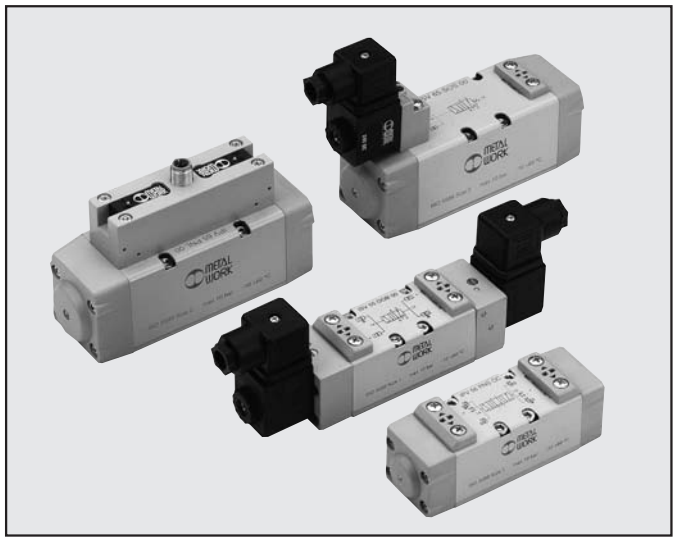
VALVES ISO 5599/1, SERIES IPV-ISV

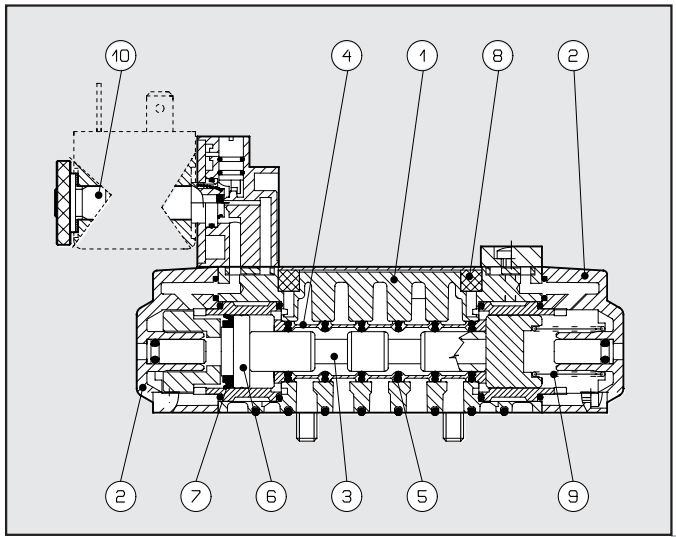
The assembly surface dimensions of ISO1 and ISO2 valves are to ISO5599-1. They are available in the 5-way versions with 2 and 3 positions and with pneumatic or solenoid actuation.



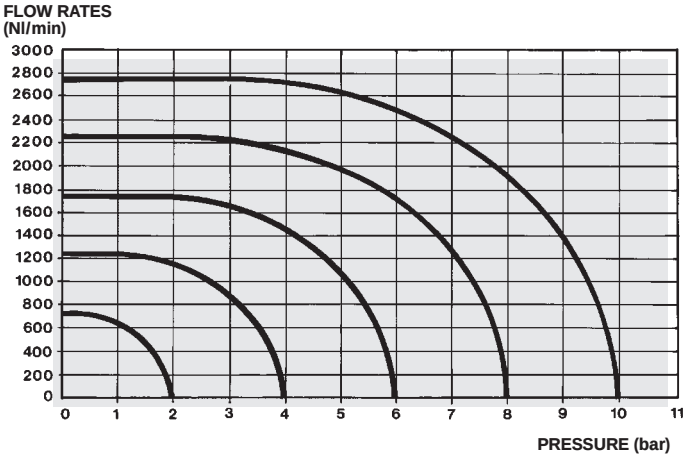
TECHNICAL DATA	ISO 1	ISO 2
Fluid	Filtered air without lubrication; lubrication, if used, must be continuous	
Operating pressure:		
• monostable	Vacuum ÷10 bar pneumatic – 2.5÷10 bar solenoid/pneumatic	
• bistable	Vacuum ÷ 10 bar pneumatic – 1÷10 bar solenoid/pneumatic	
• pilot-assisted	Vacuum ÷ 10 bar	
Minimum pilot pressure	2.5 bar	
Operating temperature range	-10°÷ +60°C	
Nominal diameter	7.5 mm	12 mm
Conductance C	250 Nl/min · bar	657.14 Nl/min · bar
Critical ratio b	0.36 bar/bar	0.25 bar/bar
Flow rate at 6 Bar ΔP 0.5 Bar	700 Nl/min	1800 Nl/min
Flow rate at 6 Bar ΔP 1 Bar	1100 Nl/min	2700 Nl/min
Installation	In any position (vertical assembly is not recommended for bistable valves subjected to vibration)	
Assembly	On single and manifold bases according to ISO 5599/1	
Recommended lubricant	ISO and UNI FD 22	
Solenoid pilot:	to CNOMO / in-line pilot / M12	
Manual:	bistable on solenoid pilot	
	monostable on valve body	
Maximum torque nut/coil	1 Nm	

