

PROGRESSIVE DISTRIBUTOR PRA, PRB

APPLICATION

PRA and PRB series Progressive distributors represent a lubricating element of central grease lubricating systems which are consequently known as circuits with progressive distributors. They are recommended for use in large lubricating circuits, i.e. circuits with tens of lubricated points.

Lubricating circuits with progressive distributors are usually fitted for permanent, regular lubrication of various machines, engineering technologies and devices. They are also used for lubrication of mobile machines and devices, e.g. for chassis of lorries, buses, semi-trailers, trailers and the like.

PRA and PRB Progressive distributors are sectional distributors in two size series with a choice of nominal doses for each section from 0.08 up to 0.9 cm³/stroke. Maximum working pressure is 230 bar.

DESCRIPTION

A PRA or PRB Progressive distributor is a unit-construction lubricating element consisting of 3 to 10 arbitrary working sections, a supply section and a closing section. The first section in direction of lubrication supply is called the supply section and the last one is called the closing section. Each section (except for the supply and closing sections) has at least 2 outlets placed horizontally on the side. Individual outlets can be mutually connected so as to attain the required output from a certain outlet. Opposite outlets of one section can be connected into one outlet (by internal arrangement of section) so as to double the output. Outlets of adjacent sections can be connected by means of external connecting bridges so as to combine the nominal doses of the connected outlets. The letter A (type PRA) or B (type PRB) is stamped on each section along with a number that indicates the piston value. This value specifies the quantity of lubricant supplied from the outlet. An arrow, indicating respective outlet, is stamped on each side of section along with a number that indicates the piston value. The outlet pertaining to the given section is always the one nearest to the inlet from progressive distributor. The progressive distributor can be provided with optical signalling (signalling pin) or electric signalling (contactless - induction switch).

OPERATION

In supplying pressurised lubricant into the progressive distributor inlet, the pistons in the sections move step-by-step to their end positions and the lubricant is simultaneously forced out of the outlets. This operation is repeated as long as lubricant is supplied into the progressive distributor. The piston of a progressive distributor that is fitted with a signalling device has a pin which moves together with the piston and causes mechanical or contactless switching of the electric monitor circuit. When designing a lubricating circuit it is recommended to connect the outlets of each distributor to lubricating points with similar back pressures so to avoid any fluctuation of nominal dose.

SERVICE AND MAINTENANCE

PRA and PRB Progressive distributors can be mounted on a flat surface in any position. After mounting the distributor, attach the deaerated supply piping and let the lubricant pass through the distributor. When the lubricant flows regularly from distributor outlets without air bubbles, close the outlets by connecting them to outlet piping.

In the case of a branched lubricating circuit it is necessary to deaerate each branch. Check piping for burrs and dirt and remove if necessary. In the case of permanent operation, check the lubricating circuit for leakage and proper connection to progressive distributors once a month.

