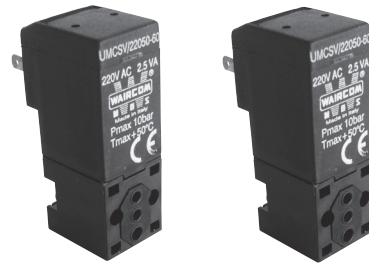


## DESCRIPTION

The direct acting solenoid valves series "UM" are produced in conformity with the Directives EC 89/336, EC 92/31, EC 93/68, EC 73/23 in the 3/2 N.O. and 3/2 N.C. pneumatic functions. They are used as power valves if mounted on single and multi-station base, or as control valves if mounted, in the 3/2 pneumatic function, on body valve series "MEV" (see from page 2.16) and "MEK" (see from page 2.32).

The multi-station bases support both the 3/2 N.O. than the 3/2 N.C. solenoid valves. The wrapping could be rotated of 180° to have an opposite electric connection respect the manual override.



2

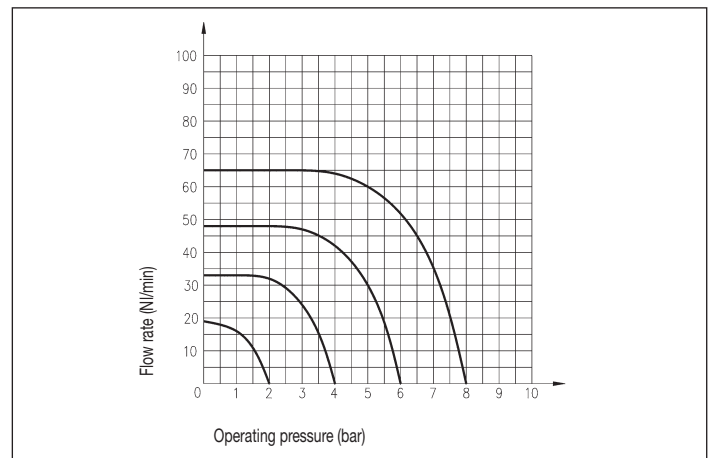
## TECHNICAL DATA

Operatin pressure	0 ÷ 7 bar N.O. 0 ÷ 10 bar N.C.
Working temperature	-5° ÷ +50° C
Fluid	Filtered, unlubricated or continuous lubricated compressed air
Nominal diameter	1.1 mm N.C. - N.O.
Max. operating frequency	≤13 Hz
Coil	Integrated in the body
Voltages	DC: 12 - 24 V AC: 24 - 110 - 220 V
Power consumption	DC: 2.3 W AC: 2.8 VA (inrush) - 2.5 VA (holding)
Voltage tolerance	-5% +10%
Protection class	IP 65 with connector MEK 192/N with VDR
Solenoid rating	F (155°C)
Electric connector	MEK192/N - see chapter Connectors on page 2.15

## MATERIALS

Core	Stainless steel AISI 430F
Body and manual override	Polyester thermoplastic
Springs	Stainless steel AISI 302
Seals	NBR rubber

## FLOW CHART - UM



## 3 PORT WITH INTERFACE

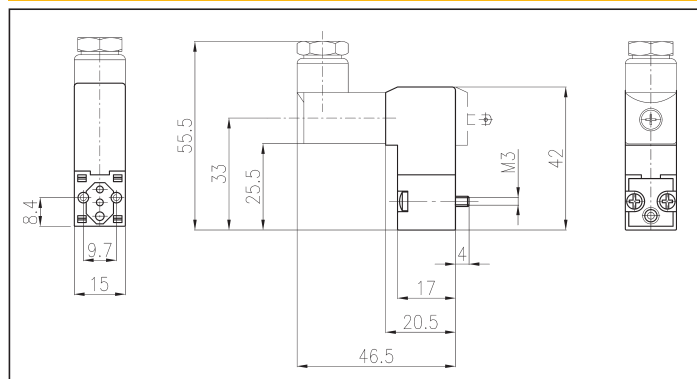
Symbol	Function	Controls		Response time at 6 bar (ms)		Flow rate (Nl/min) at 6 bar ΔP = 1 bar	Manual override	Weight (g)	TYPE*
		Pilot	Return	Pilot	Return				
	3/2 N.O.	Solenoid	Mechanical spring	17	20	26	Monostable push button	40	UMASV/
	3/2 N.C.	Solenoid	Mechanical spring	13	23	30	Monostable push button	40	UMCSV/