COMPONENTS

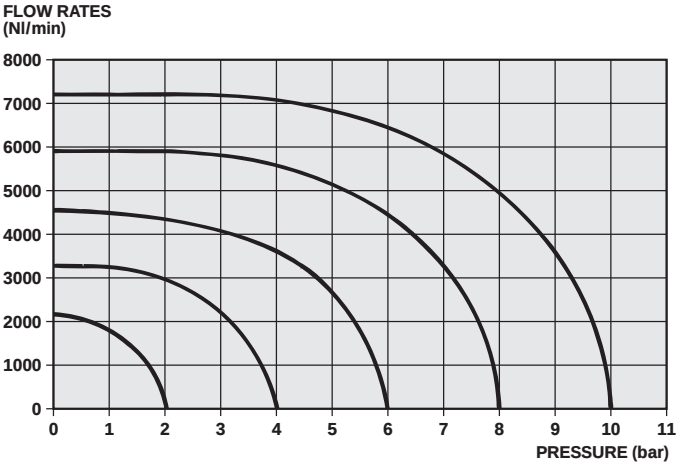
① VALVE BODY: Aluminium
② END CAP: HOSTAFORM®
③ SPOOL: chemically nickel-plated aluminium
④ DISTANCE PLATES: plastic
⑤ GASKETS: NBR nitrile rubber
⑥ PISTONS: HOSTAFORM®
⑦ PISTON GASKETS: NBR nitrile rubber
⑧ FILTER: sintered bronze
⑨ SPRINGS: special steel
⑩ OPERATOR: Brass pipe – Stainless steel core



FLOW CHARTS ISO 1



FLOW CHARTS ISO 2



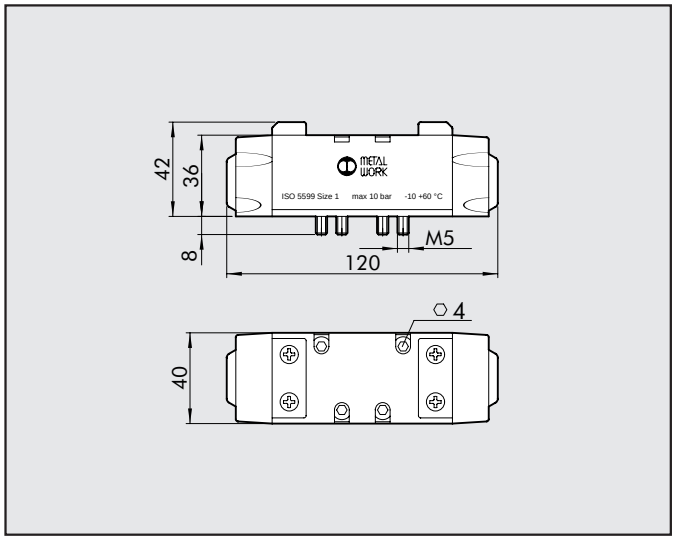
KEY TO CODES

I P V	5	5	P N	S	O O
FAMILY	PORT	FUNCTION	OPERATORS 14	RESETTING 12	FURTHER DETAILS
IPV ISO pneumatic ISV ISO solenoid/ pneumatic	5 ISO 1 6 ISO 2	5 5/2 6 5/3	PN pneumatic SO solenoid/pneumatic SE electric pilot-assisted DO solenoid/pneumatic in line DE solenoid, assisted in line CO M12 solenoid/pneumatic CE M12 solenoid assisted	S mechanical spring B bistable D differential	OO 5/2 CC closed centres OC open centres PC pressure centres