TECHNICAL DATA

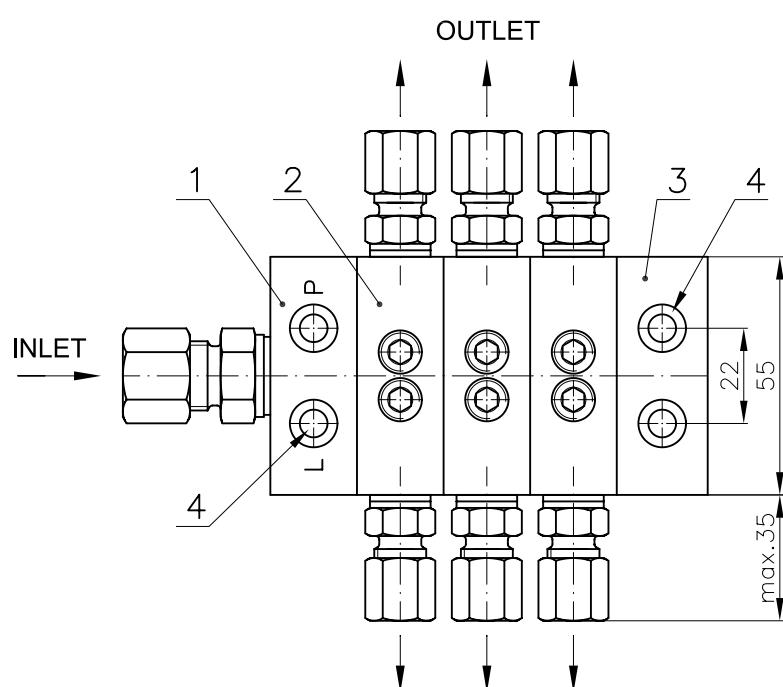
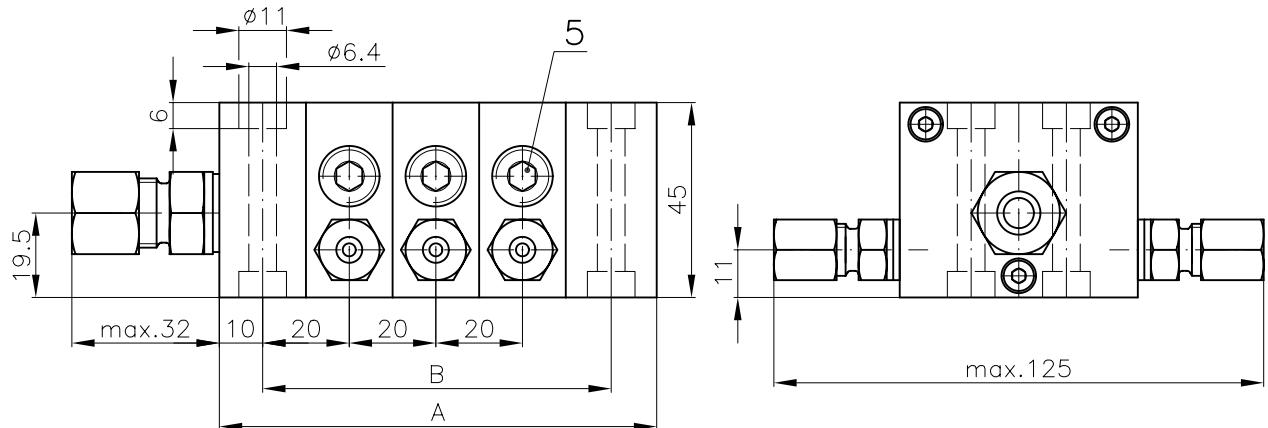
Maximum working pressure	230 bar	
Working pressure	180 bar	
Nominal supplied quantity	Section No.	
PRA	A1	0.08 cm ³ /stroke/outlet
PRA	A1,5	0.12 cm ³ /stroke/outlet
PRA	A2	0.16 cm ³ /stroke/outlet
PRA	A2,5	0.20 cm ³ /stroke/outlet
PRA	A3	0.24 cm ³ /stroke/outlet
PRA	A4	0.30 cm ³ /stroke/outlet
PRB	B1	0.30 cm ³ /stroke/outlet
PRB	B1,5	0.45 cm ³ /stroke/outlet
PRB	B2	0.60 cm ³ /stroke/outlet
PRB	B3	0.90 cm ³ /stroke/outlet
Maximum lubricant flow	PRA	0.5 dm ³ min ⁻¹
	PRB	2.0 dm ³ min ⁻¹
Minimum number of outlets	6 (2 if connecting bridges used)	
Maximum number of outlets	20	
Inlet pipe union	M14x1.5 mm, tube outside dia. 6, 8, 10, 12 mm	
Outlet pipe union	M10x1 mm, tube outside dia. 6, 8, 10 mm	
Induction switch nominal voltage	10 - 30V DC, 200 mA	
Lubricant	grease	max. NLGI - 2
	oil	min. 50 mm ² s ⁻¹
Temperature of working environment	- 25 to 80 °C	
Weight	1.5 to 9.0 kg (depending on variant)	

MARKING OF VARIANTS

PRA XX - YYY PRB XX - YYY

XX - number of working sections (e.g. PRA 05 - 5 sections)

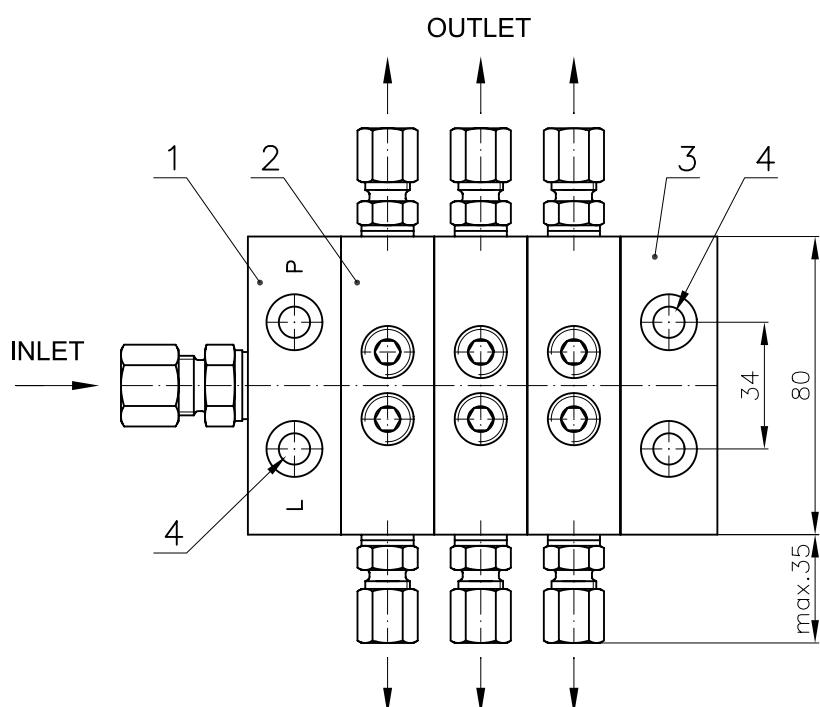
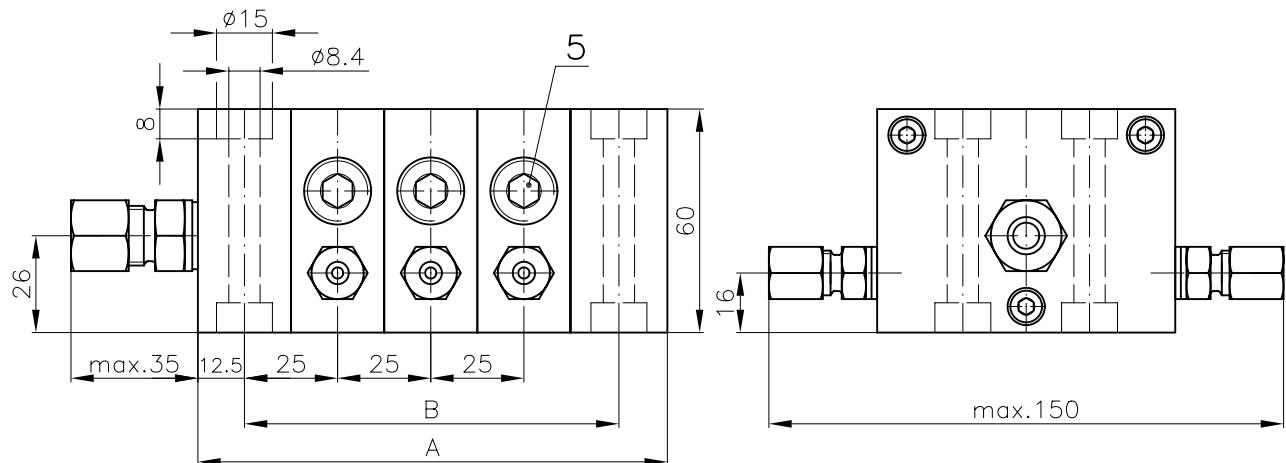
YYY - type serial number - attached by the supplier according to the Ordering sheet
(see User's guide)



