

762 steel-763 stainless steel VALVE WITH TCR ACTUATOR

FEATURES

The 762-763+TCR ball valve is designed for the automatic opening / closing of pipes with medium pressure, non-loaded industrial fluids. The 762-763 valve is a full-bore split-body valve, EC 97/23-, ATEX-, fire safe- and ISO 15848-1-approved. Its size is standardised according to EN 558-1 series 27. The ISO 5211 mounting pad enables the actuator to be directly assembled. The latter is suitable for S4-30%-type service factor, installed indoors or outdoors under shelter.

AVAILABLE MODELS

762: 1.0619 carbon steel body.

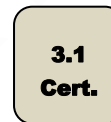
763: 1.4408 SS body.

DN 15 to DN 65 diameters.

DN 15 to DN 50: PN16/40 RF flange connections.

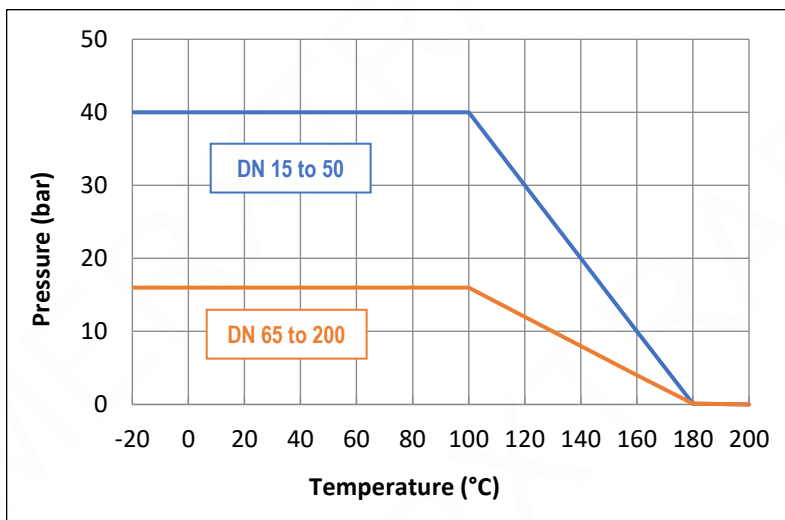
DN 65: PN16/40 RF flange connections.

Supply voltages: 12V DC, 24V DC, 24V AC and 230V AC.



LIMITS OF USE

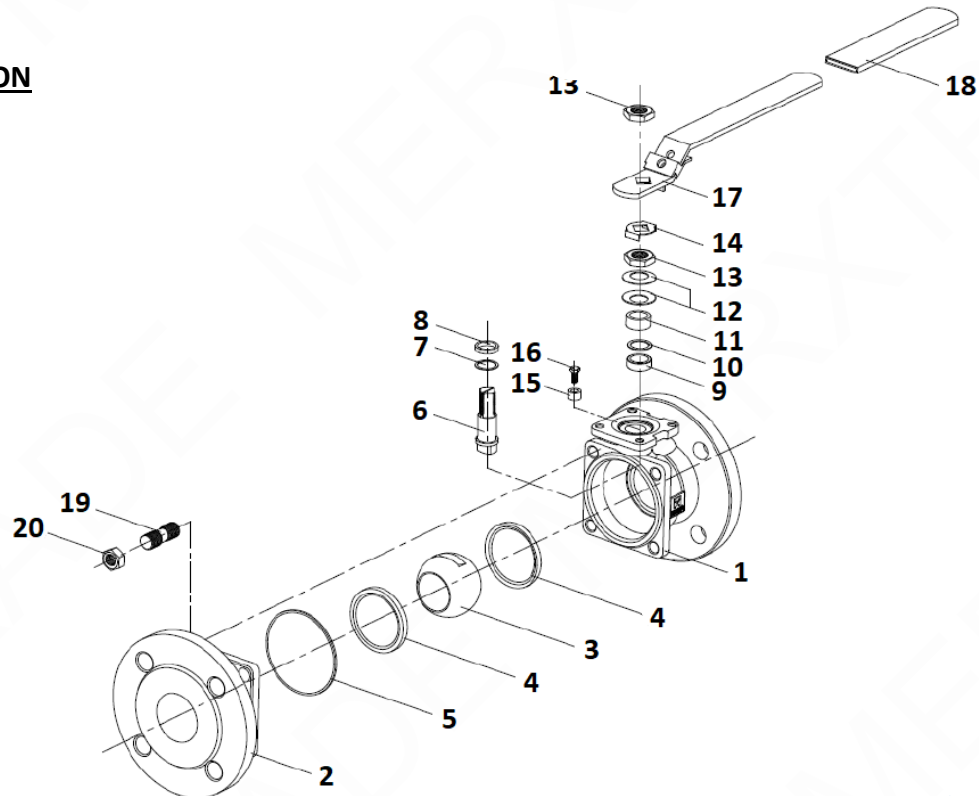
Fluid pressure: PS	DN 15 to 50: 40 bar (20°C) DN 65 to 80: 16 bar (20°C)
Fluid temperature: WT	-20°C / 200°C
Ambient temperature	- 10°C / + 50°C
Motor compressed air	S4 – 50%