\* SPECIFY THE VOLTAGE IN THE ORDER  
E.G.: UMCSV/02400

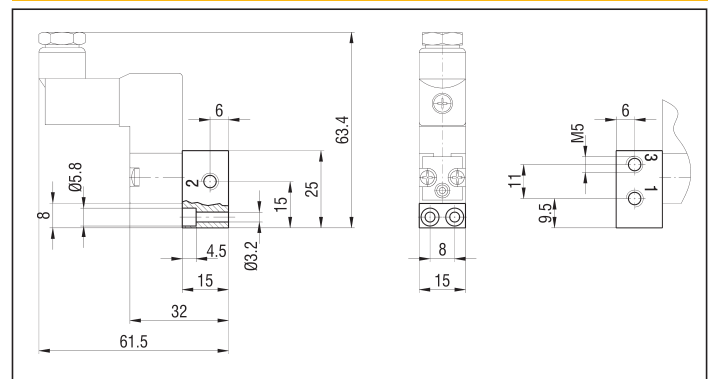
02400 = 24 V DC  
02450-60 = 24 V AC

11050-60 = 110 V AC  
22050-60 = 220 V AC

## UMASV - UMCSV

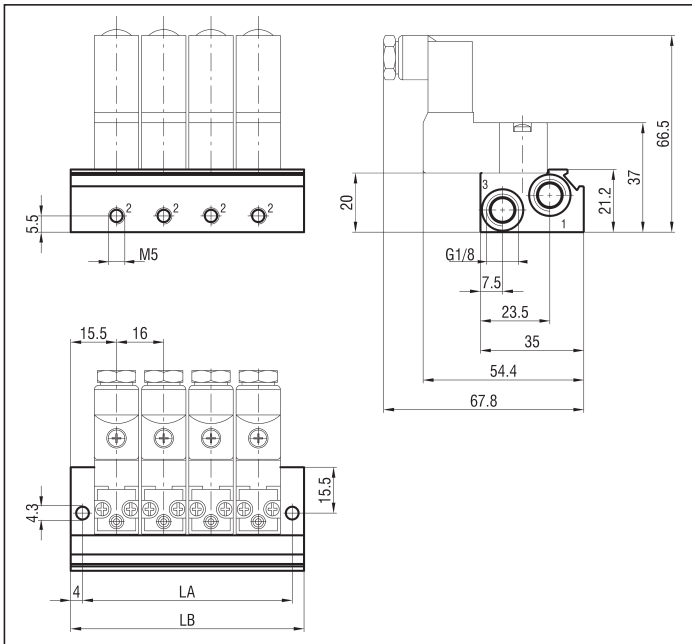


## SINGLE BASE M5 - UMP5/1

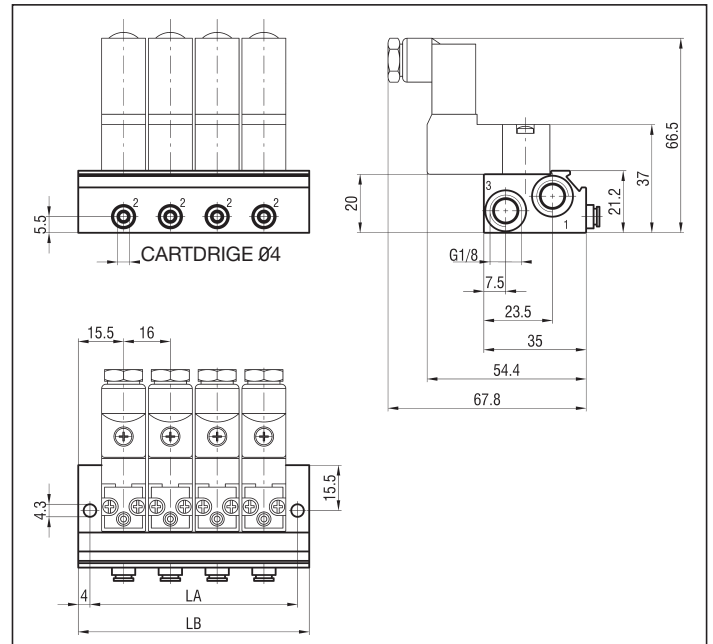


2

### MULTI-STATION BASE M5 - UMPM5

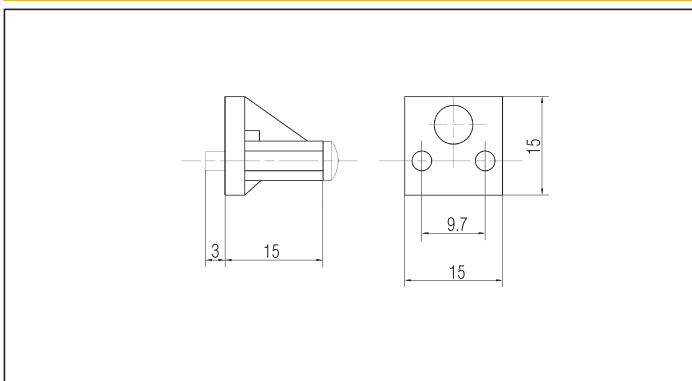


### MULTI-STATION BASE WITH CARTRIDGE Ø 4 mm - UMP4-2



N° of stations	2	3	4	5	6	7	8	9	10
LA	39	55	71	87	103	119	135	151	167
LB	47	63	79	95	111	127	143	159	175
Weight (g)	70	95	120	145	170	195	220	245	270
<b>TYPE</b>	<b>UMPM5/2</b>	<b>UMPM5/3</b>	<b>UMPM5/4</b>	<b>UMPM5/5</b>	<b>UMPM5/6</b>	<b>UMPM5/7</b>	<b>UMPM5/8</b>	<b>UMPM5/9</b>	<b>UMPM5/10</b>
Weight (g)	75	100	125	150	175	200	225	250	275
<b>TYPE</b>	<b>UMP4-2/2</b>	<b>UMP4-2/3</b>	<b>UMP4-2/4</b>	<b>UMP4-2/5</b>	<b>UMP4-2/6</b>	<b>UMP4-2/7</b>	<b>UMP4-2/8</b>	<b>UMP4-2/9</b>	<b>UMP4-2/10</b>

### REVERSAL PLATE - KIT/PC/UM



## DESCRIPTION

The direct acting solenoid valves series "UL" are produced in conformity with the Directives EC 89/336, EC 92/31, EC 93/68, EC 73/23 in the 3/2 N.O. (with feed from the exhaust "3") and 3/2 N.C. pneumatic functions. The function 2/2 is obtainable closing exhaust "3". Besides are available the versions with ports G 1/8, suitable for single use, and with interface for multi-station base mounting or for mounting on poppet and to ex CETOP RP 32 P (with fixed position) valve bodies.

## TECHNICAL DATA

Operating pressure	0 ÷ 10 bar
Working temperature	0 ÷ +50 °C (-20 °C with dry air)
Fluid	Filtered, unlubricated or continuous lubricated compressed air
Nominal diameter	2 mm
Max. operating frequency	≤13 Hz
Coil	Intergrated in the body
Voltages	DC: 24 V AC: 24 - 110 - 220 V
Apparent power	DC: 7 W AC: 17 VA (inrush) - 10 VA (holding)
Voltage tolerance	-15% +15%
Protection class	IP 65
Insulation class	F
Solenoid rating	ED 100%
Electric connector	ULR1B - see chapter Connectors on page 2.15

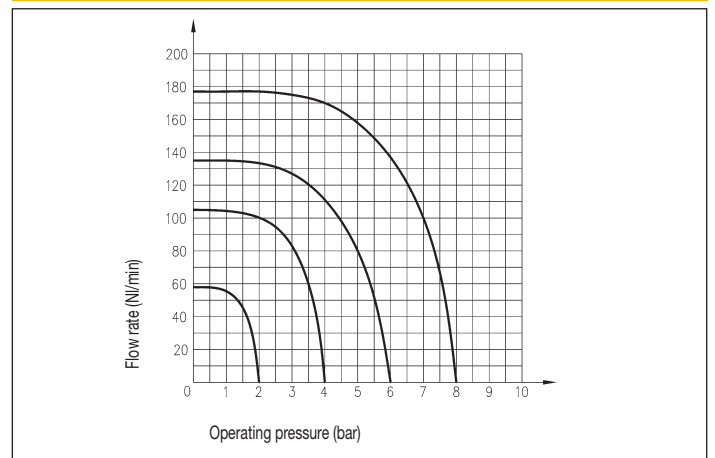
## MATERIALS

Core	IMRE
Body ported G 1/8	Zamak
Body with interface	Glass stiffened polyamide (zamak upon request)
Springs	Stainless steel
Seals	Viton®
Manual override	Acetal resin



2

## FLOW CHART - UL



## 3 PORT G 1/8 SIDE 32 mm

Symbol	Function	Controls		Response time at 6 bar (ms)		Flow rate at 6 bar ΔP = 1 bar (Nl/min)	Manual override	Weight (g)	TYPE*
		Pilot	Return	Pilot	Return				
	3/2 N.O.**	Solenoid	Mechanical spring	15	20	80	-	240	ULARG/R
	3/2 N.C.	Solenoid	Mechanical spring	15	20	80	-	240	ULCRG/R
	3/2 N.O.**	Solenoid	Mechanical spring	15	20	80	Manual bistable	240	ULARV/R
	3/2 N.C.	Solenoid	Mechanical spring	15	20	80	Manual bistable	240	ULCRV/R

\* SPECIFY THE VOLTAGE IN THE ORDER  
E.G.: ULARG/R02450-60

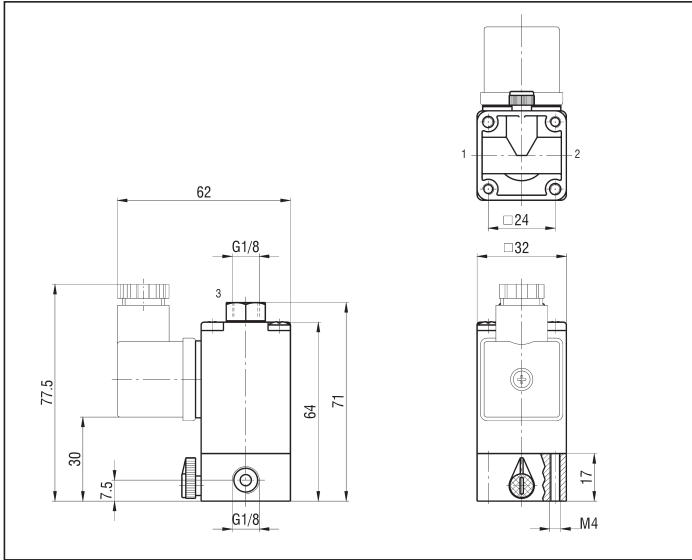
02400 = 24 V DC      11050-60 = 110 V AC  
02450-60 = 24 V AC      22050-60 = 220 V AC

\*\* For version N.O. arrange the connections as indicated:

- 1 = EXHAUST
- 2 = OUTPUT
- 3 = INPUT

2

### 3 PORT G 1/8



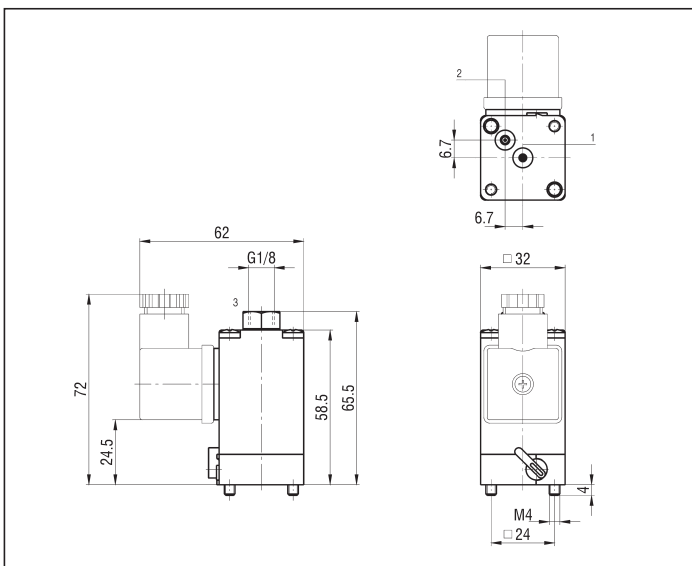
### 3 PORT WITH INTERFACE FOR MULTI-STATION BASES AND POPPET / ex CETOP VALVES (WITH FIXED POSITION)