Pos	Name
1	Supply section
2	Working section
3	Closing section
4	Anchor holes
5	Plug of servo piston

No. of working section	A	B
3	101	80,5
4	121	100,5
5	141	120,5
6	161	140,5
7	181	160,5
8	201	180,5
9	221	200,5
10	241	240,5

Name	PROGRESSIVE DISTRIBUTOR	©Tribotec s.r.o. Košuličova 4 Brno www.tribotec.cz +420 543 425 611
Type	PRA	
Code		

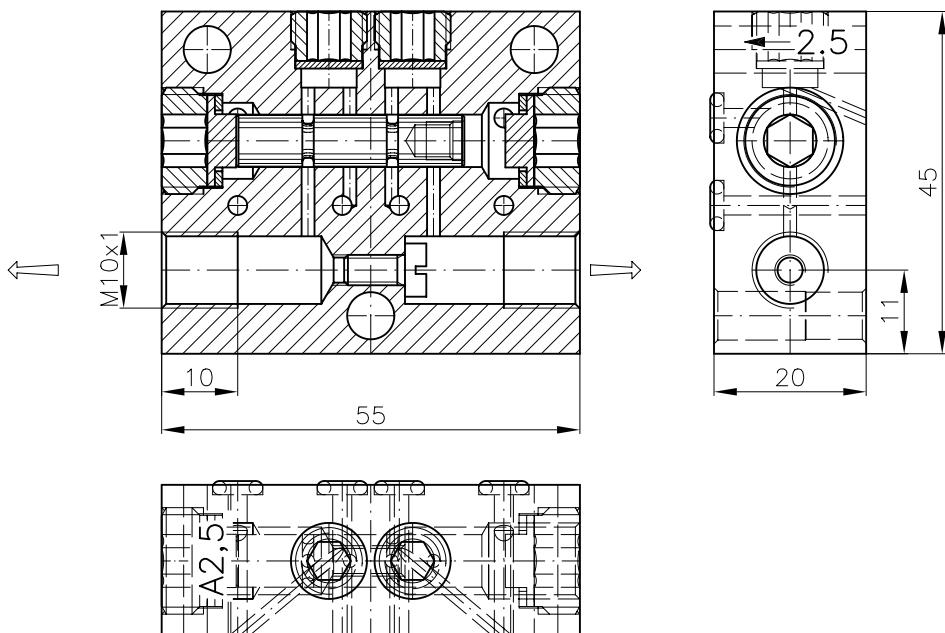


Pos	Name
1	Supply section
2	Working section
3	Closing section
4	Anchor holes
5	Plug of servo piston

