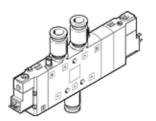
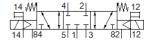
## solenoid valve CPE24-M2H-5/3GS-QS-12 Part number: 170314

**FESTO** 

High component density
This type is suitable for vacuum.





## **Data sheet**

Valve function  Type of actuation  Betavition  Standard nominal flow rate  Operating pressure  Operating pressure  Operating pressure  Piston slide  Type of reset  Authorisation  Raritime classification  Protection class  IP65  with plug socket  to IEC 60529  Nominal size  Exhaust-air function  Exhaust-air function  Bealing principle  Assembly position  Any  Manual override  Pilot air supply  Flow direction  Valve position identification  Prosition identification  Inscription label holder  Overlap  Positive overlap  Pilot pressure  Switching time of  Switching time of  Duty cycle  Max. positive test pulse with logic 0  Max. positive test pulse with logic 1  San Transport application test at severity required for further operation possible (Subsequently required for further operation)  Note on operating and pilot medium  Lubricated operation possible (Subsequently required for further operation)  Operating medium  Compressed air in accordance with ISO8573-1:2010 [7:4:4]  Note on operating and pilot medium  Lubricated operation possible (subsequently required for further operation)  Vibration resistance  Piston discussion  Transport application testerity level 2 in accordance with ISO8573-1:2010 [7:4:4]  Vibration resistance  Valve position identification coperation possible (subsequently required for further operation)  Vibration resistance	Feature	Value
Width     24 mm       Standard nominal flow rate     1,650 l/min       Operating pressure     -0.9 10 bar       Design structure     Piston slide       Type of reset     mechanical spring       Authorisation     c UL us - Recognized (OL)       Maritime classification     see certificate       Protection class     IP65       with plug socket     to IEC 60529       Nominal size     11 mm       Exhaust-air function     throttleable       Sealing principle     soft       Assembly position     Any       Manual override     with accessories, detenting       Pushing     Piloted       Pilot air supply     external       Flow direction     reversible       Vake position identification     Inscription label holder       Overlap     Positive overlap       Pilot pressure     2.5 10 bar       Switching time off     55 ms       Switching time on     25 ms       Duty cycle     100 %       Max. positive test pulse with logic 1     3,100 µs       Characteristic coil data     110 VAC: 50/60 Hz, pick-up power 3 VA, holding power 2.4 VA       Permissible voltage fluctuation     Compressed air in accordance with ISO8573-1:2010 [7:4:4]       Note on operating and pilot medium     Lubricated operation possibl	Valve function	5/3 closed
Standard nominal flow rate Operating pressure Design structure Piston slide Type of reset Authorisation Authorisation Protection class  Nominal size Exhaust-air function Sealing principle Assembly position Manual override Pilotard Flow direction Postage Valve position identification  Down Annual override  Valve position identification  Valve position identification  Valve position identification  Down Annual override  Valve position identification  Valve position identification  Valve position identification  Down Annual override  Valve position identification  Valve position identification  Down Annual override  Valve overlap  Plot pressure  2.5 10 bar  Switching time off  55 ms  Switching time off  55 ms  Switching time on  25 ms  Duty cycle  100 %  Max. positive test pulse with logic 0  3,300 µs  Max. negative test pulse with logic 1  3,100 µs  Max. negative test pulse with logic 1  3,100 µs  Max. negative test pulse with logic 1  Characteristic coil data  110 V AC: 50/60 Hz, pick-up power 3 VA, holding power 2.4 VA  Permissible voltage fluctuation  Operating medium  Lubricated operation possible (subsequently required for further operation)  Vibration resistance	Type of actuation	electrical
Design structure Piston slide Type of reset Authorisation Sea certificate Exhaust-air function Manual override Pilot aris supply Flow direction Pilot gostion identification Positive overlap Pilot pressure Switching time off Switching time off Switching time of Swi	Width	24 mm