VALVES ISO 5599/1, PNEUMATIC SERIES IPV

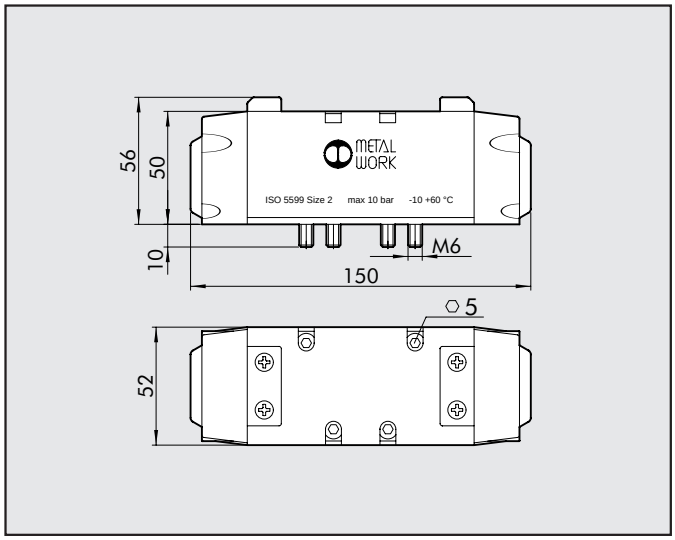
TECHNICAL DATA	ISO 1	ISO 2
Operating pressure	Vacuum ÷ 10 bar	
Minimum operation pressure:		
• monostable	2.5 bar	
• bistable	1 bar	
Operating temperature range	-10° to 60°C	
Nominal diameter	7.5 mm	12 mm
Conductance C	250 Nl/min · bar	657.14 Nl/min · bar
Critical ratio b	0.36 bar/bar	0.25 bar/bar
Flow rate at 6 Bar ΔP 0.5 Bar	700 Nl/min	1800 Nl/min
Flow rate at 6 Bar ΔP 1 Bar	1100 Nl/min	2700 Nl/min
Response times at 6 Bar:		
• monostable	12 ms	24 ms
• bistable	20 ms	30 ms
Repositioning response times at 6 Bar:		
• monostable	30 ms	43 ms
• bistable	20 ms	30 ms
Manual	monostable on valve body	

PNEUMATIC ACTUATION ISO 1



Symbol	Abbrev.	Code	Weight [g]
	IPV 55 PNS OO	7051011100	310
	IPV 55 PNB OO	7051011200	310
	IPV 55 PND OO	7051011300	310
	IPV 56 PNS CC	7051012100	310
	IPV 56 PNS OC	7051012200	310
	IPV 56 PNS PC	7051012300	310

PNEUMATIC ACTUATION ISO 2

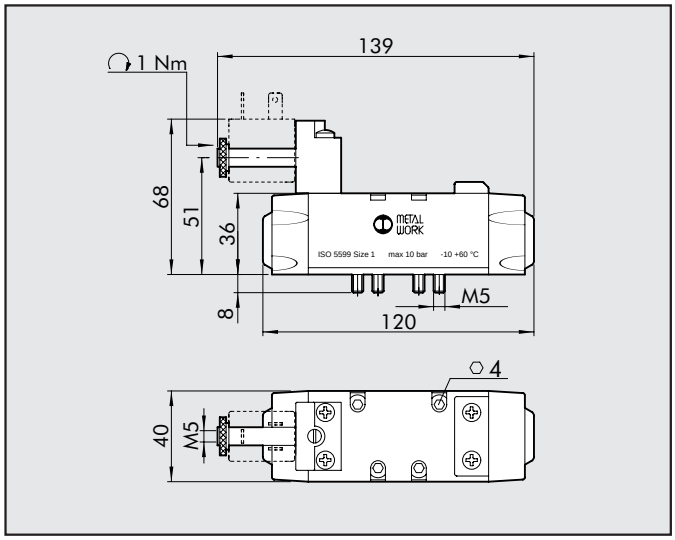


Symbol	Abbrev.	Code	Weight [g]
	IPV 65 PNS OO	7052011100	705
	IPV 65 PNB OO	7052011200	705
	IPV 65 PND OO	7052011300	705
	IPV 66 PNS CC	7052012100	705
	IPV 66 PNS OC	7052012200	705
	IPV 66 PNS PC	7052012300	705

