 24 : V3 25 : thd In 26 : thd V1 27 : thd V2 28 : thd V3 29 : ΣP- 30 : ΣQ- 31 : ΣPFC 32 : T°C 1 33 : T°C 2 34 : T°C 3 35 : T°C internal 36 : ΣP predicted 37 : ΣQ predicted 38 : ΣS predicted	–
1359	54F	2	Current alarm OUT 6 lower threshold value	–
1361	551	1	Current alarm OUT 6 upper threshold: 0 : no alarm 1 : I1 2 : I2 3 : I3 4 : In 5 : U12 6 : U23 7 : U31	–

LIST OF PARAMETERS TO BE DISPLAYED (FUNCTION 3)

Alarm event log (continued)

Decimal address	Hexa. address	Number of words	Text	Unit
			8 : ΣP+ 9 : ΣQ+ 10 : ΣS 11 : F 12 : ΣPFL 15 : thd I1 16 : thd I2 17 : thd I3 18 : thd U12 19 : thd U23 20 : thd U31 21 : HOUR 22 : V1 23 : V2 24 : V3 25 : thd In 26 : thd V1 27 : thd V2 28 : thd V3 29 : ΣP- 30 : ΣQ- 31 : ΣPFC 32 : T°C 1 33 : T°C 2 34 : T°C 3 35 : T°C internal 36 : ΣP predicted 37 : ΣQ predicted 38 : ΣS predicted	
1362	552	2	Current alarm OUT 6 upper threshold value	–
1364	554	1	Duration	s.

Size of this zone : 133 words (decimal) or 83 (hexadecimal)

Table of current and voltage harmonics

Decimal address	Hexa. address	Number of words	Text	Unit
2304	900	1	thd I1	0.10%
2305	901	1	thd I2	0.10%
2306	902	1	thd I3	0.10%
2307	903	1	thd In	0.10%
2308	904	1	thd U12	0.10%
2309	905	1	thd U23	0.10%
2310	906	1	thd U31	0.10%
2311	907	1	thd V1	0.10%
2312	908	1	thd V2	0.10%
2313	909	1	thd V3	0.10%
2314	90A	1	Harmonic I1 row 3	0.10%
2315	90B	1	Harmonic I2 row 3	0.10%
2316	90C	1	Harmonic I3 row 3	0.10%
2317	90D	1	Harmonic IN row 3	0.10%
2318	90E	1	Harmonic I1 row 5	0.10%
2319	90F	1	Harmonic I2 row 5	0.10%
2320	910	1	Harmonic I3 row 5	0.10%
2321	911	1	Harmonic IN row 5	0.10%

LIST OF PARAMETERS TO BE DISPLAYED (FUNCTION 3)

Table of current and voltage harmonics (continued)

Decimal address	Hexa. address	Number of words	Text	Unit
2322	912	1	Harmonic I1 row 7	0.10%
2323	913	1	Harmonic I2 row 7	0.10%
2324	914	1	Harmonic I3 row 7	0.10%
2325	915	1	Harmonic IN row 7	0.10%
2326	916	1	Harmonic I1 row 9	0.10%
2327	917	1	Harmonic I2 row 9	0.10%
2328	918	1	Harmonic I3 row 9	0.10%
2329	919	1	Harmonic IN row 9	0.10%
2330	91A	1	Harmonic I1 row 11	0.10%
2331	91B	1	Harmonic I2 row 11	0.10%
2332	91C	1	Harmonic I3 row 11	0.10%
2333	91D	1	Harmonic IN row 11	0.10%
2334	91E	1	Harmonic I1 row 13	0.10%
2335	91F	1	Harmonic I2 row 13	0.10%
2336	920	1	Harmonic I3 row 13	0.10%
2337	921	1	Harmonic IN row 13	0.10%
2338	922	1	Harmonic I1 row 15	0.10%
2339	923	1	Harmonic I2 row 15	0.10%
2340	924	1	Harmonic I3 row 15	0.10%
2341	925	1	Harmonic IN row 15	0.10%
2342	926	1	Harmonic U12 row 3	0.10%
2343	927	1	Harmonic U23 row 3	0.10%
2344	928	1	Harmonic U31 row 3	0.10%
2345	929	1	Harmonic U12 row 5	0.10%
2346	92A	1	Harmonic U23 row 5	0.10%
2347	92B	1	Harmonic U31 row 5	0.10%
2348	92C	1	Harmonic U12 row 7	0.10%
2349	92D	1	Harmonic U23 row 7	0.10%
2350	92E	1	Harmonic U31 row 7	0.10%
2351	92F	1	Harmonic U12 row 9	0.10%
2352	930	1	Harmonic U23 row 9	0.10%
2353	931	1	Harmonic U31 row 9	0.10%
2354	932	1	Harmonic U12 row 11	0.10%
2355	933	1	Harmonic U23 row 11	0.10%
2356	934	1	Harmonic U31 row 11	0.10%
2357	935	1	Harmonic U12 row 13	0.10%
2358	936	1	Harmonic U23 row 13	0.10%
2359	937	1	Harmonic U31 row 13	0.10%
2360	938	1	Harmonic U12 row 15	0.10%
2361	939	1	Harmonic U23 row 15	0.10%
2362	93A	1	Harmonic U31 row 15	0.10%
2363	93B	1	Harmonic V1 row 3	0.10%
2364	93C	1	Harmonic V2 row 3	0.10%
2365	93D	1	Harmonic V3 row 3	0.10%
2366	93E	1	Harmonic V1 row 5	0.10%
2367	93F	1	Harmonic V2 row 5	0.10%
2368	940	1	Harmonic V3 row 5	0.10%
2369	941	1	Harmonic V1 row 7	0.10%
2370	942	1	Harmonic V2 row 7	0.10%
2371	943	1	Harmonic V3 row 7	0.10%
2372	944	1	Harmonic V1 row 9	0.10%
2373	945	1	Harmonic V2 row 9	0.10%
2374	946	1	Harmonic V3 row 9	0.10%
2375	947	1	Harmonic V1 row 11	0.10%
2376	948	1	Harmonic V2 row 11	0.10%
2377	949	1	Harmonic V3 row 11	0.10%

LIST OF PARAMETERS TO BE DISPLAYED (FUNCTION 3)

Table of current and voltage harmonics (continued)

Decimal address	Hexa. address	Number of words	Text	Unit
2378	94A	1	Harmonic V1 row 13	0.10%
2379	94B	1	Harmonic V2 row 13	0.10%
2380	94C	1	Harmonic V3 row 13	0.10%
2381	94D	1	Harmonic V1 row 15	0.10%
2382	94E	1	Harmonic V2 row 15	0.10%
2383	94F	1	Harmonic V3 row 15	0.10%
2384	950	1	Harmonic I1 row 17	0.10%
2385	951	1	Harmonic I2 row 17	0.10%
2386	952	1	Harmonic I3 row 17	0.10%
2387	953	1	Harmonic IN row 17	0.10%
2388	954	1	Harmonic I1 row 19	0.10%
2389	955	1	Harmonic I2 row 19	0.10%
2390	956	1	Harmonic I3 row 19	0.10%
2391	957	1	Harmonic IN row 19	0.10%
2392	958	1	Harmonic I1 row 21	0.10%
2393	959	1	Harmonic I2 row 21	0.10%
2394	95A	1	Harmonic I3 row 21	0.10%
2395	95B	1	Harmonic IN row 21	0.10%
2396	95C	1	Harmonic I1 row 23	0.10%
2397	95D	1	Harmonic I2 row 23	0.10%
2398	95E	1	Harmonic I3 row 23	0.10%
2399	95F	1	Harmonic IN row 23	0.10%
2400	960	1	Harmonic I1 row 25	0.10%
2401	961	1	Harmonic I2 row 25	0.10%
2402	962	1	Harmonic I3 row 25	0.10%
2403	963	1	Harmonic IN row 25	0.10%
2404	964	1	Harmonic U12 row 17	0.10%
2405	965	1	Harmonic U23 row 17	0.10%
2406	966	1	Harmonic U31 row 17	0.10%
2407	967	1	Harmonic U12 row 19	0.10%
2408	968	1	Harmonic U23 row 19	0.10%
2409	969	1	Harmonic U31 row 19	0.10%
2410	96A	1	Harmonic U12 row 21	0.10%
2411	96B	1	Harmonic U23 row 21	0.10%
2412	96C	1	Harmonic U31 row 21	0.10%
2413	96D	1	Harmonic U12 row 23	0.10%
2414	96E	1	Harmonic U23 row 23	0.10%
2415	96F	1	Harmonic U31 row 23	0.10%
2416	970	1	Harmonic U12 row 25	0.10%
2417	971	1	Harmonic U23 row 25	0.10%
2418	972	1	Harmonic U31 row 25	0.10%
2419	973	1	Harmonic V1 row 17	0.10%
2420	974	1	Harmonic V2 row 17	0.10%
2421	975	1	Harmonic V3 row 17	0.10%
2422	976	1	Harmonic V1 row 19	0.10%
2423	977	1	Harmonic V2 row 19	0.10%
2424	978	1	Harmonic V3 row 19	0.10%
2425	979	1	Harmonic V1 row 21	0.10%
2426	97A	1	Harmonic V2 row 21	0.10%
2427	97B	1	Harmonic V3 row 21	0.10%
2428	97C	1	Harmonic V1 row 23	0.10%
2429	97D	1	Harmonic V2 row 23	0.10%
2430	97E	1	Harmonic V3 row 23	0.10%
2431	97F	1	Harmonic V1 row 25	0.10%
2432	980	1	Harmonic V2 row 25	0.10%
2433	981	1	Harmonic V3 row 25	0.10%

Size of this zone : 130 words (decimal) or 82 (hexadecimal)

LIST OF PARAMETERS TO BE DISPLAYED (FUNCTION 3)

Option recognition table

Decimal address	Hexa. address	Number of words	Text	Unit
257	101	1	Product code	–
258	102	1	Slot option 1 0xFF : no option 0x00 : communication option 0x01 : metering option 0x03 : metering and harmonics option 0x20 : inputs/outputs option 0x30 : analog outputs option 0x40 : memory option 0x50 : Profibus option 0xF0 : presence of IN measure	–
259	103	1	Slot option 2	–
260	104	1	Slot option 3	–
261	105	1	Slot option 4	–
262	106	1	Version number	–
263	107	2	Serial number	–

