

3/2 way; universal function; DN 2 and 3;  
G 1/4 and sub-base version; flow rate: up to 175 l/min



**Advantages / Benefits**

- ▶ II 2G EEx-ed-IIC T5 approved PTB03 ATEX 1030X
- ▶ Universal function
- ▶ Separating diaphragm isolates solenoid system from operating fluid
- ▶ Operational reliability
- ▶ Long service life, even in non-lube conditions
- ▶ Insensitive to contaminated fluids
- ▶ Lockable manual override standard

**Design**

The direct acting 3/2 way solenoid valve has a pivoted armature as the switching method. This unique valve design hermetically isolates the actuator from the fluid.

It provides a long service life, even in unlubricated applications. The solenoid epoxy encapsulation efficiently dissipates the heat generated by the fluid.

- Direct-acting
- Body materials: brass or stainless steel
- Fast-acting
- Sub-base connection for manifold mounting

**Applications**

Fluids

- Neutral gases and liquids
- Technical vacuum
- Lubricated and unlubricated compressed air

Applications

- Direct acting single valve or pilot valve for process, chemical and petro-chemical industry
- Actuator control
- Manifolded assembly



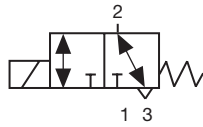
DTS 1000010947 EN Version: D Status: RL (released | freigegeben | validé) printed: 14.08.2008

### Technical data

#### Circuit Function

T 3/2-way valve,  
Universal function

#### Symbol



#### Valve specification

Body Materials	Body and seat brass or stainless steel 1.4401
Seal materials	
NBR	Neutral fluids, e.g. compressed air, town gas, water, hydraulic oil, oils and fats without additives
FKM	Hot air, oxygen, per-solutions, hot oils with additives
Max. ambient temperature	+60°C
Fluid temperatures	
with NBR seal	0 up to +70°C
with FPM seal	-10 up to +70°C
Max. viscosity	37 mm <sup>2</sup> /s
Response times	
opening	30 ms
closing	40 ms

Times measured at outlet A, from switching on until pressure rise to 90 % / pressure drops to 10 % at a max. working pressure of 6 bar.

#### Solenoid specification

Operating voltages	24, 110, 230 V/UC
Voltage tolerance	±10 %
Power consumption	
Inrush	UC 40 W
Hold	UC 3 W
Duty cycle	100% continuously rated Use reduced switch-on time for manifold installation, depending on operating conditions.
Cycling rate	approx. 30 c.p.m.
Rating	IP 65
Type of protection	II 2G EEx-ed-IIC T5 PTB03 ATEX 1030X (e = increased safety) (d = pressure-proof housing)

#### Installation / Accessories

Installation	as required, but preferably with solenoid system upright
Electr. connection	<ul style="list-style-type: none"> <li>• Moulded cable (3000 mm length)</li> <li>• Terminal box without fuse</li> </ul>