VALVES ISO 5599/1, SOLENOID/PNEUMATIC, SERIES ISV

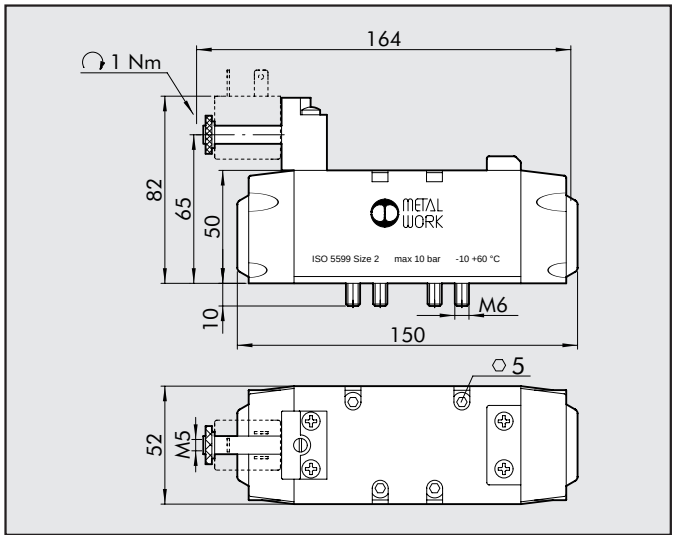
TECHNICAL DATA	ISO 1	ISO 2
Operating pressure:		
• monostable	2.5÷10 bar	
• bistable	1÷10 bar	
• pilot-assisted	Vacuum ÷ 10 bar	
Minimum pilot pressure	2.5 bar	
Operating temperature range	-10° to 60°C	
Nominal diameter	7.5 mm	12 mm
Conductance C	250 Nl/min · bar	657.14 Nl/min · bar
Critical ratio b	0.36 bar/bar	0.25 bar/bar
Flow rate at 6 Bar ΔP 0.5 Bar	700 Nl/min	1800 Nl/min
Flow rate at 6 Bar ΔP 1 Bar	1100 Nl/min	2700 Nl/min
TRA / TRR monostable at 6 Bar	24 ms / 50 ms	39 ms / 60 ms
TRA / TRR bistable at 6 Bar	80 ms / 80 ms	90 ms / 90 ms
Solenoid pilot:	Standards CNOMO	
Manual:	bistable on solenoid pilot	
	monostable on valve body	
Coils:	30mm side DIN 43650 Form A – ISO	
	22 mm side	
Maximum torque coil/nut	1 Nm	

MONOSTABLE 5/2 ISO 1



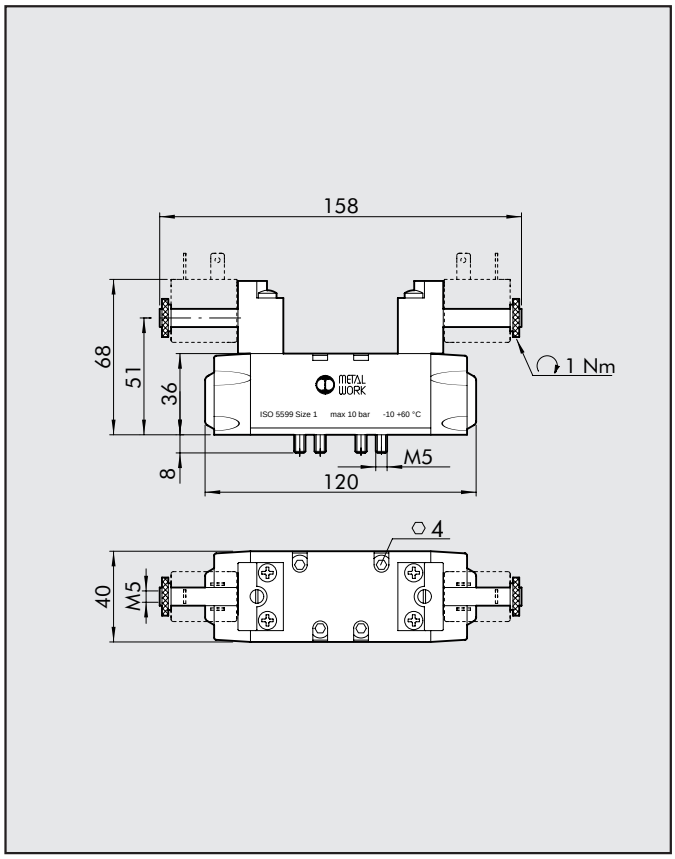
Symbol	Abbrev.	Code	Weight [g]
	ISV 55 SOS OO	7051021100	344
	ISV 55 SES OO	7051021400	344

