

# CDL.04.6... STACKABLE CIRCUIT SELECTOR VALVES



CDL.04.6...

"A09" DC COILS CH. I PAGE 67  
CONNECTORS STANDARD CH. I PAGE 19

The stackable circuit selector valves, type CDL.04.6, allows one single drive of 5 users with 4 elements connected in series.

As they are moved from high performances solenoids they don't need the external drainage.

Additionally, beyond having a reduced and compact dimensions, they can manage high hydraulic powers with a minimal pressure drop.

Max. pressure	250 bar
Max. flow	20 l/min
Overlap	positive
Hydraulic fluids	Mineral oils DIN 51524
Fluid viscosity	10 ÷ 500 mm <sup>2</sup> /s
Fluid temperature	-25°C ÷ 75°C
Ambient temperature	-25°C ÷ 60°C
Max. contamination level	class 10 in accordance NAS with 1638 with filter $\beta_{25} \geq 75$
Weight	see "Overall dimension"

### ORDERING CODE

<b>CDL</b>	Stackable circuit selector valve
<b>04</b>	Size NG04
<b>6</b>	No. of way (single element)
<b>W</b>	Threaded connectors 1/4" BSP
<b>I</b>	Internal drainage
<b>*</b>	No. of elements: 1 / 2 / 3 / 4
<b>*</b>	Voltage (Tab. 1)
<b>**</b>	Variants (Tab. 2)
<b>1</b>	Serial No.

TAB.1 - A09 (27 W) COIL

DC VOLTAGE	
<b>L</b>	12V
<b>M</b>	24V
<b>N</b>	48V*
<b>P</b>	110V*
<b>Z</b>	102V*
<b>X</b>	205V*
<b>W</b>	Without DC coil

115Vac/50Hz  
120Vac/60Hz  
with rectifier

230Vac/50Hz  
240Vac/60Hz  
with rectifier

Voltage codes are not stamped on the plate, they are readable on the coils.

\* Special voltage

- The AMP Junior coil and with the flying leads (with or without diode) coils are available in 12V or 24V DC voltage only.
- The Deutsch coil with bidirectional diode is available in 12V DC voltage only.

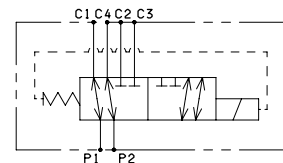
TAB. 2 - VARIANTI

VARIANTE	CODE
No variant	00
Viton	V1
Pilot light	X1
Rectifier	R1
Solenoid valve without connectors	S1
Cable gland "PG 11"	C1
Viton + Pilot light	VX
Viton + Rectifier	VR
Pilot light + Rectifier	XR
Rotary emergency button	P1(*)
Emergency button	E1
AMP Junior connection	AJ
Bobina con fili (250 mm)	FL
with flying leads (130 mm) and integr. diode	LD
Deutsch connection with bidir. diode	CX

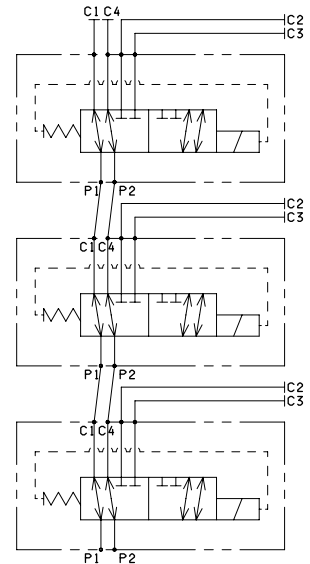
Other variants relate to a special design.