Symbol	Function	Controls		Response time at 6 bar (ms)		Flow rate at 6 bar $\Delta P = 1$ bar (Nl/min)	Manual override	Weight (g)	TYPE*
		Pilot	Return	Pilot	Return				
	3/2 N.O.	Solenoid	Mechanical spring	15	20	80	-	200	ULASG/R
	3/2 N.C.	Solenoid	Mechanical spring	15	20	80	-	200	ULCSG/R
	3/2 N.O.	Solenoid	Mechanical spring	15	20	80	Manual bistable	200	ULASV/R
	3/2 N.C.	Solenoid	Mechanical spring	15	20	80	Manual bistable	200	ULCSV/R

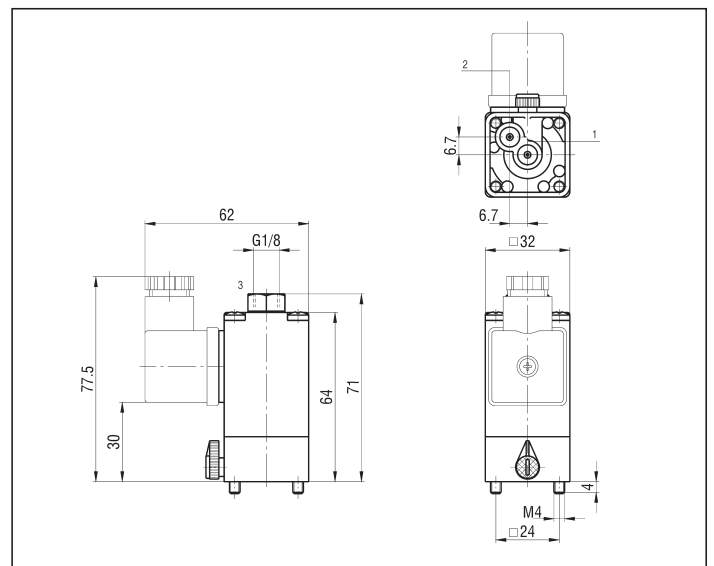
\* SPECIFY THE VOLTAGE IN THE ORDER    02400 = 24 V DC    11050-60 = 110 V AC  
 E.G.: ULARG/R02450-60                    02450-60 = 24 V AC    22050-60 = 220 V AC

PS. 1: For body valve in zamak add the letter "A" to the type.  
 E.G.: 3/2 N.C. with manual override, body in zamak ULCSV/RA + voltage.  
 PS. 2: For body valve in plastic and universal interface strip change the letter "R" of the type with the letter "U".  
 E.G.: 3/2 N.C. with manual override, body in plastic ULCSV/U + voltage.