MONOSTABLE 5/2 ISO 2



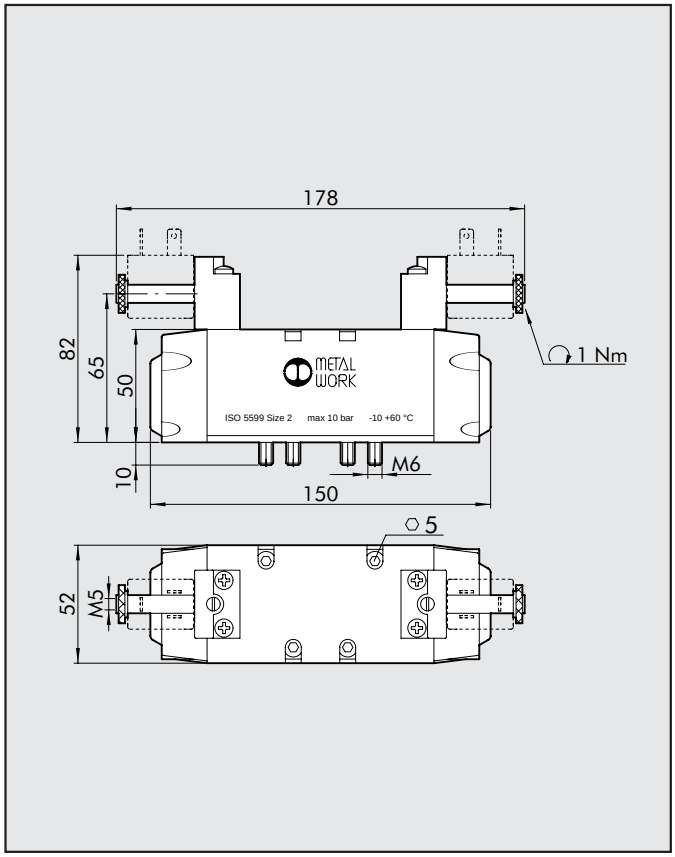
Symbol	Abbrev.	Code	Weight [g]
	ISV 65 SOS OO	7052021100	715
	ISV 65 SES OO	7052021400	715

BISTABLE 5/2 ISO 1
MONOSTABLE 5/3 ISO 1



Symbol	Abbrev.	Code	Weight [g]
	ISV 55 SOB OO	7051021200	388
	ISV 55 SOD OO	7051021300	375
	ISV 56 SOS CC	7051022100	372
	ISV 56 SOS OC	7051022200	372
	ISV 56 SOS PC	7051022300	372
	ISV 55 SEB OO	7051021500	388
	ISV 55 SED OO	7051021600	375
	ISV 56 SES CC	7051022400	372
	ISV 56 SES OC	7051022500	372
	ISV 56 SES PC	7051022600	372