DIRECTIVES AND MANUFACTURING STANDARDS

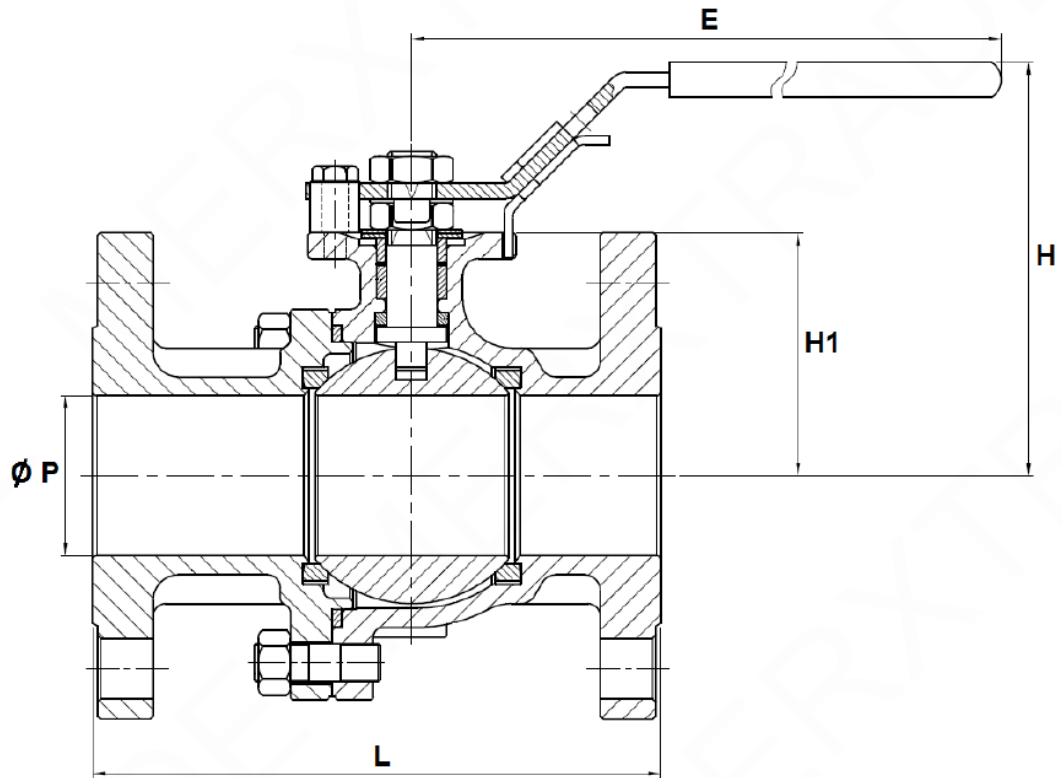
OBJECT	Standard	ON	OBJECT	Standard
Pressure Equipment Directive 2014/68/EC	DN 15 and 20: not subject		Final test	NKS 12266
	DN 25 to 200: category II	0035	Material certificate	NKS 10204
Size	EN 12516-1		Steel grades	EN 1503-1
Flange dimensions	EN 1092-1		Face-to-face dimension	EN 558-1 series 27
			Connection Motorisation	ISO 5211:
Fire safe	API 607			

