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_2O	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	System Reset					
	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					
	D7	O2 Sensor Disconnected					

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43	-	Error Status Byte 4 1 = Alarm 0 = OK	-	unsigned int	0 to 255	1	-
	D0	Low RR					
	D1	SPARE					
	D2	SPARE					
	D3	SPARE					
	D4	SPARE					
	D5	SPARE					
	D6	SPARE					
	D7	SPARE					
44-46	-	SPARE	-	-	-	-	-
47	-	Checksum XOR	-	unsigned int	0 to 255	1	-