### HYDRAULIC SYMBOLS

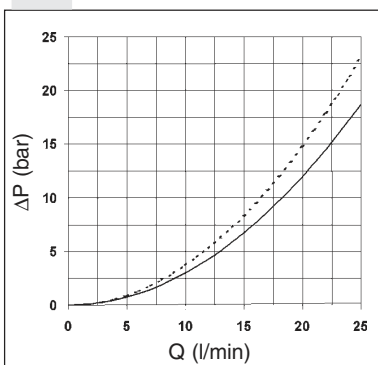
#### SINGLE ELEMENT



#### MULTI STATION CONNECTION

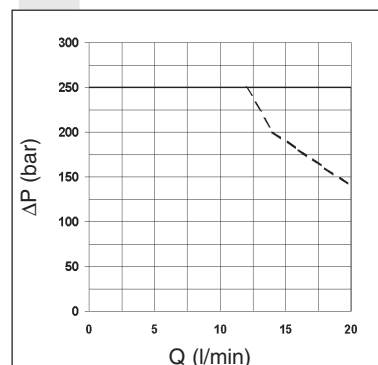


### PRESSURE DROPS



— P1 → C1  
P1 → C2  
- - - P2 → C3  
P2 → C4

### LIMITS OF USE



— Energizing  
- - - De-energizing

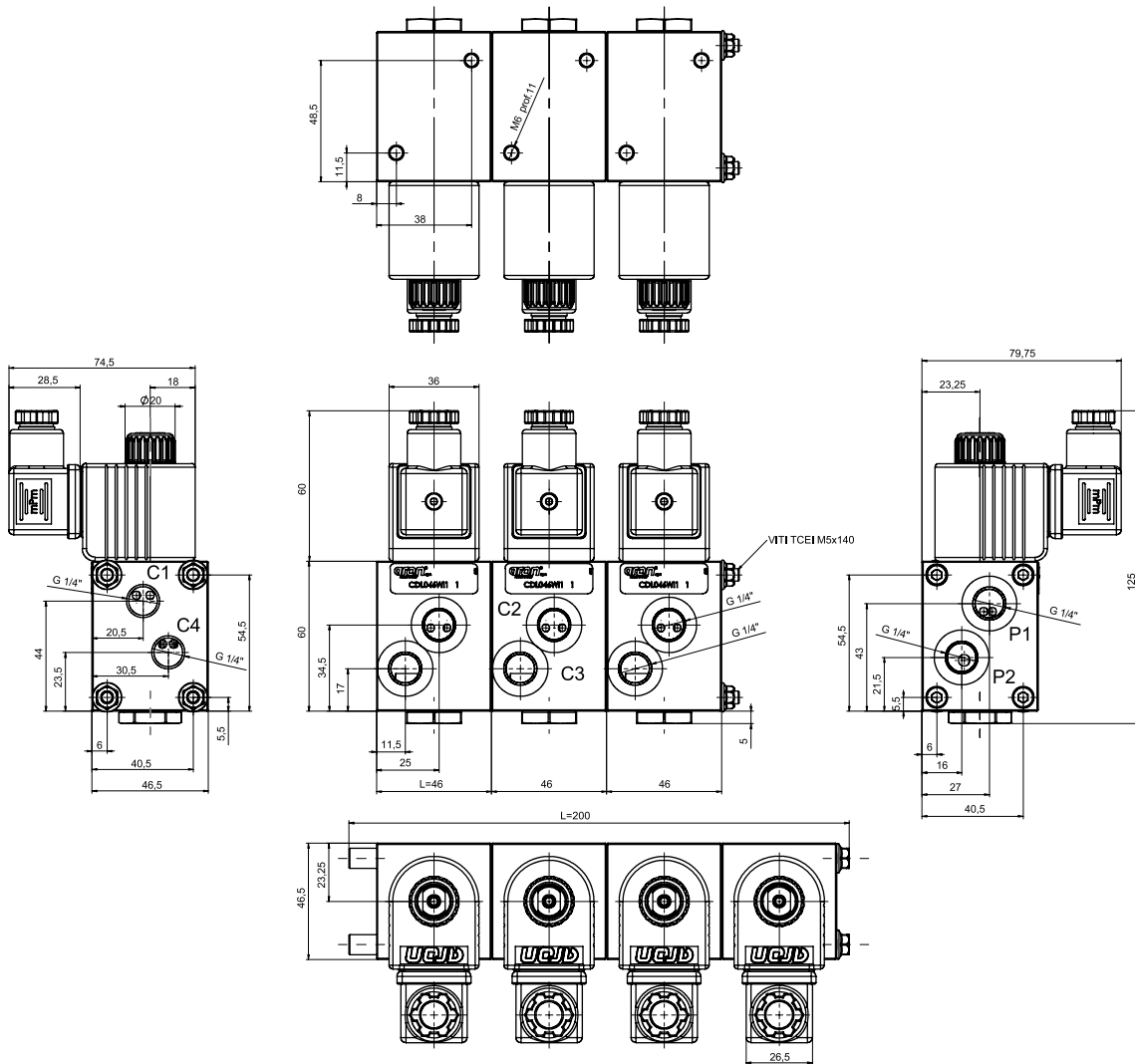
**Leakages:** ≤10 cc/min with rest carried out at a fluid temperature of 40°C with a pressure at 200 bar; the fluid used was a mineral based oil with viscosity of 46 mm<sup>2</sup>/s at 40° C.

The tests have been carried out with solenoids at operating temperature and a voltage 10% less than rated voltage with a fluid temperature of 50 C°. The fluid used was a mineral oil with a viscosity of 46 mm<sup>2</sup>/s at 40 degrees C.

**CDL.04.6... STACKABLE CIRCUIT SELECTOR VALVES**

**OVERALL DIMENSIONS**

**1**

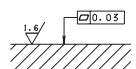


Fixing screws with material specifications min. 8.8  
Tighten the screws to a torque of 5 Nm (0.5 Kgm)

No. of elements	No. of way	L (Length)	Weight (Kg)	Fixing screws	Kit spare part code* (rods and studs)
1	06	46	1,05	-	/
2	08	100	2,20	TCEI M5x95	V89.54.0020
3	10	145	3,30	TCEI M5x140	V89.54.0021
4	12	200	4,45	TCEI M5x194 (special rods)	V89.54.0022

(\*) For multiple composition rods and studs are available.

Support plane specifications



# CDL.06.6... STACKABLE CIRCUIT SELECTOR VALVES



The stackable circuit selector valves, type CDL.06.6, allows one single drive of 6 users with 5 elements connected in series.

As they are moved from high performances solenoids they don't need the external drainage.

This valves can manage high hydraulic powers with a minimal pressure drop.