CONSTRUCTION



No.	Name	Steel 762	Stainless steel 763	No.	Name	Steel 762	Stainless steel 763
1	Body	1.0619 steel	1.4408 SS	12	Belleville washers	301 SS	
2	Ends	1.0619 steel	1.4408 SS	13	Nut	304 SS	
3	Ball	1.4408 SS		14	Lock washer	304 SS	
4	Seat	Glass loaded PTFE		15	Pointer	304 SS	
5	Body gasket	Graphite		16	Stop screw	304 SS	
6	Stem	ASTM A276 316 SS		17	Handle	304 SS	
7	Ring	Carbon loaded PTFE		18	Sheath	PVC	
8	Ring	Carbon loaded PTFE		19	Stud	304 SS	
9	CG gasket	Graphite		20	Nut	304 SS	
10	CG gasket	Carbon loaded PTFE					

DIMENSIONS (mm)



DN	15	20	25	32	40	50	65	80	100	125	150	200
Ø P	15	20	24	30	38	50	64	76	98	125	150	200
L	115	120	125	130	140	150	170	180	190	325	350	400
E	158	158	196	196	245	261	400	400	400	743	743	925
H	76.5	78.1	92	96	109.1	115.6	188	194	215	239.6	256.5	323.5
H1	39	42.5	52	56	66	73	86.5	91.5	113.5	147	170	201
Weight (kg)	2.3	3	4	5.5	7	9.3	14.4	17.5	23.3	36.7	52	78

TCR ELECTRICAL MOTORISATION

The TCR motorisation proposed as standard comprises:

- IP67 plastic housing for actuator and steel gear box,
- a safety coefficient of 1.3 minimum compared to the nominal torque of the valve,
- an upstream / downstream pressure difference $\Delta P=10$ bar max.

The actuator's assembly is direct.

DN	Actuator	Power 230V AC / 24V AC/DC	Time 230V AC	Time 24 V AC-DC	Standard equipment of the actuator
15	TCR-02N	15	10s	10s	2 adjustable limit switches 2 dry auxiliary contacts Thermal protection of the motor 2-3W anti-condensation resistance Stand-by manual control with key 3D Position visual indicator Electrical connection: TRC02: 1 x PE M10 + 1.5m cable TCR05: 1 x PE M20 + 1.5m cable TCR11: 2 x PE M14 + 1.5m cable
20	TCR-02N	15	10s	10s	
25	TCR-05N	25	12s	12s	
32	TCR-05N	25	12s	12s	
40	TCR-05N	25	12s	12s	
50	TCR-11N	100	10s	10s	
65	TCR-11N	100	10s	10s	

