OpenVentPK Serial Telemetry Packet Definition

• Number of Bytes = 48	• Checksum Scheme = XOR (Byte 0 to Byte 46)
• Packet Header = $OVP	• Interface: 232
• Update Rate 50Hz	• Baud Rate: 115200

Byte #	Bit #	Data	Units	Data Type	Range	Scale Factor	Offset
0 – 3	-	$OVP	-	-	-	-	-
4 – 7	-	Timestamp	msec	unsigned int	-	1	-
8 – 9	-	Measured Tidal Vol	ml	unsigned int	-2000 to 2000	4000/65535	-2000
10–11	-	Measured Pressure	cmH2O	unsigned int	-30 to 60	90 / 65535	-30
12–13	-	Measured Flow Rate	slpm	unsigned int	-200 to 200	400 / 65535	-200
14–15	-	PEEP	cmH2O	unsigned int	-10 to 30	40 / 65535	-10
16–17	-	Plateau Pressure	cmH2O	unsigned int	-30 to 60	90 / 65535	-30
18–19	-	FiO2	%	unsigned int	0 to 100	100 / 65535	-
20–21	-	Tidal Volume set pt.	mL	unsigned int	0 to 1000	1	-
22	-	Insp Press set pt.	cmH2O	unsigned int	-30 to 60	1	-30
23	-	Respiratory Rate Setpoint	bpm	unsigned int	0 to 40	1	-
24	D0–D3	I / E Setpoint (Inhale)	-	unsigned int	0 to 4	1	-
	D4–D7	I / E Setpoint (Exhale)	-	unsigned int	0 to 4	1	-
25	-	FiO2 Setpoint	%	unsigned int	0 to 100	1	-
26	-	Exp Press set pt.	cmH2O	unsigned int	-30 to 60	1	-30
27	-	Error Status Byte 1 1 = Alarm 0 = OK	-	unsigned int	0 to 255	1	-
	D0	Battery in Use					
	D1	Circuit Integrity Failed					
	D2	High Respiratory Rate					
	D3	High FiO2					
	D4	High PEEP					
	D5	High Plateau					
	D6	High Peak Pressure					
	D7	Low Inspiratory Pressure					
28	-	Patient Weight	kg	unsigned int	0 to 255	1	-
29	D0–D1	Breathing Phase 0 – Wait 1 – Inspiratory 2 – Hold 3 – Expiratory	-	unsigned int	0 to 255	1	-
	D2-D4	Ventilation Mode 0 – VCV 1 – PCV 2 – AC-VCV 3 –AC- PCV 4- CPAP					

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	D5	Ventilator Control 0 – Inactive 1 – Active					
	D6 – D7	Self-Test Status 0 – Not Init 1 – In Prog 2 – FAIL 3 – PASS					
30–31	-	Volume Inhaled	ml	unsigned int	-2000 to 2000	4000/65535	-2000
32–33	-	Volume Exhaled	ml	unsigned int	-2000 to 2000	4000/65535	-2000
34-35	-	Minute Ventilation	slm	unsigned int	0 to 40	40/65535	-
36-37	-	Compliance	ml/cmH$_2$O	unsigned int	0 to 400	400 / 65535	-
38	-	Trigger Sensitivity	-	unsigned int	-20 to 5	25/255	-20
39	-	Measured Respiratory Rate	bpm	unsigned int	0 to 40	1	-
40	-	Peak Pressure	cmH2O	unsigned int	-30 to 60	1	-30
41	-	Error Status Byte 2 1 = Alarm 0 = OK	-	unsigned int	0 to 255	1	-
	D0	Low FiO2					
	D1	Low PEEP					
	D2	Low Plateau Pressure					
	D3	Oxygen Failure					
	D4	Low Tidal Volume					
	D5	High Tidal Volume					
	D6	Ventilation Active at Startup					
	D7	Low Minute Ventilation					
42	-	Error Status Byte 3 1 = Alarm 0 = OK	-	unsigned int	0 to 255	1	-
	D0	High Minute Ventilation					
	D1	Patient Vent Circuit Disconnected					
	D2	Mechanical Integrity Failed					
	D3	Homing not Done					
	D4	96 Hours of Operation					
	D5	Flow Sensor Disconnected					
	D6	Pressure Sensor Disconnected					

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	D7	O2 Sensor Disconnected					
43-46	-	SPARE	-	-	-	-	-
47	-	Checksum XOR	-	unsigned int	0 to 255	1	-

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