							Gı	roup (	of Ever	nts					Group Devic			DeviceEventsDetails) Event Code and Clock)		Ala	arm
Event Code	Event Name	Description	Sub-events	Standard Event Log	d (Security) E	Disconnect or Event Log	M-bus Event Log	Power Quality Event Log	Communication Log Power Failure Event Log	M-Bus control Log 1	M-Bus control Log 2	M-Bus control Log 3	M-Bus control Log 4	1P Meter	3P Meter (Direct Connection)	3P Meter (CT) 3P Meter (CT/PT)	Name	Value	Mandatory/Optioanl	Alarm Register No.	Bit No.
1		Indicates a complete power down of the device. Please note that this is related to the device and not necessarily to the network.	NA	Х										Х	х	x x			М	2	0
2	Power Up	Indicates that the device is powered again after a complete power down.	NA	х										х	х	х			М	2	1
3	Daylight Saving Time Activated Regularly	Indicates the regular change from and to daylight saving time. The time stamp shows the time before the change. This event is not set in case of manual clock changes and in case of power failures.	NA	х										х	х	х			М		
4	Clock Adjust (old time /date)	Indicates that the clock has been adjusted. The date/time that is stored in the event log is the old date/time before adjusting the clock.  If during time synchronization, the difference between new time and old time of meter is greater than a predefined value (Clock Time Shift Limit), this event should be generated (details in section 13.1 of FID2)	NA	х										х	x	x x			М		
5	Clock Adjust (new time /date)	Indicates that the clock has been adjusted. The date/time that is stored in the event log is the new date/time after adjusting the clock.  If during time synchronization, the difference between new time and old time of meter is greater than a predefined value (Clock Time Shift Limit), this event should be generated (details in section 13.1 of FID2)	NA	x										x	х	х			М		
6	Clock Invalid	Indicates that clock may be invalid, i.e. if the power reserve of the clock has exhausted. It is set at power up.	NA	х										х	х	хх			М	1	0
7		Indicates that the battery must be exchanged due to the expected end of life time.	NA	х										х	х	хх			М	1	1
8	Battery voltage low	Indicates that the current battery voltage is low.	NA	х										х	х	хх			М		
9	ToU activated	Indicates that the passive TOU has been activated.	NA	Х										Х	Х	х х			М		
10	Error Register Cleared	Indicates that the error register is cleared.	NA	Х															М		
11	Alarm Register Cleared	Indicates that the alarm register is cleared.	NA	Х															М		
12	Meter Program Memory Error	Indicates a physical or a logical error in the program memory.	NA	х										х	Х	х х			М	1	8

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Event Code	Event Name	Description	Sub-events	Standard Event Log	Fraud (Security) Event Log	Disconnect or Event Log	M-bus Event Log	Power Quality Event Log Communication Log	Power Failure Event Log	M-Bus control Log 1	M-Bus control Log 2	M-Bus control Log 3	IVI-bus control Log 4  1P Meter	3P Meter (Direct Connection)	3P Meter (CT)	Name	Value	Mandatory/Optioanl	Alarm Register No.	Bit No.
13	RAM Error	Indicates a physical or a logical error in the RAM.	NA	х									х	х	х			М	1	9
14	NV Memory Error	Indicates a physical or a logical error in the non volatile memory	1 - Source Metrology 2 - Source Application	х									х	Х	х			М	1	10
15	Watchdog Error	Indicates a watch dog reset or a hardware reset of the microcontroller.	NA	х									х	Х	х			М	1	12
16	Measurement System Error	Indicates a logical or physical error in the measurement system	NA	х	十	十	$\dagger$			f		$\top$	х	х	х			М	1	11
17	Firmware ready for activation	Indicates that the new firmware has been successfully downloaded and verified and is ready for activation	NA	х									х	Х	х			М		
18		Indicates that a new firmware has been activated	NA	Х									Х	х	х			М		
19	Passive Inii nrogrammen	activation date/time were programed	1 – Calendar name 2 – Calendar season table 3 – Calendar week table 4 – Calendar day table	x									х	Х	x x			М		
		Indicates signal detected on the meter's input terminal	NA	Х									х	Х	х			0	2	17
	Reserved			$\vdash$	4	-									-					Ш
	Reserved				+	+	-	-							-					
	Reserved			$\vdash$	+	+	-	╂	-	-	Н		╂		+					$\vdash$
	Reserved Reserved				+	+									-					lacktriangledown