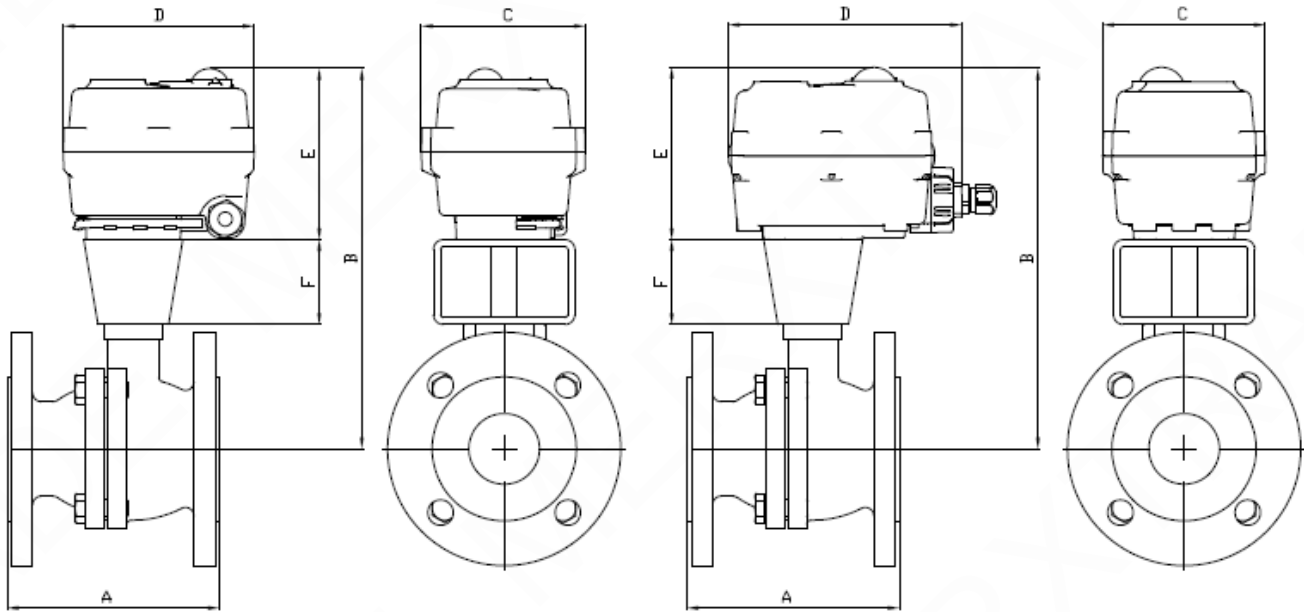
For any other operating conditions, please contact us.

* indicative time for actuator running empty

MOTORISATION OPTIONS

There are many options, so please contact our sales service for more information on these:

2	Actuator dimensioned for an upstream / downstream pressure difference ΔP greater than 10 bar
3	NF actuator – return via condenser – TCR-KT32
4	High-speed actuator - TRC-NH
5	Smart actuator with manoeuvring time adjustment - TCR-C
6	Control actuator – TCR-T
7	NF control actuator – return via condenser – TCR-T-KT32
8	Field bus actuator - TCR-B
9	Actuator with in-built timer – TCR-D
10	Wireless actuator – TCR-R



TCR-02-05

TCR-11

DN	15	20	25	32	40	50	65
SERVO	TCR02	TCR02	TCR05	TCR05	TCR05	TCR11	TCR11
A	115	120	125	130	140	150	170
B	189	192.5	233	237	247	255	288.5
C	70	70	111	111	111	115	115
D	104	104	132	132	132	165	165
E	90	90	121	121	121	122	122
F	60	60	60	60	60	60	80
KG	3.4	4.1	5.9	7.6	8.8	12.3	19.9

FEATURES

The TCR-N electric actuators are intended for motorising ¼ turn valves with a torque of 15, 20, 50 or 110 Nm. With a compact construction and plastic housing, they are especially well suited for motorising small size ball valves. Several variants offer advanced functions. IP67 leak-tightness: to be used indoors and, possibly, outdoors under a shelter. Possible installation in parallel. Manual control with a key.

AVAILABLE MODELS

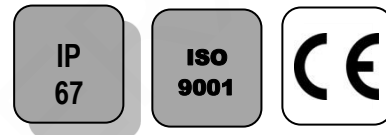
Supply voltages: 230V AC, 24V AC/DC, 12V DC.