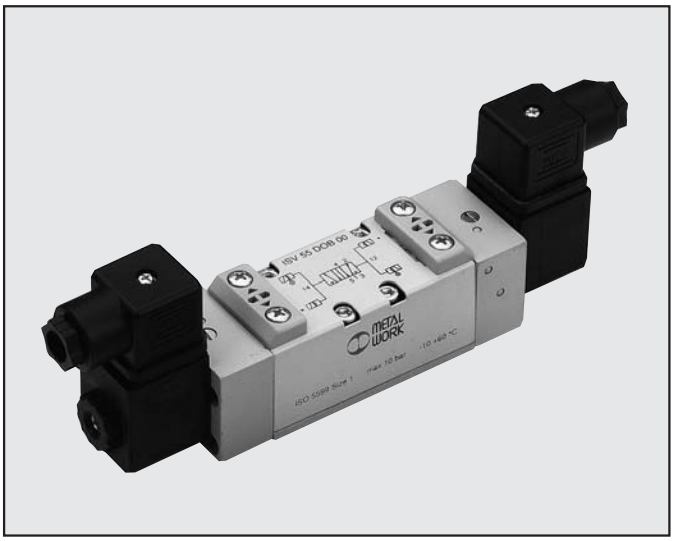
BISTABLE 5/2 ISO 2
MONOSTABLE 5/3 ISO 2



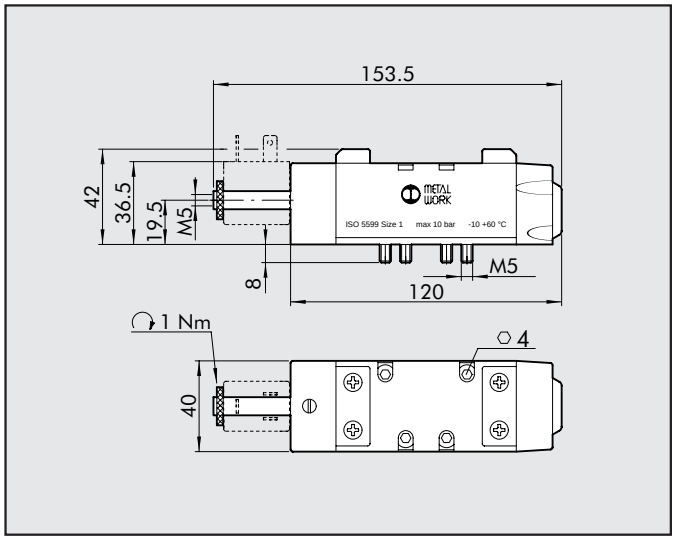
Symbol	Abbrev.	Code	Weight [g]
	ISV 65 SOB OO	7052021200	740
	ISV 65 SOD OO	7052021300	710
	ISV 66 SOS CC	7052022100	720
	ISV 66 SOS OC	7052022200	720
	ISV 66 SOS PC	7052022300	720
	ISV 65 SEB OO	7052021500	740
	ISV 65 SED OO	7052021600	710
	ISV 66 SES CC	7052022400	720
	ISV 66 SES OC	7052022500	720
	ISV 66 SES PC	7052022600	720

VALVES ISO 5599/1, PNEUMATIC, SERIES ISV WITH IN-LINE SOLENOID PILOT

TECHNICAL DATA	ISO 1
Operating pressure:	
• monostable	2.5-10 bar
• bistable	1-10 bar
• pilot-assisted	Vacuum – 10 bar
Minimum pilot pressure	2.5 bar
Operating temperature range	-10° to 60°C
Nominal diameter	7.5 mm
Conductance C	250 Nl/min · bar
Critical ratio b	0.36 bar/bar
Flow rate at 6 Bar ΔP 0.5 Bar	700 Nl/min
Flow rate at 6 Bar ΔP 1 Bar	1100 Nl/min
TRA / TRR monostable at 6 Bar	24 ms / 50 ms
TRA / TRR bistable at 6 Bar	80 ms / 80 ms
Solenoid pilot:	In line pilot
Manual:	bistable on solenoid pilot
Coils:	30mm side DIN 43650 Form A – ISO
	22 mm side
Maximum torque coil/nut	1 Nm