Max. pressure	250 bar
Max. flow	50 l/min
Overlap	negative
Hydraulic fluids	Mineral oils DIN 51524
Fluid viscosity	10 ÷ 500 mm <sup>2</sup> /s
Fluid temperature	-25°C ÷ 75°C
Ambient temperature	-25°C ÷ 60°C
Max. contamination level	class 10 in accordance NAS with 1638 with filter $\beta_{25} \geq 75$
Weight	see "Overall dimension"

<b>CDL.06.6...</b>	
"40W" DC COILS	Ch. I PAGE 68
CONNECTORS STANDARD	Ch. I PAGE 19

### ORDERING CODE

<b>CDL</b>	Stackable circuit selector valve
<b>06</b>	Size NG06
<b>6</b>	No. of way (single element)
<b>W</b>	Threaded connectors 3/8" BSP
<b>I</b>	Internal drainage
<b>*</b>	No. of elements: 1/2/3/4/5
<b>*</b>	Voltage (Tab. 1)
<b>**</b>	Variants (Tab. 2)
<b>1</b>	Serial No.

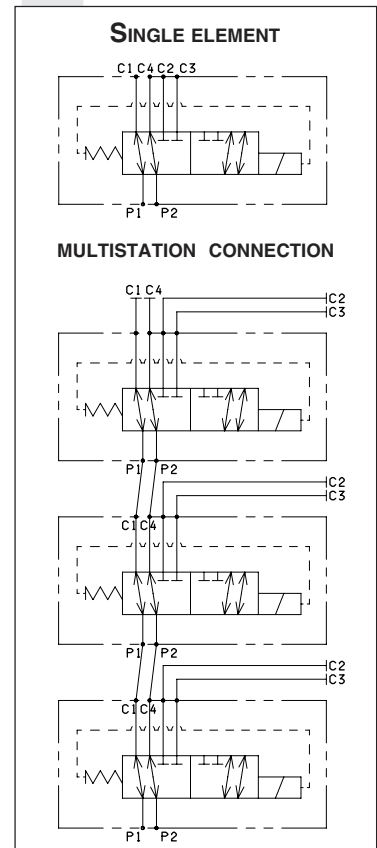
### TAB.1 - 40W COIL

DC VOLTAGE	
<b>L</b>	12V
<b>M</b>	24V
<b>W</b>	Without DC coil
Voltage codes are not stamped on the plate, they are readable on the coils.	

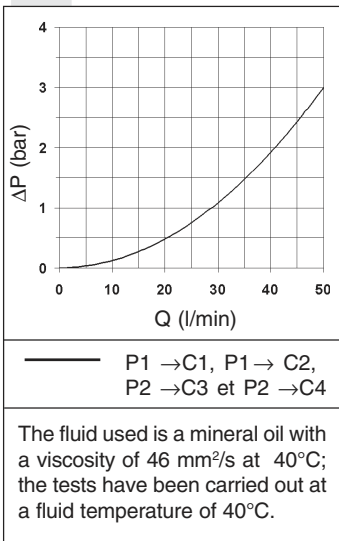
### TAB.2 - VARIANTS

No variant (connectors as in the drawing)	00
Viton	V1
Pilot light	X1
Rectifier	R1
Valve without connector (coil)	S1
Viton + Pilot light	VX
Viton + Rectifier	VR
Pilot light + Rectifier	XR
Emergency button	E1
Rotary emergency button	P1
Raccordements Deutsch DT04-2P	CZ

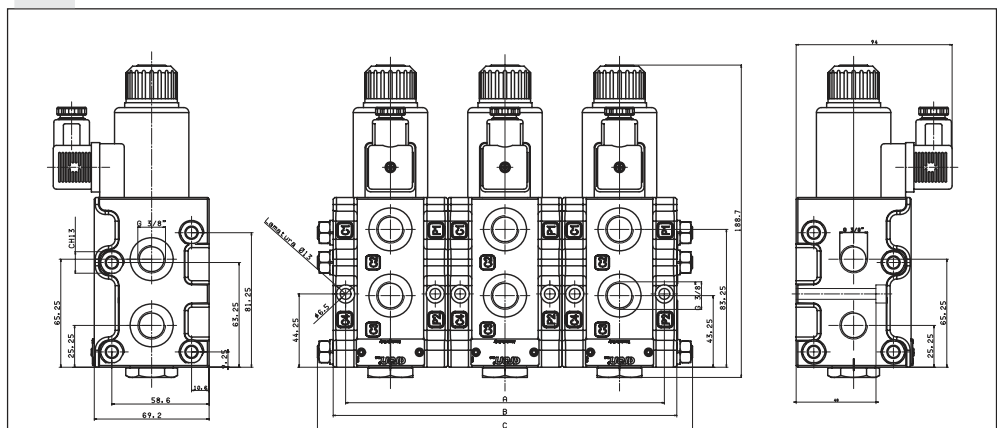
### HYDRAULIC SYMBOLS



### PRESSURE DROPS



### OVERALL DIMENSIONS



No. of elements	No. of way	Lengths (mm)			Weight (Kg)	Kit spare part code* (rods and studs)
		A	B	C		
1	06	54	69	-	3	/
2	08	123	138	160	6,3	V89.56.0001
3	10	192	207	226	9,3	V89.56.0002
4	12	261	276	296	12,3	V89.56.0003
5	14	330	345	365	25,3	V89.56.0004

(\* ) For multiple composition rods and studs are available.

