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New Technology, Durable Design Features and Benefits Certified to NSF/ANSI 61 (PVDF liquid ends)Variable AC frequency combined with digital stroking frequencyRemovable HMI unit with illuminated LCD, click-wheel and 4 operation buttons3 LED's function as operation indicators, alarm indicator and fault indicatorIntegrated Timer (standard) and Data LogConnection to PROFIBUS-DP interfaceControl via contact or analog signalsIntegrated multilayer safety diaphragm (standard) with visual or electrical rupture indicatorControl via contact or analog signals (e.g. 0/4-20 mA) The following list is a general representation of basically suitable applications for this product. Please contact your personal representative to discuss the use of the product in your individual application.Time-controlled chemical addition in cooling water circuitsProportional chemical addition in water treatment (e.g., Sodium Hypochlorite for drinking water disinfection)Measurement-dependent chemical addition (e.g., acid & caustic metering for pH neutralization in wastewater treatment)Pulse-controlled metering from variable flow metersChemical process, Mining, Petrochemical, Heavy industrial, Pharmaceutical, Water and Wastewater Treatment Stroke length: 4 mmStroke length adjustment range: 0 100%Stroke length adjustment: manually using self-locking rotary dial in 1 % incrementsWith the right, constant conditions, correct installation and calibration, precision exceeds 1 %, based on maximum stroke volume.Wetted materials: PVDF, stainless steel 1.4571/1.4404 (special materials on request)Power supply: 1-phase, 100 230 V 10%, 240 V 6%, 50/60 Hz (110 W)IP 65 degree of protectionFibreglass-reinforced plastic housingThe liquid end on the left of the standard version can be selected for special installation situations or in combination with tanks, brackets etc.Manual or external contact mode can be set, factor with external contact control 99:1 1:99; batch mode with max. 99,999 strokes/start pulse.Metering profiles for optimum metering results.Display of wear parts in the Service menu.Connector for 2-stage level switch.Connection to PROFIBUS using the ProMinent DULCONvert PROFIBUS-PROFINET converter.Various relay modules can be selectedThe Sigma product range is available in a "Physiologically safe in respect of wetted materials" design. Hygienic design liquid ends are available for applications with stringent hygiene requirements.Customised designs are available on request.For reasons of safety, provide suitable overflow devices during installation for all mechanically deflected diaphragm metering pumps. TypeCapacity at max. back pressureSuction liftPerm. pre-pressure suction sideConnector Suction/Discharge SideShipping weightMax. stroke rateS1Cbqph | l/hpsiml/strokeStrokes/minft | m WCpsincheslb | kg12017 SST5.55 | 211743.89023 | 7153/8 FNPT26.4 | 1212017 PVT5.55 | 211453.89023 | 7151/2 MNPT19.8 | 912035 PVT11.1 | 421454.017023 | 7151/2 MNPT19.8 | 912035 SST11.1 | 421744.017023 | 7153/8 FNPT26.4 | 1210050 PVT12.95 | 491454.020023 | 7151/2 MNPT19.8 | 910050 SST12.95 | 491454.020023 | 7153/8 FNPT26.4 | 1210022 PVT7.13 | 271455.09020 | 6151/2 MNPT19.8 | 910022 SST7.13 | 271455.09020 | 6153/8 FNPT26.4 | 1210044 PVT14 | 531455.117020 | 6151/2 MNPT19.8 | 910044 SST14 | 531455.117020 | 6153/8 FNPT26.4 | 1207065 PVT16.64 | 631025.220020 | 6151/2 MNPT19.8 | 907065 SST16.64 | 631025.220020 | 6153/8 FNPT26.4 | 1207042 PVT13.74 | 521029.59010 | 3153/4 MNPT22 | 1007042 SST13.74 | 521029.59010 | 3151/2 FNPT30.9 | 1404084 PVT26.68 | 101589.717010 | 3153/4 MNPT22 | 1004084 SST26.68 | 101589.717010 | 3151/2 FNPT30.9 | 1404120 PVT30.91 | 117589.720010 | 3153/4 MNPT22 | 1004120 SST30.91 | 117589.720010 | 3151/2 FNPT30.9 | 141Identity code of materialDosing headConnection on suction/discharge sideSeals/ball seatBallsIntegral relief