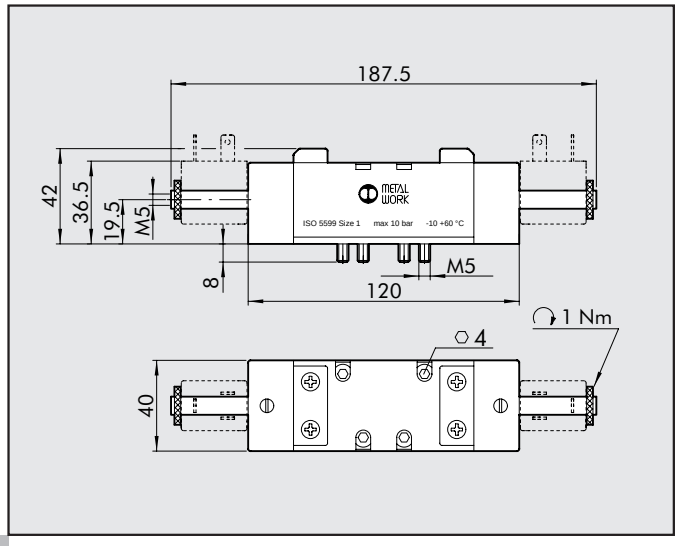


MONOSTABLE 5/2 ISO 1



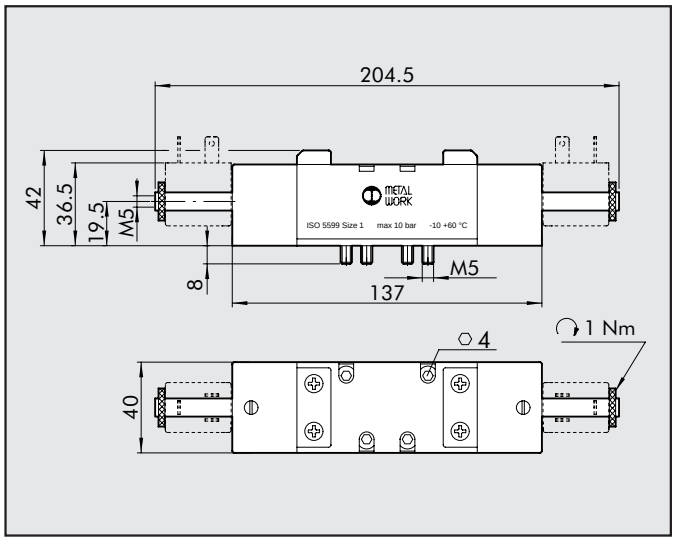
Symbol	Abbrev.	Code	Weight [g]
	ISV 55 DOS OO	7053021100	396
	ISV 55 DES OO	7053021400	396

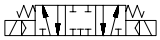
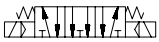
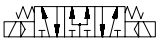
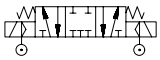
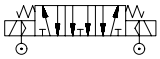
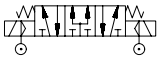
BISTABLE 5/2 ISO 1



Symbol	Abbrev.	Code	Weight [g]
	ISV 55 DOB OO	7053021200	450
	ISV 55 DEB OO	7053021500	450

MONOSTABLE 5/3 ISO 1

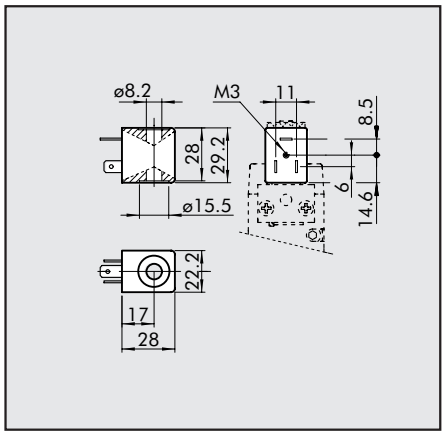


Symbol	Abbrev.	Code	Weight [g]
	ISV 56 DOS CC	7053022100	517
	ISV 56 DOS OC	7053022200	516
	ISV 56 DOS PC	7053022300	516
	ISV 56 DES CC	7053022400	517
	ISV 56 DES OC	7053022500	516
	ISV 56 DES PC	7053022600	515