Design structure Type of reset mechanical spring Authorisation see certificate Protection class IP65 with plug socket to IEC 60529 Nominal size 11 mm Exhaust-air function Sealing principle Assembly position Any Manual override with accessories, detenting Pushing Type of piloting Pilot air supply external Flow direction Valve position identification Inscription label holder Overlap Pilot positive overlap Pilot pressure 2.5 10 bar Switching time off Switching time off Switching time on Duty cycle Max. positive test pulse with logic 0 Max. negative test pulse with logic 1 Characteristic coil data Propersible (Subsequently required for further operation) Vibration resistance Transport application test at severity level 2 in accordance with FN Vibration resistance Transport application test at severity level 2 in accordance with FN Vibration resistance Transport application test at severity level 2 in accordance with FN Vibration resistance Transport application test at severity level 2 in accordance with FN Vibration resistance Transport application test at severity level 2 in accordance with FN Vibration resistance Transport application test at severity level 2 in accordance with FN	Standard nominal flow rate	1,650 l/min
Type of reset Authorisation c UL us - Recognized (OL) Maritime classification Protection class IP65 with plug socket to IEC 60529 Nominal size 11 mm Exhaust-air function selding principle soft Assembly position Manual override With accessories, detenting Pushing Pilot air supply Pilot air supply Pilot position identification Inscription label holder Overlap Positive overlap Pilot position identification Inscription label holder Switching time on Duty cycle Max. positive test pulse with logic 0 Max. positive test pulse with logic 1 John Assemble voltage fluctuation Operating medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Note on operating and pilot medium Upbration repistance Transport application test at severity level 2 in accordance with FN Vibration resistance Transport application test at severity level 2 in accordance with FN Vibration resistance Transport application test at severity level 2 in accordance with FN Vibration resistance Transport application test at severity level 2 in accordance with FN Vibration resistance Transport application test at severity level 2 in accordance with FN	Operating pressure	-0.9 10 bar
Authorisation c UL us - Recognized (OL)  Maritime classification see certificate  Protection class IP65 with plug socket to IEC 60529  Nominal size 11 mm Exhaust-air function soft Sealing principle soft Assembly position Any Manual override with accessories, detenting Pushing Type of piloting Piloted Pilot air supply external Flow direction reversible Valve position identification Inscription label holder  Overlap Positive overlap Pilot pressure 2.5 10 bar Switching time off 55 ms Switching time on 25 ms Duty cycle 100 % Max. positive test pulse with logic 0 3,300 µs Max. negative test pulse with logic 1 3,100 µs  Max. peraitive and pilot medium compressed air in accordance with ISO8573-1:2010 [7:4:4] Note on operating and pilot medium Uvibration resistance Transport application test at severity level 2 in accordance with FN  Vibration resistance  Transport application test at severity level 2 in accordance with FN  Vibration resistance  Transport application test at severity level 2 in accordance with FN	Design structure	Piston slide
Maritime classification       see certificate         Protection class       IP65         with plug socket       to IEC 60529         Nominal size       11 mm         Exhaust-air function       throttleable         Sealing principle       soft         Assembly position       Any         Manual override       with accessories, detenting         Pushing       Pushing         Type of piloting       Piloted         Pilot air supply       external         Flow direction       reversible         Valve position identification       Inscription label holder         Overlap       Positive overlap         Pilot pressure       2.5 10 bar         Switching time off       55 ms         Switching time on       25 ms         Duty cycle       100 %         Max. negative test pulse with logic 0       3,300 μs         Max. negative test pulse with logic 1       3,100 μs         Characteristic coil data       110 V Ac: 50/60 Hz, pick-up power 3 VA, holding power 2.4 VA         Permissible voltage fluctuation       -15 % / +10 %         Operating medium       Compressed air in accordance with ISO8573-1:2010 [7:4:4]         Note on operating and pilot medium       Lubricated operation possible (sub	Type of reset	mechanical spring