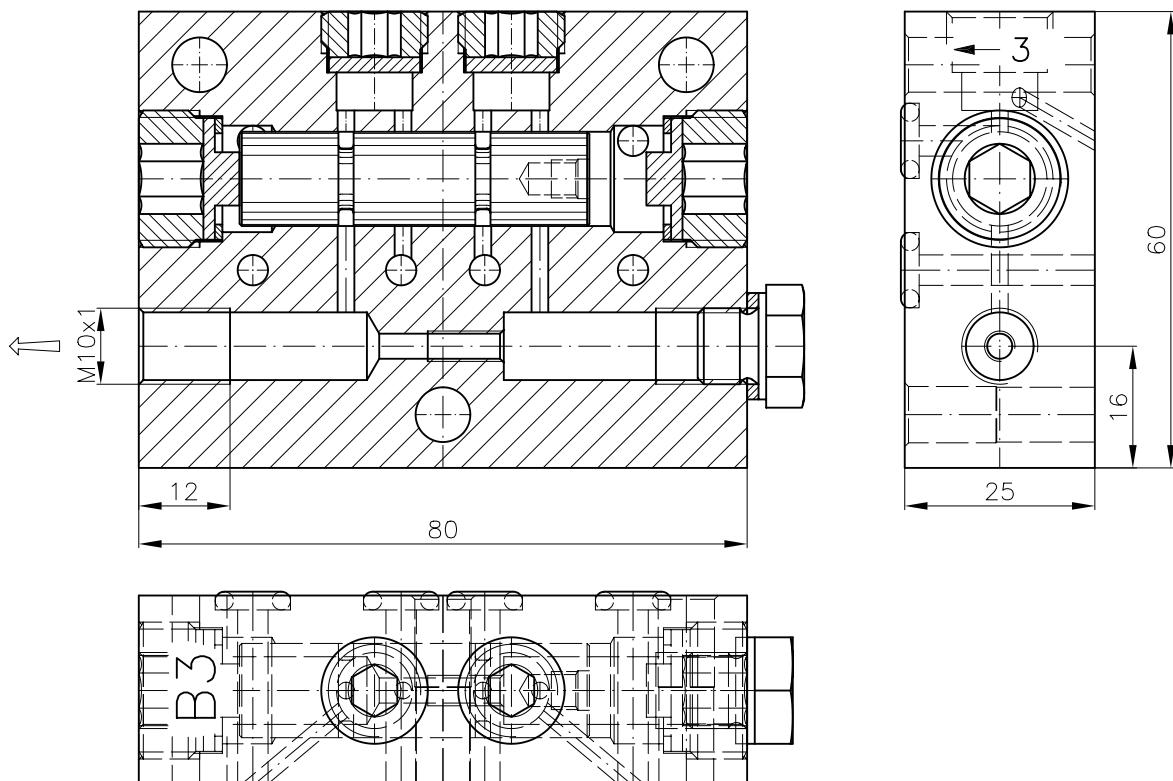
No. of working section	A	B
3	126	100,5
4	151	125,5
5	176	150,5
6	201	175,5
7	226	200,5
8	251	225,5
9	276	250,5
10	301	275,5

Name	PROGRESSIVE DISTRIBUTOR	©Tribotec s.r.o. Košuličova 4 Brno www.tribotec.cz +420 543 425 611
Type	PRB	
Code		