NOTES

COILS AND CONNECTORS FOR ISO 5599/1 SOLENOID VALVES SERIES ISV

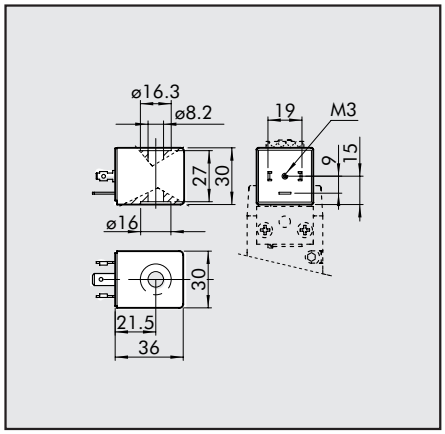
COILS SIDE 22 mm FOR ISO 5599/1 SOLENOID VALVES



- Voltage tolerance: -10% + 15%
- Insulation class: F155
- Degree of protection: IP65 EN60529 with connector
- Avoid prolonged exposure to the atmospheric agents
- Coil temperature 100% ED: 70°C at 20°C – Ambient temperature

Nominal voltage	Absorption		Abbrev.	Code
	Inrush	Holding		
12Vcc	2W	2W	Coil 22 Ø8 BA 2W-12VDC	W0215000151
24Vcc	2W	2W	Coil 22 Ø8 BA 2W-24VDC	W0215000101
24V 50/60Hz	4VA	3VA	Coil 22 Ø8 BA 3VA-24VAC	W0215000111
110V 50/60Hz	4VA	3VA	Coil 22 Ø8 BA 3VA-110VAC	W0215000121
220V 50/60Hz	4VA	3VA	Coil 22 Ø8 BA 3VA-220VAC	W0215000131

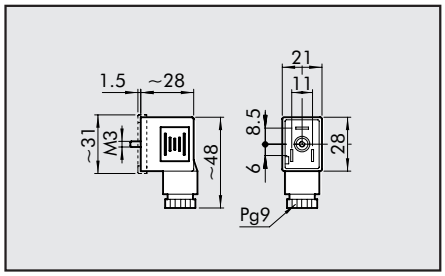
COILS SIDE 30 mm FOR ISO 5599/1 SOLENOID VALVES



- electric contact DIN43650 shape A – ISO 4400
- Voltage tolerance: -10% + 10%
- Insulation class: F155
- Degree of protection: IP65 EN60529 with connector

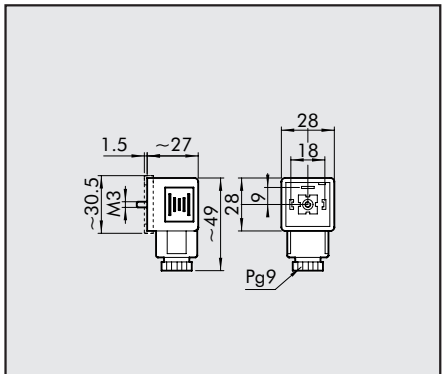
Nominal voltage	Absorption		Abbrev.	Code
	Inrush	Holding		
24Vcc	5W	4W	Coil 30 Ø8 4W-24VDC	W0210010100
24V 50/60Hz	10VA	4VA	Coil 30 Ø8 4VA-24VAC	W0210011100
110V 50/60Hz	10VA	4VA	Coil 30 Ø8 4VA-110VAC	W0210012100
220V 50/60Hz	10VA	4VA	Coil 30 Ø8 4VA-220VAC	W0210013100

ELECTRIC CONNECTOR FOR COILS SIDE 22 mm



Colour	Ø Cable	Type	Code
Black	PG9	Standard	W0970510011
Transparent	PG9	LED 24V	W0970510012
Transparent	PG9	LED 110V	W0970510013
Transparent	PG9	LED 220V	W0970510014
Transparent	PG9	LED + VDR 24V	W0970510015
Transparent	PG9	LED + VDR 110V	W0970510016
Transparent	PG9	LED + VDR 220V	W0970510017

ELECTRIC CONNECTOR FOR COILS SIDE 30 mm



Colour	Ø Cable	Type	Code
Black	PG9	Standard	W0970520033
Transparent	PG9	LED 24V	W0970520034
Transparent	PG9	LED 110V	W0970520035
Transparent	PG9	LED 220V	W0970520036
Transparent	PG9	LED + VDR 24V	W0970520037
Transparent	PG9	LED + VDR 110V	W0970520038
Transparent	PG9	LED + VDR 220V	W0970520039