<b>_</b>	Reserved				+	+	+	+					+		+					$\vdash$
<b>_</b>	Reserved				+	+	+	+	+						+					H
_	Reserved			H	$\dashv$	$\dashv$	十		+		H			1	+			$\Box$		$\square$
	Reserved			$  \cdot  $	$\dashv$	十	十	$\top$	T				$\top$	1	$\vdash \vdash$					一
	Reserved			H	十	十	T	_	1		M				$\Box$					$\square$
	Reserved				十	十	十		T					T					$\Box$	一
-	Reserved				_†				1					Ī						
33	Reserved																			
34	Reserved																			
35	Reserved																			
36	Reserved																			
37	Reserved																			
38	Reserved																			
	Reserved	Indicates that the terminal cover has been		$oxed{oxed}$	4	4	+	+	+		$\square$		$\bot$							Н
	Terminal Cover opened	removed.  Indicates that the terminal cover has been	NA		Х		4			_			-	1-	Х			М	1	13
-	Terminal Cover closed	closed. Indicates that a strong magnetic DC field has	NA		Х	4	_	igapha	_		Н			-	X	<b> </b>		М	<u> </u>	Ш
42		been detected.	NA		Х	4	_	_			Щ	$\Box$	Х	Х	Х			М	1	13
43		Indicates that the strong magnetic DC field has disappeared.	NA		х		Ī						Х	Х	Х			М		1 I

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Event Code	Event Name	Description	Sub-events	Standard Event Log	ity) Ev	Disconnect or Event Log	M-bus Event Log	Power Quality Event Log	Communication Log Power Failure Event Log	M-Bus control Log 1	M-Bus control Log 2	M-Bus control Log 3	M-Bus control Log 4	1P Meter	3P Meter (Direct Connection)	3P Meter (CT) 3P Meter (CT/PT)	Name	Value	Mandatory/Optioanl	Alarm Register No.	Bit No.	
44	Meter cover opened	Indicates that the meter cover has been removed.	NA		Х									х	Х	хх			М	1	13	,
45	Meter cover closed	Indicates that the meter cover has been closed.	NA	H	Х									Х	Х	хх			М	T	T	1
46	Association authentication failure after n times	Indicates that a user tried to gain LLS access with wrong password (intrusion detection) or HLS access challenge processing failed n-times	NA		х									х	х	х х			М	1	13	
47	Parameter (s) changed	Parameter (s) changed	1 – Demand register 1,2,3,4,7 period 2 - Demand register 1,2,3,4,7 number of period 3 - Limiter Threshold Normal 4 - Limiter Threshold Emergency 5 – LP1 Capture Period 6 - LP2 Capture Period 7 - LP Average Capture Period 8 - LP Min Capture Period 9 - LP Min Capture Period 10 - LP Harmonics Capture Period 11 – Secret change 12 – Security policy changed (meter) 13 – Security policy changed (IHD) 14 – M_BUS security parameters changed 15 – Transformer ratio- current numerator changed 16 – Transformer ratio- voltage numerator changed 17 – Transformer ratio- voltage denominator changed 18 – Transformer ratio- voltage denominator changed 19 - Limiter action activated (Attr. 11, IC 71, changed to any action) 20 - Limiter action deactivated (Attr. 11, IC 71, changed to any action) 21 - Minimum Time Under Threshold 22 - Minimum Time Over Threshold 23 - Time Threshold for Under Voltage Detection 24 - Time Threshold for Under Voltage Detection 25 - Threshold for Under Voltage Detection 26 - Threshold for Over Voltage Detection 27 - Time Threshold for Missing Voltage 28 - Threshold for Missing Voltage 29 - Time threshold for long power failure	×										x	X	x x			М			
48	Security key (s) changed	One or more security keys (Global/Master) changed.	<ul> <li>1- Authentication Key for meter change</li> <li>2 - Encryption Unicast key for meter change</li> <li>3 - Encryption Broadcast key for meter change</li> <li>4 - Authentication Key for IHD change</li> <li>5 - Encryption Unicast key for IHD change</li> <li>6 - Master Key Change</li> <li>7- Authentication Key for Local Port</li> <li>8- Encryption Unicast Key for Local Port</li> </ul>	Х										Х	Х	хх			М	2	13	
49	Decryption or Message Authentication failure	Decryption with currently valid key (global or dedicated) failed to generate a valid APDU or authentication tag			х									Х	х	х			М	1	13	

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Event Code	Event Name	Description	Sub-events	Standard Event Log	<u>ب</u>	Disconnect or Event Log	IVI-DUS EVENT LOG	Power Quality Event Log	Power Failure Event Log	M-Bus control Log 1	M-Bus control Log 2	M-Bus control Log 3	M-Bus control Log 4	20 Motor (Direct Connection)	3P Meter (CT)	3P Meter (CT/PT)	Name	Value	Mandatory/Optioanl	Alarm Register No.	Bit No.