## ADL06.6... FLOW DIVERSION VALVES



**ADL06.6...**

"D15" DC COILS CH. I PAGE 67  
STANDARD CONNECTORS CH. I PAGE 19

The 6 way flow diversion valves are special solenoid valves which allow the simultaneous connection of two systems.

In order to obtain valve's working at pressure of 250 bar up to 320 bar (external drainage) the G 1/8" BSP plug must be removed to Y connector.

Max. pressure (without drainage, Y plugged)	250 bar
Max. pressure (external drainage)	320 bar
Max. flow	40 l/min
Overlap	negative
Fluid viscosity	10 ÷ 500 mm <sup>2</sup> /s
Fluid temperature	-25°C ÷ 75°C
Ambient temperature	-25°C ÷ 60°C
Max. contamination level	class 10 in accordance with NAS 1638 with filter $\beta_{25} \geq 75$
Weight	2,4 Kg

### ORDERING CODE

- ADL06** Flow diversion valves NG6
- 6** No. of way
- W** Threaded connectors 3/8"BSP
- I** Without drainage Y connector plugged
- \*** Voltage (see table 1)
- \*\*** Variants (see table 2)
- 3** Serial No.

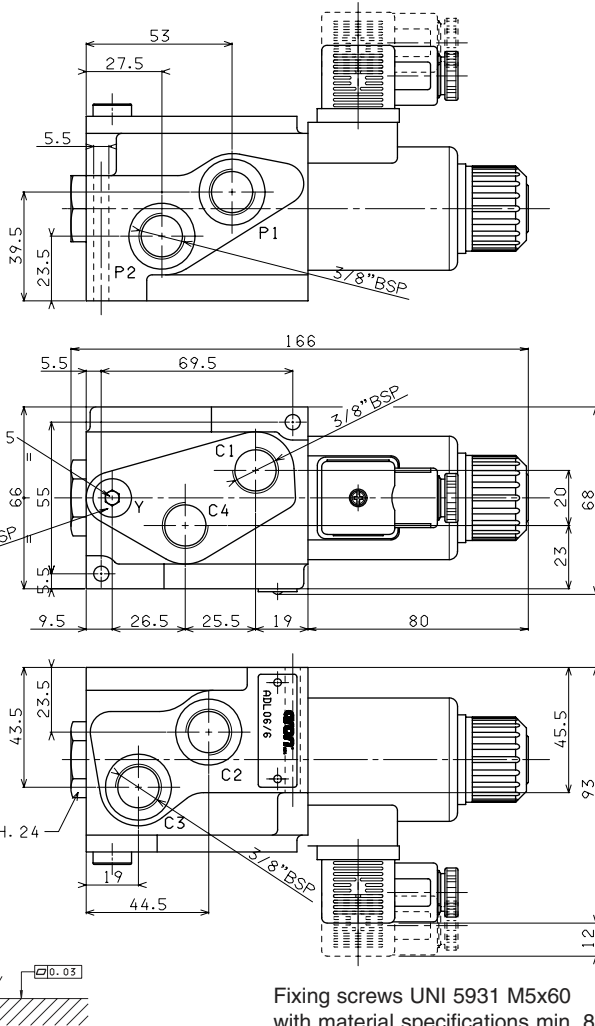
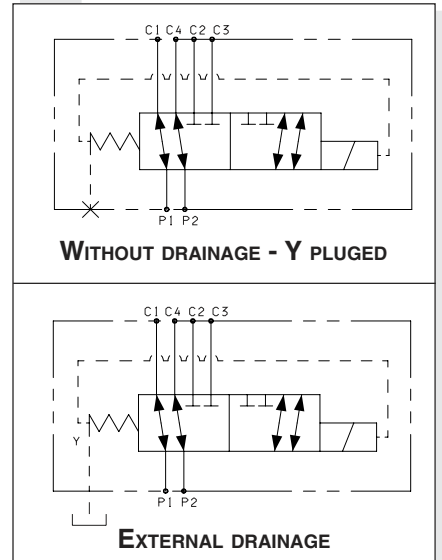
### TAB.2 - VOLTAGE D15 COIL (30W)

<b>L</b>	12V	115Vac/50Hz 120Vac/60Hz with rectifier
<b>M</b>	24V	
<b>V</b>	28V*	230Vac/50Hz 240Vac/60Hz with rectifier
<b>N</b>	48V*	
<b>Z</b>	102V*	
<b>P</b>	110V*	
<b>X</b>	205V*	
<b>W</b>	Without DC coils and connectors	

Voltage codes are not stamped on the plate, their are readable on the coils.  
\* Special voltage

- AMP Junior (with or without diode) and Deutsch and with flying leads coils, are available in 12V or 24V DC voltage only.
- Plastic type coils are available in 12V, 24V, 28V or 110V DC voltage only.