LIMITS OF USE

IP Code	IP 67
Ambient temperature	- 20°C / +60°C
Service factor	S4-50%

MECHANICAL FEATURES

Gear box	treated steel pinions
Torques	15 - 20 - 50 - 110 Nm
Angle of rotation	90° +/- 2°
Declutching	without
Override control	By key



Actuator	TCR 02N			TCR 05N			TCR 11N		
	Torques (Nm)	15	20	20	50			110	
Voltage	12V DC	24V AC-DC	95-265V AC-DC	12VDC	24V AC-DC	95-265V AC-DC	12V DC	24V AC-DC	95-265V AC-DC
Manoeuvring time (s)	15	10	10	12	12	12	10	10	10
ISO 5211:	F03/F04/F05 - star 11			F05/F07 - star 14			F05/F07 - star 17		

ELECTRICAL FEATURES

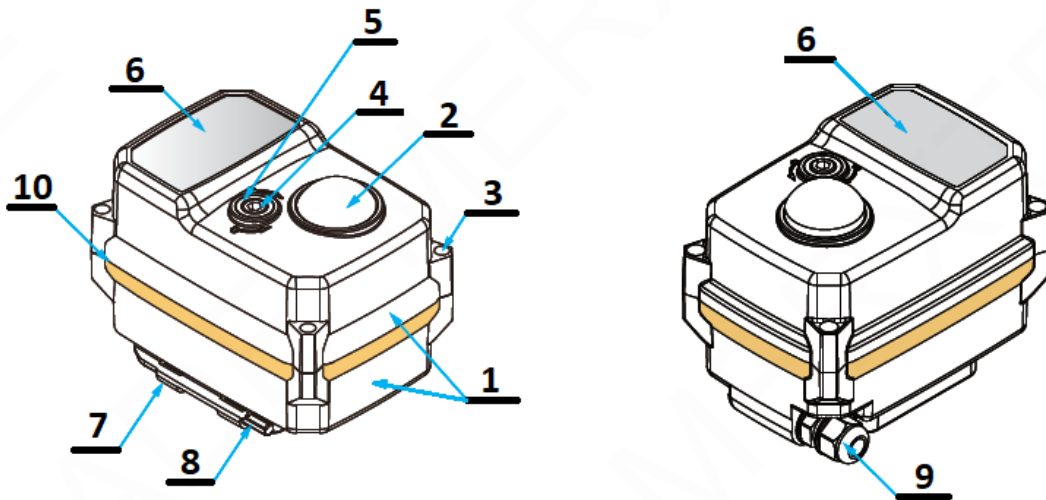
Actuator	TCR 02N	TCR 05N	TCR 11N
Motor protection	Thermal switch		
Limit switches	2 adjustable switches		
Auxiliary switches	2 adjustable dry switches		
Anti-condensation	integrated		
Electrical connection	PE M10 + 1.5m cable	PE M20 + 1.5m cable	2 x PE M14

Actuator	TCR 02N			TCR 05N			TCR 11N		
Voltage	12V DC	24V AC-DC	95-265V AC-DC	12V DC	24V AC-DC	95-265V AC-DC	12V DC	24V AC-DC	95-265V AC-DC
Power (W)	15	15	15	25	25	25	100	100	100
Current (A)	1,5	1,5	0,09	1,67		0,18 - 0,37	2,5		0,3 - 0,6
Fuse Protection (A)	5	5	1	8		1 - 2	5		2 - 3