50	Replay attack	Receive frame counter value less or equal to the last successfully received frame counter in the received APDU.	NA		х									× >	x x	X			М	1	13
51	Firmware verification failed	Indicates the transferred firmware verification failed i.e. cannot be activated.	NA	х										x >	х	x			М		
52		Indicates consumption is detected at least on one phase when the disconnector has been disconnected		х										x >	х	x			М	2	12
53	Reserved				丁	丁	_	丁	1				_†	1	1						
54	Reserved																				
55	Reserved																				
56	Reserved																				
57	Reserved																				
58	Reserved																				
59	Disconnector in "Ready for Reconnection"	Indicates that the disconnector has been indicates that the disconnector has been set into the Ready_for_reconnection state and can be manually reconnected	NA			Х													М		
60	Manual Disconnection	Indicates that the disconnector has been manually disconnected.	NA			Х								x >	Х	X			М		
61	Manual Connection	Indicates that the disconnector has been manually connected.	NA			Х								x >	х	X			М		
62	Remote Disconnection	Indicates that the disconnector has been remotely disconnected.	NA			Х								X >	Х	X			М		
63	Remote Connection	Indicates that the disconnector has been remotely connected.	NA			Х		_						X >	Х	X			М		
64	Local Disconnection	Indicates that the disconnector has been locally disconnected (via limiter).	NA		-	Х		$\downarrow$					1	X >	Х	X			М		
65	limiter threshold evceed	Indicates that the limiter threshold has been exceeded (both Normal and Emergency).	NA			Х								x >	Х	X	Threshold Value		М		
66	Limiter threshold OK	Indicates that the monitored value of the limiter dropped below the threshold (both Normal and Emergency).	NA			х								× >	x x	X	Threshold Value		М		
67	limiter threshold changed	Indicates that the limiter threshold has been changed (both Normal and Emergency).	NA			х								× >	х	x	Threshould Value (new value)		М		
68	Disconnect /Reconnect failure	Indicates that a failure of disconnection or reconnection has happened.	NA			Х								x >	х	Х			0	2	31
69		Indicates that the disconnector has been locally reconnected (via limiter).	NA			Х							$\perp$	x >	X	Х			М		Ш
70	Fuse supervision L1, threshold exceeded	Indicates that the threshold value in L1 has been exceeded.	NA			Х		$\perp$	$\perp$					X	Х	X	Threshold Value		М		
71	Filse slinervision i i threshold lik	Indicates that the monitored value dropped below the threshold.	NA			Х								x >	X	X	Threshold Value		М		

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Event Code	Event Name	Description	Sub-events	Standard Event Log	curry	Disconnect or Event Log	bus event Log	Power Quality Event Log	Communication Log Power Failure Event Log	M-Bus control Log 1	M-Bus control Log 2	M-Bus control Log 3	M-Bus control Log 4	1P Meter	3P Meter (Direct Connection)	3P Meter (CT/PT)	Name	Value	Mandatory/Optioanl	Alarm Register No.	Bit No.
72	Fuse supervision L2, threshold exceeded	Indicates that the threshold value in L2 has been exceeded.	NA			х									х	х	Threshold Value		М		
73	Fuse supervision L2, threshold OK	Indicates that the monitored value dropped below the threshold.	NA			Х									Х	х	Threshold Value		М		
74	Fuse supervision L3, threshold exceeded	Indicates that the threshold value in L3 has been exceeded.	NA		T	Х				Ī					х	х	Threshold Value		М		П
75	Fuse supervision L3 threshold OK	Indicates that the monitored value dropped below the threshold.	NA	$\sqcap$		х	T		$\top$						Х	х	Threshold Value		М		
76	Undervoltage (voltage SAG) I 1	Indicates undervoltage on L1 phase was detected.	NA	$\sqcap$			,	х	$\top$					х	Х	х х			М		П
77	Undervoltage (voltage SAG) L2	Indicates undervoltage on L2 phase was detected.	NA	$\sqcap$	T		,	х	$\top$	T					х	хх			М		П
78	Undervoltage (voltage SAG) I 3	Indicates undervoltage on L3 phase was detected.	NA	$\sqcap$	T		,	х	$\top$	T					х	хх			М		П
79	Overvoltage (voltage SWELL) L1	Indicates overvoltage on L1 phase was detected.	NA	П	Ī		,	х		T				х	х	х х			М		
80	Overvoltage (voltage SWELL) L2	Indicates overvoltage on L2 phase was detected.	NA				)	х							Х	х			М		
81	Overvoltage (voltage SWELL) L3	Indicates overvoltage on L3 phase was detected.	NA				)	х							Х	x x			М		