### DRAINS AND HYDRAULIC SYMBOLS



Fixing screws UNI 5931 M5x60 with material specifications min. 8.8

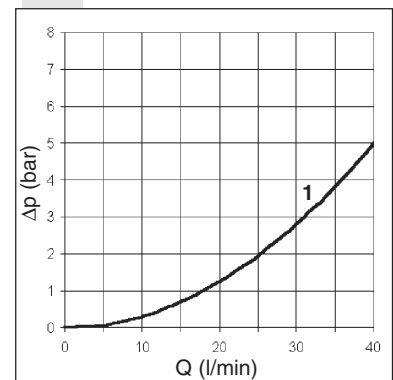
### TAB.2 - VARIANTS

No variant (connectors as in the drawing)	00
Viton	V1
Pilot light	X1
Rectifier	R1
Flow diversion without connector (coil)	S1
Emergency button	E1
Rotary emergency button	P1
Viton + Pilot light	VX
Viton + Rectifier	VR
Pilot light + Rectifier	XR
AMP Junior coil	AJ
AMP Junior coil and integrated diode	AD
Coil with flying leads (175mm)	SL
Deutsch DT04-2P Coil type	CZ
Plastic type coil	BR

### PRESSURE DROPS

Curve n° 1:

- P1 → C1
- P1 → C2
- P2 → C3
- P2 → C4



**Leakages:** ≤ 10 cc/min with rest carried out at a fluid temperature of 40°C with a pressure at 200 bar; the fluid used was a mineral based oil with viscosity of 46 mm<sup>2</sup>/s at 40° C.

# CDL.10.6... STACKABLE CIRCUIT SELECTOR VALVES



The stackable circuit selector valves, type CDL.10.6, allows one single drive of 6 users with 5 elements connected in series.

As they are moved from high performances solenoids they don't need the external drainage.

This valves can manage high hydraulic powers with a minimal pressure drop.

Max. pressure	250 bar
Max. flow	80 l/min
Overlap	negative
Hydraulic fluids	Mineral oils DIN 51524
Fluid viscosity	10 ÷ 500 mm <sup>2</sup> /s
Fluid temperature	-25°C ÷ 75°C
Ambient temperature	-25°C ÷ 60°C
Max. contamination level	class 10 in accordance NAS with 1638 with filter β <sub>25</sub> <sup>375</sup> see "Overall dimension"
Weight	

<b>CDL.10.6...</b>	
"A16" DC COILS	CH. I PAGE 68
CONNECTORS STANDARD	CH. I PAGE 19

### ORDERING CODE

<b>CDL</b>	Stackable circuit selector valve
<b>10</b>	Size NG10
<b>6</b>	No. of way (single element)
<b>W</b>	Threaded connectors 1/2" BSP
<b>I</b>	Internal drainage
<b>*</b>	No. of elements: 1/2/3/4/5
<b>*</b>	Voltage (Tab. 1)
<b>**</b>	Variants (Tab. 2)
<b>1</b>	Serial No.

### TAB.1 - A16 COIL

DC VOLTAGE	
L	12V
M	24V
N	48V*
P	110V*
Z	102V*
X	205V*
W	Without DC coil

115Vac/50Hz 120Vac/60Hz with rectifier
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230Vac/50Hz 240Vac/60Hz with rectifier
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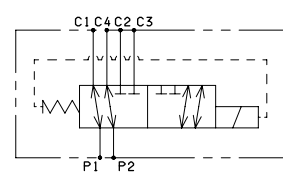
Voltage codes are not stamped on the plate, their are readable on the coils.  
\* Special voltage

### TAB.2 - VARIANTS

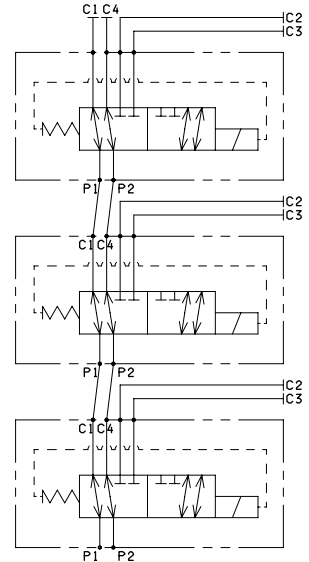
No variant (connectors as in the drawing)	00
Viton	V1
Pilot light	X1
Rectifier	R1
Valve without connector (coil)	S1
Viton + Pilot light	VX
Viton + Rectifier	VR
Pilot light + Rectifier	XR
Emergency button	E1
Rotary emergency button	P1

