

We care for every drop



INFUSION PUMP & SYRINGE PUMP



CODAN

Volumetric Infusion Pumps

A717V, A718V



Fact Sheet

Version October 2017

en



Technical Data	Description	Remarks
Performance Data		
Applications	Intensive care, anesthesia, standard care, oncology, blood transfusion, parenteral nutrition, neonatal care	Dose calculation
Dosing units	g, mg, µg, ng, IU, mmol	Per hour, minute, kilogram, day
Infusion rate	0.1 – 1'200 ml/h	Steps of 0.1 ml/steps of 1.0 ml, modification without infusion interruption
Infusion volume	0.1 – 999.9 ml/1'000 – 9'999 ml	Steps of 0.1 ml/steps of 1.0 ml
Infusion time	1 min – 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	Rate in ml/h, volume in ml, infusion duration in h and min
Bolus administration	Manually or automatically	With/without dose limit, limits via ARGUSmedDB
Bolus rate	0.1 – 1'200 ml/h	Without infusion interruption
Bolus volume	0.1 – 999 ml	Without infusion interruption
Purging of the infusion line	0.1 – 1'200 ml/h	
Accuracy	±5%	Under normal conditions according to IEC/EN 60601-2-24
KVO (Keep Vein Open) rate	0.1 – 10.0 ml/h	With CODAN qualified administration sets
Standby mode	1 – 60 min	Depending on infusion rate; deactivation possible
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		Electrically isolated, connectable to PDMS (Patient Data Management System)
Operation		
Display type	Monochrome LCD, 98.4 x 26.2 mm, 240 x 64 pixel	Illuminated, adjustable brightness
Display contents	Infusion rate in units and ml/h, infused volume, target volume (VTBI), infusion time, remaining infusion time, battery capacity, pressure level, medication name and setup, bolus delivery and information menu etc.	
Menu overview	Intuitive and configurable for specific applications	Display text in national language, overview of infusion data
Menu configuration	By means of ARGUSservice software/temporary settings by operator	Client-specific configuration possible
Infusion lines	CODAN standard- and cyto-sets and other validated sets A718V: CODAN IVIP® dedicated set	Tube materials: PVC, PVC-free, NoDEHP/display of the set name With anti-free-flow clamp Suitable for Infusion lines from other brands
Safety		
Pressure release	Automatic pressure release after occlusion	
Air bubble detection	Individual air bubbles accumulated air bubbles	Configurable from 50 – 1'000 µl configurable from 100 – 2'000 µl within 8 – 64 min
Drop detector	10 – 65 drops/ml	In transport mode alarm is less sensitive
Alarms, pre-alarms	Visual and audible signals for rapid detection	With text explanation and symbols, large alarm window
Alarm types	Occlusion (up- and downstream), air bubbles, no drops and too many drops, end of infusion, standby, low battery, end of battery, maintenance due etc.	
Key lock	Activation/deactivation via numerical code	
Pressure limit for occlusion	100 – 1'200 mbar (also in mmHg, kPa, cmH2O, Psi)	100 configurable steps
DERS: Medication database (Dose Error Reduction System)	On request	On request
Power Supply		
Battery	1'800 mAh, NiMH	
Battery operation	6 hours at 25 ml/h	
Battery charging time	9 hours	In standby mode
Mains power supply	100 - 240 V, 25 VA, 50 - 60 Hz	
Product Specification		
Dimensions	190 x 160 x 130 mm (W x L x D)	Without combination clamp
Housing	ASA high performance plastic	
Operating-/ medication temperature	5 – 40°C/18 – 30°C	
Temperature for storage	0 – 40°C	
Temperature for transport	- 20 - 60°C	
Relative humidity	20 – 90% without condensation	
Atmospheric pressure	Operation: 750 – 1 060 mbar Storage and transport: 500 – 1 060 mbar	
Weight with battery	1.78 kg	Including battery and power supply unit
Maintenance	Safety standard check (SSC): every 24 months	Or after 10'000 operating hours
Compliance		
IP protection class	IP22	Drop-protected in horizontal position up to ±15° inclination
Protection class	II	Electric shock protection according to IEC 61140
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 lifecycle	EN 62304	
Certification CODAN ARGUS AG	ISO 13485, ISO 9001	
Device CE mark	CE 0123	According to directive 93/42/EEC
Accessories		
Docking stations	CODAN docking stations in 3 sizes for different combinations	Version M: monitoring (PDMS link) + power supply Version P : only power supply
Attachment system	Combination clamp	Suitable for pole- and rail systems
Software	ARGUSservice	Program for simple maintenance and configuration