82	Missing Voltage (Voltage Cut) L1	Indicates that voltage on at least L1 phase has fallen below the Umin threshold for longer than the T time delay.	NA				)	x						х	х	x x			М	2	2
83	5 5 7	Indicates that voltage on at least L2 phase has fallen below the Umin threshold for longer than the T time delay.	NA				)	x							Х	x x			М	2	3
84	Missing Voltage (Voltage Cut) L3	Indicates that voltage on at least L3 phase has fallen below the Umin threshold for longer than the time delay.	NA				)	x							х	x x			М	2	4
85	Normal Voltage L1	Indicates that the main voltage is in normal limits again, e.g. after overvoltage, under voltage, missing voltage	NA				)	х						х	х	x x			М	2	5
86	Normal Voltage L2	Indicates that the main voltage is in normal limits again, e.g. after overvoltage, under voltage, missing voltage	NA				,	х							х	x x			М	2	6
87	Normal Voltage L3	Indicates that the main voltage is in normal limits again, e.g. after overvoltage, under voltage, missing voltage	NA				,	х							Х	х			М	2	7
88	Phase sequence reversal	Indicates wrong main connection. Usually indicates fraud or wrong installation. For poly phase connection only.	NA	х											Х	x x			М	2	11

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Event Code	Event Name	Description	Sub-events	Standard Event Log	Fraud (Security) Event Log	Onnect or	Dower Quality Event Log	Communication Log	Power Failure Event Log	M-Bus control Log 1	M-Bus control Log 2	M-Bus control Log 3	M-Bus control Log 4	1P Meter	SP Meter (Direct Connection)	3P Meter (CT/PT)	Name	Value	Mandatory/Optioanl	Alarm Register No.	Bit No.
89	Missing neutral	Indicates that the neutral connection from the supplier to the meter is interrupted (but the neutral connection to the load prevails). The phase voltages measured by the meter may differ from their nominal values	NA	х										X Z	<b>(</b> )	( X			0	2	8
90	Load Unbalance	Indicates phase asymmetry due to large unbalance of loads connected	NA				X	(						2	( )	κ x			М	2	9
91		Indicates unexpected energy export (for devices which are configured for energy import measurement only)	NA		х									)	( )	x x			0	2	10
92	- '	acc. to section 9.1.1.1 of FID2	NA				X	(								X			М	2	14
93	· ·	acc. to section 9.1.1.1 of FID2	NA				X	(						;	_	( X			М	2	15
94	Bad Voltage Quality L3	acc. to section 9.1.1.1 of FID2	NA				X	(							( )	( X			М	2	16
95	Reserved																				<u>i</u>
96	Reserved																				
97	Reserved																				i
98	Reserved																				
99	Reserved																				
100	Communication error M-Bus channel 1	Indicates a communication problem when reading the meter connected to channel 1 of the M-Bus				х	(							x :	<b>(</b> )	<b>κ</b> χ			М	1	16
101	Communication ok Mbus channel 1	Indicates that the communication with the M-Bus meter connected to channel 1 of the M-Bus is ok				×	(							x :	<b>(</b> )	ζ X			М		
102	Replace Battery M-Bus channel 1	Indicates that the battery must be exchanged due to the expected end of life time.		Ц		×	(							x :	( )	κ x			М		Ш
103	Fraild affemnt M-Bils channel 1	Indicates that a fraud attempt has been registered.				Х	(							x :	( )	ζ X			М	1	20
104	Clock adjusted M-Bus channel 1	Indicates that the clock has been adjusted.				X	(							X Z	<b>(</b> )	κ x			М		
105	New M-Bus device installed channel 1	Indicated the meter (M-Bus master) has registered a M-Bus device connected to channel 1 with a new serial number				×	(							x Z	( )	( X			М	2	19
106	Permanent Error M-Bus channel 1	Severe error reported by M-Bus device				Х	(							x 2	( )	( X			М	1	, I
107	Reserved					十	1	Ť	1	1			丁	T	十	1					
	Reserved				十	十	1	十	1	1	П		1	十	十	1					
	Reserved				十	Ť	Ť	十	1	Ī	П		T	丁	十	1				$\Box$	
	Communication error M-Bus channel 2	Indicates a communication problem when reading the meter connected to channel 2 of the M-Bus				Х	(							x Z	<b>(</b> )	x x			М	1	17

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Event Code	Event Name	Description	Sub-events	Standard Event Log	ity) Ev	Disconnect or Event Log	Power Original Front Log	Communication Log	Power Failure Event Log	M-Bus control Log 1	M-Bus control Log 2	M-Bus control Log 3	M-Bus control Log 4	1P Meter	3P Meter (Direct Connection)	3P Meter (CI/PT)	Name	Value	Mandatory/Optioanl	Alarm Register No.	Bit No.