Size of this zone : 8 words (decimal) or 8 (hexadecimal)

LIST OF PARAMETERS TO BE DISPLAYED OR PROGRAMMED (FUNCTION 3, 6 OR 16)

Decimal address	Hexa. address	Number of words	Text	Unit
512	200	1	Network type:	–
			0 : 1BL 1 : 2BL 2 : 3BL 3 : 3NBL 4 : 4BL 5 : 4NBL	
513	201	1	CT secondary : 1 : 1 A 5 : 5 A	A
514	202	1	CT primary	A
515	203	1	Voltage input on PT: 0 : No 1: Yes	–
516	204	2	PT primary	V
518	206	1	PT secondary: 60 : 60 V 100 : 100 V 110 : 110 V 115 : 115 V 120 : 120 V 173 : 173 V 190 : 190 V	V
519	207	1	Synchronisation of I AVG/MAX: Time in seconds, possible values 2 : 2 seconds 10 : 10 seconds 300 : 5 minutes (5x60s) 480 : 8 minutes (8x60s) 600 : 10 minutes (10x60s) 900 : 15 minutes (15x60s) 1200 : 20 minutes (20x60s) 1800 : 30 minutes (30x60s) 3600 : 60 minutes (60x60s)	s
520	208	1	Synchronisation of P/Q/S AVG/MAX: Time in seconds, possible values 10 : 10 seconds 300 : 5 minutes (5x60s) 480 : 8 minutes (8x60s) 600 : 10 minutes (10x60s) 900 : 15 minutes (15x60s) 1200 : 20 minutes (20x60s) 1800 : 30 minutes (30x60s) 3600 : 60 minutes (60x60s)	s
521	209	1	OUT 1 allocation of the pulse output: 0 : kWh + 1 : kvarh + 2 : kVAh 3 : kWh - 4 : kvarh -	–
522	20A	1	OUT1 impulse value: 0 : 0.1 kWh/kvarh/kVAh 1 : 1 kWh/kvarh/kVAh 2 : 10 kWh/kvarh/kVAh	–

LIST OF PARAMETERS TO BE DISPLAYED OR PROGRAMMED (FUNCTION 3, 6 OR 16)

Decimal address	Hexa. address	Number of words	Text	Unit
			3 : 100 kWh/kvarh/kVAh 4 : 1000 kWh/kvarh/kVAh 5 : 10000 kWh/kvarh/kVAh	
523	20B	1	OUT 1 impulse duration: 1 : 100 ms 2 : 200 ms 3 : 300 ms 4 : 400 ms 5 : 500 ms 6 : 600 ms 7 : 700 ms 8 : 800 ms 9 : 900 ms	–
524	20C	1	OUT 2 allocation of the pulse output: 0 : kWh + 1 : kvarh + 2 : kVAh 3 : kWh - 4 : kvarh -	–
525	20D	1	OUT 2 impulse value: 0 : 0.1 kWh/kvarh/kVAh 1 : 1 kWh/kvarh/kVAh 2 : 10 kWh/kvarh/kVAh 3 : 100 kWh/kvarh/kVAh 4 : 1000 kWh/kvarh/kVAh 5 : 10000 kWh/kvarh/kVAh	–
526	20E	1	OUT 2 impulse duration : 1 : 100 ms 2 : 200 ms 3 : 300 ms 4 : 400 ms 5 : 500 ms 6 : 600 ms 7 : 700 ms 8 : 800 ms 9 : 900 ms	–
527	20F	1	Type of analog output OUT 1: 0 : 0/20 mA 1 : 4/20 mA 2 : 30 V	–
528	210	1	Output allocation analog OUT 1: 0: I1 1 : I2 2 : I3 3 : In 4 : U12 5 : U23 6 : U31 7 : ΣP 8 : ΣQ 9 : ΣS 10 : ΣPFL 11 : V1 12 : V2	–

LIST OF PARAMETERS TO BE DISPLAYED OR PROGRAMMED (FUNCTION 3, 6 OR 16)

Decimal address	Hexa. address	Number of words	Text	Unit
			13 : V3 14 : F 15 : ΣPFC 16 : I Sys 17 : U Sys 18 : V Sys 19 : ΣP predicted 20 : ΣQ predicted 21 : ΣS predicted 22 : T°C 1 23 : T°C 2 24 : T°C 3 25 : T°C internal	
529	211	1	Value at 0 or 4 mA from analog output OUT 1	–
530	212	1	Unit at 0 or 4 mA from analog output OUT 1: 0 : / 1 : k 2 : M	–
531	213	1	Value at 20 mA from analog output OUT 1	–
532	214	1	Unit at 20 mA from analog output OUT 1: 0 : / 1 : k 2 : M	–
533	215	1	Type of analog output OUT 2 : 0 : 0/20 mA 1 : 4/20 mA 2 : 30 V	–
534	216	1	Output allocation analog OUT 2: 0 : I1 1 : I2 2 : I3 3 : In 4 : U12 5 : U23 6 : U31 7 : ΣP 8 : ΣQ 9 : ΣS 10 : ΣPFL 11 : V1 12 : V2 13 : V3 14 : F 15 : ΣPFC 16 : I Sys 17 : U Sys 18 : V Sys 19 : ΣP predicted 20 : ΣQ predicted 21 : ΣS predicted 22 : T°C 1 23 : T°C 2 24 : T°C 3 25 : T°C internal	–
535	217	1	Value at 0 or 4 mA from analog output OUT 2	–

COMMUNICATION

LIST OF PARAMETERS TO BE DISPLAYED OR PROGRAMMED (FUNCTION 3, 6 OR 16)

Decimal address	Hexa. address	Number of words	Text	Unit
536	218	1	Unit at 0 or 4 mA from analog output OUT 2 : 0 : / 1 : k 2 : M	–
537	219	1	Value at 20 mA from analog output OUT 2:	–
538	21A	1	Unit at 20 mA from analog output OUT 2: 0 : / 1 : k 2 : M	–
539	21B	1	Type of analog output OUT 3: 0 : 0/20 mA 1 : 4/20 mA 2 : 30 V	–
540	21C	1	Output allocation analog OUT 3: 0 : I1 1 : I2 2 : I3 3 : In 4 : U12 5 : U23 6 : U31 7 : ΣP 8 : ΣQ 9 : ΣS 10 : ΣPFL 11 : V1 12 : V2 13 : V3 14 : F 15 : ΣPFC 16 : I Sys 17 : U Sys 18 : V Sys 19 : ΣP predicted 20 : ΣQ predicted 21 : ΣS predicted 22 : T°C 1 23 : T°C 2 24 : T°C 3 25 : T°C internal	–
541	21D	1	Value at 0 or 4 mA from analog output OUT 3	–
542	21E	1	Unit at 0 or 4 mA from analog output OUT 3: 0 : / 1 : k 2 : M	–
543	21F	1	Value at 20 mA from analog output OUT 3	–
544	220	1	Unit at 20 mA from analog output OUT 3: 0 : / 1 : k 2 : M	–
545	221	1	Type of analog output OUT 4: 0 : 0/20 mA 1 : 4/20 mA 2 : 30 V	–
546	222	1	Output allocation analog OUT 4:	–

LIST OF PARAMETERS TO BE DISPLAYED OR PROGRAMMED (FUNCTION 3, 6 OR 16)

Decimal address	Hexa. address	Number of words	Text	Unit
			0 : I1 1 : I2 2 : I3 3 : In 4 : U12 5 : U23 6 : U31 7 : ΣP 8 : ΣQ 9 : ΣS 10 : ΣPFL 11 : V1 12 : V2 13 : V3 14 : F 15 : ΣPFC 16 : I Sys 17 : U Sys 18 : V Sys 19 : ΣP predicted 20 : ΣQ predicted 21 : ΣS predicted 22 : T°C 1 23 : T°C 2 24 : T°C 3 25 : T°C internal	
547	223	1	Value at 0 or 4 mA from analog output OUT 4	–
548	224	1	Unit at 0 or 4 mA from analog output OUT 4: 0 : / 1 : k 2 : M	–
549	225	1	Value at 20 mA from analog output OUT 4	–
550	226	1	Unit at 20 mA from analog output OUT 4: 0 : / 1 : k 2 : M	–
551	227	1	Allocation of OUT 1 relay: 0 : Cde 1 : I 2 : U 3 : ΣP+ 4 : ΣQ+ 5 : ΣS 6 : F 7 : ΣPFL 8 : thd 3I 9 : thd 3U 10 : IN 11 : HOUR 12 : V 13 : thd In 14 : thd 3V 15 : ΣP- 16 : ΣQ- 17 : ΣPFC 18 : Cd-t	–

LIST OF PARAMETERS TO BE DISPLAYED OR PROGRAMMED (FUNCTION 3, 6 OR 16)

Decimal address	Hexa. address	Number of words	Text	Unit
			19 : ΣP predicted 20 : ΣQ predicted 21 : ΣS predicted 22 : T°C 1 23 : T°C 2 24 : T°C 3 25 : T°C internal	
552	228	1	Lower threshold OUT 1	–
553	229	1	Unit lower threshold OUT 1: 0 : / 1 : k 2 : M	–
554	22A	1	Threshold value OUT 1	–
555	22B	1	Unit threshold value OUT : 0 : / 1 : k 2 : M	–
556	22C	1	Hysteresis 0 to 99 OUT 1	%
557	22D	1	Specified time OUT 1	s.
558	22E	1	Relay status OUT 1: 0 : Open 1 : Closed	–
559	22F	1	Allocation of OUT 2 relay : 0 : Cde 1 : I 2 : U 3 : ΣP+ 4 : ΣQ+ 5 : ΣS 6 : F 7 : ΣPFL 8 : thd 3I 9 : thd 3U 10 : IN 11 : HOUR 12 : V 13 : thd In 14 : thd 3V 15 : ΣP- 16 : ΣQ- 17 : ΣPFC 18 : Cd-t 19 : ΣP predicted 20 : ΣQ predicted 21 : ΣS predicted 22 : T°C 1 23 : T°C 2 24 : T°C 3 25 : T°C internal	–
560	230	1	Lower threshold OUT 2	–
561	231	1	Unit lower threshold OUT 2: 0 : / 1 : k 2 : M	–