**Ordering chart (other versions on request)**
**Type 0780 with brass body**

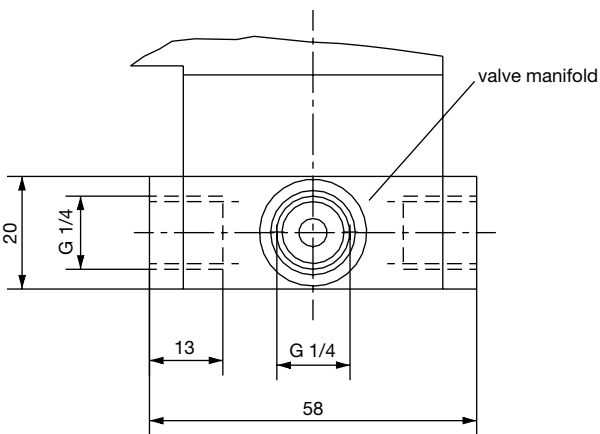
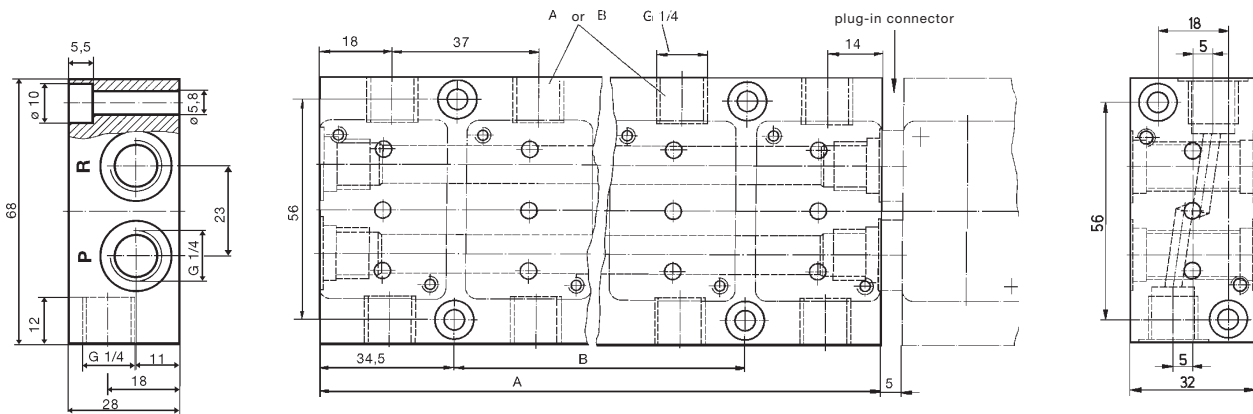
Circuit function	Port connection	Orifice [mm]	Pressure range [bar]	Kv-value (water) [m <sup>3</sup> /h]	Q <sub>Nn</sub> -value (air) [l/min]	Seal material	Ex-approval	Weight [kg]	024/UC	Item-No. Voltage 110/UC	230/UC
<b>with cable (3000 mm length)</b>											
T	Sub base	2.0	0 - 10	0.10	108	NBR	EEx-ed-IIC T5	0.6	138 246 A	138 247 B	138 248 L
T	Sub base	2.0	0 - 10	0.10	108	FKM	EEx-ed-IIC T5	0.6	138 252 G	138 253 H	138 254 A
T	G 1/4	2.0	0 - 10	0.11	120	NBR	EEx-ed-IIC T5	0.6	139 384 W	139 385 X	139 386 Y
T	G 1/4	3.0	0 - 6	0.16	175	NBR	EEx-ed-IIC T5	0.6	139 387 Z	139 388 A	139 389 B
<b>with terminal box</b>											
T	Sub base	2.0	0 - 10	0.10	108	NBR	EEx-ed-IIC T5	0.6	138 249 M	138 250 J	138 251 F
T	Sub base	2.0	0 - 10	0.10	108	FKM	EEx-ed-IIC T5	0.6	138 255 B	138 256 C	138 257 D

**Type 0780 with stainless steel body**

Circuit function	Port connection	Orifice [mm]	Pressure range [bar]	Kv-value (water) [m <sup>3</sup> /h]	Q <sub>Nn</sub> -value (air) [l/min]	Seal material	Ex-approval	Weight [kg]	024/UC	Item-No. Voltage 110/UC	230/UC
<b>with cable (3000 mm length)</b>											
T	Sub base	2.0	0 - 10	0.10	108	NBR	EEx-ed-IIC T5	0.6	138 258 N	138 259 P	138 260 L
T	Sub base	2.0	0 - 10	0.10	108	FKM	EEx-ed-IIC T5	0.6	138 264 C	138 265 D	137 899 R
T	G 1/4	2.0	0 - 10	0.11	120	FKM	EEx-ed-IIC T5	0.6	139 390 G	139 391 V	139 392 W
T	G 1/4	3.0	0 - 6	0.16	175	FKM	EEx-ed-IIC T5	0.6	139 393 X	139 394 Y	139 395 Z
<b>with terminal box</b>											
T	Sub base	2.0	0 - 10	0.10	108	NBR	EEx-ed-IIC T5	0.6	138 261 H	138 262 A	138 263 B
T	Sub base	2.0	0 - 10	0.10	108	FKM	EEx-ed-IIC T5	0.6	138 266 E	138 267 F	138 268 Q

**Dimensions [mm] type 0780 multiple manifold**

**Single Manifold**



Manifold for	2 valves	3 valves	4 valves	5 valves	6 valves	7 valves	8 valves
Overall length A	69	106	143	180	217	254	291
Hole spacing B	-	37	74	111	148	185	222