WORKING SECTION PRA

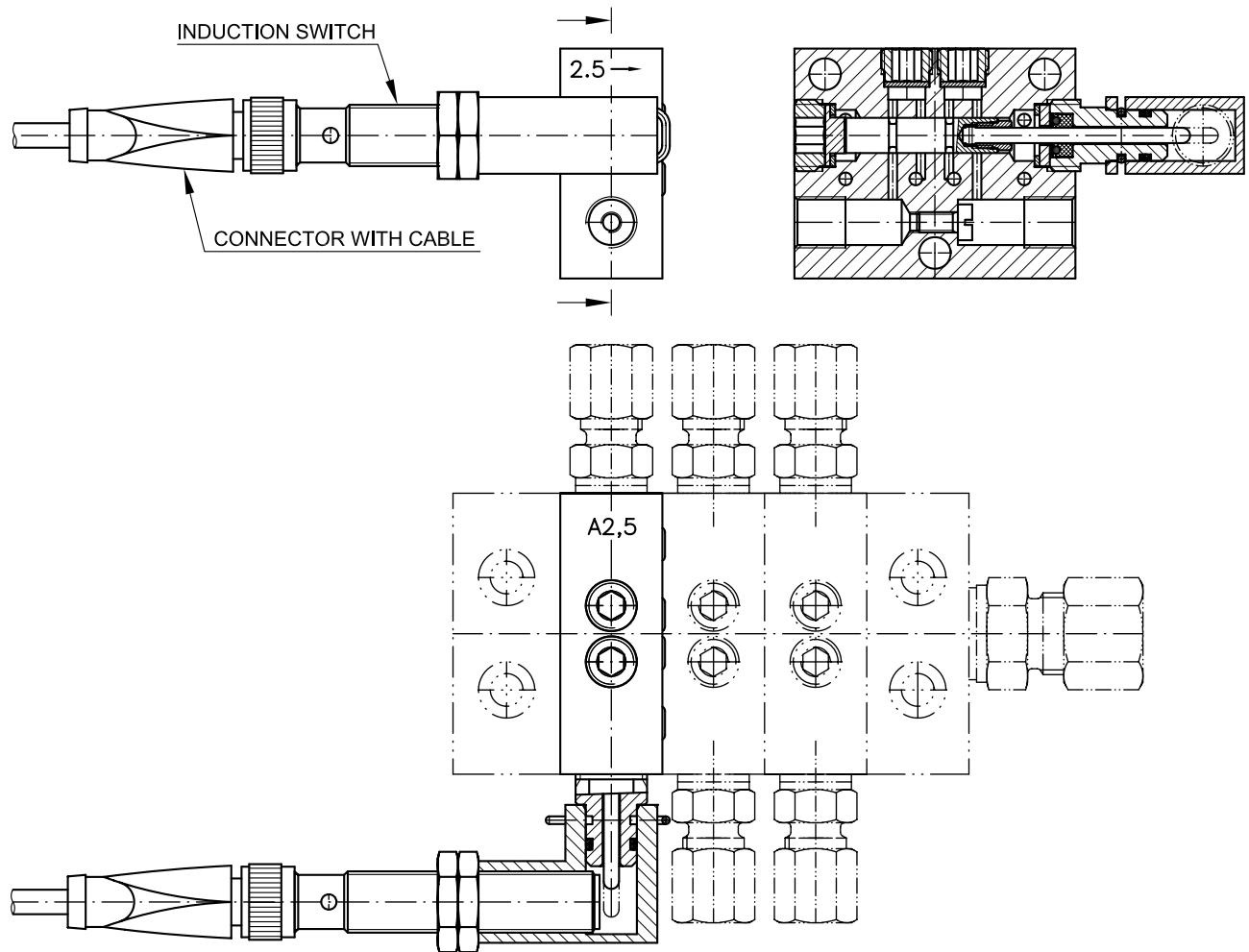


WORKING SECTION PRB

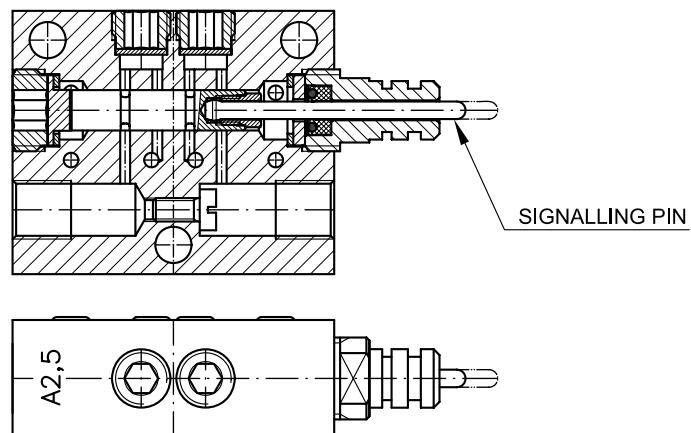


Name	PROGRESSIVE DISTRIBUTOR	©Tribotec s.r.o. Košuličova 4 Brno www.tribotec.cz +420 543 425 611
Type	PRA, PRB	
Code		

WORKING SECTION PRA, PRB WITH INDUCTION SWITCH

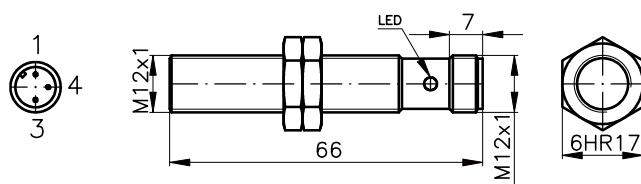


WORKING SECTION PRA, PRB WITH OPTICAL SIGNALLING



Name	PROGRESSIVE DISTRIBUTOR	©Tribotec s.r.o. Košuličova 4 Brno www.tribotec.cz +420 543 425 611
Type	PRA, PRB	
Code		

INDUCTIVE SWITCH FOR CONNECTOR

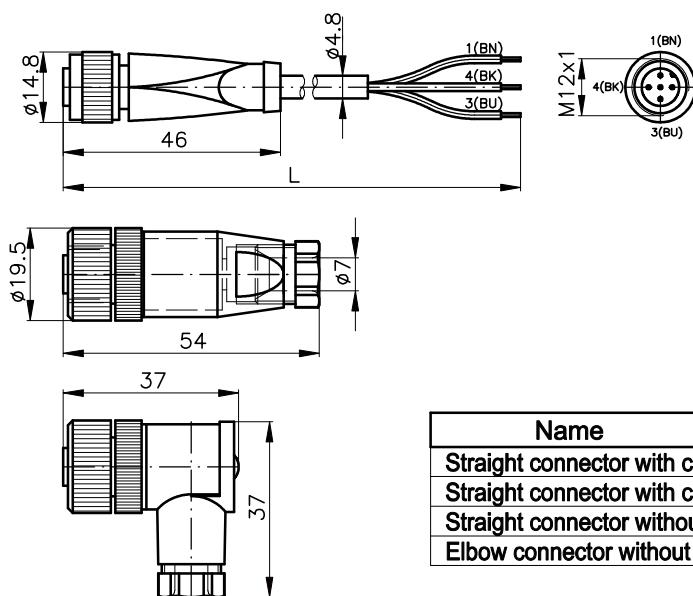


WIRING DIAGRAM



CODE	425 531 087 764
Rated operating distance	2mm
Installation	embeddable
Make function	PNP
Operating voltage	10...30 VDC
Operating current	200 mA
Switching frequency	0+1500 Hz
No-load supply current	17 mA
Voltage drop	3V
Protection	short-circuit reversing of polarity
Indication	yes yes
Connection type	LED, yellow connector M12x1
Housing material	brass, nickel-plated
Protection degree	IP 67
Ambient temperature	-25...+70°C