LIST OF PARAMETERS TO BE DISPLAYED OR PROGRAMMED (FUNCTION 3, 6 OR 16)

Decimal address	Hexa. address	Number of words	Text	Unit
562	232	1	Threshold value OUT 2	–
563	233	1	Unit upper threshold OUT 2: 0: / 1 : k 2 : M	–
564	234	1	Hysteresis 0 to 99 OUT 2	%
565	235	1	Specified time OUT 2	s.
566	236	1	Reserved	–
567	237	1	Reserved	–
568	238	1	Reserved	–
569	239	1	Reserved	–
570	23A	1	Reserved	–
571	23B	1	CT secondary neutral : 1: 1 A 5: 5 A	A
572	23C	1	CT primary neutral	A
573	23D	1	Synchronisation of U AVG/MAX : 10 : 10 seconds 300 : 5 minutes (5x60s) 480 : 8 minutes (8x60s) 600 : 10 minutes (10x60s) 900 : 15 minutes (15x60s) 1200 : 20 minutes (20x60s) 1800 : 30 minutes (30x60s) 3600 : 60 minutes (60x60s)	s.
574	23E	1	Synchronisation of F AVG/MAX : 10 : 10 seconds 300 : 5 minutes (5x60s) 480 : 8 minutes (8x60s) 600 : 10 minutes (10x60s) 900 : 15 minutes (15x60s) 1200 : 20 minutes (20x60s) 1800 : 30 minutes (30x60s) 3600 : 60 minutes (60x60s)	s.
575	23F	1	Mean power memory storage P+ : 0 : no 1 : yes	
576	240	1	Mean power memory storage P- : 0 : no 1 : yes	
577	241	1	Mean power memory storage Q+ : 0 : no 1 : yes	
578	242	1	Mean power memory storage Q- : 0 : no 1 : yes	
579	243	1	Mean power synchronisation signal : 0 : internal 1 : external	
580	244	1	Synchronisation period for P+, P-, Q+ et Q-: 300 : 5 minutes (5x60s)	s.

LIST OF PARAMETERS TO BE DISPLAYED OR PROGRAMMED (FUNCTION 3, 6 OR 16)

Decimal address	Hexa. address	Number of words	Text	Unit
			480 : 8 minutes (8x60s) 600 : 10 minutes (10x60s) 900 : 15 minutes (15x60s) 1200 : 20 minutes (20x60s) 1800 : 30 minutes (30x60s)	
581	245	1	Allocation of OUT 3 relay: 0 : Cde 1 : I 2 : U 3 : ΣP+ 4 : ΣQ+ 5 : ΣS 6 : F 7 : ΣPFL 8 : thd 3I 9 : thd 3U 10 : IN 11 : HOUR 12 : V 13 : thd In 14 : thd 3V 15 : ΣP- 16 : ΣQ- 17 : ΣPFC 18 : Cd-t 19 : T°C 1 20 : T°C 2 21 : T°C 3 22 : T°C internal 23 : ΣP predicted 24 : ΣQ predicted 25 : ΣS predicted	
582	246	1	Lower threshold OUT 3	
583	247	1	Unit lower threshold OUT 3 : 0 : / 1 : k 2 : M	
584	248	1	Upper threshold OUT 3	
585	249	1	Unit upper threshold OUT 3 : 0 : / 1 : k 2 : M	
586	24A	1	Hysteresis 0 to 99 OUT 3	%
587	24B	1	Specified time OUT 3	s.
588	24C	1	Relay status OUT 3 : 0 : Open 1 : Closed	
589	24D	1	Allocation of OUT 4 relay: 0 : Cde 1 : I 2 : U 3 : ΣP+ 4 : ΣQ+	

LIST OF PARAMETERS TO BE DISPLAYED OR PROGRAMMED (FUNCTION 3, 6 OR 16)

Decimal address	Hexa. address	Number of words	Text	Unit
			5 : ΣS 6 : F 7 : ΣPFL 8 : thd 3I 9 : thd 3U 10 : IN 11 : HOUR 12 : V 13 : thd In 14 : thd 3V 15 : ΣP- 16 : ΣQ- 17 : ΣPFC 18 : Cd-t 19 : T°C 1 20 : T°C 2 21 : T°C 3 22 : T°C internal 23 : ΣP predicted 24 : ΣQ predicted 25 : ΣS predicted	
590	24E	1	Lower threshold OUT 4	
591	24F	1	Unit lower threshold OUT 4 : 0 : / 1 : k 2 : M	
592	250	1	Upper threshold OUT 4	
593	251	1	Unit upper threshold OUT 4 : 0 : / 1 : k 2 : M	
594	252	1	Hysteresis 0 to 99 OUT 4	%
595	253	1	Specified time OUT 4	s.
596	254	1	Relay status OUT 4 : 0 : Open 1 : Closed	
597	255	1	Allocation of OUT 5 relay: 0 : Cde 1 : I 2 : U 3 : ΣP+ 4 : ΣQ+ 5 : ΣS 6 : F 7 : ΣPFL 8 : thd 3I 9 : thd 3U 10 : IN 11 : HOUR 12 : V 13 : thd In 14 : thd 3V 15 : ΣP- 16 : ΣQ-	

LIST OF PARAMETERS TO BE DISPLAYED OR PROGRAMMED (FUNCTION 3, 6 OR 16)

Decimal address	Hexa. address	Number of words	Text	Unit
			17 : ΣPFC 18 : Cd-t 19 : T°C 1 20 : T°C 2 21 : T°C 3 22 : T°C internal 23 : ΣP predicted 24 : ΣQ predicted 25 : ΣS predicted	
598	256	1	Lower threshold OUT 5	
599	257	1	Unit lower threshold OUT 5 : 0 : / 1 : k 2 : M	
600	258	1	Upper threshold OUT 5	
601	259	1	Unit upper threshold OUT 5 : 0 : / 1 : k 2 : M	
602	25A	1	Hysteresis 0 to 99 OUT 5	%
603	25B	1	Specified time OUT 5	s.
604	25C	1	Relay status OUT 5 : 0 : Open 1 : Closed	
605	25D	1	Allocation of OUT 6 relay: 0 : Cde 1 : I 2 : U 3 : ΣP+ 4 : ΣQ+ 5 : ΣS 6 : F 7 : ΣPFL 8 : thd 3I 9 : thd 3U 10 : IN 11 : HOUR 12 : V 13 : thd In 14 : thd 3V 15 : ΣP- 16 : ΣQ- 17 : ΣPFC 18 : Cd-t 19 : T°C 1 20 : T°C 2 21 : T°C 3 22 : T°C internal 23 : ΣP predicted 24 : ΣQ predicted 25 : ΣS predicted	
606	25E	1	Lower threshold OUT 6	
607	25F	1	Unit lower threshold OUT 6 : 0 : /	

LIST OF PARAMETERS TO BE DISPLAYED OR PROGRAMMED (FUNCTION 3, 6 OR 16)

Decimal address	Hexa. address	Number of words	Text	Unit
			1 : k 2 : M	
608	260	1	Upper threshold OUT 6	
609	261	1	Unit upper threshold OUT 6 : 0 : / 1 : k 2 : M	
610	262	1	Hysteresis 0 to 99 OUT 6	%
611	263	1	Specified time OUT 6	s.
612	264	1	Relay status OUT 6 : 0 : Open 1 : Closed	
613	265	1	Voltage dips detection threshold (SAG)	%
614	266	1	Voltage dip detection threshold hysteresis (SAG)	%
615	267	1	Voltage surge detection threshold hysteresis (SWELL)	%
616	268	1	Voltage surge detection threshold hysteresis (SWELL)	%
617	269	1	Hour meter allocation 1. Auxiliary power supply 2. Currents 3. phase to phase voltage	
618	26A	1	Hour meter trigger threshold	A/V
619	26B	1	Reserved for manufacturer	

Size of this zone: 108 words (decimals) or 6C (hexadecimals)

Example:
Configuration of a 4-wired unbalanced network (4 NBL) for ***DIRIS*** number 5.

Slave	Function	High-order address	Low-order address	High-order word N°	Low-order word N°	CRC 16
05	06	02	00	00	05	49F5

DIRIS A40/A41 reply: Identical to message sent.

RESET TO ZERO: ENERGY METERS AND MAX. VALUES (FUNCTION 6)

Decimal address	Hexa. address	Number of words	Text	Unit
1024	400	1	RAZ: Max3I : 0 x 0001 MaxP+ : 0 x 0002 MaxP-: 0 x 0004 MaxQ+ : 0 x 0008 MaxQ- : 0 x 0010 MaxS : 0 x 0020 Hour meter : 0 x 0040 kWh+ : 0 x 0080 kvarh+ : 0 x 0100 kVAh : 0 x 0200 kWh- : 0 x 0400 kvarh- : 0 x 0800 All parameters : 0 x 1000 MaxU : 0 x 2000 MaxV : 0 x 4000 MaxF : 0 x 8000	
1025	401	1	R.A.Z. : E1 : 0 x 0001 E2 : 0 x 0002 E3 : 0 x 0004 E4 : 0 x 0008 E5 : 0 x 0010 E6 : 0 x 0020 Min/Max I : 0 x 0040 Min/Max In : 0 x 0080 Min/Max U : 0 x 0100 Min/Max F : 0 x 0200 Min/Max PF : 0 x 0400 Min/Max P : 0 x 0800 Min/Max Q : 0 x 1000 Min/Max thd I : 0 x 2000 Min/Max thd In : 0 x 4000 Min/Max thd U : 0 x 8000	
1026	402	1	RAZ: Min/Max thd V : 0 x 0001 Min/Max V : 0 x 0002 Min/Max S : 0 x 0004 10 alarms event log : 0 x 0008 10 voltage dips event log : 0 x 0010 10 surges event log : 0 x 0020 10 cut-offs event log : 0 x 0040 Averaged out frequencies : 0 x 0080 Averaged out voltage values : 0 x 0100 Averaged out power values : 0 x 0200	

Size of this zone: 3 words (decimals) and 3 (hexadecimals)

RESET TO ZERO: ENERGY METERS AND MAX. VALUES (FUNCTION 6)

NB:
To reset several parameters to zero, add the corresponding figure indicated in the "text" column.

Example: reset Max P+ and kvarh + to zero:

2 + 100 = 102 (Hex)

Example:
To reset all values for ***DIRIS*** number 5 to zero, the following frame should be sent:

Slave	Function	High-order address	Low-order address	High-order word N°	Low-order word N°	CRC 16
05	06	04	00	10	00	84BE

DIRIS A40/A41 reply: identical to the message sent.

SAVED COMMAND (RESET)

The following command should be done to save programming parameters changes for ***DIRIS*** number 5.

Slave	Function	High-order address	Low-order address	Values	CRC 16
05	06	06	00	0000	88C6

NB : The ***DIRIS A40/A41*** responds with an identical frame.

PULSE METERS VALUES

Input meters

Decimal address	Hexa. address	Number of words	Text	Unit
2560	A00	2	Input E1, option ES 1	
2562	A02	2	Input E2, option ES 1	
2564	A04	2	Input E3, option ES 2	
2566	A06	2	inputE4, option ES 2	
2568	A08	2	Input E5, option ES 3	
2570	A0A	2	Input E6, option ES 3	

Size of this zone: 12 words (decimals) or C (hexadecimals)

DATE AND HOUR SETTINGS (FUNCTION 3, 6 OR 16)

Input meters

Decimal address	Hexa. address	Number of words	Text	Unit
3072	C00	1	Day	
3073	C01	1	Month	
3074	C02	1	Year	
3075	C03	1	Hour	
3076	C04	1	Minute	
3077	C05	1	Second	

Zone size: 6 words (decimal) or 6 (hexadecimal).

LAST 10 ALARMS EVENT LOG (FUNCTION 3)

Alarm n-1

Decimal address	Hexa. address	Number of words	Text	Unit
3088	C10	1	Alarm output number (1 to 6)	
3089	C11	1	Lower threshold: 0 : no alarm 1 : I1 2 : I2 3 : I3 4 : In 5 : U12 6 : U23 7 : U31 8 : ΣP+ 9 : ΣQ+ 10 : ΣS 11 : F 12 : ΣPFL 15 : thd I1 16 : thd I2 17 : thd I3 18 : thd U12 19 : thd U23 20 : thd U31 21 : HOUR 22 : V1 23 : V2 24 : V3 25 : thd In 26 : thd V1 27 : thd V2 28 : thd V3 29 : ΣP- 30 : ΣQ- 31 : ΣPFC 32 : T°C 1 33 : T°C 2 34 : T°C 3 35 : T°C internal 36 : ΣP predicted 37 : ΣQ predicted 38 : ΣS predicted	
3090	C12	2	Lower threshold value	

LAST 10 ALARMS EVENT LOG (FUNCTION 3)

Alarm n-1

Decimal address	Hexa. address	Number of words	Text	Unit
3092	C14	1	Lower threshold: 0 : no alarm 1 : I1 2 : I2 3 : I3 4 : In 5 : U12 6 : U23 7 : U31 8 : ΣP+ 9 : ΣQ+ 10 : ΣS 11 : F 12 : ΣPFL 15 : thd I1 16 : thd I2 17 : thd I3 18 : thd U12 19 : thd U23 20 : thd U31 21 : HOUR 22 : V1 23 : V2 24 : V3 25 : thd In 26 : thd V1 27 : thd V2 28 : thd V3 29 : ΣP- 30 : ΣQ- 31 : ΣPFC 32 : T°C 1 33 : T°C 2 34 : T°C 3 35 : T°C internal 36 : ΣP predicted 37 : ΣQ predicted 38 : ΣS predicted	
3093	C15	2	Upper threshold value	
3095	C17	1	Duration	s
3096	C18	1	Day	
3097	C19	1	Month	
3098	C1A	1	Year	
3099	C1B	1	Hour	
3100	C1C	1	Minute	
3101	C1D	1	Second	

LAST 10 ALARMS EVENT LOG (FUNCTION 3)

Alarm n-1

Decimal address	Hexa. address	Number of words	Text	Unit
3102	C1E	1	Output number (1 to 6)	
3103	C1F	1	Lower threshold : 0 : no alarm 1 : I1 2 : I2 3 : I3 4 : In 5 : U12 6 : U23 7 : U31 8 : ΣP+ 9 : ΣQ+ 10 : ΣS 11 : F 12 : ΣPFL 15 : thd I1 16 : thd I2 17 : thd I3 18 : thd U12 19 : thd U23 20 : thd U31 21 : HOUR 22 : V1 23 : V2 24 : V3 25 : thd In 26 : thd V1 27 : thd V2 28 : thd V3 29 : ΣP- 30 : ΣQ- 31 : ΣPFC 32 : T°C 1 33 : T°C 2 34 : T°C 3 35 : T°C internal 36 : ΣP predicted 37 : ΣQ predicted 38 : ΣS predicted	
3104	C20	2	Lower threshold value	
3106	C22	1	Lower threshold : 0 : no alarm 1 : I1 2 : I2 3 : I3 4 : In 5 : U12 6 : U23 7 : U31 8 : ΣP+ 9 : ΣQ+ 10 : ΣS 11 : F 12 : ΣPFL 15 : thd I1	

LAST 10 ALARMS EVENT LOG (FUNCTION 3)

Alarm n-2

Decimal address	Hexa. address	Number of words	Text	Unit
			16 : thd I2 17 : thd I3 18 : thd U12 19 : thd U23 20 : thd U31 21 : HOUR 22 : V1 23 : V2 24 : V3 25 : thd In 26 : thd V1 27 : thd V2 28 : thd V3 29 : ΣP- 30 : ΣQ- 31 : ΣPFC 32 : T°C 1 33 : T°C 2 34 : T°C 3 35 : T°C internal 36 : ΣP predicted 37 : ΣQ predicted 38 : ΣS predicted	
3107	C23	2	Upper threshold value	
3109	C25	1	Duration	s
3110	C26	1	Day	
3111	C27	1	Month	
3112	C28	1	Year	
3113	C29	1	Hour	
3114	C2A	1	Minute	
3115	C2B	1	Second	

LAST 10 ALARMS EVENT LOG (FUNCTION 3)

Alarm n-3

Decimal address	Hexa. address	Number of words	Text	Unit
3116	C2C	1	Output number (1 to 6)	
3117	C2D	1	Lower threshold : 0 : no alarm 1 : I1 2 : I2 3 : I3 4 : In 5 : U12 6 : U23 7 : U31 8 : ΣP+ 9 : ΣQ+ 10 : ΣS 11 : F 12 : ΣPFL 15 : thd I1 16 : thd I2 17 : thd I3 18 : thd U12 19 : thd U23 20 : thd U31 21 : HOUR 22 : V1 23 : V2 24 : V3 25 : thd In 26 : thd V1 27 : thd V2 28 : thd V3 29 : ΣP- 30 : ΣQ- 31 : ΣPFC 32 : T°C 1 33 : T°C 2 34 : T°C 3 35 : T°C internal 36 : ΣP predicted 37 : ΣQ predicted 38 : ΣS predicted	
3118	C2E	2	Lower threshold value	
3120	C30	1	Lower threshold : 0 : no alarm 1 : I1 2 : I2 3 : I3 4 : In 5 : U12 6 : U23 7 : U31 8 : ΣP+ 9 : ΣQ+ 10 : ΣS 11 : F 12 : ΣPFL	

LAST 10 ALARMS EVENT LOG (FUNCTION 3)

Alarm n-3

Decimal address	Hexa. address	Number of words	Text	Unit
			15 : thd I1 16 : thd I2 17 : thd I3 18 : thd U12 19 : thd U23 20 : thd U31 21 : HOUR 22 : V1 23 : V2 24 : V3 25 : thd In 26 : thd V1 27 : thd V2 28 : thd V3 29 : ΣP- 30 : ΣQ- 31 : ΣPFC 32 : T°C 1 33 : T°C 2 34 : T°C 3 35 : T°C internal 36 : ΣP predicted 37 : ΣQ predicted 38 : ΣS predicted	
3121	C31	2	Upper threshold value	
3123	C33	1	Duration	s
3124	C34	1	Day	
3125	C35	1	Month	
3126	C36	1	Year	
3127	C37	1	Hour	
3128	C38	1	Minute	
3129	C39	1	Second	

Alarme n-4

Decimal address	Hexa. address	Number of words	Text	Unit
3130	C3A	1	Output number (1 to 6)	
3131	C3B	1	Lower threshold : 0 : no alarm 1 : I1 2 : I2 3 : I3 4 : In 5 : U12 6 : U23 7 : U31 8 : ΣP+ 9 : ΣQ+ 10 : ΣS 11 : F 12 : ΣPFL 15 : thd I1 16 : thd I2 17 : thd I3	

LAST 10 ALARMS EVENT LOG (FUNCTION 3)

Alarm n-4

Decimal address	Hexa. address	Number of words	Text	Unit
			18 : thd U12 19 : thd U23 20 : thd U31 21 : HOUR 22 : V1 23 : V2 24 : V3 25 : thd In 26 : thd V1 27 : thd V2 28 : thd V3 29 : ΣP- 30 : ΣQ- 31 : ΣPFC 32 : T°C 1 33 : T°C 2 34 : T°C 3 35 : T°C internal 36 : ΣP predicted 37 : ΣQ predicted 38 : ΣS predicted	
3132	C3C	2	Lower threshold value	
3134	C3E	1	Lower threshold : 0 : no alarm 1 : I1 2 : I2 3 : I3 4 : In 5 : U12 6 : U23 7 : U31 8 : ΣP+ 9 : ΣQ+ 10 : ΣS 11 : F 12 : ΣPFL 15 : thd I1 16 : thd I2 17 : thd I3 18 : thd U12 19 : thd U23 20 : thd U31 21 : HOUR 22 : V1 23 : V2 24 : V3 25 : thd In 26 : thd V1 27 : thd V2 28 : thd V3 29 : ΣP- 30 : ΣQ- 31 : ΣPFC 32 : T°C 1	

LAST 10 ALARMS EVENT LOG (FUNCTION 3)

Alarm n-4

Decimal address	Hexa. address	Number of words	Text	Unit
			33 : T°C 2 34 : T°C 3 35 : T°C internal 36 : ΣP predicted 37 : ΣQ predicted 38 : ΣS predicted	
3135	C3F	2	Upper threshold value	
3137	C41	1	Duration	s
3138	C42	1	Day	
3139	C43	1	Month	
3140	C44	1	Year	
3141	C45	1	Hour	
3142	C46	1	Minute	
3143	C47	1	Second	

Alarm n-5

Decimal address	Hexa. address	Number of words	Text	Unit
3144	C48	1	Output number (1 to 6)	
3145	C49	1	Lower threshold : 0 : no alarm 1 : I1 2 : I2 3 : I3 4 : In 5 : U12 6 : U23 7 : U31 8 : ΣP+ 9 : ΣQ+ 10 : ΣS 11 : F 12 : ΣPFL 15 : thd I1 16 : thd I2 17 : thd I3 18 : thd U12 19 : thd U23 20 : thd U31 21 : HOUR 22 : V1 23 : V2 24 : V3 25 : thd In 26 : thd V1 27 : thd V2 28 : thd V3 29 : ΣP- 30 : ΣQ- 31 : ΣPFC 32 : T°C 1 33 : T°C 2 34 : T°C 3 35 : T°C internal	

LAST 10 ALARMS EVENT LOG (FUNCTION 3)

Alarm n-5

Decimal address	Hexa. address	Number of words	Text	Unit
			36 : ΣP predicted 37 : ΣQ predicted 38 : ΣS prédictive	
3146	C4A	2	Lower threshold value	
3148	C4C	1	Lower threshold : 0 : no alarm 1 : I1 2 : I2 3 : I3 4 : In 5 : U12 6 : U23 7 : U31 8 : ΣP+ 9 : ΣQ+ 10 : ΣS 11 : F 12 : ΣPFL 15 : thd I1 16 : thd I2 17 : thd I3 18 : thd U12 19 : thd U23 20 : thd U31 21 : HOUR 22 : V1 23 : V2 24 : V3 25 : thd In 26 : thd V1 27 : thd V2 28 : thd V3 29 : ΣP- 30 : ΣQ- 31 : ΣPFC 32 : T°C 1 33 : T°C 2 34 : T°C 3 35 : T°C internal 36 : ΣP predicted 37 : ΣQ predicted 38 : ΣS predicted	
3149	C4D	2	Upper threshold value	
3151	C4F	1	Duration	s
3152	C50	1	Day	s
3153	C51	1	Month	
3154	C52	1	Year	
3155	C53	1	Hour	
3156	C54	1	Minute	
3157	C55	1	Second	

LAST 10 ALARMS EVENT LOG (FUNCTION 3)

Alarm n-6

Decimal address	Hexa. address	Number of words	Text	Unit
3158	C56	1	Output number (1 to 6)	
3159	C57	1	Lower threshold : 0 : no alarm 1 : I1 2 : I2 3 : I3 4 : In 5 : U12 6 : U23 7 : U31 8 : ΣP+ 9 : ΣQ+ 10 : ΣS 11 : F 12 : ΣPFL 15 : thd I1 16 : thd I2 17 : thd I3 18 : thd U12 19 : thd U23 20 : thd U31 21 : HOUR 22 : V1 23 : V2 24 : V3 25 : thd In 26 : thd V1 27 : thd V2 28 : thd V3 29 : ΣP- 30 : ΣQ- 31 : ΣPFC 32 : T°C 1 33 : T°C 2 34 : T°C 3 35 : T°C internal 36 : ΣP predicted 37 : ΣQ predicted 38 : ΣS predicted	
3160	C58	2	Lower threshold value	
3162	C5A	1	Lower threshold : 0 : no alarm 1 : I1 2 : I2 3 : I3 4 : In 5 : U12 6 : U23 7 : U31 8 : ΣP+ 9 : ΣQ+ 10 : ΣS 11 : F 12 : ΣPFL	

LAST 10 ALARMS EVENT LOG (FUNCTION 3)

Alarme n-6

Decimal address	Hexa. address	Number of words	Text	Unit
			15 : thd I1 16 : thd I2 17 : thd I3 18 : thd U12 19 : thd U23 20 : thd U31 21 : HOUR 22 : V1 23 : V2 24 : V3 25 : thd In 26 : thd V1 27 : thd V2 28 : thd V3 29 : ΣP- 30 : ΣQ- 31 : ΣPFC 32 : T°C 1 33 : T°C 2 34 : T°C 3 35 : T°C internal 36 : ΣP predicted 37 : ΣQ predicted 38 : ΣS predicted	
3163	C5B	2	Upper threshold value	
3165	C5D	1	Duration	s
3166	C5E	1	Day	
3167	C5F	1	Month	
3168	C60	1	Year	
3169	C61	1	Hour	
3170	C62	1	Minute	
3171	C63	1	Second	

Alarm n-7

Decimal address	Hexa. address	Number of words	Text	Unit
3172	C64	1	Output number (1 to 6)	
3173	C65	1	Lower threshold : 0 : no alarm 1 : I1 2 : I2 3 : I3 4 : In 5 : U12 6 : U23 7 : U31 8 : ΣP+ 9 : ΣQ+ 10 : ΣS 11 : F 12 : ΣPFL 15 : thd I1 16 : thd I2 17 : thd I3	

LAST 10 ALARMS EVENT LOG (FUNCTION 3)

Alarm n-7

Decimal address	Hexa. address	Number of words	Text	Unit
			18 : thd U12 19 : thd U23 20 : thd U31 21 : HOUR 22 : V1 23 : V2 24 : V3 25 : thd In 26 : thd V1 27 : thd V2 28 : thd V3 29 : ΣP- 30 : ΣQ- 31 : ΣPFC 32 : T°C 1 33 : T°C 2 34 : T°C 3 35 : T°C internal 36 : ΣP predicted 37 : ΣQ predicted 38 : ΣS predicted	
3174	C66	2	Lower threshold value	
3176	C68	1	Lower threshold : 0 : no alarm 1 : I1 2 : I2 3 : I3 4 : In 5 : U12 6 : U23 7 : U31 8 : ΣP+ 9 : ΣQ+ 10 : ΣS 11 : F 12 : ΣPFL 15 : thd I1 16 : thd I2 17 : thd I3 18 : thd U12 19 : thd U23 20 : thd U31 21 : HOUR 22 : V1 23 : V2 24 : V3 25 : thd In 26 : thd V1 27 : thd V2 28 : thd V3 29 : ΣP- 30 : ΣQ- 31 : ΣPFC 32 : T°C 1	

LAST 10 ALARMS EVENT LOG (FUNCTION 3)

Alarm n-7

Decimal address	Hexa. address	Number of words	Text	Unit
			33 : T°C 2 34 : T°C 3 35 : T°C internal 36 : ΣP predicted 37 : ΣQ predicted 38 : ΣS predicted	
3177	C69	2	Upper threshold value	
3179	C6B	1	Duration	s
3180	C6C	1	Day	
3181	C6D	1	Month	
3182	C6E	1	Year	
3183	C6F	1	Hour	
3184	C70	1	Minute	
3185	C71	1	Second	

Alarm n-8

Decimal address	Hexa. address	Number of wordss	Text	Unit
3186	C72	1	Output number (1 to 6)	
3187	C73	1	Lower threshold : 0 : no alarm 1 : I1 2 : I2 3 : I3 4 : In 5 : U12 6 : U23 7 : U31 8 : ΣP+ 9 : ΣQ+ 10 : ΣS 11 : F 12 : ΣPFL 15 : thd I1 16 : thd I2 17 : thd I3 18 : thd U12 19 : thd U23 20 : thd U31 21 : HOUR 22 : V1 23 : V2 24 : V3 25 : thd In 26 : thd V1 27 : thd V2 28 : thd V3 29 : ΣP- 30 : ΣQ- 31 : ΣPFC 32 : T°C 1 33 : T°C 2 34 : T°C 3	

LAST 10 ALARMS EVENT LOG (FUNCTION 3)

Alarm n-8

Decimal address	Hexa. address	Number of words	Text	Unit
			35 : T°C internal 36 : ΣP predicted 37 : ΣQ predicted 38 : ΣS predicted	
3188	C74	2	Lower threshold value	
3190	C76	1	Lower threshold : 0 : no alarm 1 : I1 2 : I2 3 : I3 4 : In 5 : U12 6 : U23 7 : U31 8 : ΣP+ 9 : ΣQ+ 10 : ΣS 11 : F 12 : ΣPFL 15 : thd I1 16 : thd I2 17 : thd I3 18 : thd U12 19 : thd U23 20 : thd U31 21 : HOUR 22 : V1 23 : V2 24 : V3 25 : thd In 26 : thd V1 27 : thd V2 28 : thd V3 29 : ΣP- 30 : ΣQ- 31 : ΣPFC 32 : T°C 1 33 : T°C 2 34 : T°C 3 35 : T°C internal 36 : ΣP predicted 37 : ΣQ predicted 38 : ΣS predicted	
3191	C77	2	Upper threshold value	
3193	C79	1	Duration	s
3194	C7A	1	Day	
3195	C7B	1	Month	
3196	C7C	1	Year	
3197	C7D	1	Hour	
3198	C7E	1	Minute	
3199	C7F	1	Second	

LAST 10 ALARMS EVENT LOG (FUNCTION 3)

Alarm n-9

Decimal address	Hexa. address	Number of words	Text	Unit
3200	C80	1	Output number (1 to 6)	
3201	C81	1	Lower threshold : 0 : no alarm 1 : I1 2 : I2 3 : I3 4 : In 5 : U12 6 : U23 7 : U31 8 : ΣP+ 9 : ΣQ+ 10 : ΣS 11 : F 12 : ΣPFL 15 : thd I1 16 : thd I2 17 : thd I3 18 : thd U12 19 : thd U23 20 : thd U31 21 : HOUR 22 : V1 23 : V2 24 : V3 25 : thd In 26 : thd V1 27 : thd V2 28 : thd V3 29 : ΣP- 30 : ΣQ- 31 : ΣPFC 32 : T°C 1 33 : T°C 2 34 : T°C 3 35 : T°C internal 36 : ΣP predicted 37 : ΣQ predicted 38 : ΣS predicted	
3202	C82	2	Lower threshold value	
3204	C84	1	Lower threshold : 0 : no alarm 1 : I1 2 : I2 3 : I3 4 : In 5 : U12 6 : U23 7 : U31 8 : ΣP+ 9 : ΣQ+ 10 : ΣS 11 : F 12 : ΣPFL	

LAST 10 ALARMS EVENT LOG (FUNCTION 3)

Alarm n-9

Decimal address	Hexa. address	Number of words	Text	Unit
			15 : thd I1 16 : thd I2 17 : thd I3 18 : thd U12 19 : thd U23 20 : thd U31 21 : HOUR 22 : V1 23 : V2 24 : V3 25 : thd In 26 : thd V1 27 : thd V2 28 : thd V3 29 : ΣP- 30 : ΣQ- 31 : ΣPFC 32 : T°C 1 33 : T°C 2 34 : T°C 3 35 : T°C internal 36 : ΣP predicted 37 : ΣQ predicted 38 : ΣS predicted	
3205	C85	2	Upper threshold value	
3207	C87	1	Duration	s
3208	C88	1	Day	
3209	C89	1	Month	
3210	C8A	1	Year	
3211	C8B	1	Hour	
3212	C8C	1	Minute	
3213	C8D	1	Second	

Alarm n-10

Decimal address	Hexa. address	Number of words	Text	Unit
3214	C8E	1	Output number (1 to 6)	
3215	C8F	1	Lower threshold : 0 : no alarm 1 : I1 2 : I2 3 : I3 4 : In 5 : U12 6 : U23 7 : U31 8 : ΣP+ 9 : ΣQ+ 10 : ΣS 11 : F 12 : ΣPFL 15 : thd I1 16 : thd I2	

LAST 10 ALARMS EVENT LOG (FUNCTION 3)

Alarm n-10

Decimal address	Hexa. address	Number of words	Text	Unit
			17 : thd I3 18 : thd U12 19 : thd U23 20 : thd U31 21 : HOUR 22 : V1 23 : V2 24 : V3 25 : thd In 26 : thd V1 27 : thd V2 28 : thd V3 29 : ΣP- 30 : ΣQ- 31 : ΣPFC 32 : T°C 1 33 : T°C 2 34 : T°C 3 35 : T°C internal 36 : ΣP predicted 37 : ΣQ predicted 38 : ΣS predicted	
3216	C90	2	Lower threshold value	
3218	C92	1	Lower threshold : 0 : no alarm 1 : I1 2 : I2 3 : I3 4 : In 5 : U12 6 : U23 7 : U31 8 : ΣP+ 9 : ΣQ+ 10 : ΣS 11 : F 12 : ΣPFL 15 : thd I1 16 : thd I2 17 : thd I3 18 : thd U12 19 : thd U23 20 : thd U31 21 : HOUR 22 : V1 23 : V2 24 : V3 25 : thd In 26 : thd V1 27 : thd V2 28 : thd V3 29 : ΣP- 30 : ΣQ- 31 : ΣPFC	

LAST 10 ALARMS EVENT LOG (FUNCTION 3)

Alarm n-10

Decimal address	Hexa. address	Number of words	Text	Unit
			32 : T°C 1 33 : T°C 2 34 : T°C 3 35 : T°C internal 36 : ΣP predicted 37 : ΣQ predicted 38 : ΣS predicted	
3219	C93	2	Upper threshold value	
3221	C95	1	Duration	s
3222	C96	1	Day	
3223	C97	1	Month	
3224	C98	1	Year	
3225	C99	1	Hour	
3226	C9A	1	Minute	
3227	C9B	1	Second	

Zone size: 140 words (decimal) or 8C (hexadecimal).

LAST 10 VOLTAGE DIPS EVENT LOG / SAG (FUNCTION 3)

Voltage dip n-1

Decimal address	Hexa. address	Number of words	Text	Unit
3328	D00	1	Query! : phase-to-phase residual value : 0 : no 5: U12 6: U23 7: U31	
3329	D01	2	Value	
3331	D03	1	Query! : phase-to-neutral residual value : 22 : V1 23 : V2 24 : V3	
3332	D04	2	Value	
3334	D06	2	Duration	ms
3336	D08	1	Day	
3337	D09	1	Month	
3338	D0A	1	Year	
3339	D0B	1	Hour	
3340	D0C	1	Minute	
3341	D0D	1	Second	

LAST 10 VOLTAGE DIPS EVENT LOG / SAG (FUNCTION 3)

Voltage dip n-2

Decimal address	Hexa. address	Number of words	Text	Unit
3342	D0E	1	Query! : phase-to-phase residual value : 0 : no 5: U12 6: U23 7: U31	
3343	D0F	2	Value	
3345	D11	1	Query! : phase-to-neutral residual value : 0 : no 22 : V1 23 : V2 24 : V3	
3346	D12	2	Value	
3348	D14	2	Duration	ms
3350	D16	1	Day	
3351	D17	1	Month	
3352	D18	1	Year	
3353	D19	1	Hour	
3354	D1A	1	Minute	
3355	D1B	1	Second	

Voltage dip n-3

Decimal address	Hexa. address	Number of words	Text	Unit
3356	D1C	1	Query! : phase-to-phase residual value : 0 : no 5: U12 6: U23 7: U31	
3357	D1D	2	Value	
3359	D1F	1	Query! : phase-to-neutral residual value : 0 : no 22 : V1 23 : V2 24 : V3	
3360	D20	2	Value	
3362	D22	2	Duration	ms
3364	D24	1	Day	
3365	D25	1	Month	
3366	D26	1	Year	
3367	D27	1	Hour	
3368	D28	1	Minute	
3369	D29	1	Second	

LAST 10 VOLTAGE DIPS EVENT LOG / SAG (FUNCTION 3)

Voltage dip n-4

Decimal address	Hexa. address	Number of words	Text	Unit
3370	D2A	1	Query! : phase-to-phase residual value : 0 : no 5: U12 6: U23 7: U31	
3371	D2B	2	Value	
3373	D2D	1	Query! : phase-to-neutral residual value : 0 : no 22 : V1 23 : V2 24 : V3	
3374	D2E	2	Value	
3376	D30	2	Duration	ms
3378	D32	1	Day	
3379	D33	1	Month	
3380	D34	1	Year	
3381	D35	1	Hour	
3382	D36	1	Minute	
3383	D37	1	Second	

Voltage dip n-5

Decimal address	Hexa. address	Number of words	Text	Unit
3384	D38	1	Query! : phase-to-phase residual value: 0 : no 5: U12 6: U23 7: U31	
3385	D39	2	Value	
3387	D3B	1	Query! : phase-to-neutral residual value: 0 : no 22 : V1 23 : V2 24 : V3	
3388	D3C	2	Value	
3390	D3E	2	Duration	ms
3392	D40	1	Day	
3393	D41	1	Month	
3394	D42	1	Year	
3395	D43	1	Hour	
3396	D44	1	Minute	
3397	D45	1	Second	

LAST 10 VOLTAGE DIPS EVENT LOG / SAG (FUNCTION 3)

Voltage dip n-6

Decimal address	Hexa. address	Number of words	Text	Unit
3398	D46	1	Query! : phase-to-phase residual value : 0 : no 5: U12 6: U23 7: U31	
3399	D47	2	Value	
3401	D49	1	Query! : phase-to-neutral residual value : 0 : no 22 : V1 23 : V2 24 : V3	
3402	D4A	2	Value	
3404	D4C	2	Duration	ms
3406	D4E	1	Day	
3407	D4F	1	Month	
3408	D50	1	Year	
3409	D51	1	Hour	
3410	D52	1	Minute	
3411	D53	1	Second	

Voltage dip n-7

Decimal address	Hexa. address	Number of words	Text	Unit
3412	D54	1	Query! : phase-to-phase residual value : 0 : no 5: U12 6: U23 7: U31	
3413	D55	2	Value	
3415	D57	1	Query! : phase-to-neutral residual value : 0 : no 22 : V1 23 : V2 24 : V3	
3416	D58	2	Value	
3418	D5A	2	Duration	ms
3420	D5C	1	Day	
3421	D5D	1	Month	
3422	D5E	1	Year	
3423	D5F	1	Hour	
3424	D60	1	Minute	
3425	D61	1	Second	

LAST 10 VOLTAGE DIPS EVENT LOG / SAG (FUNCTION 3)

Voltage dip n-8

Decimal address	Hexa. address	Number of words	Text	Unit
3426	D62	1	Query! : phase-to-phase residual value : 0 : no 5: U12 6: U23 7: U31	
3427	D63	2	Value	
3429	D65	1	Query! : phase-to-neutral residual value : 0 : no 22 : V1 23 : V2 24 : V3	
3430	D66	2	Value	
3432	D68	2	Duration	ms
3434	D6A	1	Day	
3435	D6B	1	Month	
3436	D6C	1	Year	
3437	D6D	1	Hour	
3438	D6E	1	Minute	
3439	D6F	1	Second	

Voltage dip n-9

Decimal address	Hexa. address	Number of words	Text	Unit
3440	D70	1	Query! : phase-to-phase residual value : 0 : no 5: U12 6: U23 7: U31	
3441	D71	2	Value	
3443	D73	1	Query! : phase-to-neutral residual value : 0 : no 22 : V1 23 : V2 24 : V3	
3444	D74	2	Value	
3446	D76	2	Duration	ms
3448	D78	1	Day	
3449	D79	1	Month	
3450	D7A	1	Year	
3451	D7B	1	Hour	
3452	D7C	1	Minute	
3453	D7D	1	Second	

LAST 10 VOLTAGE DIPS EVENT LOG / SAG (FUNCTION 3)

Voltage dip n-10

Decimal address	Hexa. address	Number of words	Text	Unit
3454	D7E	1	Query! : phase-to-phase residual value : 0 : no 5: U12 6: U23 7: U31	
3455	D7F	2	Value	
3457	D81	1	Query! : phase-to-neutral residual value : 0 : no 22 : V1 23 : V2 24 : V3	
3458	D82	2	Value	
3460	D84	2	Duration	ms
3462	D86	1	Day	
3463	D87	1	Month	
3464	D88	1	Year	
3465	D89	1	Hour	
3466	D8A	1	Minute	
3467	D8B	1	Second	

Zone size: 140 words (decimal) or 8C (hexadecimal).

LAST 10 VOLTAGE SURGE EVENT LOG / SWELL (FUNCTION 3)

Voltage surge n-1

Decimal address	Hexa. address	Number of words	Text	Unit
3584	E00	1	Query! : maximum phase-to-phase value : 0 : no 5: U12 6: U23 7: U31	
3585	E01	2	Value	
3587	E03	1	Query! : maximum phase-to-neutral value : 0 : no 22 : V1 23 : V2 24 : V3	
3588	E04	2	Value	
3590	E06	2	Duration	ms
3592	E08	1	Day	
3593	E09	1	Month	
3594	E0A	1	Year	
3595	E0B	1	Hour	
3596	E0C	1	Minute	
3597	E0D	1	Second	

LAST 10 TEMPORARY VOLTAGE SURGE EVENT LOG (FUNCTION 3)

Voltage surge n-2

Decimal address	Hexa. address	Number of words	Text	Unit
3598	E0E	1	Query! : maximum phase-to-phase value : 0 : no 5: U12 6: U23 7: U31	
3599	E0F	2	Value	
3601	E11	1	Query! : maximum phase-to-neutral value : 0 : no 22 : V1 23 : V2 24 : V3	
3602	E12	2	Value	
3604	E14	2	Duration	ms
3606	E16	1	Day	
3607	E17	1	Month	
3608	E18	1	Year	
3609	E19	1	Hour	
3610	E1A	1	Minute	
3611	E1B	1	Second	

Voltage surge n-3

Decimal address	Hexa. address	Number of words	Text	Unit
3612	E1C	1	Query! : maximum phase-to-phase value : 0 : no 5: U12 6: U23 7: U31	
3613	E1D	2	Value	
3615	E1F	1	Query! : maximum phase-to-neutral value : 0 : no 22 : V1 23 : V2 24 : V3	
3616	E20	2	Value	
3618	E22	2	Duration	ms
3620	E24	1	Day	
3621	E25	1	Month	
3622	E26	1	Year	
3623	E27	1	Hour	
3624	E28	1	Minute	
3625	E29	1	Seconds	

LAST 10 TEMPORARY VOLTAGE SURGE EVENT LOG (FUNCTION 3)

Voltage surge n-4

Decimal address	Hexa. address	Number of words	Text	Unit
3626	E2A	1	Query! : maximum phase-to-phase value : 0 : no 5: U12 6: U23 7: U31	
3627	E2B	2	Value	
3629	E2D	1	Query! : maximum phase-to-neutral value : 0 : no 22 : V1 23 : V2 24 : V3	
3630	E2E	2	Value	
3632	E30	2	Duration	ms
3634	E32	1	Day	
3635	E33	1	Month	
3636	E34	1	Year	
3637	E35	1	Hour	
3638	E36	1	Minute	
3639	E37	1	Second	

Voltage surge n-5

Decimal address	Hexa. address	Number of words	Text	Unit
3640	E38	1	Query! : maximum phase-to-phase value : 0 : no 5: U12 6: U23 7: U31	
3641	E39	2	Value	
3643	E3B	1	Query! : maximum phase-to-neutral value : 0 : no 22 : V1 23 : V2 24 : V3	
3644	E3C	2	Value	
3646	E3E	2	Duration	ms
3648	E40	1	Day	
3649	E41	1	Month	
3650	E42	1	Year	
3651	E43	1	Hour	
3652	E44	1	Minute	
3653	E45	1	Second	

LAST 10 TEMPORARY VOLTAGE SURGE EVENT LOG (FUNCTION 3)

Voltage surge n-6

Decimal address	Hexa. address	Number of words	Text	Unit
3654	E46	1	Query! : maximum phase-to-phase value : 0 : no 5: U12 6: U23 7: U31	
3655	E47	2	Value	
3657	E49	1	Query! : maximum phase-to-neutral value : 0 : no 22 : V1 23 : V2 24 : V3	
3658	E4A	2	Value	
3660	E4C	2	Duration	ms
3662	E4E	1	Day	
3663	E4F	1	Month	
3664	E50	1	Year	
3665	E51	1	Hour	
3666	E52	1	Minute	
3667	E53	1	Second	

Voltage surge n-7

Decimal address	Hexa. address	Number of words	Text	Unit
3668	E54	1	Query! : maximum phase-to-phase value : 0 : no 5: U12 6: U23 7: U31	
3669	E55	2	Value	
3671	E57	1	Query! : maximum phase-to-neutral value : 0 : no 22 : V1 23 : V2 24 : V3	
3672	E58	2	Value	
3674	E5A	2	Duration	ms
3676	E5C	1	Day	
3677	E5D	1	Month	
3678	E5E	1	Year	
3679	E5F	1	Hour	
3680	E60	1	Minute	
3681	E61	1	Second	

LAST 10 TEMPORARY VOLTAGE SURGE EVENT LOG (FUNCTION 3)

Voltage surge n-8

Decimal address	Hexa. address	Number of words	Text	Unit
3682	E62	1	Query! : maximum phase-to-phase value : 0 : no 5: U12 6: U23 7: U31	
3683	E63	2	Value	
3685	E65	1	Query! : maximum phase-to-neutral value : 0 : no 22 : V1 23 : V2 24 : V3	
3686	E66	2	Value	
3688	E68	2	Duration	ms
3690	E6A	1	Day	
3691	E6B	1	Month	
3692	E6C	1	Year	
3693	E6D	1	Hour	
3694	E6E	1	Minute	
3695	E6F	1	Second	

Voltage surge n-9

Decimal address	Hexa. address	Number of words	Text	Unit
3696	E70	1	Query! : maximum phase-to-phase value : 0 : no 5: U12 6: U23 7: U31	
3697	E71	2	Value	
3699	E73	1	Query! : maximum phase-to-neutral value : 0 : no 22 : V1 23 : V2 24 : V3	
3700	E74	2	Value	
3702	E76	2	Duration	ms
3704	E78	1	Day	
3705	E79	1	Month	
3706	E7A	1	Year	
3707	E7B	1	Hour	
3708	E7C	1	Minute	
3709	E7D	1	Second	

LAST 10 TEMPORARY VOLTAGE SURGE EVENT LOG (FUNCTION 3)

Voltage surge n-10

Decimal address	Hexa. address	Number of words	Text	Unit
3710	E7E	1	Query! : maximum phase-to-phase value : 0 : no 5: U12 6: U23 7: U31	
3711	E7F	2	Value	
3713	E81	1	Query! : maximum phase-to-neutral value : 0 : no 22 : V1 23 : V2 24 : V3	
3714	E82	2	Value	
3716	E84	2	Duration	ms
3718	E86	1	Day	
3719	E87	1	Month	
3720	E88	1	Year	
3721	E89	1	Hour	
3722	E8A	1	Minute	
3723	E8B	1	Second	

Zone size: 140 words (decimal) or 8C (hexadecimal).

MINIMUM AND MAXIMUM INSTANTANEOUS VALUES (FUNCTION 3)

Decimal address	Hexa. address	Number of words	Text	Unit
3840	F00	2	3I minimum	mA
3842	F02	1	Day	
3843	F03	1	Month	
3844	F04	1	Year	
3845	F05	1	Hour	
3846	F06	1	Minute	
3847	F07	1	Second	
3848	F08	2	3I maximum	mA
3850	F0A	1	Day	
3851	F0B	1	Month	
3852	F0C	1	Year	
3853	F0D	1	Hour	
3854	F0E	1	Minute	
3855	F0F	1	Second	
3856	F10	2	IN minimum	mA
3858	F12	1	Day	
3859	F13	1	Month	
3860	F14	1	Year	
3861	F15	1	Hour	
3862	F16	1	Minute	
3863	F17	1	Second	
3864	F18	2	IN maximum	mA
3866	F1A	1	Day	
3867	F1B	1	Month	
3868	F1C	1	Year	
3869	F1D	1	Hour	
3870	F1E	1	Minute	
3871	F1F	1	Second	
3872	F20	2	3U minimum	mA

MINIMUM AND MAXIMUM INSTANTANEOUS VALUES (FUNCTION 3)

Decimal address	Hexa. address	Number of words	Text	Unit
3874	F22	1	Day	
3875	F23	1	Month	
3876	F24	1	Year	
3877	F25	1	Hour	
3878	F26	1	Minute	
3879	F27	1	Second	
3880	F28	2	3U maximum	0.01 V
3882	F2A	1	Day	
3883	F2B	1	Month	
3884	F2C	1	Year	
3885	F2D	1	Hour	
3886	F2E	1	Minute	
3887	F2F	1	Second	
3888	F30	2	3V minimum	0.01 V
3890	F32	1	Day	
3891	F33	1	Month	
3892	F34	1	Year	
3893	F35	1	Hour	
3894	F36	1	Minute	
3895	F37	1	Second	
3896	F38	2	3V maximum	0.01 V
3898	F3A	1	Day	
3899	F3B	1	Month	
3900	F3C	1	Year	
3901	F3D	1	Hour	
3902	F3E	1	Minute	
3903	F3F	1	Second	
3904	F40	2	F minimum	Hz / 100
3906	F42	1	Day	
3907	F43	1	Month	
3908	F44	1	Year	
3909	F45	1	Hour	
3910	F46	1	Minute	
3911	F47	1	Second	
3912	F48	2	F maximum	Hz / 100
3914	F4A	1	Day	
3915	F4B	1	Month	
3916	F4C	1	Year	
3917	F4D	1	Hour	
3918	F4E	1	Minute	
3919	F4F	1	Second	
3920	F50	2	ΣPF minimum	1 / 1000
3922	F52	1	Day	
3923	F53	1	Month	
3924	F54	1	Year	
3925	F55	1	Hour	
3926	F56	1	Minute	
3927	F57	1	Second	
3928	F58	2	ΣPF maximum	1 / 1000
3930	F5A	1	Day	
3931	F5B	1	Month	
3932	F5C	1	Year	
3933	F5D	1	Hour	
3934	F5E	1	Minute	
3935	F5F	1	Second	
3936	F60	2	ΣP + minimum	kW / 100

MINIMUM AND MAXIMUM INSTANTANEOUS VALUES (FUNCTION 3)