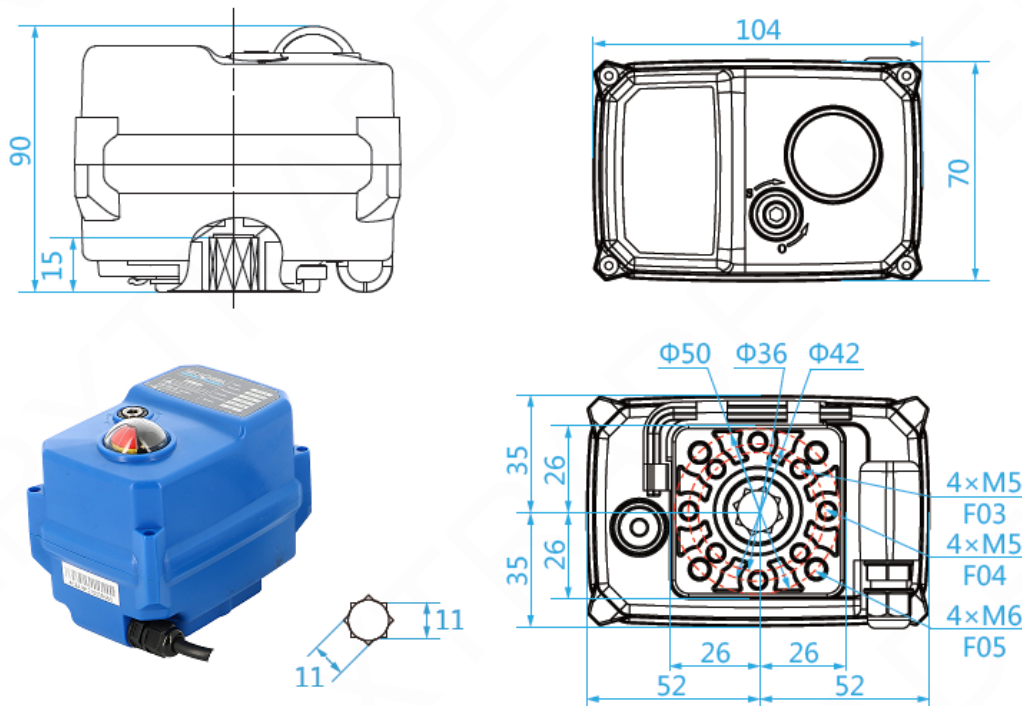
CONSTRUCTION (TCR-02N)

TCR-02N					
No.	Name	Material	No.	Name	Material
1	Casing + lid	Plastic (ABS)	6	Rating plate	PVC
2	Position indicator	Polycarbonate plastic	7	Key support	Plastic (ABS)
3	Screw x 4	Aisi 304	8	Hex key	Steel
4	Backup control stem	Aisi 304	9	Packing gland	Nylon
5	Gasket	NBR	10	Cover gasket	NBR

Weight (kg): 0.620



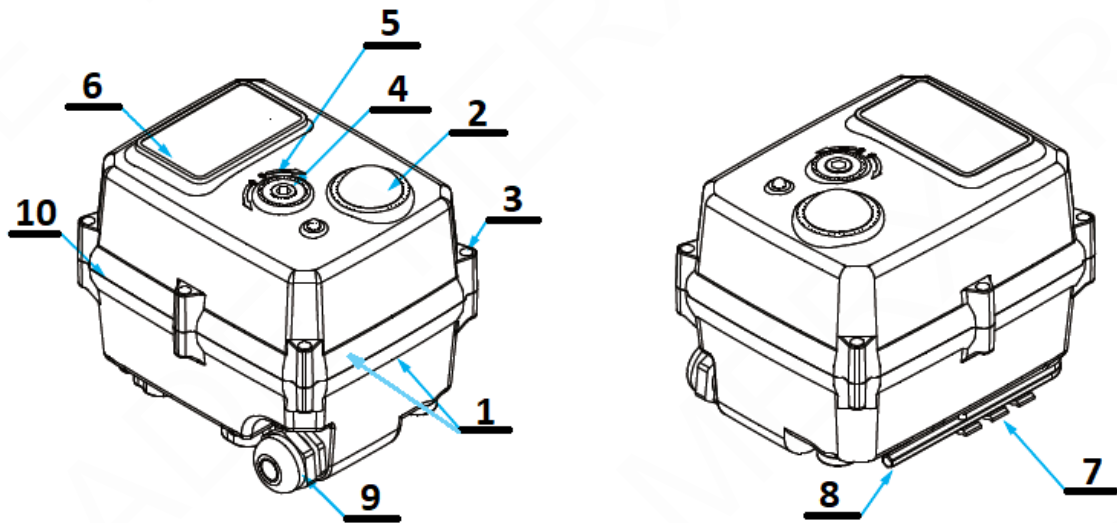
DIMENSIONS (mm)