111	Communication ok Mbus channel 2	Indicates that the communication with the M-Bus meter connected to channel 2 of the M-Bus is ok again.				×	<									x x			М		
112	Replace Battery M-Bus channel 2	Indicates that the battery must be exchanged due to the expected end of life time.				X	<							Х	<b>X</b>	x x			М	1	
113	Fraud attempt M-Bus channel 2	Indicates that a fraud attempt has been registered in the M-Bus device.				×	<							Х	x :	x x			М	1	21
114	Clock adjusted M-Bus channel 2	Indicates that the clock has been adjusted				Х	<b>(</b>							Х	X I	х			М		
115	New M-Bus device installed channel 2	Indicated the meter (M-Bus master) has registered a M-Bus device connected to channel 2 with a new serial number				х	(							Х	<b>x</b> :	x x			М	2	20
116	Permanent Error M-Bus channel 2	Severe error reported by M-Bus device (Bit 3 in MBUS status EN13757)				×	<							х	x :	x x			М	1	
117	Reserved																				
	Reserved																			L	
119	Reserved	La disabasa sa				-	-		╄	-			4	4	_	_				<b>L</b>	<b>_</b>
120	Communication error M-Bus channel 3	Indicates a communication problem when reading the meter connected to channel 3 of the M-Bus				×	<							х	<b>x</b> :	x x			М	1	18
121	Communication ok Mbus channel 3	Indicates that the communication with the M-Bus meter connected to channel 3 of the M-Bus is ok again.				×	<							х	<b>x</b> :	x x			М		
122	Replace Battery M-Bus channel 3	Indicates that the battery must be exchanged due to the expected end of life time.				х	<							Х	<b>X</b>	х			М	1	
123	Fraud attempt M-Bus channel 3	Indicates that a fraud attempt has been registered.				X	<							х	<b>x</b> :	х			М	1	22
124	Clock adjusted M-Bus channel 3	Indicates that the clock has been adjusted.				Х	<							Х	X :	х			М		
125	New M-Bus device installed channel 3	Indicated the meter (M-Bus master) has registered a M-Bus device connected to channel 3 with a new serial number				х	(							х	x :	х х			М	2	21
126	Permanent Error M-Bus channel 3	Severe error reported by M-Bus device (Bit 3 in MBUS status EN13757)				×	<							Х	x I	x x			М	1	
	Reserved														$oldsymbol{ol}}}}}}}}}}}}}}$						
	Reserved			Щ								Щ								<b>L</b>	<u> </u>
129	Reserved																			<b>L</b>	<u> </u>

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Event Code	Event Name	Description	Sub-events	Standard Event Log	Fraud (Security) Event Log	onnect or Eve M-bus Event L	Power Quality Event Log	Communication Log	Power Failure Event Log	M-Bus control Log 1	M-Bus control Log 2	M-Bus control Log 3	1P Meter	3P Meter (Direct Connection)	3P Meter (CT)	Name	Value	Mandatory/Optioanl	Alarm Register No.	Bit No.
130	Communication error M-Bus channel 4	Indicates a communication problem when reading the meter connected to channel 4 of the M-Bus				x							х	х	x :			М	1	19
131	Communication ok Mbus channel 4	Indicates that the communication with the M-Bus meter connected to channel 4 of the M-Bus is ok again.				х							х	х	x Z			М		
132	Replace Battery M-Bus channel 4	Indicates that the battery must be exchanged due to the expected end of life time.				х							х	х	x Z			М	1	
133	Fraild attempt M-Rils channel 4	Indicates that a fraud attempt has been registered.				х							х	х	x Z			М	1	23
134	Clock adjusted M-Bus channel 4	Indicates that the clock has been adjusted				х							х	Х	x 2			М		
135	New M-Bus device installed channel 4	Indicated the meter (M-Bus master) has registered a M-Bus device connected to channel 4 with a new serial number				x							х	х	x x			М	2	22
136	Permanent Error M-Bus channel 4	Severe error reported by M-Bus device (Bit 3 in MBUS status EN13757)				х							х	х	x z			М	1	П
137	Reserved																			
	Reserved													1	Ш					Ш
		There has been no remote communication on application layer for a predefined period of time; i.e. meter could not be reached remotely.																		