Decimal address	Hexa. address	Number of words	Text	Unit
3938	F62	1	Day	
3939	F63	1	Month	
3940	F64	1	Year	
3941	F65	1	Hour	
3942	F66	1	Minute	
3943	F67	1	Second	
3944	F68	2	ΣP + maximum	kW / 100
3946	F6A	1	Day	
3947	F6B	1	Month	
3948	F6C	1	Year	
3949	F6D	1	Hour	
3950	F6E	1	Minute	
3951	F6F	1	Second	
3952	F70	2	ΣP - minimum	kW / 100
3954	F72	1	Day	
3955	F73	1	Month	
3956	F74	1	Year	
3957	F75	1	Hour	
3958	F76	1	Minute	
3959	F77	1	Second	
3960	F78	2	ΣP - maximum	kvar / 100
3962	F7A	1	Day	
3963	F7B	1	Month	
3964	F7C	1	Year	
3965	F7D	1	Hour	
3966	F7E	1	Minute	
3967	F7F	1	Second	
3968	F80	2	ΣQ + minimum	kvar / 100
3970	F82	1	Day	
3971	F83	1	Month	
3972	F84	1	Year	
3973	F85	1	Hour	
3974	F86	1	Minute	
3975	F87	1	Second	
3976	F88	2	ΣQ + maximum	kvar / 100
3978	F8A	1	Day	
3979	F8B	1	Month	
3980	F8C	1	Year	
3981	F8D	1	Hour	
3982	F8E	1	Minute	
3983	F8F	1	Second	
3984	F90	2	ΣQ - minimum	kvar / 100
3986	F92	1	Day	
3987	F93	1	Month	
3988	F94	1	Year	
3989	F95	1	Hour	
3990	F96	1	Minute	
3991	F97	1	Second	
3992	F98	2	ΣQ - maximum	kvar / 100
3994	F9A	1	Day	
3995	F9B	1	Month	
3996	F9C	1	Year	
3997	F9D	1	Hour	
3998	F9E	1	Minute	
3999	F9F	1	Second	
4000	FA0	2	ΣS minimum	kvar / 100

MINIMUM AND MAXIMUM INSTANTANEOUS VALUES (FUNCTION 3)

Decimal address	Hexa. address	Number of words	Text	Unit
4002	FA2	1	Day	
4003	FA3	1	Month	
4004	FA4	1	Year	
4005	FA5	1	Hour	
4006	FA6	1	Minute	
4007	FA7	1	Second	
4008	FA8	2	ΣS maximum	kvar / 100
4010	FAA	1	Day	
4011	FAB	1	Month	
4012	FAC	1	Year	
4013	FAD	1	Hour	
4014	FAE	1	Minute	
4015	FAF	1	Second	
4016	FB0	2	THD 3I minimum	0.10 %
4018	FB2	1	Day	
4019	FB3	1	Month	
4020	FB4	1	Year	
4021	FB5	1	Hour	
4022	FB6	1	Minute	
4023	FB7	1	Second	
4024	FB8	2	THD 3I maximum	0.10 %
4026	FBA	1	Day	
4027	FBB	1	Month	
4028	FBC	1	Year	
4029	FBD	1	Hour	
4030	FBE	1	Minute	
4031	FBF	1	Second	
4032	FC0	2	THD IN minimum	0.10 %
4034	FC2	1	Day	
4035	FC3	1	Month	
4036	FC4	1	Year	
4037	FC5	1	Hour	
4038	FC6	1	Minute	
4039	FC7	1	Second	
4040	FC8	2	THD IN maximum	0.10 %
4042	FCA	1	Day	
4043	FCB	1	Month	
4044	FCC	1	Year	
4045	FCD	1	Hour	
4046	FCE	1	Minute	
4047	FCF	1	Second	
4048	FD0	2	THD 3U minimum	0.10 %
4050	FD2	1	Day	
4051	FD3	1	Month	
4052	FD4	1	Year	
4053	FD5	1	Hour	
4054	FD6	1	Minute	
4055	FD7	1	Second	
4056	FD8	2	THD 3U maximum	0.10 %
4058	FDA	1	Day	
4059	FDB	1	Month	
4060	FDC	1	Year	
4061	FDD	1	Hour	
4062	FDE	1	Minute	
4063	FDF	1	Second	
4064	FE0	2	THD 3V minimum	0.10 %

MINIMUM AND MAXIMUM INSTANTANEOUS VALUES (FUNCTION 3)

Decimal address	Hexa. address	Number of words	Text	Unit
4066	FE2	1	Day	
4067	FE3	1	Month	
4068	FE4	1	Year	
4069	FE5	1	Hour	
4070	FE6	1	Minute	
4071	FE7	1	Second	
4072	FE8	2	THD 3V maximum	0.10 %
4074	FEA	1	Day	
4075	FEB	1	Month	
4076	FEC	1	Year	
4077	FED	1	Hour	
4078	FEE	1	Minute	
4079	FEF	1	Second	

Zone size: 240 words (decimal) or FO (hexadecimal).

LAST 10 VOLTAGE CUT-OFFS EVENT LOG / SAG (FUNCTION 3)

Outage n-1

Decimal address	Hexa. address	Number of words	Text	Unit
4096	1000	1	Day	
4097	1001	1	Month	
4098	1002	1	Year	
4099	1003	1	Hour	
4100	1004	1	Minute	
4101	1005	1	Second	

Outage n-2

Decimal address	Hexa. address	Number of words	Text	Unit
4102	1006	1	Day	
4103	1007	1	Month	
4104	1008	1	Year	
4105	1009	1	Hour	
4106	100A	1	Minute	
4107	100B	1	Second	

Outage n-3

Decimal address	Hexa. address	Number of words	Text	Unit
4108	100C	1	Day	
4109	100D	1	Month	
4110	100E	1	Year	
4111	100F	1	Hour	
4112	1010	1	Minute	
4113	1011	1	Second	

Outage n-5

Decimal address	Hexa. address	Number of words	Text	Unit
4114	1012	1	Day	
4115	1013	1	Month	
4116	1014	1	Year	
4117	1015	1	Hour	
4118	1016	1	Minute	
4119	1017	1	Second	

LAST 10 VOLTAGE CUT-OFFS EVENT LOG / SAG (FUNCTION 3)

Outage n-5

Decimal address	Hexa. address	Number of words	Text	Unit
4120	1018	1	Day	
4121	1019	1	Month	
4122	101A	1	Year	
4123	101B	1	Hour	
4124	101C	1	Minute	
4125	101D	1	Second	

Outage n-6

Decimal address	Hexa. address	Number of words	Text	Unit
4126	101E	1	Day	
4127	101F	1	Month	
4128	1020	1	Year	
4129	1021	1	Hour	
4130	1022	1	Minute	
4131	1023	1	Second	

Outage n-7

Decimal address	Hexa. address	Number of words	Text	Unit
4132	1024	1	Day	
4133	1025	1	Month	
4134	1026	1	Year	
4135	1027	1	Hour	
4136	1028	1	Minute	
4137	1029	1	Second	

Outage n-8

Decimal address	Hexa. address	Number of words	Text	Unit
4138	102A	1	Day	
4139	102B	1	Month	
4140	102C	1	Year	
4141	102D	1	Hour	
4142	102E	1	Minute	
4143	102F	1	Second	

Outage n-9

Decimal address	Hexa. address	Number of words	Text	Unit
4144	1030	1	Day	
4145	1031	1	Month	
4146	1032	1	Year	
4147	1033	1	Hour	
4148	1034	1	Minute	
4149	1035	1	Second	

Outage n-10

Decimal address	Hexa. address	Number of words	Text	Unit
4150	1036	1	Day	
4151	1037	1	Month	
4152	1038	1	Year	
4153	1039	1	Hour	
4154	103A	1	Minute	
4155	103B	1	Second	

Zone size: 60 words (decimal) or 3C (hexadecimal).

MEAN POWER EVENT LOG (FUNCTION 3)

Values not modified by current and voltage transformation ratios

Decimal address	Hexa. address	Number of words	Text	Unit
12288	3000	1	Mean active power pointer P+/P-	
12289	3001	1	Mean reactive power pointer Q+/Q-	
12290	3002	3	Date/Hour pointers updating	
12293	3004	4500	Zone P.1 saving mean active power values P+ / P-	W/10
16793	4198	4500	Zone P.2 saving mean active power values P+ / P-	W/10
21293	532C	4500	Zone Q.1 saving mean reactive power values Q+ / Q-	W/10
25793	64C0	4500	Zone Q.2 saving mean reactive power values Q+ / Q-	W/10
30293	7655	Zone end		

Zone size: 18005 words (decimal) or 4655 (hexadecimal).

MEAN VOLTAGE EVENT LOG (FUNCTION 3)

Values not modified by voltage transformation ratio

Decimal address	Hexa. address	Number of words	Text	Unit
32768	8000	1	Voltage pointer	
32769	8001	2	Date/Hour pointer updating	
32772	8003	875	3U, 3V voltage values	V/10
33647	836E	Zone end		

Taille de cette zone : 879 mots en décimal ou 36F en hexadécimal

MEAN FREQUENCY EVENT LOG (FUNCTION 3)

Decimal address	Hexa. address	Number of words	Text	Unit
36864	9000	1	Frequency pointer	
36865	9001	2	Date/Hour pointer updating	
36868	9003	8700	Frequency values	Hz/100
45568	B1FF	Zone end		

Zone size: 8704 words (decimal) or 220 (hexadecimal).

TECHNICAL CHARACTERISTICS

COMMUNICATION

RS485	2 or 3 wires half duplex
Protocole	JBUS/MODBUS® protocol / RTU mode
Speed	2400 to 38400 Bauds
Galvanic insulation	4 kV

UL - CSA APPROVAL

Standard	UL 61010-1 CSA-C22.2 No. 61010-1
Certificate	UL file No : E257746 CSA report No. for DIRIS A20 : 1810571 CSA report No. for DIRIS A40 : 1810577

GLOSSARY OF ABBREVIATIONS

COM	Communication
ADR	Slave address
BDS	Speed of communication in bauds
PAR	Communication frame parity
NO	Without parity
Even	Even parity
Odd	Odd parity
STOP	Frame-stop beep
1	1 stop bit
2	2 stop bits

NOTES

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