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The decisive connection

CODAN

Syringe Pump

A616S InCare



Fact Sheet
Version July 2017

en



Technical Data	Description	Remarks
Performance Data		
Product variants	InCare, TCI	
Dosing units	g, mg, ug, ng, IU, mmol	Per hour, minute, day, kilogramme
Infusion rate	0.1 – 1 500 ml/h	Steps of 0.1 ml/h, modification without infusion interruption
Infusion volume	0.1 – 999.9 ml / 1 000 – 9999 ml	Steps of 0.1 ml / steps of 1.0 ml
Infusion time	1 min – 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 – 1 500 ml/h	
Bolus volume	0.1 – 50 ml	Depending on syringe size
Purging of the infusion line	0.1 – 1 500 ml/h	Depending on syringe size
Accuracy	±2% (at ≥ 1 ml/h)	According to IEC 60601-2-24 With CODAN qualified syringes (list on request) ±5% (at ≥ 1 ml/h) with customer qualified syringes
Error volume	0.5 – 1.2 ml	Depending on the syringe
KVO (Keep Vein Open) rate	Off or 0.1 – 5.0 ml/h	Configurable
Alarm PUMP UNUSED	Off or 1 – 60 min	Time until the alarm is triggered
History and Interface		
History and event log	1 000 events	
Nurse call	Connection to the central system	24 V / 0.2 A, configurable pulse, potential-free
RS-232 interface	Connection to a medical PC or PDMS	
Docking stations	Connection to docking stations	Via docking stations connection to Ethernet is possible
Operation		
Display type	Monochrome LCD, 98.4 x 26.2 mm, 240 x 64 Pixel	Adjustable brightness
Menu overview	Intuitive and configurable for specific applications	Display text in national language, 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 Can use syringe from other brands	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 (ug), induction time, maintenance rate (ug/h)	Medication database is required
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 defibrillator	
Key lock	Activation / deactivation via numerical code	
Pressure limit for occlusion	200 – 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	With deactivated display backlight
Battery charging time	5 hours (to 80%) in standby mode	At room temperature
Mains power supply	110 – 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 – 40°C	
Temperature for storage	0 – 40°C	
Temperature for transport	-20 – 60°C	
Relative humidity	20 – 90% non-condensing	
Atmospheric pressure	Operation: 750 – 1 060 mbar Storage and transport: 500 – 1 060 mbar	
Weight with battery	2.0 kg	Including power supply unit
SSC (safety standard check)	Every 24 months or after 10 000 operating hours	
Compliance		
IP protection class	IP22	Drop-protected in horizontal position up to ±15° inclination
Protection class	II	Electric shock protection according to IEC 61140
Applied part type	CF	According to EN 60601-1
MDD classification	IIb	
Electrical safety	EN 60601-1 (Ed. 3.1), EN 60601-8, EN 60601-2-24, EN 60601-1-6, EN 62304	
Electromagnetic compatibility	EN 60601-1-2 (Ed. 4)	
Certification CODAN ARGUS AG	ISO 13485	
Device CE mark	CE 0123	
Accessories		
Docking stations	ARGUS docking stations in 3 sizes for different combinations	Version M: monitoring (PDMS link) + power supply Version P: power supply
Attachment system	Combination clamp for pole- and rail systems	
Software	ARGUSservice	program for update, maintenance and configuration



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Syringe Pump

A616S TCI



Fact Sheet
Version July 2017

en



Technical Data	Description	Remarks
Performance Data		
Product variants	InCare, TCI	
Dosing units	g, mg, ug, ng, IU, mmol	Per hour, minute, day, kilogramme
Infusion rate	0.1 – 1 500 ml/h	Steps of 0.1 ml/h, modification without infusion interruption
Infusion volume	0.1 – 999.9 ml / 1 000 – 9999 ml	Steps of 0.1 ml / steps of 1.0 ml
Infusion time	1 min – 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 – 1 500 ml/h	
Bolus volume	0.1 – 50 ml	Depending on syringe size
Purging of the infusion line	0.1 – 1 500 ml/h	Depending on syringe size
Accuracy	±2% (at ≥ 1 ml/h)	According to IEC 60601-2-24 With CODAN qualified syringes (list on request) ±5% (at ≥ 1 ml/h) with customer qualified syringes
Error volume	0.5 – 1.2 ml	Depending on the syringe
KVO (Keep Vein Open) rate	Off or 0.1 – 5.0 ml/h	Configurable
Alarm PUMP UNUSED	Off or 1 – 60 min	Time until the alarm is triggered
History and Interface		
History and event log	1 000 events	
Nurse call	Connection to the central system	24 V / 0.2 A, configurable pulse, potential-free
RS-232 interface	Connection to a medical PC or PDMS	
Docking stations	Connection to docking stations	Via docking stations connection to Ethernet is possible
Operation		
Display type	Monochrome LCD, 98.4 x 26.2 mm, 240 x 64 Pixel	Adjustable brightness
Menu overview	Intuitive and configurable for specific applications	Display text in national language, 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 Can use syringe from other brands	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 (ug), induction time, maintenance rate (ug/h) TCI (Target Controlled Infusion): Minto model for Remifentanyl, Schnider model for Propofol; patient data: gender, age, height, weight	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 defibrillator	
Key lock	Activation / deactivation via numerical code	
Pressure limit for occlusion	200 – 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	With deactivated display backlight
Battery charging time	5 hours (to 80%) in standby mode	At room temperature
Mains power supply	110 – 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 – 40°C	
Temperature for storage	0 – 40°C	
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Relative humidity	20 – 90% non-condensing	
Atmospheric pressure	Operation: 750 – 1 060 mbar Storage and transport: 500 – 1 060 mbar	
Weight with battery	2.0 kg	Including power supply unit
SSC (safety standard check)	Every 24 months or after 10 000 operating hours	
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