141	Modem Initialization Failure	Modem's response to initialization AT command(s) is invalid or ERROR or no response received	NA					х					х	х	x X			М		П
142		SIM card is not inserted or is not recognized	NA					х					Х	Х	x Z			М		
143		SIM card has been correctly detected	NA	Ц			丰	Х					Х	Х	X 2			М	1	14
144	GSM Registration Failure	Modem's registration on GSM network was not successful	NA					Х					Х	Х	x z			М		
145	GPRS Registration Failure	Modem's registration on GPRS network was not successful	NA					Х					Х	х	x Z			М		
146	PDP Context Established	PDP context is established	NA				I	Х					Х	Х	X Z			М		
		PDP context is destroyed	NA				Ţ	Χ						4-	X 2			М		
_		No Valid PDP context(s) retrieved	NA	$\square$		_	_	Х			Щ	_	_	+	X 2			М	<u> </u>	Ш
<b>_</b>		Modem restarted by SW reset	NA	$oldsymbol{\sqcup}$	_	_	╬	Х				_	Х	Х	X X			М		Щ
	IGNIVI CHITONINO CONNECTION	Modem is successfully connected, initiated by an outgoing call	NA	H	$\top$		$\dagger$	х			H		Х	Х	x :	:		М		H

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Event Code	Event Name	Description	Sub-events	Standard Event Log	(Security) Ev	Disconnect or Event Log	M-bus Event Log	Fower Quality Event Log Communication Log	Power Failure Event Log	M-Bus control Log 1	M-Bus control Log 2	M-Bus control Log 3	M-Bus control Log 4	1P Meter	3F INECE (Direction) 3P Meter (CT)	3P Meter (CT/PT)	Name	Value	Mandatory/Optioanl	Alarm Register No.	Bit No.
152	MASINI INCOMINE CONNECTION	Modem is successfully connected, initiated	NA					х						x :	( )	х			М		
153		by an incoming call  Modem is disconnected	NA	H	+	+	+	Х					+	x x	( )	Х			М		H
	Reserved		· · · · · · · · · · · · · · · · · · ·	$\vdash$	十	$\dashv$	$\dashv$	Ť	1			H	$\dashv$	十	ť	<u> </u>					H
		Modem's initialization AT command(s) – specified in attribute 3 of the modem configuration object - is invalid. Error message or no response from the modem.	NA					х						x ;	<b>(</b> )	х			М		
156	Nighai Chairv Low	Signal strength too low, not known, or not detectable	NA					х						x 7	( )	x			М		
157		Number of calls has exceeded. The values given in the attribute number_of_calls.	NA					х						x 2	<b>(</b> )	X			М		
158	I ocal communication attempt	Indicates a successful communication on any local port has been initiated.	NA					Х						x .	<b>(</b> )	x			М	2	18
159																					
160	Manual disconnection M-Bus channel 1	Indicates that the disconnector has been manually disconnected.								Х				x 2	<b>(</b> )	х			М		
161	channel 1	Indicates that the disconnector has been manually connected.								Х				x 2	<b>(</b> )	х			М		
162	Remote disconnection M-Bus channel 1	Indicates that the disconnector has been remotely disconnected.								Х				x 2	<b>(</b> )	х			М		
163	Remote connection MBus channel 1	Indicates that the disconnector has been remotely connected.								х				x 2	<b>(</b> )	x			М		
164	Valve alarm M-Bus channel 1	Indicates that a valve alarm has been registered.								Х				x 2	<b>(</b> )	х			М	2	27
165	cnannel 1	Indicates that the disconnector has been locally disconnected.								х				x 2	< >	х			М		
166	Local connection M-Bus channel 1	Indicates that the disconnector has been locally connected.								х				x :	( )	x			М		
167	Reserved																				
168	Reserved																				
169	Reserved																				
170	Manual disconnection M-Bus channel 2	Indicates that the disconnector has been manually disconnected.									Х			x :	( )	x			М		
171	Manual connection MBus channel 2	Indicates that the disconnector has been manually connected.									Х			x 2	( )	x			М		
172	Remote disconnection M-Bus channel 2	Indicates that the disconnector has been remotely disconnected.									х			X Z	( )	х			М		
173	Remote connection MBus channel 2	Indicates that the disconnector has been remotely connected.									х			x :	< >	x			М		
174	Valve alarm M-Bus channel 2	Indicates that a valve alarm has been registered.									х			x :	( )	х			М	2	28
175	Channel /	Indicates that the disconnector has been locally disconnected.									х			x z	< >	х			М		

							Gro	oup of	f Even	nts					Group Device			DeviceEventsDetails) Event Code and Clock)		Ala	rm
Event Code	Event Name	Description	Sub-events	Standard Event Log	<u>.</u> آ	Disconnect or Event Log	IVI-bus Event Log	Power Quality Event Log	Power Failure Event Log	M-Bus control Log 1	M-Bus control Log 2	M-Bus control Log 3	M-Bus control Log 4	1P Meter	3P Meter (Direct Connection)	3P Meter (CT) 3P Meter (CT/PT)	Name	Value	Mandatory/Optioanl	Alarm Register No.	Bit No.