CONNECTORS M12x1

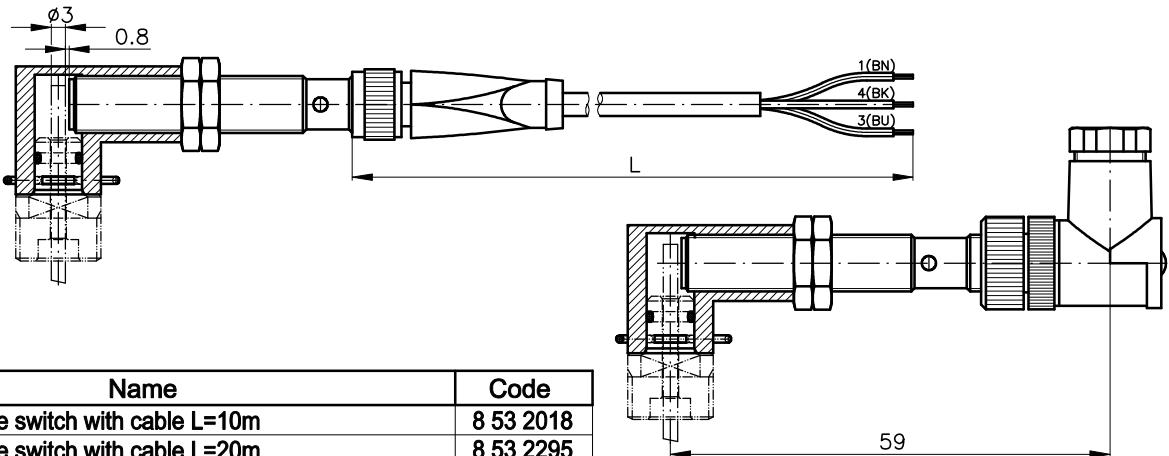


Straight connector with cable

Technical data	
Number of poles	3
Threading	M12x1
Operating voltage	max. 300V DC
Operating current	max. 4 A
Ambient temperature	-25...+100°C
Material of contacts	CuSn/Au
Cable sheathing	PUR
Cable cores	3x0.34mm²
Protection degree	IP 67

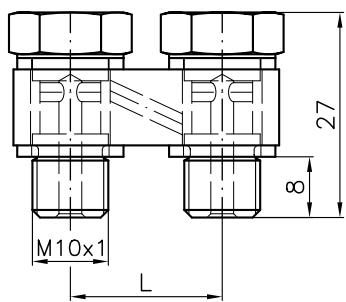
Name	Type	Length L	Code
Straight connector with cable	V11-G-10M-PUR	10m	425 531 920 010
Straight connector with cable	V1-G-20M-PUR	20m	425 531 189 934
Straight connector without cable	V1-G	—	425 531 920 001
Elbow connector without cable	V1-W	—	425 531 050 050

COMPLETE INDUCTIVE SWITCH

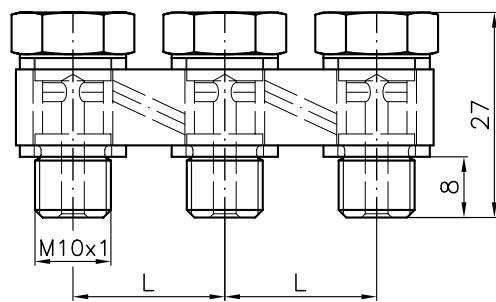


Name	Code
Complete switch with cable L=10m	8 53 2018
Complete switch with cable L=20m	8 53 2295
Complete switch with elbow connector, without cable	8 53 1973

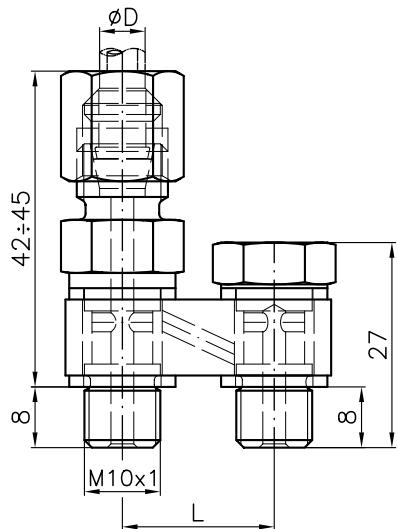
Name	INDUCTIVE SWITCH AND CONNECTORS	©Tribotec s.r.o. Košuličova 4 Brno www.tribotec.cz +420 543 425 611
Type	FOR PROGRESSIVE DISTRIBUTORS PRA, PRB	



