

CODAN Syringe Pumps

A616S, A616S Plus



Fact Sheet

Version April 2024
For Firmware version 5.51

en



Technical Data	Description	Remarks
Performance Data		
Product variants	A616S, A616S Plus	
Dosing units	g, mg, µg, ng, IU, mmol	Per hour, minute, day, kilogram
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	Based on volume and time	
Bolus administration	Manually or automatically	With/without dose limit. Limits can be set via MED DB
Bolus rate	0.1 to 1,500 ml/h	
Bolus volume	0.1 to 50 ml	
Purging of the infusion line	0.1 to 1,500 ml/h, Purge max volume: 1.0 to 5.0 ml/h	See the service manual
Accuracy rate (according to IEC 60601-2-24)	+2% with CODAN ARGUS qualified syringes (list on request) +5% with customer qualified syringes (list on request) Bolus <1 ml accuracy deviates	
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
History and Interface		
History and event log	Up to 1,000 events	With timestamp
Nurse call	Connection to the hospital nurse call system	Max. DC 24 V / 0.2 A.; Electrically isolated; Configurable pulse
RS-232 interface	Connection to ARGUSservice and power supply when mounted on P-docking station	
Ethernet and Wi-Fi	Health Level 7 (HL7), IHE Profiles: DEC, CT, SN	A616S Plus only, (Wi-Fi optional)
Bluetooth	Secure 1 to 1 connection	For Patient ID scan
Operation		
Applications	Intended for use on adults, paediatric patients, and neonates requiring continuous or intermittent delivery at precisely-controlled infusion rates of liquid medications, parenteral nutrition solutions, blood and blood products by intravenous infusion. The system is intended for patients who require transfusion (Haematology), infusion therapy for cancer(chemotherapeutic agents), pain management, and parenteral nutrition	
Display type	Monochrome LCD, 98.4 x 26.2 mm, 240 x 64 Pixel	Adjustable brightness
Night Mode	Automatic dimming of display and front panel LED brightness	Night Mode is not available in TCI infusion mode
Display contents	Values and units for infused volume, target volume (VTBI), infusion time, remaining infusion time, battery capacity, pressure level. Text and symbols for alarms and low prio-alarms, medication name and medication setup, bolus delivery and information menu	
Menu overview	Intuitive and configurable for specific applications	Available in 18 languages
Menu configuration	By means of ARGUSservice software/temporary settings by the 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	Medication database (MED DB) is required. Up to 256 drugs with safetylimits and dose calculation configurable.
	TIVA (Total Intravenous Anaesthesia): patient weight (if applicable), induction dose (e.g. µg), induction time, maintenance rate (e.g. µg/h)	Optional for A616S and A616S Plus only. Medication database (MED DB) is required
	TCI (Target Controlled Infusion): medications, Remifentanyl (Minto), and Propofol (Schnider); patient data: gender, age, height, weight	Optional for A616S Plus only. Night Mode is not available in TCI infusion mode. TCI cannot be retro-enabled

Safety		
Pressure release	Automatic pressure release after occlusion	Configurable
Alarm	Syringe position, empty syringe, pressure too high, empty battery, syringe or battery almost empty, standby, limit exceeded etc.	
Low prio-alarm	Infusion near end (VTBI / time), pump unused, low battery	
Key lock	Activation/deactivation via numerical code	
Sound pressure level range	Between 50dB(A) and 75dB(A) within a 1 m radius	
Pressure limit for occlusion	200 to 1,200 mbar ±200 mbar (CODAN ARGUS qualified syringes)	Configurable. Steps of 10 mbar. Units also in mmHg, kPa, cmH2O, Psi
DERS: Medication database (Dose Error Reduction System)	MED DB medication library	Optional on request
Overinfusion under single fault conditions	Maximum 0.66 ml	
Power Supply		
Battery	1,800 mAh, NiMH	
Battery operation	9 hours at 5 ml/h, 8 hours at 10 and 25 ml/h 7 hours at 5 ml/h, 6.5 hours at 10 and 25 ml/h for the Plus variant	
Battery charging time	< 6 hours in standby mode (at room temperature)	
Mains power supply	100 to 240 V, max. 25 VA, 50 - 60 Hz	
Product Specification		
Dimensions	320 x 100 x 180 mm (W x L x D)	Without combination clamp
Housing	ASA high-performance plastic	
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	750 to 1,060 mbar (operation); ≤ 2,300 m above sea level 500 to 1,060 mbar (storage and transport); ≤ 5,000 m above sea level	
Weight with battery	2.0 kg	Including power supply unit
Maintenance	Safety Standard Check (SSC): every 24 months or after 10,000 h operating time	
Compliance		
IP Code	IP22	Protection against ingress of solid foreign objects with a diameter of ≥ 12.5 mm, and ingress of water in a position with 15° inclination
Wi-Fi and Bluetooth Frequency	Single-band 2.4 GHz	
Protection class	II	Electric shock protection according to IEC 60601-1
Applied part type	CF	Defibrillation proof parts, including CODAN ARGUS qualified syringes and IV-Sets according to IEC 60601-1
Electrical safety	IEC 60601-1, IEC 60601-2-24	
Electromagnetic compatibility	IEC 60601-1-2	
Usability	IEC 60601-1-6, IEC 62366	
Alarm systems/SW life cycle	IEC 60601-1-8, IEC 62304	
MDR classification	Iib	In compliance with Council Directive 93/42/EEC and (EU) 2017/745
Accessories		
Docking stations	CODAN docking stations in three sizes A300P, A500P, A600P	
Barcode Scanner	Bluetooth Scanner Zebra DS8178-HC	

CODAN Worldwide



CODAN is known internationally as a manufacturer and supplier of medical transfer systems. The CODAN Companies have more than 1500 employees around the world.

The name CODAN is synonymous with reliability, quality and precision based on the know-how and experience gained from more than 60 years of research and development. Company-owned production facilities and sales companies around the world are a guarantee for efficient production, a tight-knit sales network and a first-class service for customers in the healthcare sector.

CODAN Companies

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CODAN s.r.l. · Italia
CODAN Medical GmbH · Österreich
CODAN Medical ApS · Danmark
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CODAN Product range

- Infusion sets
- Transfusion sets
- Extension lines and manifold connectors
- Infusion and transfusion accessories
- Infusion filters and filter systems
- Neonatology/Paediatric products
- Withdrawal, preparation and administration systems
- CODAN CYTO®
- Chemoprotect® products
- Single use syringes
- Invasive blood pressure monitoring systems
- Infusion pumps
- Other CODAN Products

Compliance of the established quality management systems with the provisions of EN ISO 13485, the Council Directive 93/42/EEC and/or Regulation (EU) 2017/745 has been certified by the relevant, competent notified bodies:

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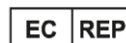
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The decisive connection



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