176	Local connection M-Bus channel 2	Indicates that the disconnector has been locally connected.		П	T	T					х			Х	х	хх			М		
177	Reserved	oo.mesteur													T					$\Box$	
178	Reserved				ĺ		Ī		Ť	1		ĺ	П		T						
179	Reserved				丁				T		1	ĺ	П								
180	Manual disconnection M-Bus channel 3	Indicates that the disconnector has been manually disconnected.										х		Х	х	х х			М		
181	Manual connection MBus channel 3	Indicates that the disconnector has been manually connected.										Х		Х	Х	х			М		
182	Remote disconnection M-Bus channel 3	Indicates that the disconnector has been remotely disconnected.										Х		Х	Х	х			М		
183	Remote connection MBus channel 3	Indicates that the disconnector has been remotely connected.										х		х	Х	х			М		
184	Valve alarm M-Bus channel 3	Indicates that a valve alarm has been registered.										Х		Х	х	х			М	2	29
185	Local disconnection MBus channel 3	Indicates that the disconnector has been locally disconnected.										Х		Х	х	х			М		
186	Il ocal connection M-Rus	Indicates that the disconnector has been locally connected.										х		Х	х	х			М		
187	Reserved																				
188	Reserved																			$\Box$	
189	Reserved																				
190		Indicates that the disconnector has been manually disconnected.											х	х	Х	х			М		
191		Indicates that the disconnector has been manually connected.											Х	Х	Х	х			М		
192	Remote disconnection M-Bus channel 4	Indicates that the disconnector has been remotely disconnected.			$\perp$		_	_	$oldsymbol{\perp}$				Х	Х	Х	х			М		
193	Remote connection MBus channel 4	Indicates that the disconnector has been remotely connected.											Х	Х	Х	x x			М		
194	Valve alarm M-Bus channel 4	Indicates that a valve alarm has been registered.											Х	Х	Х	х			М	2	30
195	Ichannel 4	Indicates that the disconnector has been locally disconnected.											х	Х	х	х			М		
196	Local connection M-Bus channel 4	Indicates that the disconnector has been locally connected.											Х	Х	х	х			М		
197	Reserved								Ī											$\Box$	$\Box$
	Reserved				1	ĺ	Ī			ĺ	Ī	ĺ	П							$\sqcap$	
_	Reserved				丁				T		1	ĺ	П								
200	Current in absence of voltage at L1 detected		NA		х									Х	Х	х			М	1	
201	Current in absence of voltage at L2 detected		NA		Х										Х	х			М	1	

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Event Code	Event Name	Description	Sub-events	Standard Event Log	Ev	onnect or Eve	M-bus Event Log	Power Quality Event Log Communication Log	Power Failure Event Log	M-Bus control Log 1	M-Bus control Log 2	M-Bus control Log 3	M-Bus control Log 4	3P Meter (Direct Connection)	3P Meter (CT)	3P Meter (CT/PT)	Name	Value	Mandatory/Optioanl	Alarm Register No.	Bit No.