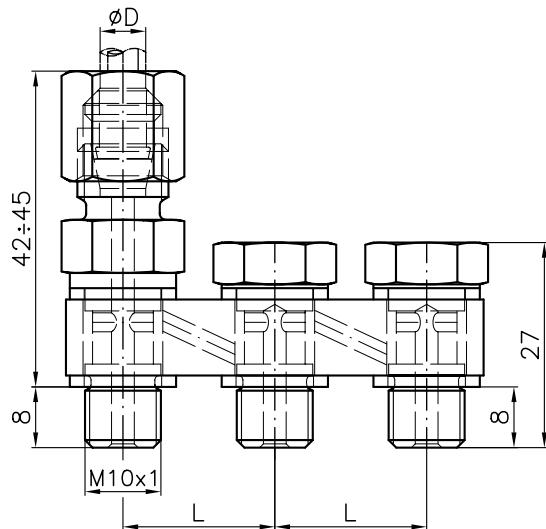
Name	L	Code	Type
Connecting bridge 2-D0-A	20	8 53 1324	PRA
Connecting bridge 2-D0-B	25	8 53 2057	PRB



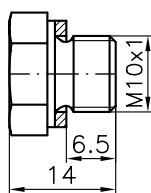
Name	L	Code	Type
Connecting bridge 3-D0-A	20	8 53 1325	PRA
Connecting bridge 3-D0-B	25	8 53 1985	PRB



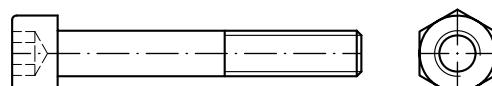
Name	ØD	L	Code	Type
Connecting bridge 2-D6-A	6	20	8 53 0872	PRA
Connecting bridge 2-D8-A	8		8 53 0873	
Connecting bridge 2-D10-A	10		8 53 1311	
Connecting bridge 2-D6-B	6	25	8 53 0920	PRB
Connecting bridge 2-D8-B	8		8 53 0921	
Connecting bridge 2-D10-B	10		8 53 0922	



Name	ØD	L	Code	Type
Connecting bridge 3-D6-A	6	20	8 53 0874	PRA
Connecting bridge 3-D8-A	8		8 53 0875	
Connecting bridge 3-D10-A	10		8 53 1665	
Connecting bridge 3-D6-B	6	25	8 53 0923	PRB
Connecting bridge 3-D8-B	8		8 53 0924	
Connecting bridge 3-D10-B	10		8 53 0925	

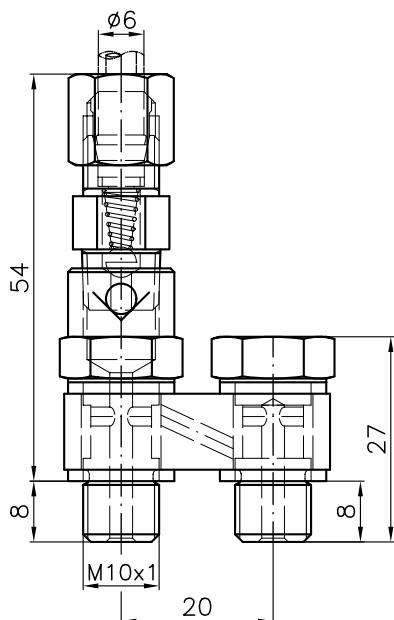


Name	Code
Outlet plug	8 53 0871

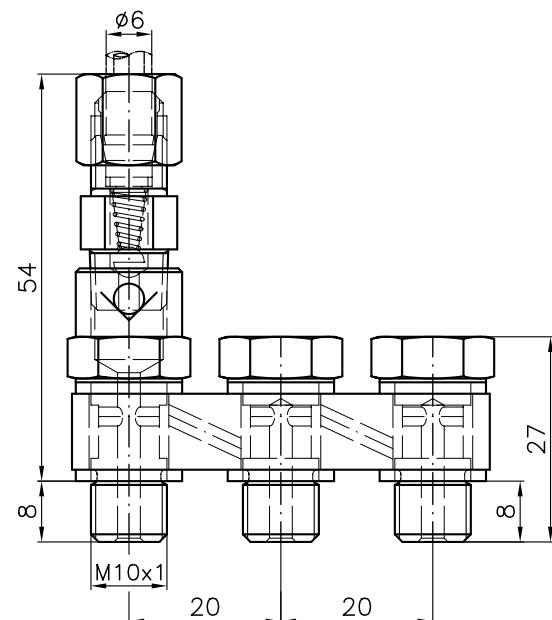


Name	Code	Type
Screw M6 x 50	309543000628	PRA
Nut M6	311120500060	
Screw M8 x 65	309543000834	PRB
Nut M8	311120500080	

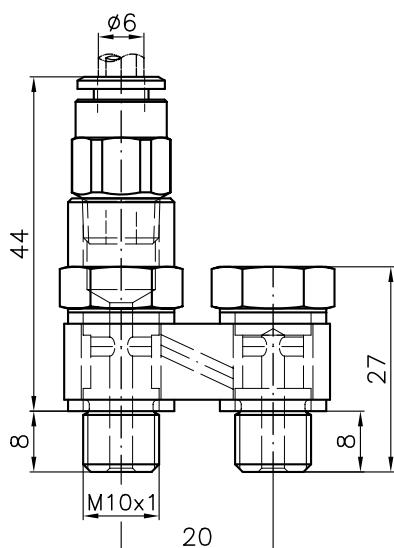
Name	ACCESSORIES PROGRESSIVE DISTRIBUTORS	©Tribotec s.r.o. Košuličova 4 Brno www.tribotec.cz +420 543 425 611
Type	PRA, PRB	
Code		