### HYDRAULIC SYMBOLS

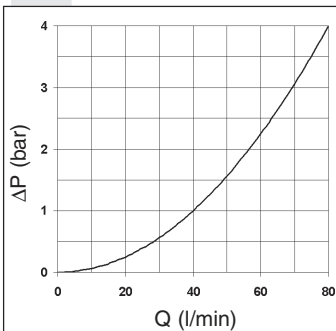
#### SINGLE ELEMENT



#### MULTISTATION CONNECTION



### PRESSURE DROPS

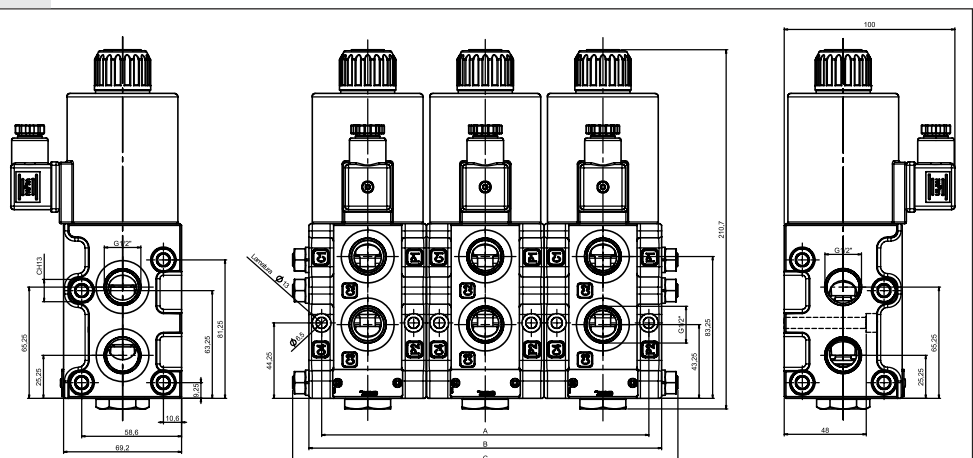


— P1 → C1, P1 → C2,  
P2 → C3 et P2 → C4

The fluid used is a mineral oil with a viscosity of 46 mm<sup>2</sup>/s at 40°C; the tests have been carried out at a fluid temperature of 40°C.

Fixing screws UNI 5931 M6x60 with material specifications min. 8.8  
Tightening torque for studs 8 Nm / 0.8 Kgm  
Tightening torque for rods 20 Nm / 2 Kgm

### OVERALL DIMENSIONS



No. of elements	No. of way	Lengths (mm)			Weight (Kg)	Kit spare part code* (rods and studs)
		A	B	C		
1	06	54	69	-	4,5	/
2	08	123	138	160	9,3	V89.56.0001
3	10	192	207	226	14	V89.56.0002
4	12	261	276	296	18,5	V89.56.0003
5	14	330	345	365	23,3	V89.56.0004

(\* ) For multiple composition rods and studs are available.

## ADL10.6... FLOW DIVERSION VALVES



The 6 way flow diversion valves are special solenoid valves which allow the simultaneous connection of two systems.

In order to obtain valve's working at pressure of 250 bar up to 320 bar (external drainage) the G 1/8" BSP plug must be removed to Y connector.

Max. pressure (without drainage, Y plugged)	250 bar
Max. pressure (external drainage)	320 bar
Max. flow	80 l/min
Fluid viscosity	10 ÷ 500 mm <sup>2</sup> /s
Fluid temperature	-25°C ÷ 75°C
Ambient temperature	-25°C ÷ 60°C
Max. contamination level	class 10 in accordance with NAS 1638 with filter $\beta_{25} \geq 75$
Weight	3,6 Kg

### ADL10.6...

"A16" DC COILS	CH. I PAGE 68
STANDARD CONNECTORS	CH. I PAGE 19

### ORDERING CODE

<b>ADL10</b>	Flow diversion valves NG10
<b>6</b>	No. of way
<b>J</b>	Connectors 3/4"BSP
<b>I</b>	Without drainage Y connector plugged
<b>*</b>	Voltage (see table 1)
<b>**</b>	Variants (see table 2)
<b>1</b>	Serial No.

**TAB.1 - A16 COIL**

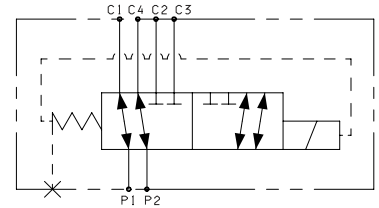
DC VOLTAGE	
<b>L</b>	12V
<b>M</b>	24V
<b>N</b>	48V*
<b>P</b>	110V*
<b>Z</b>	102V*
<b>X</b>	205V*
<b>W</b>	Without DC coil

115Vac/50Hz  
120Vac/60Hz  
with rectifier

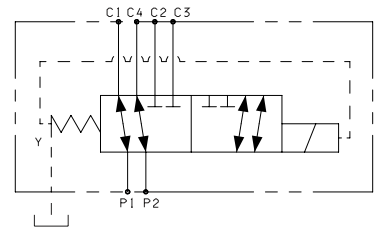
230Vac/50Hz  
240Vac/60Hz  
with rectifier

Voltage codes are not stamped on the plate, they are readable on the coils.  
\* Special voltage