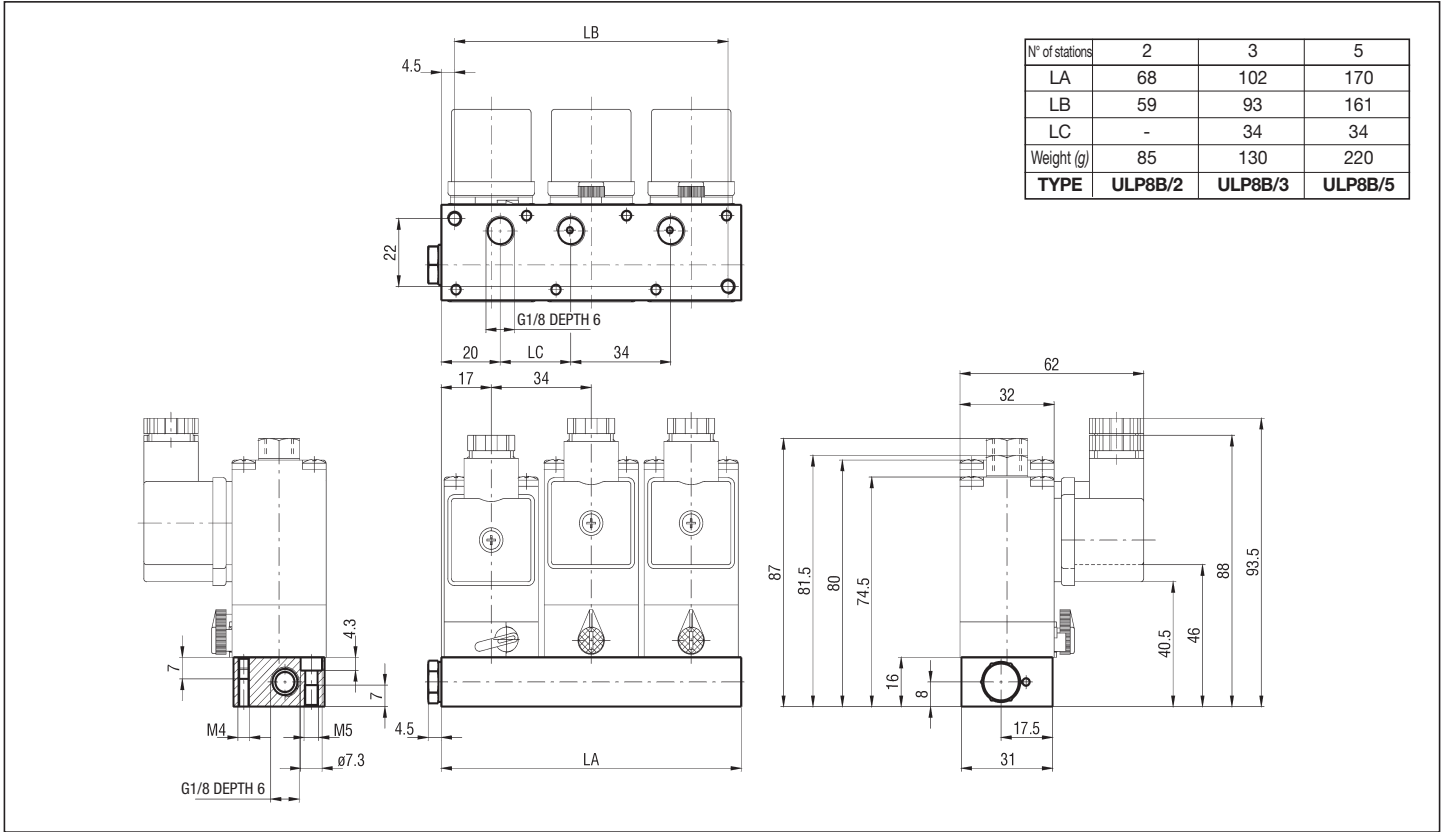
### 3 PORT WITH PLASTIC INTERFACE STRIP



### 3 PORT WITH ZAMAK INTERFACE STRIP

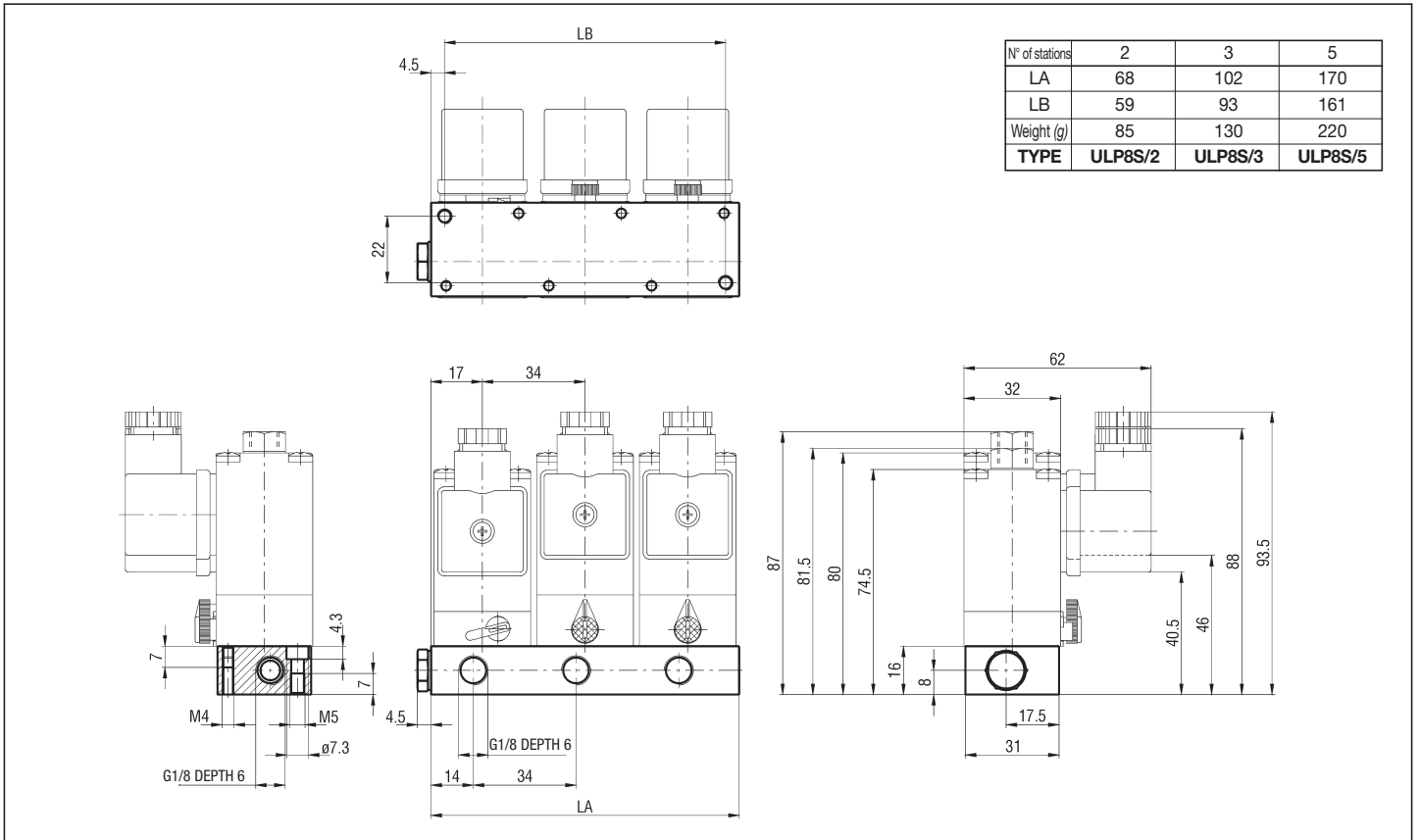


MULTI-STATION BOTTOM PORTED BASE G 1/8 - ULP8B



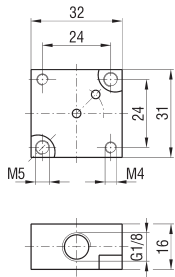
2

MULTI-STATION SIDE PORTED BASE G 1/8 - ULP8S



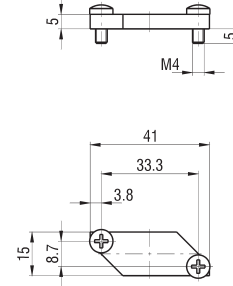
2

### SINGLE BASE G 1/8 - XVB



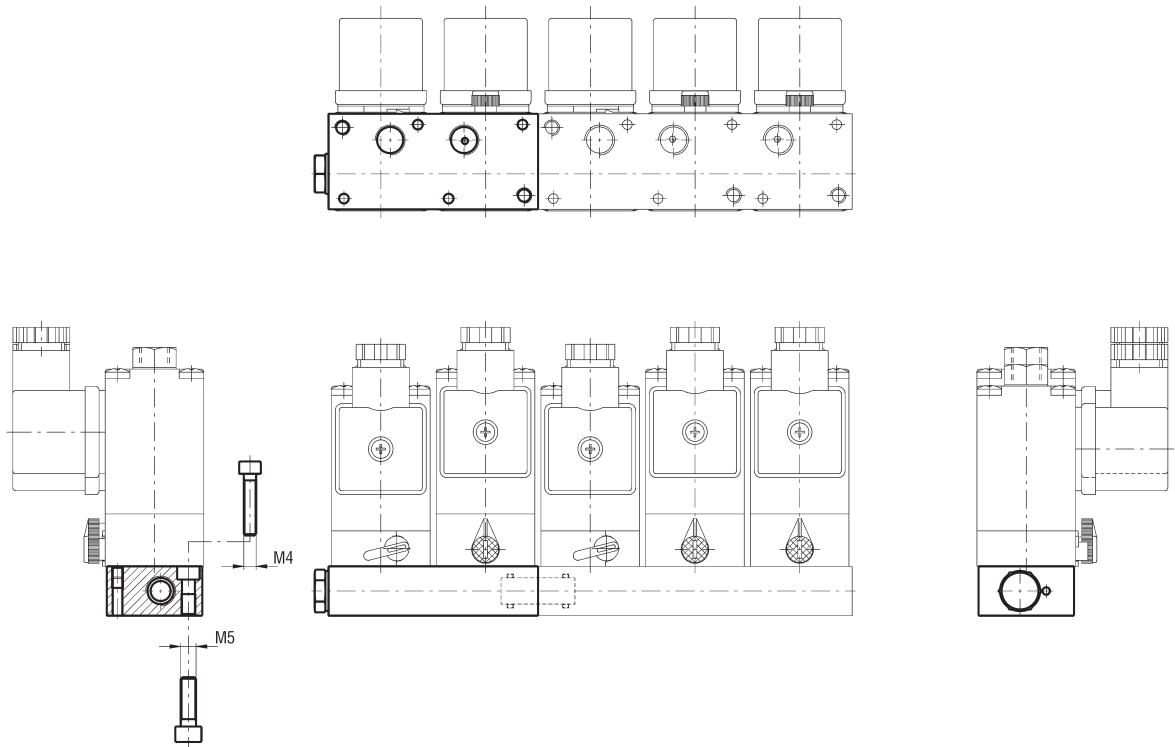
WEIGHT 40 g

### BLANKING PLATE - KIT/PC/UL



WEIGHT 10 g

### EXAMPLE OF BASES ASSEMBLY



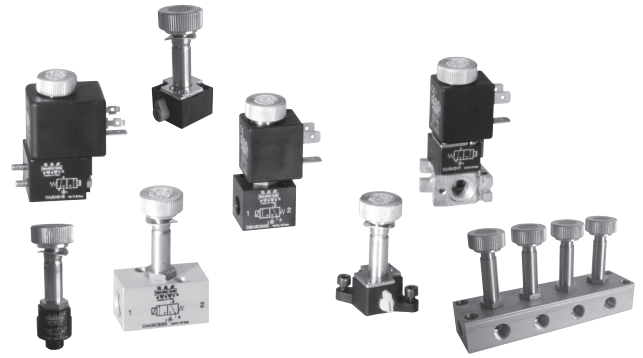
P.S.: The connection nipple is supplied as standard with the multi-station base

# Direct acting solenoid valves with sleeve Ø 9 mm

# series C/

## DESCRIPTION

The direct acting solenoid valves series "C/" are produced in conformity with the Directives EC 89/336, EC 92/31, EC 93/68, EC 73/23 in the 3/2 N.O. and 3/2 N.C. pneumatic functions. Using the same mechanic, it is possible to obtain four standard versions: side 22 mm - body ported, side 22 mm - body with interface, side 30 mm - body with ex CNOMO interface and body with interface for mounting on poppet and ex CETOP (with fixed position and rotatable coil) valves. All the solenoid valves with interface can be mounted on single modular bases. The version side 30 mm with ex CNOMO interface, in the 3/2 N.C. pneumatic function, has two different manual overrides as standard: bistable screwdriver and monostable push button.