Protection class  IP65 with plug socket to IEC 60529  Nominal size 11 mm Exhaust-air function throttleable Sealing principle Assembly position Any Manual override with accessories, detenting Pushing Type of piloting Piloted Pilot air supply external Flow direction Valve position identification Inscription label holder Overlap Positive overlap Pilot pressure 2.5 10 bar Switching time off S5 ms Switching time on Duty cycle Max. positive test pulse with logic 0 Max. negative test pulse with logic 1 Characteristic coil data 110 V AC: 50/60 Hz, pick-up power 3 VA, holding power 2.4 VA Permissible voltage fluctuation Operating medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Note on operating and pilot medium Uvibration resistance Transport application test at severity level 2 in accordance with FN Vibration resistance Transport application test at severity level 2 in accordance with FN	Authorisation	c UL us - Recognized (OL)
with plug socket to IEC 60529  Nominal size  Exhaust-air function  Sealing principle  Assembly position  Manual override  Any  Manual override  Pilot air supply Flow direction  Valve position identification  Overlap Positive overlap Pilot prior pressure  Switching time off  Simple prior pressure  Switching time on  Duty cycle  Max. positive test pulse with logic 0  Max. negative test pulse with logic 1  Characteristic coil data  110 V AC: 50/60 Hz, pick-up power 3 VA, holding power 2.4 VA  Permissible voltage fluctuation  Operating medium  Compressed air in accordance with ISO8573-1:2010 [7:4:4]  Note on operating and pilot medium  Vibration resistance  Transport application test at severity level 2 in accordance with FN	Maritime classification	see certificate
to IEC 60529  Nominal size 11 mm  Exhaust-air function throttleable  Sealing principle soft Assembly position Any Manual override with accessories, detenting Pushing Type of piloting Piloted Pilot air supply external Flow direction reversible  Valve position identification Inscription label holder  Overlap Positive overlap Pilot pressure 2.5 10 bar  Switching time off 55 ms  Switching time off 55 ms  Switching time off 55 ms  Switching time on 25 ms  Duty cycle 100 %  Max. positive test pulse with logic 0 3,300 µs  Max. negative test pulse with logic 1 3,100 µs  Characteristic coil data 110 V AC: 50/60 Hz, pick-up power 3 VA, holding power 2.4 VA  Permissible voltage fluctuation -15 % / +10 %  Operating medium Compressed air in accordance with ISO8573-1:2010 [7:4:4]  Note on operating and pilot medium Lubricated operation possible (subsequently required for further operation)  Vibration resistance Transport application test at severity level 2 in accordance with FN	Protection class	IP65
Nominal size 11 mm Exhaust-air function throttleable Sealing principle soft Assembly position Any Manual override with accessories, detenting Pushing Type of piloting Piloted Pilot air supply external Flow direction reversible Valve position identification inscription label holder Overlap Positive overlap Pilot pressure 2.5 10 bar Switching time off 55 ms Switching time off 55 ms Switching time on 25 ms Duty cycle 100 % Max. positive test pulse with logic 0 3,300 µs Max. negative test pulse with logic 1 3,100 µs Characteristic coil data 110 V AC: 50/60 Hz, pick-up power 3 VA, holding power 2.4 VA Permissible voltage fluctuation 1 Lubricated operation possible (subsequently required for further operation) Vibration resistance Transport application test at severity level 2 in accordance with FN		with plug socket
Exhaust-air function       throttleable         Sealing principle       soft         Assembly position       Any         Manual override       with accessories, detenting         Pushing       Pushing         Type of piloting       Piloted         Pilot air supply       external         Flow direction       reversible         Valve position identification       Inscription label holder         Overlap       Positive overlap         Pilot pressure       2.5 10 bar         Switching time off       55 ms         Switching time on       25 ms         Duty cycle       100 %         Max. positive test pulse with logic 0       3,300 μs         Max. negative test pulse with logic 1       3,100 μs         Characteristic coil data       110 V AC: 50/60 Hz, pick-up power 3 VA, holding power 2.4 VA         Permissible voltage fluctuation       -15 % / +10 %         Operating medium       Compressed air in accordance with ISO8573-1:2010 [7:4:4]         Note on operating and pilot medium       Lubricated operation possible (subsequently required for further operation)         Vibration resistance       Transport application test at severity level 2 in accordance with FN		to IEC 60529
Sealing principle  Assembly position  Any  Manual override  With accessories, detenting Pushing  Pushing  Piloted  Pilot air supply  external  Flow direction  reversible  Valve position identification  Overlap  Positive overlap  Pilot pressure  2.5 10 bar  Switching time off  55 ms  Switching time on  25 ms  Duty cycle  100 %  Max. positive test pulse with logic 0  Max. negative test pulse with logic 1  Characteristic coil data  Permissible voltage fluctuation  Operating medium  Note on operating and pilot medium  Vibration resistance  Transport application test at severity level 2 in accordance with FN  Transport application test at severity level 2 in accordance with FN	Nominal size	11 mm
Assembly position  Any  Manual override  with accessories, detenting Pushing  Piloted  Pilot air supply Pilot air supply Positive overlap  Positive overlap  Pilot pressure  Switching time on  Duty cycle  Max. positive test pulse with logic 0  Max. negative test pulse with logic 1  Characteristic coil data Permissible voltage fluctuation  Operating medium  Note on operating and pilot medium  Vibration resistance  Any with accessories, detenting Pushing Pushing Piloted  Reversible  2.5 10 bar  55 ms  Switching time on  25 ms  Duty cycle  100 %  Max. negative test pulse with logic 0  3,300 µs  Also, negative test pulse with logic 1  3,100 µs  Characteristic coil data  110 V AC: 50/60 Hz, pick-up power 3 VA, holding power 2.4 VA  Permissible voltage fluctuation  Compressed air in accordance with ISO8573-1:2010 [7:4:4]  Ubricated operation possible (subsequently required for further operation)  Vibration resistance  Transport application test at severity level 2 in accordance with FN	Exhaust-air function	throttleable
Manual override  with accessories, detenting Pushing  Type of piloting  Piloted  Positive oversible  Valve position identification  Inscription label holder  Overlap  Positive overlap  Pilot pressure  2.5 10 bar  Switching time off  55 ms  Switching time on  25 ms  Duty cycle  100 %  Max. positive test pulse with logic 0  Max. negative test pulse with logic 1  Characteristic coil data  110 V AC: 50/60 Hz, pick-up power 3 VA, holding power 2.4 VA  Permissible voltage fluctuation  Operating medium  Compressed air in accordance with ISO8573-1:2010 [7:4:4]  Note on operating and pilot medium  Ubricated operation possible (subsequently required for further operation)  Vibration resistance  Transport application test at severity level 2 in accordance with FN	Sealing principle	soft
Pushing Type of piloting Pilot air supply Pilot air supply Pilot air supply Pilot direction Peversible Valve position identification Inscription label holder Overlap Positive overlap Pilot pressure Pil	Assembly position	Any
Type of piloting       Piloted         Pilot air supply       external         Flow direction       reversible         Valve position identification       Inscription label holder         Overlap       Positive overlap         Pilot pressure       2.5 10 bar         Switching time off       55 ms         Switching time on       25 ms         Duty cycle       100 %         Max. positive test pulse with logic 0       3,300 μs         Max. negative test pulse with logic 1       3,100 μs         Characteristic coil data       110 V AC: 50/60 Hz, pick-up power 3 VA, holding power 2.4 VA         Permissible voltage fluctuation       -15 % / +10 %         Operating medium       Compressed air in accordance with ISO8573-1:2010 [7:4:4]         Note on operating and pilot medium       Lubricated operation possible (subsequently required for further operation)         Vibration resistance       Transport application test at severity level 2 in accordance with FN	Manual override	with accessories, detenting
Pilot air supply Flow direction reversible Valve position identification Inscription label holder Overlap Positive overlap Pilot pressure 2.5 10 bar Switching time off S5 ms Switching time on 25 ms Duty cycle 100 % Max. positive test pulse with logic 0 Max. negative test pulse with logic 1 Characteristic coil data 110 V AC: 50/60 Hz, pick-up power 3 VA, holding power 2.4 VA Permissible voltage fluctuation Operating medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Note on operating and pilot medium Vibration resistance Transport application test at severity level 2 in accordance with FN		Pushing
Flow direction  Valve position identification  Inscription label holder  Overlap  Positive overlap  Pilot pressure  2.5 10 bar  Switching time off  Sims  Switching time on  Duty cycle  Max. positive test pulse with logic 0  Max. negative test pulse with logic 1  Characteristic coil data  Permissible voltage fluctuation  Operating medium  Compressed air in accordance with ISO8573-1:2010 [7:4:4]  Note on operating and pilot medium  Vibration resistance  Transport application test at severity level 2 in accordance with FN	Type of piloting	Piloted
Valve position identificationInscription label holderOverlapPositive overlapPilot pressure2.5 10 barSwitching time off55 msSwitching time on25 msDuty cycle100 %Max. positive test pulse with logic 03,300 μsMax. negative test pulse with logic 13,100 μsCharacteristic coil data110 V AC: 50/60 Hz, pick-up power 3 VA, holding power 2.4 VAPermissible voltage fluctuation-15 % / +10 %Operating mediumCompressed air in accordance with ISO8573-1:2010 [7:4:4]Note on operating and pilot mediumLubricated operation possible (subsequently required for further operation)Vibration resistanceTransport application test at severity level 2 in accordance with FN	Pilot air supply	external
Overlap Positive overlap Pilot pressure 2.5 10 bar  Switching time off 55 ms Switching time on 25 ms Duty cycle 100 % Max. positive test pulse with logic 0 3,300 µs Max. negative test pulse with logic 1 3,100 µs Characteristic coil data 110 V AC: 50/60 Hz, pick-up power 3 VA, holding power 2.4 VA Permissible voltage fluctuation -15 % / +10 % Operating medium Compressed air in accordance with ISO8573-1:2010 [7:4:4] Note on operating and pilot medium Ubbricated operation possible (subsequently required for further operation) Vibration resistance Transport application test at severity level 2 in accordance with FN	Flow direction	reversible
Pilot pressure  2.5 10 bar  Switching time off  55 ms  Switching time on  25 ms  Duty cycle  100 %  Max. positive test pulse with logic 0  3,300 µs  Max. negative test pulse with logic 1  3,100 µs  Characteristic coil data  110 V AC: 50/60 Hz, pick-up power 3 VA, holding power 2.4 VA  Permissible voltage fluctuation  -15 % / +10 %  Operating medium  Compressed air in accordance with ISO8573-1:2010 [7:4:4]  Note on operating and pilot medium  Ubbricated operation possible (subsequently required for further operation)  Vibration resistance  Transport application test at severity level 2 in accordance with FN	Valve position identification	Inscription label holder
Switching time off55 msSwitching time on25 msDuty cycle100 %Max. positive test pulse with logic 03,300 μsMax. negative test pulse with logic 13,100 μsCharacteristic coil data110 V AC: 50/60 Hz, pick-up power 3 VA, holding power 2.4 VAPermissible voltage fluctuation-15 % / +10 %Operating mediumCompressed air in accordance with ISO8573-1:2010 [7:4:4]Note on operating and pilot mediumLubricated operation possible (subsequently required for further operation)Vibration resistanceTransport application test at severity level 2 in accordance with FN	Overlap	Positive overlap
Switching time on 25 ms  Duty cycle 100 %  Max. positive test pulse with logic 0 3,300 µs  Max. negative test pulse with logic 1 3,100 µs  Characteristic coil data 110 V AC: 50/60 Hz, pick-up power 3 VA, holding power 2.4 VA  Permissible voltage fluctuation -15 % / +10 %  Operating medium Compressed air in accordance with ISO8573-1:2010 [7:4:4]  Note on operating and pilot medium Lubricated operation possible (subsequently required for further operation)  Vibration resistance Transport application test at severity level 2 in accordance with FN	Pilot pressure	2.5 10 bar
Duty cycle       100 %         Max. positive test pulse with logic 0       3,300 μs         Max. negative test pulse with logic 1       3,100 μs         Characteristic coil data       110 V AC: 50/60 Hz, pick-up power 3 VA, holding power 2.4 VA         Permissible voltage fluctuation       -15 % / +10 %         Operating medium       Compressed air in accordance with ISO8573-1:2010 [7:4:4]         Note on operating and pilot medium       Lubricated operation possible (subsequently required for further operation)         Vibration resistance       Transport application test at severity level 2 in accordance with FN	Switching time off	55 ms
Max. positive test pulse with logic 03,300 μsMax. negative test pulse with logic 13,100 μsCharacteristic coil data110 V AC: 50/60 Hz, pick-up power 3 VA, holding power 2.4 VAPermissible voltage fluctuation-15 % / +10 %Operating mediumCompressed air in accordance with ISO8573-1:2010 [7:4:4]Note on operating and pilot mediumLubricated operation possible (subsequently required for further operation)Vibration resistanceTransport application test at severity level 2 in accordance with FN	Switching time on	25 ms
Max. negative test pulse with logic 1       3,100 μs         Characteristic coil data       110 V AC: 50/60 Hz, pick-up power 3 VA, holding power 2.4 VA         Permissible voltage fluctuation       -15 % / +10 %         Operating medium       Compressed air in accordance with ISO8573-1:2010 [7:4:4]         Note on operating and pilot medium       Lubricated operation possible (subsequently required for further operation)         Vibration resistance       Transport application test at severity level 2 in accordance with FN	Duty cycle	100 %
Characteristic coil data  110 V AC: 50/60 Hz, pick-up power 3 VA, holding power 2.4 VA  Permissible voltage fluctuation  -15 % / +10 %  Operating medium  Compressed air in accordance with ISO8573-1:2010 [7:4:4]  Note on operating and pilot medium  Lubricated operation possible (subsequently required for further operation)  Vibration resistance  Transport application test at severity level 2 in accordance with FN	Max. positive test pulse with logic 0	3,300 µs
Permissible voltage fluctuation  -15 % / +10 %  Operating medium  Compressed air in accordance with ISO8573-1:2010 [7:4:4]  Note on operating and pilot medium  Lubricated operation possible (subsequently required for further operation)  Vibration resistance  Transport application test at severity level 2 in accordance with FN	Max. negative test pulse with logic 1	
Operating medium         Compressed air in accordance with ISO8573-1:2010 [7:4:4]           Note on operating and pilot medium         Lubricated operation possible (subsequently required for further operation)           Vibration resistance         Transport application test at severity level 2 in accordance with FN	Characteristic coil data	110 V AC: 50/60 Hz, pick-up power 3 VA, holding power 2.4 VA
Note on operating and pilot medium  Lubricated operation possible (subsequently required for further operation)  Vibration resistance  Transport application test at severity level 2 in accordance with FN	Permissible voltage fluctuation	-15 % / +10 %
operation)  Vibration resistance  Transport application test at severity level 2 in accordance with FN	Operating medium	Compressed air in accordance with ISO8573-1:2010 [7:4:4]
	Note on operating and pilot medium	
	Vibration resistance	Transport application test at severity level 2 in accordance with FN 942017-4 and EN 60068-2-6
Shock resistance Shock test with severity level 2 in accordance with FN 942017-5 and E 60068-2-27	Shock resistance	Shock test with severity level 2 in accordance with FN 942017-5 and EN 60068-2-27
Corrosion resistance classification CRC 2 - Moderate corrosion stress	Corrosion resistance classification CRC	
Medium temperature -5 50 °C		
Pilot medium Compressed air in accordance with ISO8573-1:2010 [7:4:4]	•	
Ambient temperature -5 50 °C		
Electrical connection Plug pattern type C to EN 175301-803	<u> </u>	



Feature	Value
Mounting type	with through hole
Pilot exhaust port 82	M5
Pilot exhaust port 84	M5
Pilot air port 12	M5
Pilot air port 14	M5
Pneumatic connection, port 1	QS-12
Pneumatic connection, port 2	QS-12
Pneumatic connection, port 3	G3/8
Pneumatic connection, port 4	QS-12
Pneumatic connection, port 5	G3/8
Materials note	Conforms to RoHS
Material seals	NBR
Material housing	Aluminium die cast