**DRAINS AND HYDRAULIC SYMBOLS**



**WITHOUT DRAINAGE - Y PLUGGED**

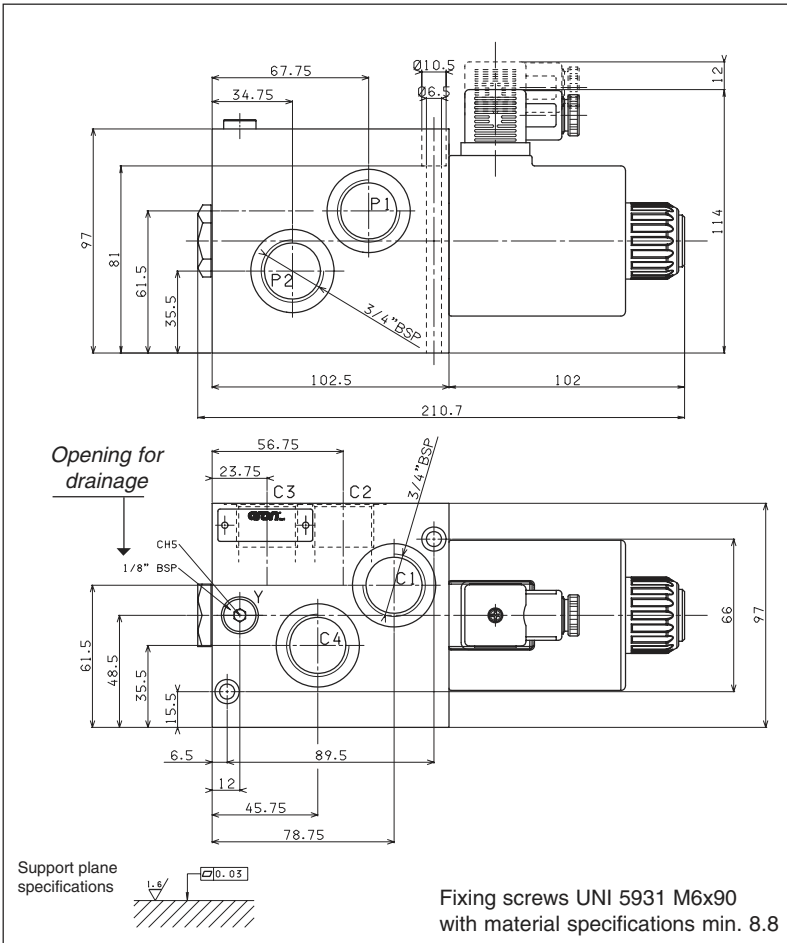
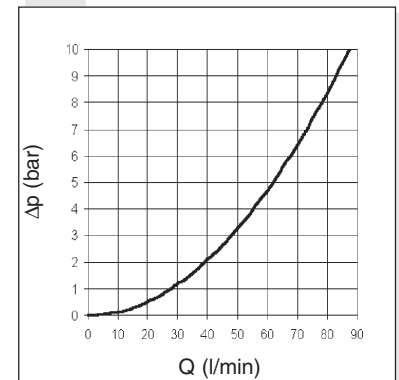


**EXTERNAL DRAINAGE**

**TAB.2 - VARIANTS**

VARIANT	CODE
No variant (connectors as in the drawing)	00
Viton	V1
Pilot light	X1
Rectifier	R1
Flow diversion without connector (coil)	S1
Viton + Pilot light	VX
Viton + Rectifier	VR
Pilot light + Rectifier	XR
Emergency button	E1
Rotary emergency button	P1

**PRESSURE DROPS**



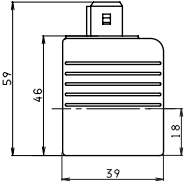


**"A09" DC COILS FOR CDL.04...**

Type of protection (in relation to connector used)	IP 65
Number of cycle	18.000/h
Supply tolerance	±10%
Ambient temperature	-30°C ÷ 60°C
Duty cycle	100% ED
Insulation class	H
Weight	0,215 Kg

- The AMP Junior coil and with the flying leads (with or without diode) coils are available in 12V or 24V DC voltage only.
- The Deutsch coil with bidirectional diode is available in 12V DC voltage only.

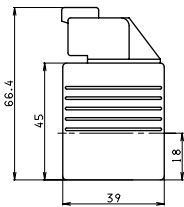
**AMP JUNIOR (AJ)**



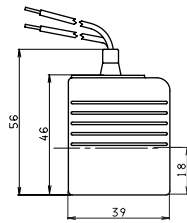
VOLTAGE (V)	MAX WINDING TEMPERATURE (AMBIENT TEMPERATURE 25°C)	RATED POWER (W)	RESISTANCE AT 20°C (OHM) ±7%
12V	123°C	27	5.3
24V	123°C	27	21.3
48V*	123°C	27	85.3
102V*	123°C	27	392
110V*	123°C	27	448
205V*	123°C	27	1577

\* Special voltages ETA09/AD2-CDL04-C3V - 04/2001/e

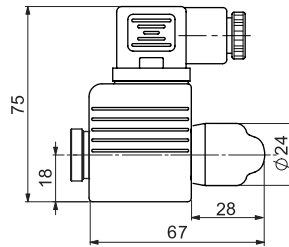
**DEUTSCH COIL WITH BIDIR. DIODE (CX) DT04 - 2P**



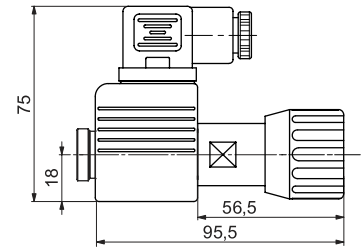
**FLYING LEADS (FL) LEADS WITH DIODE (LD)**



**E1 MANUAL EMERGENCY**



**P1(\*) ROTARY EMERGENCY**



(\*) P1 Emergency tightening torque max. 6±9 Nm / 0.6 ÷ 0.9 Kgm with CH n. 22



• Emergency, plastic coil, and Amp Junior, leads or deutch coils, are not available for A66 valve.

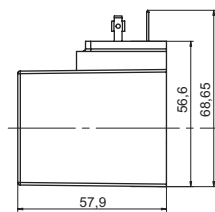
**"D15" DC COILS FOR ADL06... AND A.66..**



Type of protection (in relation to the connector used)	IP 66
Number of cycles	18.000/h
Supply tolerance	±10%
Ambient temperature	-54°C ÷ 60°C
Duty cycle	100% ED
Insulation class	H
Weight	0,354 Kg

- AMP Junior coils (with or without diode) and coils with flying leads and coils type Deutsch, are available in 12V or 24V DC voltage only.
- The pastic type coil (BR variant) is available in 12V, 24V, 28V or 110V DC voltage only.

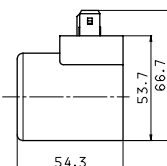
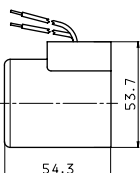
**PLASTIC COIL (BR)**



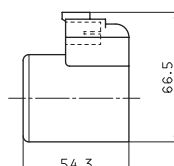
VOLTAGE (V)	MAX. WINDING TEMPERATURE (AMBIENT TEMPERATURE 25°C)	RATED POWER (W)	RESISTANCE AT 20°C (OHM) ±10%
12V	110°C	30	4.8
24V	110°C	30	18.8
28V*	110°C	30	25.6
48V*	110°C	30	75.2
102V*	110°C	30	340
110V*	110°C	30	387
205V*	110°C	30	1375

(\*) Special voltages ETD15/ADL06-A66 - 04/2001/e

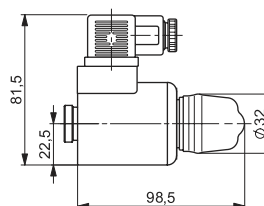
**FLYING WITH LEADS COIL (SL) AMP JUNIOR (AJ) AJ + DIODE (AD)**



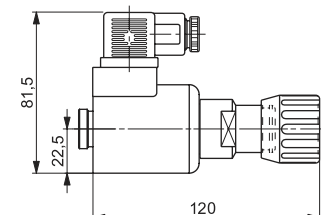
**DEUTSCH COIL (CZ) DT04 - 2P**



**E1 MANUAL EMERGENCY**



**P1 ROTARY EMERGENCY**



1

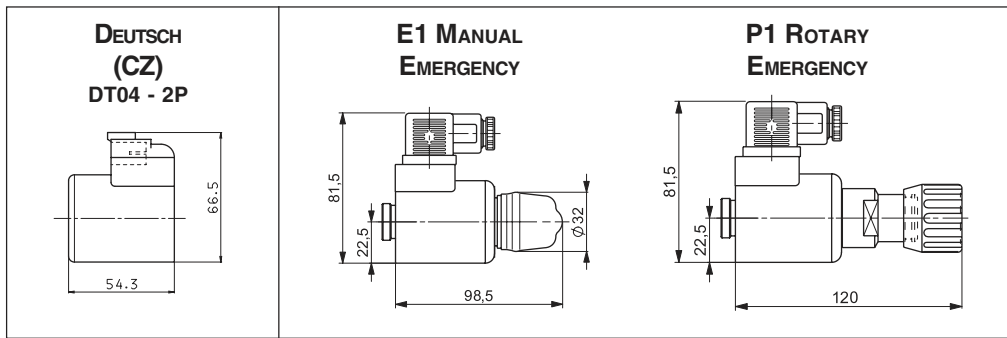


**"40W" DC COILS FOR CDL06...**

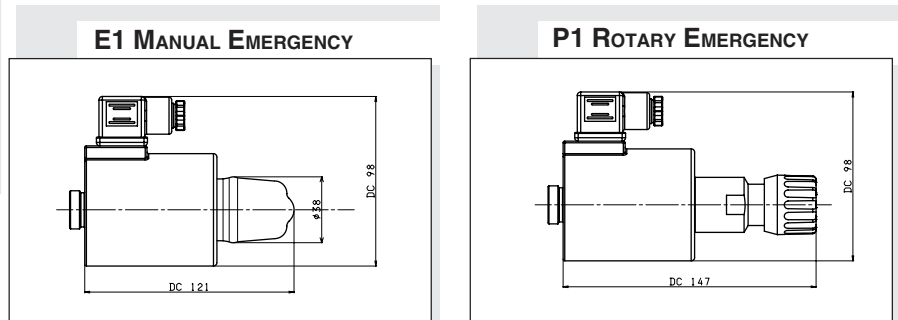
Type of protection (in relation to the connector used)	IP 66
Number of cycles	18.000/h
Supply tolerance	+10% / -10%
Ambient temperature	-54°C ÷ 60°C
Duty cycle	100% ED
Insulation class	H
Weight	0,354 Kg

VOLTAGE (V)	MAX. WINDING TEMPERATURE (AMBIENT TEMPERATURE 25°C)	RATED POWER (W)	RESISTANCE AT 20°C (OHM) ±10%
12V	135°C	40	3.6
24V	135°C	40	14.4

IT40W - 02/2004/e



**"A16" DC COILS FOR ADL10 AND CDL10**



Type of protection (in relation to the connector used)	IP 65
Number of cycles	18.000/h
Supply tolerance	±10%
Ambient temperature	-30°C ÷ 60°C
Duty cycle	100% ED
Insulation class	H
Weight	0,9 Kg

VOLTAGE (V)	MAX. WINDING TEMPERATURE (AMBIENT TEMPERATURE 25°C)	RATED POWER (W)	RESISTANCE AT 20°C (OHM) ±7%
12V	106°C	45	3.2
24V	113°C	45	12,4
48V*	-	45	-
102V*	-	45	-
110V*	118°C	45	268
205V*	-	45	-

(\*) Special voltage

ETA16 - 03/2002/e