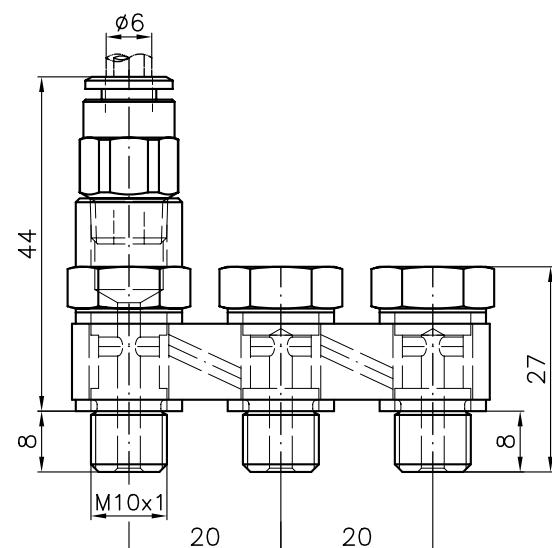
Name	Code	Type
Connecting bridge 2-D6-ZV-A	8 53 2010	PRA



Name	Code	Type
Connecting bridge 3-D6-ZV-A	8 53 2035	PRA



Name	Code	Type
Connecting bridge 2-D6-RP-A	8 53 2025	PRA



Name	Code	Type
Connecting bridge 3-D6-RP-A	8 53 2103	PRA

Name	ACCESSORIES PROGRESSIVE DISTRIBUTORS	Tribotec s.r.o. Košuličova 4 Brno www.tribotec.cz +420 543 425 611
Type	PRA, PRB	
Code		

ORDERING SHEET FOR PROGRESSIVE DISTRIBUTOR PR

ORDERING CODE

P R

--	--	--

--	--	--

Type identification
(Execution A or B)

No. of working sections
Min. 3 (03), Max. 10 (10)

Distributor series no.
(Producer fills out)

IDENTIFICATION No.

(Producer fills out)

--	--	--	--	--	--	--	--

CUSTOMER

phone:

Company

fax.:

Address

e-mail:

Distributor is specified for:
(Type & name of equipment)

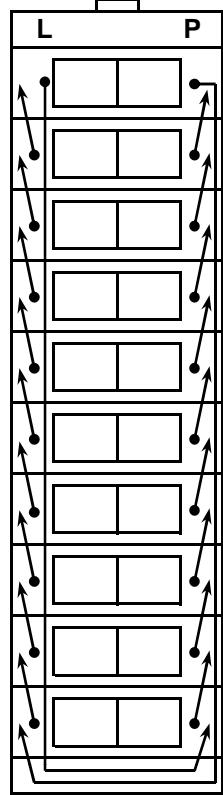
Fittings	Variant	Standard				Push-in tube outer dia (mm)	
		6	8	10	12		
Inlet	straight	—	—	—	—	—	
	elbow	6	8	10	12	—	
Outlet	straight	—	—	—	—	4	
	elbow	6	8	10	—	6	
Non-return valves on outlets				YES	NO		
For standard str. fittings pipe out. dia 6 mm only							
Signalling of distributor operation (not available for sections PRA 1;1,5; 2)				right	last section		
				left	first section		

Working sections lubricant output

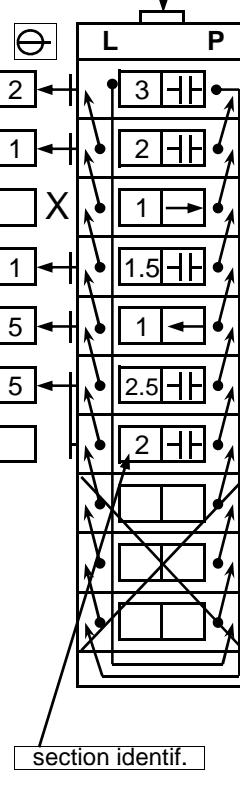
PRA		PRB	
section ident.	dose cm ³ /stroke	section ident.	dose cm ³ /stroke
1	0,08	1	0,30
1,5	0,12	1,5	0,45
2	0,16	2	0,60
2,5	0,20	3	0,90
3	0,24		
4	0,30		

Unsuitable to be crossed out

Diagram of distributor
(customer specifies)



Example of ordering distributor
PRA 07 -



Legend of marks in diagram

- inside connection of working section

- inside distributor of working section

- outlet is plugged

- outlet from working sec.

- connecting bridge for 2 and 3 adjacent outlets

- optical control (signalling pin)

- contactless switch with cable l=10m, (10÷30V DC; 250mA)

- contactless switch 10÷30VDC connector without cable

section identif.

dose on outlet

= fixed no. x 0.08 for PRA

= fixed no. x 0.30 for PRB

Worked by:

Date:

Function: