

CODAN Syringe Pumps



A616S InCare
A616S TCI

Fact Sheet
Version Mar 2019

en



Technical Data	Description	Remarks
Performance Data		
Product variants	InCare, TCI	
Dosing units	g, mg, µg, ng, IU, mmol	Per hour, minute, day, kilogramme
Infusion rate	0.1 to 1'500 ml/h	Steps of 0.1 ml/h, modification without infusion interruption
Infusion volume	0.1 to 999.9 ml/1'000 to 9'999 ml	Steps of 0.1 ml/steps of 1.0 ml
Infusion time	1 min to 99 h 59 min	Steps of 1 min
Programming	Rate in ml/h, volume in ml, duration in h and min	
Automatic rate calculation	On the basis of volume and time	
Bolus administration	Manual or automatic	
Bolus rate	0.1 to 1'500 ml/h	
Bolus volume	0.1 to 50 ml	Depending on syringe size
Purging of the infusion line	0.1 to 1'500 ml/h	Depending on syringe size
	Purge max volume: 1.0 to 5.0 ml/h	► See the service manual
Accuracy of delivery rate	±2% (at ≥ 1 ml/h)	With CODAN qualified syringes (list on request)
(According to IEC 60601-2-24)	±5% (at ≥ 1 ml/h)	With customer qualified syringes
Error volume	0.5 to 1.2 ml	Depending on the syringe
Keep Vein Open (KVO) rate	Off or 0.1 to 5.0 ml/h	Configurable
Alarm PUMP UNUSED	Off or 1 to 60 min	Time until the alarm is triggered
History and Interface		
History and event log	Up to 1'000 events	With time stamp
Nurse call	Connection to the central system	24 V/0.2 A, configurable pulse, potential-free
RS-232 interface	Configuration interface	For use with ARGUSservice
Communication interface	Connection to docking stations	Via docking stations, connection to Ethernet is possible (i.e. PDMS)
Operation		
Display type	Monochrome LCD, 98.4 x 26.2 mm, 240 x 64 Pixel	Adjustable brightness
Night mode	A feature to automatically dim the brightness of the device backlight and front panel LEDs.	
Menu overview	Intuitive and configurable for specific applications	Available in 18 languages, overview of infusion data
Display contents	Flow rate in units and ml/h, infused volume, target volume (VTBI), infusion time, remaining infusion time, battery capacity, pressure level, text and symbols for alarms and pre-alarms, medication name and medication setup, bolus delivery and information menu etc.	
Menu configuration	By means of ARGUSservice software/temporary settings by operator	Client-specific configuration possible
Syringes	10 ml, 20 ml, 30 ml, 50/60 ml	Automatic identification of CODAN ARGUS approved syringes, permanent display of the syringe name
Infusion modes	Standard operation: adjustable infusion rate, infusion volume, infusion time Dose calculation: infusion based on supported dosing units TIVA (Total Intravenous Anesthesia): patient weight (if applicable), induction dose (µg), induction time, maintenance rate (µg/h) TCI (Target Controlled Infusion): Minto model for Remifentanyl, Schnider model for Propofol; patient data: gender, age, height, weight	Medication database is required Medication database is required Available in product variant CODAN A616S TCI
Safety		
Pressure release	Automatic pressure release after occlusion	
Alarms, pre-alarms	Visual and audible signals for rapid detection	
Alarm types	Syringe position, empty syringe, pressure too high, empty battery, syringe or battery almost empty, standby, limit exceeded etc.	
DEFI proof	Protection against electrical shock from a defibrillator	
Key lock	Activation/deactivation via numerical code	
Pressure limit for occlusion	200 to 1'200 mbar ±200 mbar (CODAN qualified syringes)	Steps of 10 mbar
DERS: Medication database (Dose Error Reduction System)	On request	
Power Supply		
Battery	1'800 mAh, NiMH	Maintenance-free
Battery operation	9 hours at 5 ml/h, 8 hours at 10 and 25 ml/h	
Battery charging time	6 hours in standby mode	At room temperature
Mains power supply	100 to 240 V, 25 VA, 50 – 60 Hz	
Product Specification		
Dimensions	320 x 100 x 180 mm (W x L x D)	
Housing	ASA high-performance plastic	Including clamp for pole fixation, expandable for rails
Operating temperature	5°C to 40°C	
Temperature for storage	0°C to 40°C	
Temperature for transport	-20°C to 60°C	
Relative humidity	20% to 90% without condensation	
Atmospheric pressure	Operation: 750 to 1'060 mbar Storage and transport: 500 to 1'060 mbar	
Weight with battery	2.0 kg	Including power supply unit
Maintenance	Safety Standard Check (SSC): every 24 months	Or after 10'000 operating hours
Compliance		
IP Code	IP22	Protected against ingress of solid foreign objects with a diameter of ≥ 12,5 mm, and ingress of water in a position with 15° inclination.
Protection class	II	Electric shock protection according to IEC 60601-1
Applied part type	CF	According to EN 60601-1
MDD classification	IIb	
Electrical safety	EN 60601-1, EN 60601-2-24	
Electromagnetic compatibility	EN 60601-1-2	
Usability	EN 60601-1-6, EN 62366	
Alarm systems	EN 60601-1-8	
SW life cycle	EN 62304	
Accessories		
Docking stations	CODAN docking stations in 3 sizes for different combinations	Version M: PDMS link + power supply Version P: only power supply Suitable for pole- and rail systems Program for simple maintenance and configuration
Attachment system	Combination clamp	
Software	ARGUSservice	



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The decisive connection