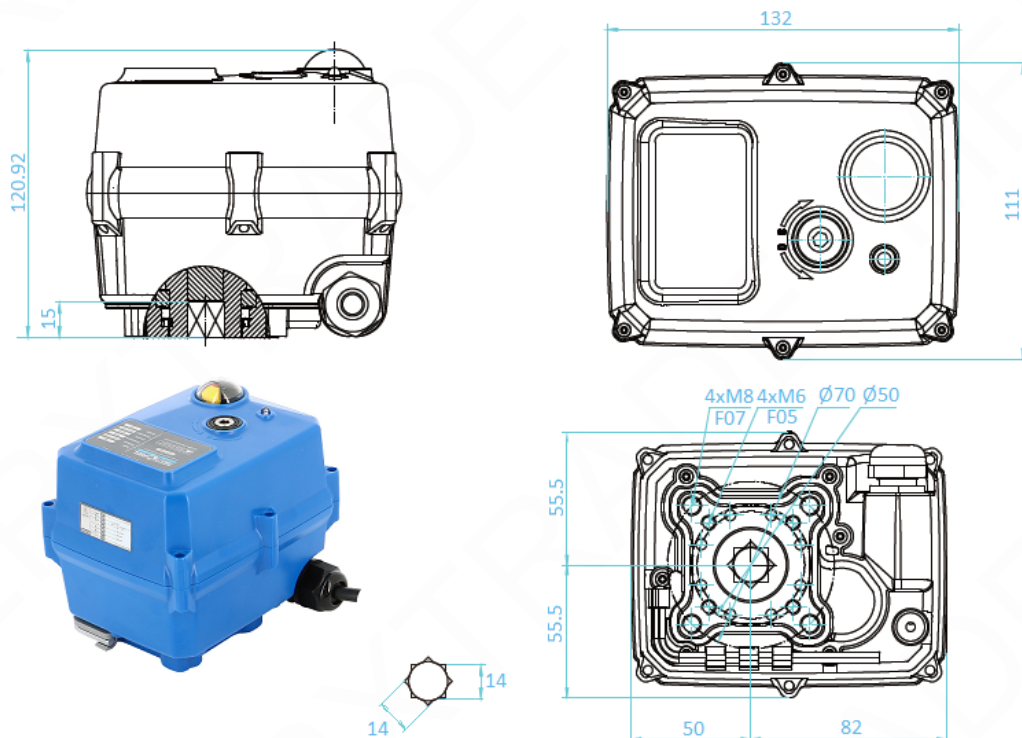
CONSTRUCTION (TCR-05N)

TCR-05N					
No.	Name	Material	No.	Name	Material
1	Casing + lid	Plastic (ABS)	6	Rating plate	PVC
2	Position indicator	Polycarbonate plastic	7	Key support	Plastic (ABS)
3	Screw x 6	Aisi 304	8	Hex key	Steel
4	Backup control stem	Aisi 304	9	Packing gland	Nylon
5	Gasket	NBR	10	Cover gasket	NBR

Weight (kg): 1.800

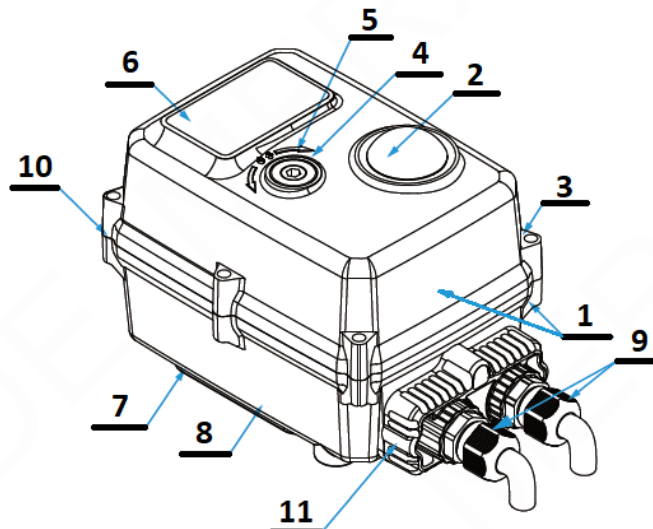


DIMENSIONS (mm)