**Ordering chart for manifolds and accessories**

**Ordering Code for multiple Light Alloy Manifolds**

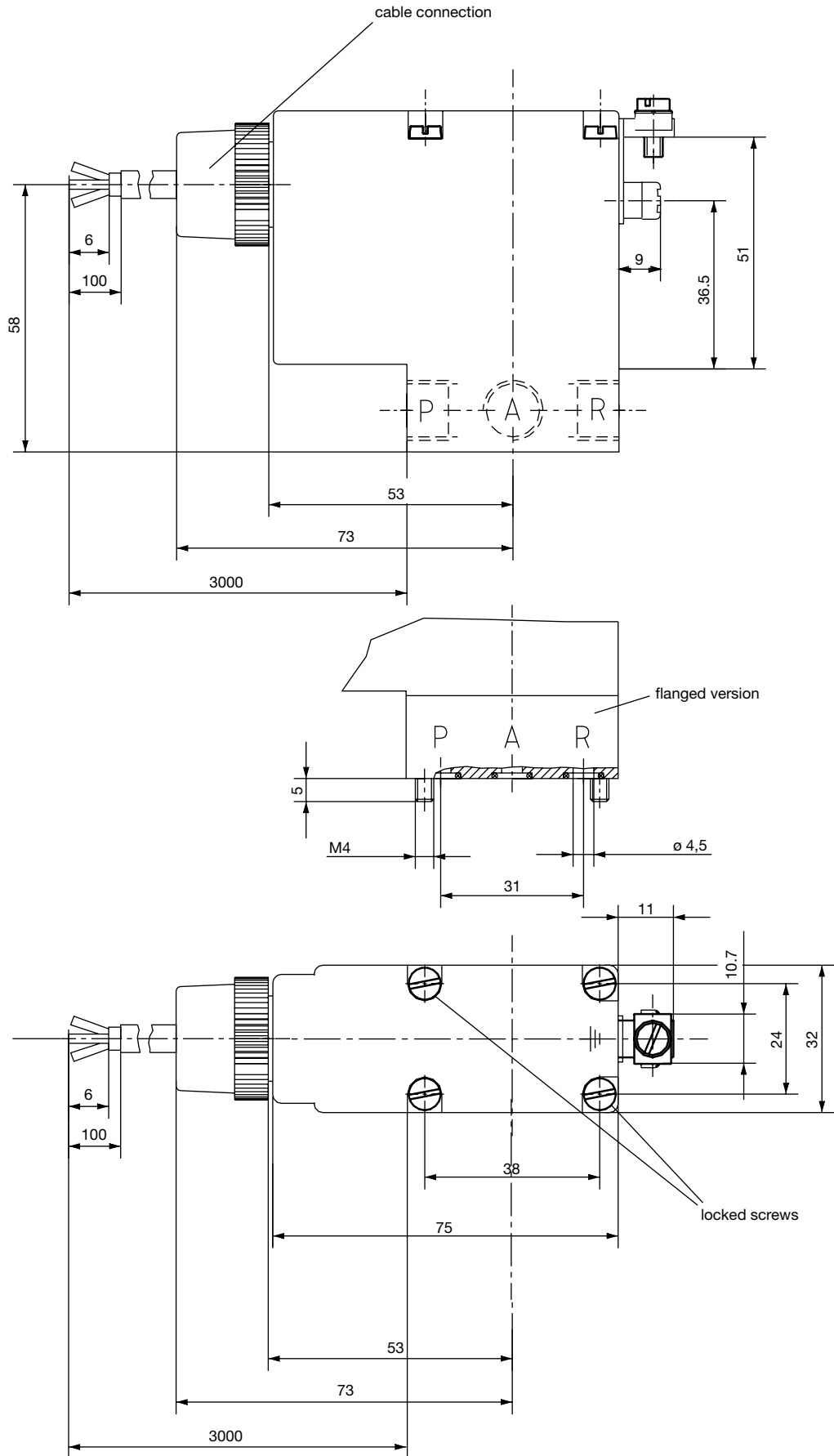
Manifolds	Item-No.
1valve	005 043 Z
2valves	005 045 T
3valves	005 366 H
4valves	005 294 S
5valves	005 295 T
6valves	005 296 U
7valves	005 403 Y
8valves	006 074 Z

**Accessories**

Specification	Item-No.
O-ring connector nipple	005 049 F
O-ring connector nipple without drill hole	006 049 G
Blanking plug with seal G 1/4	005 050 C
Lock for manual override, through	013 372 W
Blanking plate	005 625 V