valvePVT/PVDF/PVDF/PTE/PTFECeramic/PVDF/FKM or EPDMSSSTStainless steel 1.4404Stainless steel 1.4581PTE/PTFESTainless steel 1.4404Stainless steel/FKM or EPDMSSSTStainless steel 1.4404Stainless steel 1.4435EPDM or FKM/stainless steel 1.4435Ceramic-identity code specificationPower supplyRemarksU1-phase, IP 65100 230 V 10 % / 240 V 6 %50/60 Hz110 WWide-range voltage power unitMotors less than 0.75 kW and motors designed for speed-controllable operation are not subject to the IE3 standard in compliance with the Ecodesign Directive 2009/125/EC. The server is temporarily unable to service your request due to maintenance downtime or capacity problems. Please try again later. The Sigma X diaphragm metering pump covers a capacity range of 21 to 1,040 l/h in versions S1Cb, S2Cb and S3Cb. Its patented multi-layer safety diaphragm guarantees maximum process reliability. Efficient protection of the power end from overloading by means of an integral frequency converter with microprocessor control(ler).One highlight is the standardised operating concept with click wheel and 4 additional operating keys on a removable operating unit. A large illuminated LCD and a 3-LED display for operating, warning and error messages, visible from all sides, offers additional operating convenience.The Sigma, like all smart ProMinent metering pumps, can be flexibly connected to various bus systems. It has a large adjustment range thanks to a combination of frequency and stroke length adjustment. The pump works with high precision across the entire frequency range. Operating statuses are simply remotely transmitted via an additional output or relay module. A built-in timer, included as standard, controls time-dependant metering cycles. Your Benefits:Safe: In the event of an accident, the feed chemical does not escape to the outside nor into the pumps power end.Integrated relief valve protects the pump against overloadingExternal control is scalable via potential-free contacts with pulse step-up and step-down, batch mode or via a 0/4-20mA standard signal css reDescriptionCapacityConnection sizeCSS PRICE H16050Sigma X with pulse, 4-20ma, PVDF head 61 l/h @ 10 barG1" / DN 153,023.81 H16090Sigma X with pulse, 4-20ma, PVDF head 109 l/h @ 10 barG1" / DN 153,023.81 H16130Sigma X with pulse, 4-20ma, PVDF head 131 l/h @ 10 barG1" / DN 153,023.81 H120190Sigma X with pulse, 4-20ma, PVDF head 243 l/h @ 10 barG1" / DN 153,446.02 H070410Sigma X with pulse, 4-20ma, PVDF head 500 l/h @ 7 barG1" / DN 253,830.82 H070580Sigma X with pulse, 4-20ma, PVDF head 670 l/h @ 7 barG2" / DN 323,830.82 H040836Sigma X with pulse, 4-20ma, PVDF head 1040 l/h @ 4 barG2" / DN 323,830.82 TitleDescriptionDownloadSigma Pump product sheetDownload Sigma 2 (b version) - Operating ManualDownload The sigma/ X diaphragm metering pump covers a capacity range of 21 to 1,040 l/h in versions S1Cb, S2Cb and S3Cb. Its patented multi-layer safety diaphragm guarantees maximum process reliability. Efficient protection of the power end from overloading by means of an integral frequency converter with microprocessor control(ler).One highlight is the standardised operating concept with click wheel and 4 additional operating keys on a removable operating unit. A large illuminated LCD and a 3-LED display for operating, warning and error messages, visible from all sides, offers additional operating convenience.The sigma, like all smart ProMinent metering pumps, can be flexibly connected to various bus systems.It has a large adjustment range thanks to a combination of frequency and stroke length adjustment. The pump works with high precision across the entire frequency range. Accurate and complication-free metering of viscous and gaseous media by adjustment of the movement profile.Operating statuses are simply remotely transmitted via an additional output or relay module. A built-in timer, included as standard, controls time-dependent metering cycles.Relevant spare parts can be shown in the display. The integral logbook significantly improves process management, optimisation and troubleshooting. Discover more about DULCONNEXYou can find more product details and downloads on our Corporate Website. Markings and Warning Symbols 9 Qualification of Personnel 10 Isolating Protective Equipment 12 Storage, Transport and Unpacking 13 Overview of Equipment and Control Elements 14 Functional Description 19 Bleed Valve and Integrated Relief Valve 20 Multi-Layer Safety Diaphragm 21 Function and Fault Indicator 23 Hierarchy of Operating Modes, Functions and Fault Statuses 24 Mounting the HMI User Control 26 Installation, Hydraulic 27 Relief Valve/Bleeder Valve 29 Diaphragm Rupture Sensor 30 Basic Installation Notes 31 Installation, Electrical 32 Basic Set-Up Principles 41 Basic Principles for Setting up the Control 41 Checking Adjustable Variables 43 Changing to Setting Mode 43 Diaphragm Part Number: XXXXXX 58 Spare Parts Kit Part Number: XXXXXX 59 Maintenance Safety Notes 66 Safety Information, Repair 69 Replacing the Diaphragm 71 Safety Information, Troubleshooting 75 Faults Without Error Message 76 Warning Messages in the Log Book 79 Fault Messages in the Log Book 80 Degree of Protection and Safety Requirements 85 Diaphragm Rupture Sensor 86 Wearing Parts for S2Cb 97 Diagrams for Setting the Capacity 99 Declaration of Conformity for Machinery 100 Operating/Set-Up Overview of the Sigma X Control Type 101 Operating Menu of Sigma X Control Type, Complete 102 Continuous Displays and Secondary Displays 106 The new Sigma X family reliable, smart and with scope for networking The Sigma X diaphragm metering pump covers a capacity range of 21 to 1,040 l/h in versions S1Cb, S2Cb and S3Cb. Its patented multi-layer safety diaphragm guarantees maximum process reliability. Efficient protection of the power end from overloading by means of an integral frequency converter with microprocessor control(ler).One highlight is the standardised operating concept with click wheel and 4 additional operating keys on a removable operating unit. A large illuminated LCD and a 3-LED display for operating, warning and error messages, visible from all sides, offers additional operating convenience.The Sigma, like all smart ProMinent metering pumps, can be flexibly connected to various bus systems.It has a large adjustment range thanks to a combination of frequency and stroke length adjustment. The pump works with high precision across the entire frequency range. Accurate and complication-free metering of viscous and gaseous media by adjustment of the movement profile.Operating statuses are simply remotely transmitted via an additional output or relay module. A built-in timer, included as standard, controls time-dependent metering cycles.Relevant spare parts can be shown in the display. The integral logbook significantly improves process management, optimisation and troubleshooting. Your benefits Safe: In the event of an accident, the feed chemical does not escape to the outside nor into the pump's power end, thanks to the patented multi-layer safety diaphragm with optical signalling (electrical as an option).Integrated overload shut-down in the pump control to protect the pump from overloading and thus significantly reduce pressure surges caused by blockages External control is scalable via potential-free contacts with pulse step-up and step-down, batch mode or via a 0/4-20 mA standard signal.Can be flexibly networked: Connection to process management systems via integral PROFIBUS Integral log book saves up to 300 events and simplifies troubleshooting and analysis of the cause. The following list of applications are general examples of generally suitable applications for this product. Please contact your local sales representative to talk about the applicable use of this product in your specific