2

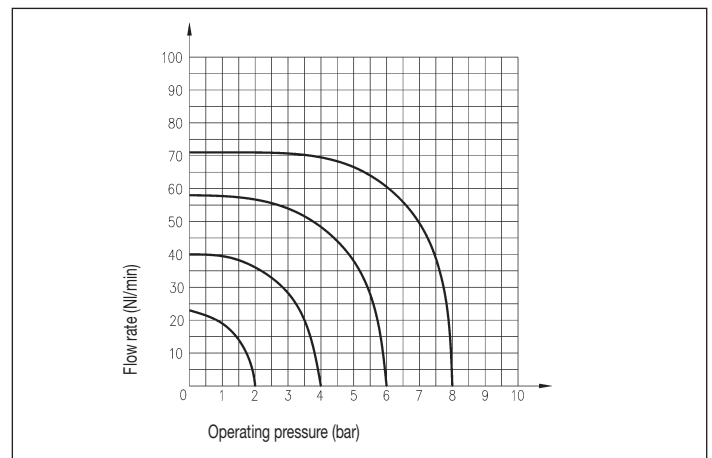
## TECHNICAL DATA

Operating pressure	0 ÷ 10 bar N.C. 0 ÷ 8 bar N.O.
Working temperature	0 ÷ +50 °C (-20 °C with dry air)
Fluid	Filtered, unlubricated or continuous lubricated compressed air
Sleeve	Ø 9 mm
Nominal diameter	1,1 mm
Max. operating frequency	≤13 Hz
Coils	USB - see chapter Coils on page 2.14 USBG - see chapter Coils on page 2.14
Electric connectors	USR102/N9 - see chapter Connectors on page 2.15 ULR1B - see chapter Connectors on page 2.15

## MATERIALS

Core	IMRE
Body ported G 1/8 - G 1/4	Aluminium
Body and manual override	Acetal resin
Springs	Stainless steel
Seals	Viton®

## FLOW CHART - C/



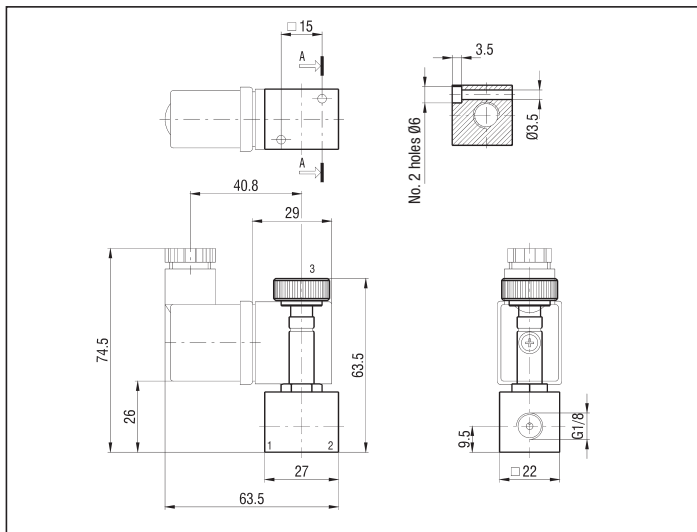
## 3 PORT G 1/8 - G 1/4 SIDE 22 mm

Symbol	Function	Controls		Response time at 6 bar (ms)		Flow rate at 6 bar ΔP = 1 bar (Nl/min)	Manual override	Size	Weight (g)	TYPE*
		Pilot	Return	Energized	De-energized					
	3/2 N.O.	Solenoid	Mechanical spring	10	20	48	G 1/8	-	46	C8/USASGG
	3/2 N.O.	Solenoid	Mechanical spring	10	20	48	G 1/4	-	46	C4/USASGG
	3/2 N.C.	Solenoid	Mechanical spring	10	20	36	G 1/8	-	65	C8/USCSGG
	3/2 N.C.	Solenoid	Mechanical spring	10	20	36	G 1/4	-	80	C4/USCSGG

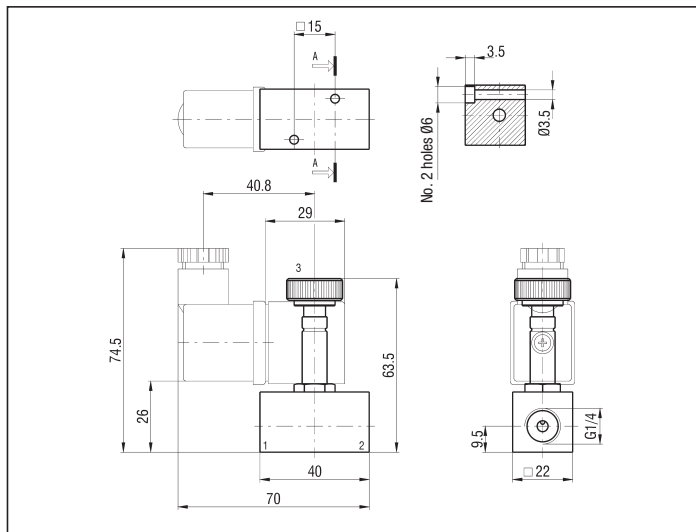
\* THE TYPES OF THE SOLENOID VALVES DO NOT INCLUDE COILS

2

### 3 PORT G 1/8



### 3 PORT G 1/4



### MANIFOLD BASE OF SOLENOID VALVES SIDE PORTED G 1/8 N.C. - C8/USCP AND N.O. - C8/USAP

N° of stations	4	6	8
LA	115	165	215
LB	105	155	205
Weight (g)	172	258	344
TYPE N.C.	C8/USCP/4	C8/USCP/6	C8/USCP/8
TYPE N.O.	C8/USAP/4	C8/USAP/6	C8/USAP/8

P.S.: MANIFOLD BASES OF SOLENOID VALVES WITH "MIXED" OPERATION (N.O./N.C.) ARE SUPPLIED UPON REQUEST

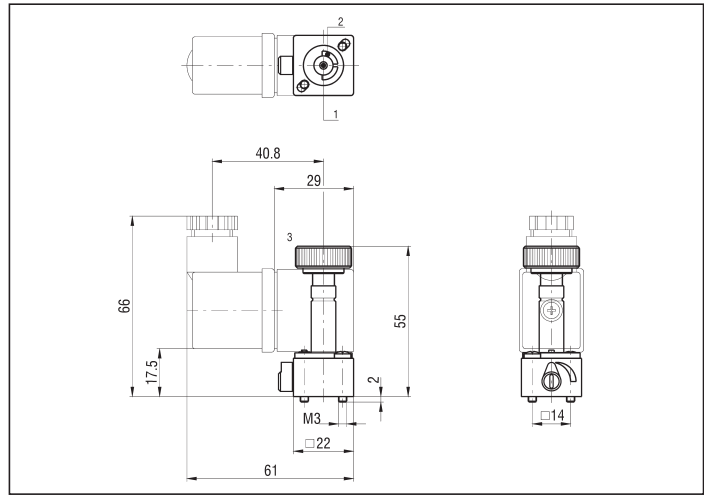


## 3 PORT WITH INTERFACE FOR MODULAR BASES AND SPOOL VALVES SIDE 22 mm

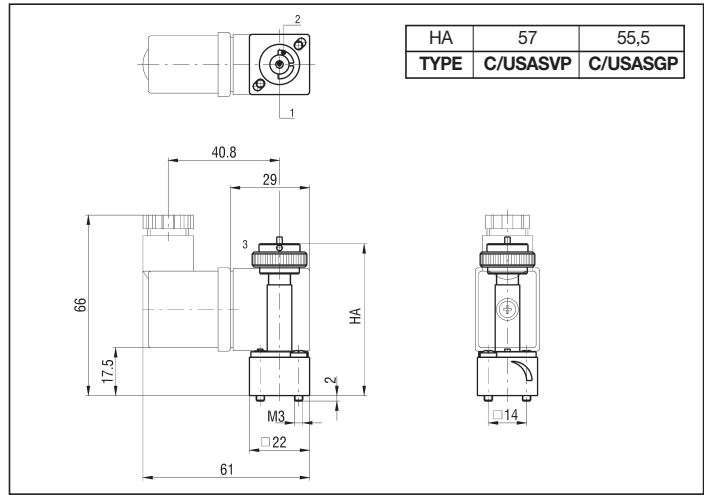
Symbol	Function	Controls		Response time at 6 bar (ms)		Flow rate at 6 bar $\Delta P = 1 \text{ bar}$ (Nl/min)	Manual override	Weight (g)	TYPE*
		Pilot	Return	Energized	De-energized				
	3/2 N.O.	Solenoid	Mechanical spring	10	25	36	Manual monostable	45	C/USASVP
	3/2 N.O.	Solenoid	Mechanical spring	10	25	36	-	30	C/USASGP
	3/2 N.C.	Solenoid	Mechanical spring	10	25	36	Manual monostable	30	C/USCSVP
	3/2 N.C.	Solenoid	Mechanical spring	10	25	36	-	30	C/USCSGP

\* THE TYPES OF THE SOLENOID VALVES DO NOT INCLUDE COILS

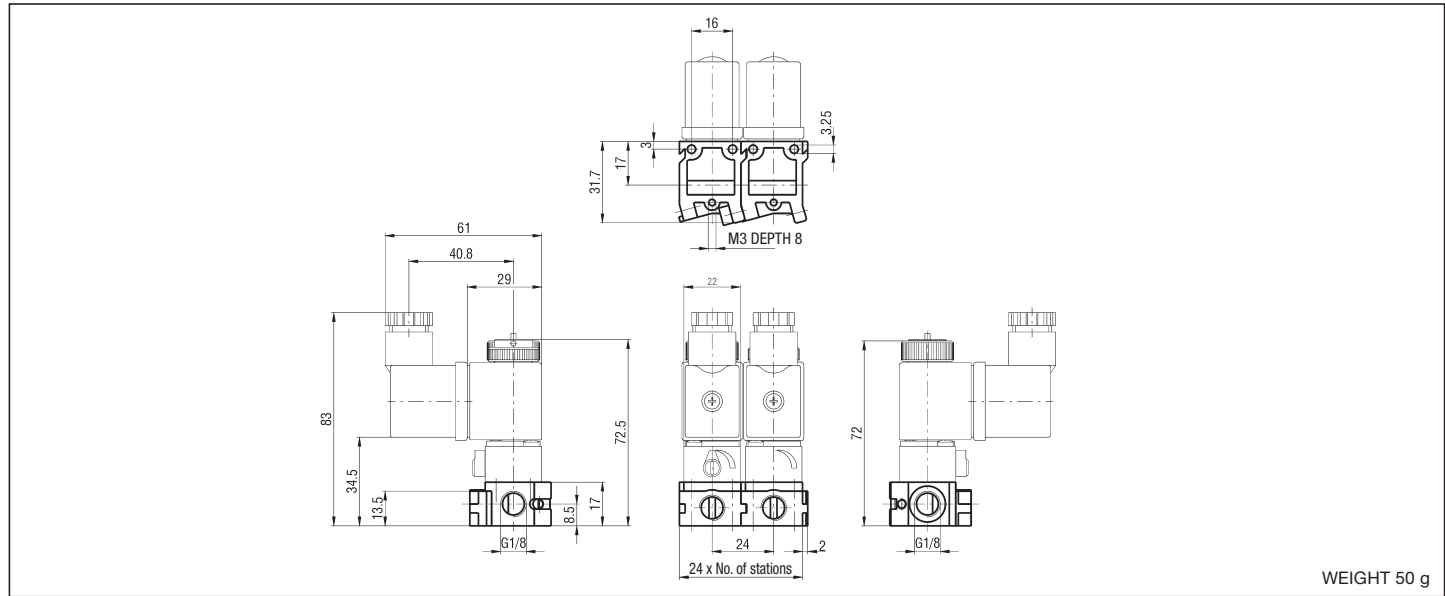
### C/USCSVP



### C/USASVP - C/USASGP



### MODULAR BASE SIDE PORTED G 1/8 - ELPP8S



WEIGHT 50 g

HOW TO ORDER A SOLENOID VALVE COMPLETE OF COIL AND BASE

DESCRIPTION	TYPE
3/2 N.O. + base + coil (with manual override)	ELPP8S/PAV/USB/voltage
3/2 N.O. + base + coil (without manual override)	ELPP8S/PAG/USB/voltage
3/2 N.C. + base + coil (with manual override)	ELPP8S/P/USB/voltage

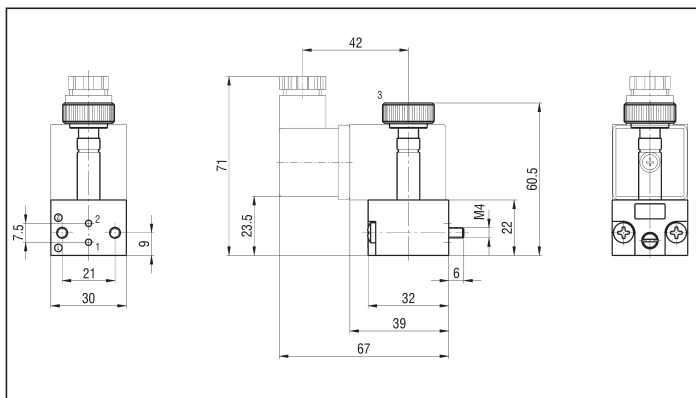
Example: 3/2 N.C. solenoid valve base mounted (with manual override) + coil 24 V D.C. ELPP8S/P/USB/02400

## 3 PORT WITH ex CNOMO INTERFACE FOR MODULAR BASES AND VALVES TO ISO 5599/1

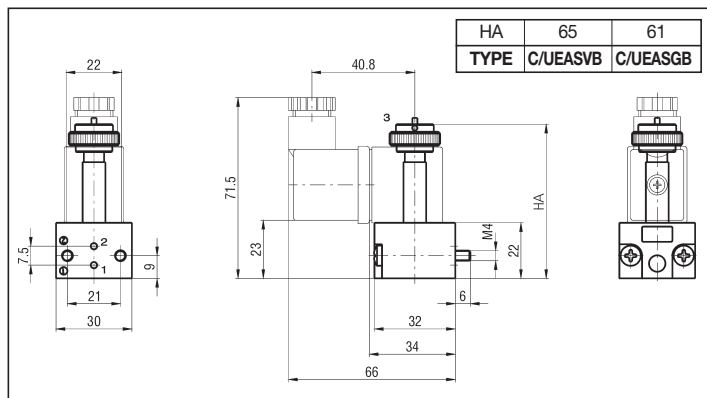
Symbol	Function	Controls		Response time at 6 bar (ms)		Flow rate at 6 bar $\Delta P = 1 \text{ bar (l/min)}$	Manual override	Weight (g)	TYPE*
		Pilot	Return	Energized	De-energized				
	3/2 N.O.	Solenoid	Mechanical spring	13	23	36	Manual monostable	60	C/UEASVB
	3/2 N.O.	Solenoid	Mechanical spring	13	23	36	-	45	C/UEASGB
	3/2 N.C.	Solenoid	Mechanical spring	10	25	36	Bistable screw driver slot	45	C/UECSVB
	3/2 N.C.	Solenoid	Mechanical spring	10	25	36	Monostable push button	45	C/UECSPB

\* THE TYPES OF THE SOLENOID VALVES DO NOT INCLUDE COILS

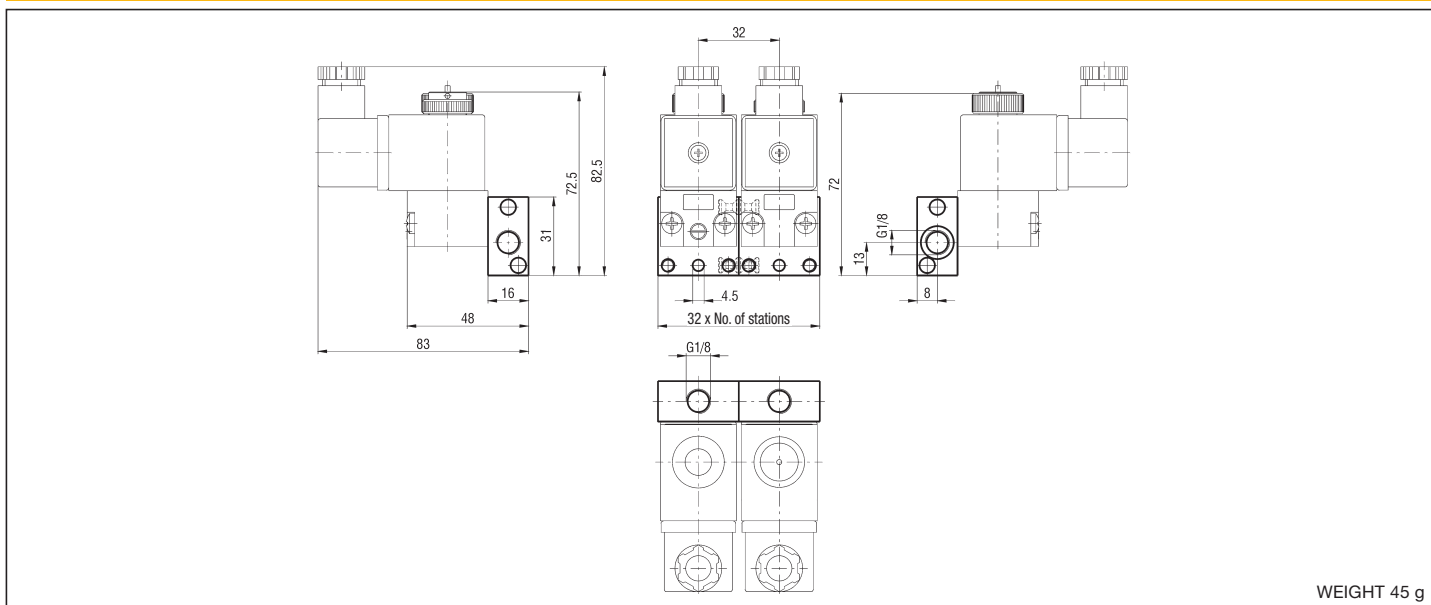
### C/UECSVB - C/UECSPB



### C/UEASVB - C/UEASGB



### ex CNOMO MODULAR BASE SIDE PORTED G 1/8 - ELPG8S



WEIGHT 45 g

HOW TO ORDER A SOLENOID VALVE COMPLETE OF COIL AND BASE

DESCRIPTION	TYPE
3/2 N.O. + base + coil (with manual override)	ELPG8S/BAV/USBG/voltage
3/2 N.O. + base + coil (without manual override)	ELPG8S/BAG/USBG/voltage
3/2 N.C. + base + coil (with manual override)	ELPG8S/B/USBG/voltage
3/2 N.C. + base + coil (with push button manual override)	ELPG8S/BP/USBG/voltage

Example: 3/2 N.O. solenoid valve base mounted (with manual override) + coil 24 V D.C. ELPG8S/BAV/USBG/02400

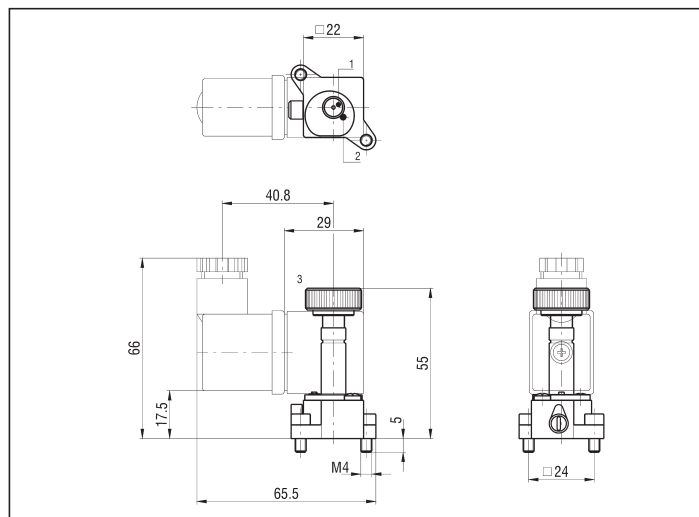
## 3 PORT WITH INTERFACE FOR POPPET AND ex CETOP (WITH FIXED POSITION AND ROTATABL COIL) VALVES

Symbol	Function	Controls		Response time at 6 bar (ms)		Flow rate at 6 bar $\Delta P = 1$ bar (NI/min)	Manual override	Weight (g)	TYPE*
		Pilot	Return	Energized	De-energized				
	3/2 N.C.	Solenoid	Mechanical spring	10	25	36	Manual bistable	30	C/USCSVG

\* THE TYPES OF THE SOLENOID VALVES DO NOT INCLUDE COILS

2

### C/USCSVG



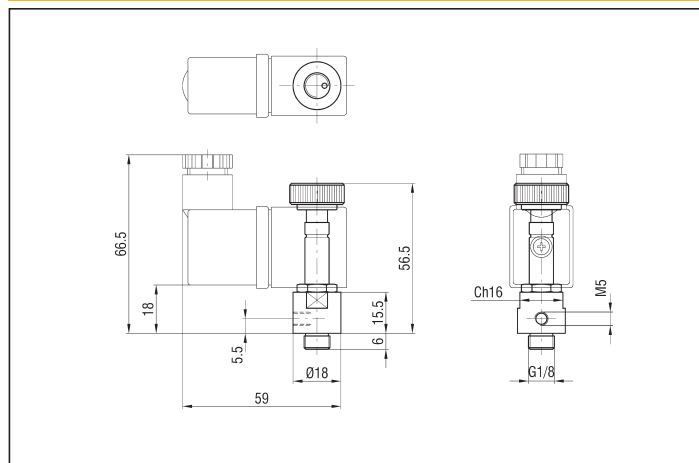
### 3 PORT BODY PORTED G 1/8 FOR DIRECT MOUNTING

This solenoid valve has been specifically designed to pilot single acting small cylinders and pneumatic valves. The input connection is M5 while the output has a male thread G1/8 that allows the direct assembling of the solenoid valve on the component.

Symbol	Function	Controls		Response time at 6 bar (ms)		Flow rate at 6 bar $\Delta P = 1$ bar (NI/min)	Manual override	Weight (g)	TYPE*
		Pilot	Return	Energized	De-energized				
	3/2 N.C.	Solenoid	Mechanical spring	10	20	36	-	46	C/ELP8M

\* THE TYPES OF THE SOLENOID VALVES DO NOT INCLUDE COILS

### C/ELP8M



# series USB

## Coils for solenoid valves side 22 mm with sleeve Ø 9 mm

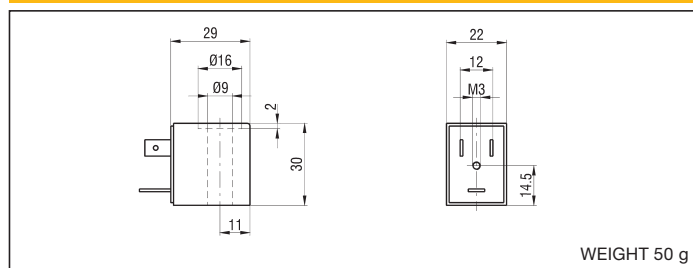
### TECHNICAL DATA

Voltages	DC: 24 V AC: 24 V - 110 V - 220 V
Working temperature	-30 ÷ +40 °C basic version -30 ÷ +70 °C low absorption version
Power consumption	Basic version DC: 5 W AC : 11 VA (inrush) Low absorption version DC: 2,5 W AC: 5,6 VA (inrush)
Standard frequencies AC	50 - 60 Hz
Voltage tolerance	± 10% of rated voltage
Coil insulation class	F
Solenoid rating	100% ED
Electrical connection	Fit for connector to DIN 46244 standard See chapter Connectors series USR on page 2.15
Protection class with connector	IP 65

### MATERIALS

Body	Glass stiffened polyamide
Coil winding	Copper wire

### USB



DESCRIPTION	TYPE
Coil 22 mm 24 V DC	USB/02400
Coil 22 mm 24 V AC	USB/02450-60
Coil 22 mm 110 V AC	USB/11050-60
Coil 22 mm 220 V AC	USB/22050-60
Coil 22 mm 24 V DC - low absorption	USB-BA/02400
Coil 22 mm 24 V AC - low absorption	USB-BA/02450-60
Coil 22 mm 110 V AC - low absorption	USB-BA/11050-60
Coil 22 mm 220 V AC - low absorption	USB-BA/22050-60
OTHER VOLTAGES	USB/...