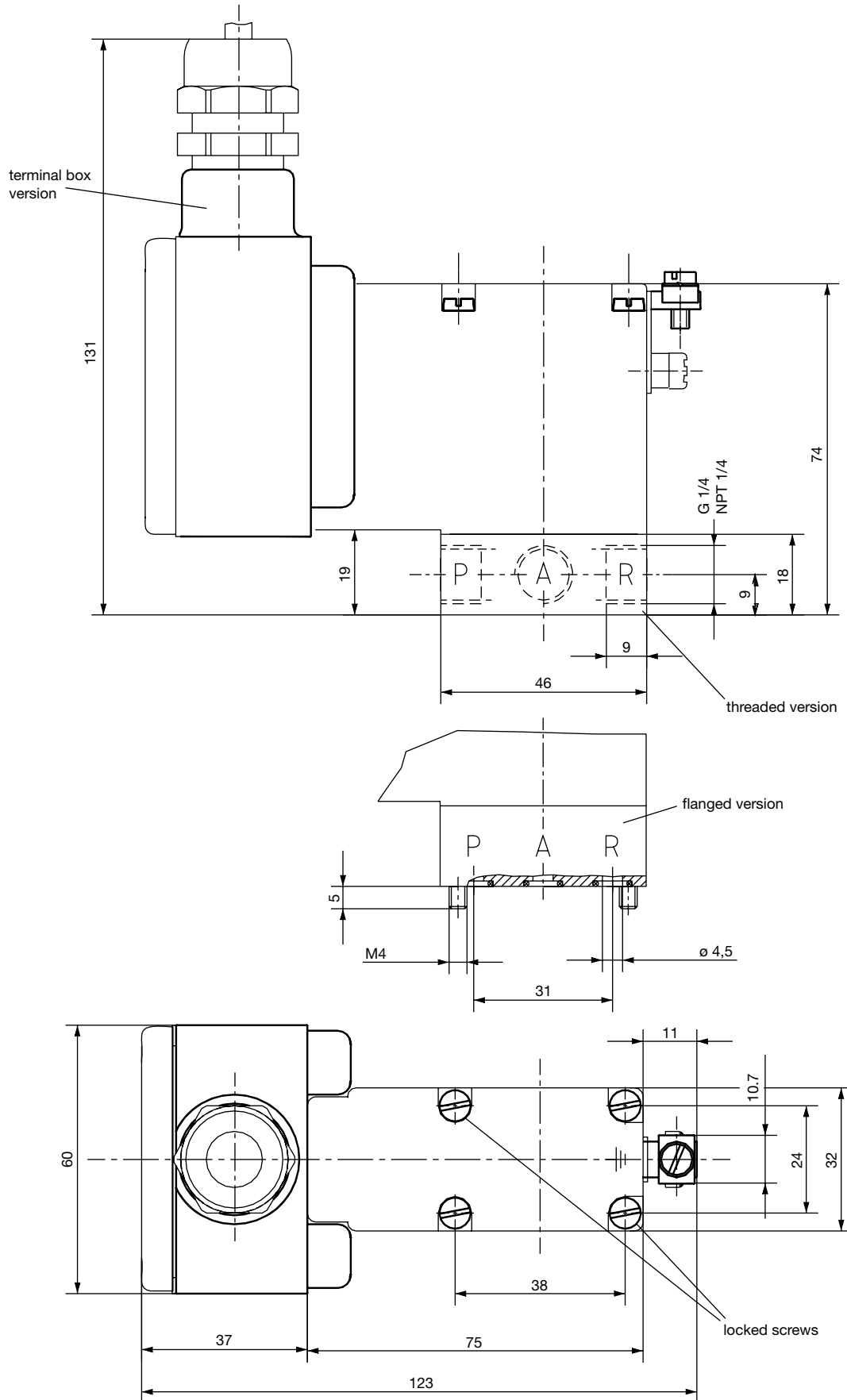
DTS 1000010947 EN Version: D Status: RL (released | freigegeben | validé) printed: 14.08.2008

Dimensions [mm] type 0780 with moulded-in cable (3000 mm length)



DTS 1000010947 EN Version: D Status: RL (released | freigegeben | validé) printed: 14.08.2008

## Dimensions [mm] type 0780 with terminal box



DTS 1000010947 EN Version: D Status: RL (released | freigegeben | valide) printed: 14.08.2008