202	Current in absence of voltage at L3		NA		х									Х	( X	х			М	1	
203	detected Manual demand reset		NA	Х			+		1	+		H		ν x	( X	Х			М		_
	Power direction has changed		NA NA			1	)	Х						_	_	Х			М		_
	Manufacturer Phase and Null current are not equal (for single phase	If value of current in Phase and null paths differ more than a threshold (typically 12.5%) this event recorded just for single phase meters.	NA		х									Κ					М		
206		If value of current in Phase and null paths differ less than a threshold (typically 12.5%) this event recorded just for single phase meters.	NA		х								;	ĸ					M		
207	Reserved																				
208	Reserved																				
209	Reserved																			<b></b>	
210	Long power failure in all phases		NA		4	-	4	_	Х	-		Ш	-	_	_	Х			М		_
	Long power failure in phase1		NA	$\vdash$			+		Х	-			)	( X	-	Х	Duration		М		_
	Long power failure in phase2		NA NA	$\vdash$	+	+	+	+	X	+		H	+	×		X	Duration Duration		M		_
	Long power failure in phase3  Communication module removed		NA NA				+	Х	_	+		H	+			X			M		_
	Communication module inserted		NA NA		Ħ	H	+	Х		┢		H				Х			M	<del></del>	-
	Factory reset		NA NA	Χ		1	+												М		
	Under Voltage end L1		NA				>	Х					,	КХ	( X	х	Amplitude and Duration		М		
218	Under Voltage end L2		NA				)	Х						×	( X	х	Amplitude and Duration		М		
219	Under Voltage end L3		NA				)	Х						×	( X	Х	Amplitude and Duration		М		_
220	Overvoltage end L1		NA				)	Х					2	K X	X	Х	Amplitude and Duration		М		
221	Overvoltage end L2		NA				)	Х						×	( x	Х	Amplitude and Duration		М		
222	Overvoltage end L3		NA	Ц			,	Х	$oldsymbol{\perp}$					×	( x	Х	Amplitude and Duration		М	Щ	
223	Missing Voltage end L1		NA				,	Х					,	K X	( X	Х	Amplitude and Duration		М		
224	Missing Voltage end L2		NA				,	Х						×	( X	Х	Amplitude and Duration		М		
	Missing Voltage end L3		NA	Щ		$\perp$	,	Х	$oldsymbol{\perp}$				$\perp$	×			Amplitude and Duration		М	Щ	_
	Firmware activation failed		NA	Χ	_	_			_			Щ	;	( X	( X	Х			М	Щ.	
	Reserved				4		_	_		1		oxdot		_	_	lacksquare			Ш		
	Reserved			$oldsymbol{\perp}$	-	+	+		+	╀		$oldsymbol{arphi}$	+	-	+	+					
<b>_</b>	Reserved			$\vdash$	+	+	+	+	+	+		dash	+	+	+	+				┌─┤	4
	Reserved Reserved			$\vdash$	+	+	+	+	+	+	1	${oldsymbol{dash}}$	+	+	+	+			$\vdash$	┌─┤	$\dashv$
	Reserved			H	+	+	+	+	+	+		H	十	+	+	+				一十	$\dashv$
						1	1					. 1	1							. 1	

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Event Code	Event Name	Description	Sub-events	Standard Event Log	Fraud (Security) Event Log	Disconnect or Event Log	M-bus Event Log	Power Quality Event Log	Communication Log Power Failure Event Log	M-Bus control Log 1	M-Bus control Log 2	M-Bus control Log 3	M-Bus control Log 4	1P Meter	3P Meter (Direct Connection)	3P Meter (CT/PT)	Name	Value	Mandatory/Optioanl	Alarm Register No.	Bit No.
233	Reserved																				
234	Reserved			Н	+	_	4	-		+	-			4	+	+				<u> </u>	$\blacksquare$
235 236	Reserved Reserved						+			╁				+	+	+				<b>-</b>	H
237	Reserved			H	+	$\dashv$	+	+	-	╆	1	H	H	+	+	+				一	H
238	Reserved						1			t				1							一
239	Reserved																				一
240	Reserved																				
241	Reserved																				
242	Reserved															Ш				<u> </u>	Ш
243	Reserved					_	4	4		┡		Ш		4	4	Ш				<u> </u>	Ш
244	Reserved				4		4	-		-					+	+				lacksquare	igwdapprox
245	Reserved						-		-	+				-	+					┢	$\vdash$
246 247	Reserved Reserved						-			╁				-	+	+					Н
248	Reserved						+			╁				-	+	+				_	
_	Reserved				1	-	+	H	+	╁				t	+	+					H
	Reserved						1														$\blacksquare$
251	Reserved				1	1	1	Ħ		1				T	t	Н					M
	Reserved						1			1				1	1						П
	Reserved				Ì		1														
254	Load profile cleared	Any of the profiles cleared.  Note: If it appears in Standard Event Log then any of the E-load profiles was cleared. If the event appears in the M-Bus Event Log then one of the M-Bus load profiles was cleared.	1 – Monthly 2 – LP1 (hourly) 3 – LP2 (daily) 4 - Supervision Average 5 - Supervision Minimum 6 - Supervision Maximum 7 - Supervision Harmonics 8 - LP Mbus1 9 - LP Mbus2 10 – LP Mbus 4	х			x							×	x >	x x			М		
255	Any of event logs were cleared	Indicates that the event log was cleared. This is always the first entry in an event log. It is only stored in the affected event log.		х	Х	Х	Х	X I	x x					х	x >	x			М		