case / environment.All industrial applications, either as a stand-alone unit or integrated in a complete systemVolume-proportional addition of chemicals in water treatment, e.g. sodium hypochlorite for the disinfection of potable waterNeutralisation in wastewater treatmentPulse-controlled metering in the bottling of different volumes e.g. glycerol filling of manometersWith an integrated timer as a control unit for simple processes, e.g. biocide metering in cooling water Stroke length: 5 mmStroke length adjustment: manually using self-locking rotary dial in 1 % incrementsWith the right, constant conditions, correct installation and calibration, precision exceeds 1 %, based on maximum stroke volume.Power supply: 1-phase, 100 230 V 10%, 240 V 6%, 50/60 Hz (220 W)Degree of protection IP 65Fibreglass-reinforced plastic housingManual or external contact mode can be set, factor with external contact control 99:1 1:99; batch mode with max. 99,999 strokes/start pulse.Display of wear parts in the Service menu.Connector for 2-stage level switch.Connection to PROFIBUS using the ProMinent DULCONvert PROFIBUS-PROFINET converter.Variants with EU 1935/2004, FDA or hygienic design can be selected for food and other applications. Hygienic design liquid ends are available for applications with stringent hygiene requirements.Various relay modules can be selected.Wetted materials: PVDF, stainless steel 1.4571/1.4404, special materials on requestCustomised designs are available on request.For reasons of safety, provide suitable overflow devices during installation for all mechanically deflected diaphragm metering pumps. TypeCapacity at max. back pressureMax. stroke ratePump capacity at max. back pressureSuction liftPerm. pre-pressure suction sideConnector Suction/Discharge SideShipping weightS2Cb/l/hbarl/strokeStrokes/minqph (US)psim WCbarG-DNkg*For the Sigma types 07120, 07220 and 04350, the dosing head is fitted with DN 25 (G 1 1/2) valves. As DN 20 is generally sufficient for the pipework for these types (see technical data, suction/discharge side connector), the connector parts that can be ordered with the identity code (e.g. inserts) are already reduced to DN 20, i.e. DN 20 pipework and accessories can be installed.16050 PVT611011.49016.1145721151516050 SST561610.49014.8232721152016090 PVT1091011.416028.8145721151516090 SST991610.316026.2232721152016130 PVT1311010.920034.6145721151516130 SST1291610.920034.1232721152007120 PVT *150727.49039.6102511 1/2251607120 SST *150727.49039.6102511 1/2252407220 PVT *271727.716071.6102511 1/2251607220 SST *271727.716071.6102511 1/2252404350 PVT *353429.420093.358511 1/2251604350 SST *353429.420093.358511 1/22524Integrated relief valve, connector for DN 10 pressure hose sleeveMaterials in Contact with the Mediumidentity code of materialDosing headConnection on suction/discharge sideSeals/ball seatBallsIntegral relief valve*With 07120, 07220, 04350PVT/PVDF/PVDF/PTE/PTFECeramic/glass *PVDF/FKM or EPDMSSSTStainless steel 1.4404Stainless steel 1.4581PTE/PTFESTainless steel 1.4404Stainless steel/FKM or EPDMSSSTStainless steel 1.4404Stainless steel 1.4435EPDM or FKM/stainless steel 1.4435Ceramic-Motor Dataidentity code specificationPower supplyRemarksU1-phase, IP 65100 230 V 10 % / 240 V 6 %50/60 Hz220 WWide-range voltage power unitMotors less than 0.75 kW and motors designed for speed-controllable operation are not subject to the IE3 standard in compliance with the Ecodesign Directive 2009/125/EC. Are you looking for the right 3D model for your dosing pump? Use our 3D model search and optimise your planning phase with the help of the right 3D model. Simply enter the Indetcode of your dosing pump in the search mask. Go to search The server is temporarily unable to service your request due to maintenance downtime or capacity problems. Please try again later.

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