# series USBG

## Coils for solenoid valves side 30 mm with sleeve Ø 9 mm to ex CNOMO standards

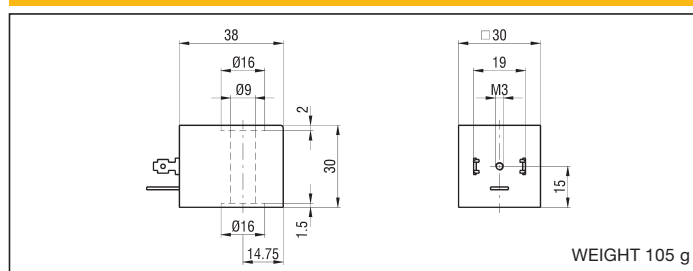
### TECHNICAL DATA

Voltages	DC: 24 V AC: 24 V - 110 V - 220 V
Working temperature	-30 ÷ +40 °C basic version -30 ÷ +70 °C low absorption version
Power consumption	Basic version DC: 5 W AC : 11 VA (inrush) Low absorption version DC: 2,5 W AC: 5,6 VA (inrush)
Standard frequencies AC	50 - 60 Hz
Voltage tolerance	± 10% of rated voltage
Coil insulation class	H
Solenoid rating	100% ED
Electrical connection	Fit for connector to DIN 43650 standard, shape "A" See chapter Connectors series ULR on page 2.13
Protection class with connector	IP 65

### MATERIALS

Body	Glass stiffened polyamide
Coil winding	Copper wire

### USBG



DESCRIPTION	TYPE
Coil 30 mm 24 V DC	USBG/02400
Coil 30 mm 24 V AC	USBG/02450-60
Coil 30 mm 110 V AC	USBG/11050-60
Coil 30 mm 220 V AC	USBG/22050-60
Coil 30 mm 24 V DC - low absorption	USBG-BA/02400
Coil 30 mm 24 V AC - low absorption	USBG-BA/02450-60
Coil 30 mm 110 V AC - low absorption	USBG-BA/11050-60
Coil 30 mm 220 V AC - low absorption	USBG-BA/22050-60
OTHER VOLTAGES	USBG/...

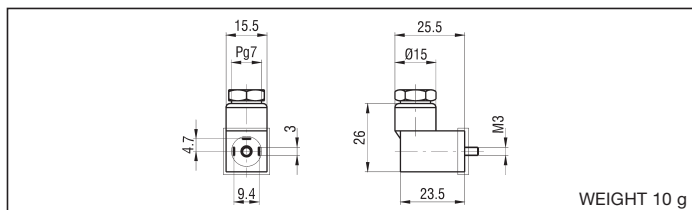
# Connectors for solenoid valves side 15 mm series UM

# series MEK<sub>192/N</sub>

## TECHNICAL DATA

Voltages	DC: MAX. 300 V AC: MAX. 250 V
Working temperature	-40 ÷ +90 °C
Versions	Basic With indicator light (LED) With indicator light (LED) and varistat (VDR) as electrical protection
Number of pins	2 + earthed
Nominal current	6 A
Maximum current	10 A
Contacts resistance	≤ 4 mOhm
Protection class	IP 65 EN 60529
Connector insulation class	IEC 664 / VDE 0110-1/89

## MEK192/N



WEIGHT 10 g

DESCRIPTION	TYPE
Basic connector	MEK192/N
Connector with led + VDR as protection 24 V DC/AC	MEK192/NVD 24V CC/CA
Connector with led + VDR as protection 110 V DC/AC	MEK192/NVD 110V CC/CA
Connector with led + VDR as protection 220 V DC/AC	MEK192/NVD 220V CC/CA
Connector with led 24 V DC/AC	MEK192/NLED 24V CC/CA
Connector with led 110/220 V DC/AC	MEK192/NLED 110/220V CC/CA

2

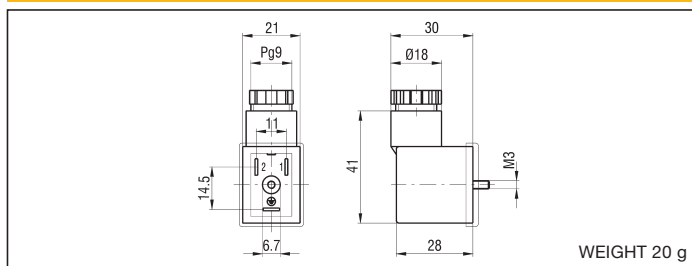
# Connectors DIN 46244 for coils side 22 mm series USB and series WE (3A)

# series USR<sub>102/N9</sub>

## TECHNICAL DATA

Voltages	DC: MAX. 300 V AC: MAX. 250 V
Working temperature	-40 ÷ +90 °C
Versions	Basic With indicator light (LED) With indicator light (LED) and varistat (VDR) as electrical protection
Number of pins	2 + earthed
Nominal current	10 A
Maximum current	16 A
Contacts resistance	≤ 4 mOhm
Protection class	IP 65 EN 60529
Connector insulation class	IEC 664 / VDE 0110-1/89

## USR102/N9



WEIGHT 20 g

DESCRIPTION	TYPE
Basic connector	USR102/N9
Connector with led + VDR as protection 24 V DC/AC	USR102/N9VD 24 V CC/CA
Connector with led + VDR as protection 110 V DC/AC	USR102/N9VD 110 V CC/CA
Connector with led + VDR as protection 220 V DC/AC	USR102/N9VD 220 V CC/CA
Connector with led 24 V DC/AC	USR102/N9LED 24 V CC/CA
Connector with led 110/220 V DC/AC	USR102/N9LED 110/220 V CC/CA

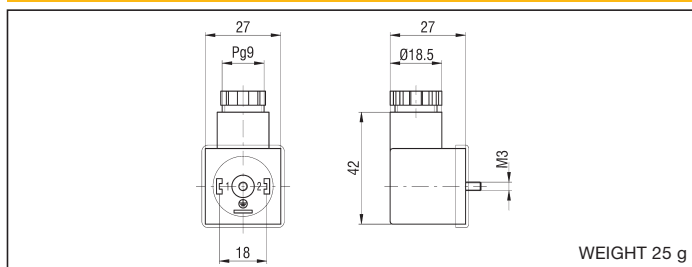
# Connectors DIN 43650 - form "A" for solenoid valves side 30 mm series UL and coils series USBG and series WE (2A, 5A)

# series ULR<sub>1B</sub>

## TECHNICAL DATA

Voltages	DC: MAX. 300V AC: MAX. 250V
Working temperature	-40 ÷ +90 °C
Versions	Basic With indicator light (LED) With indicator light (LED) and varistat (VDR) as electrical protection
Number of pins	2 + earthed
Nominal current	6 A
Maximum current	10 A
Contacts resistance	≤ 4 mOhm
Protection class	IP 65 EN 60529
Connector insulation class	IEC 664 / VDE 0110-1/89

## ULR1B



WEIGHT 25 g

DESCRIPTION	TYPE
Basic connector	ULR1B
Connector with led + VDR as protection 24 V DC/AC	ULR1B/VD 24 V CC/CA
Connector with led + VDR as protection 110 V DC/AC	ULR1B/VD 110 V CC/CA
Connector with led + VDR as protection 220 V DC/AC	ULR1B/VD 220 V CC/CA
Connector with led 24 V DC/AC	ULR1B/LED 24 V CC/CA
Connector with led 110/220 V DC/AC	ULR1B/LED 110/220 V CC/CA