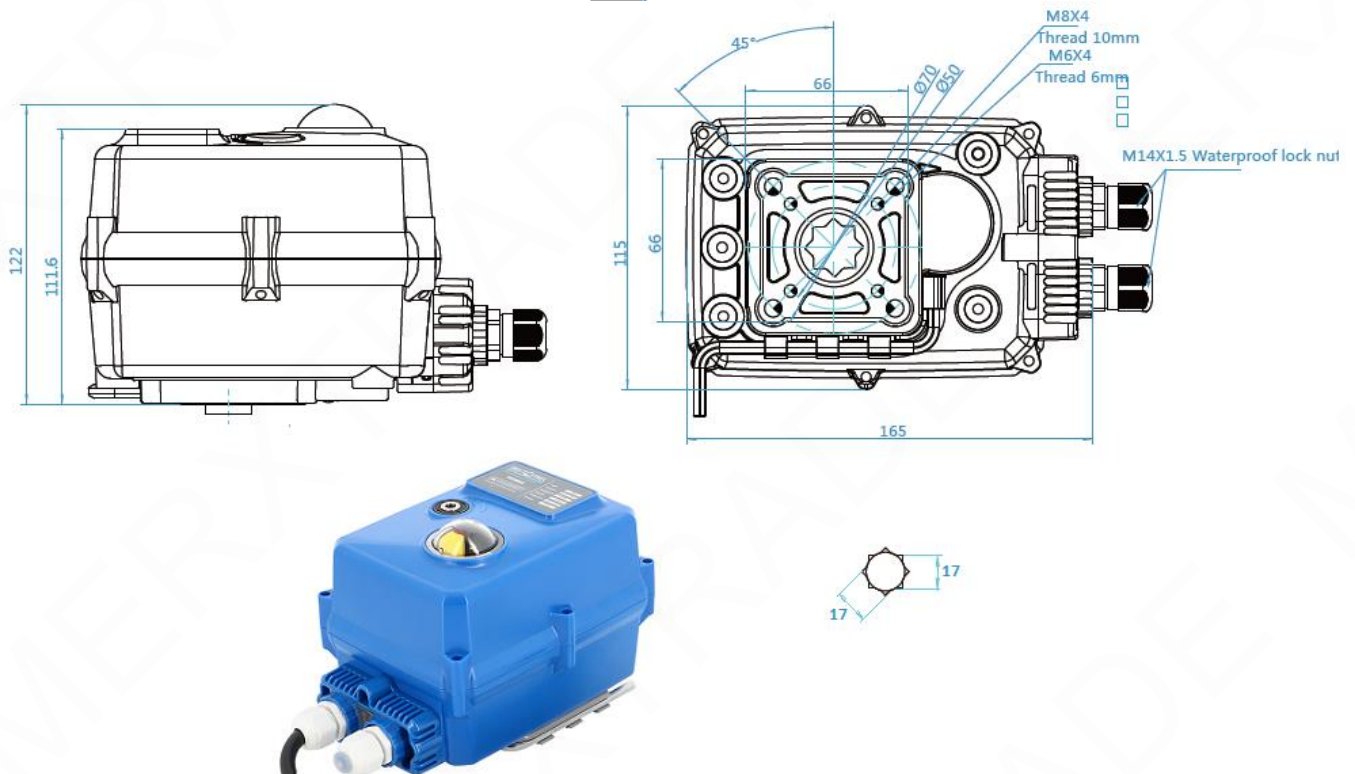


CONSTRUCTION (TCR-11N)

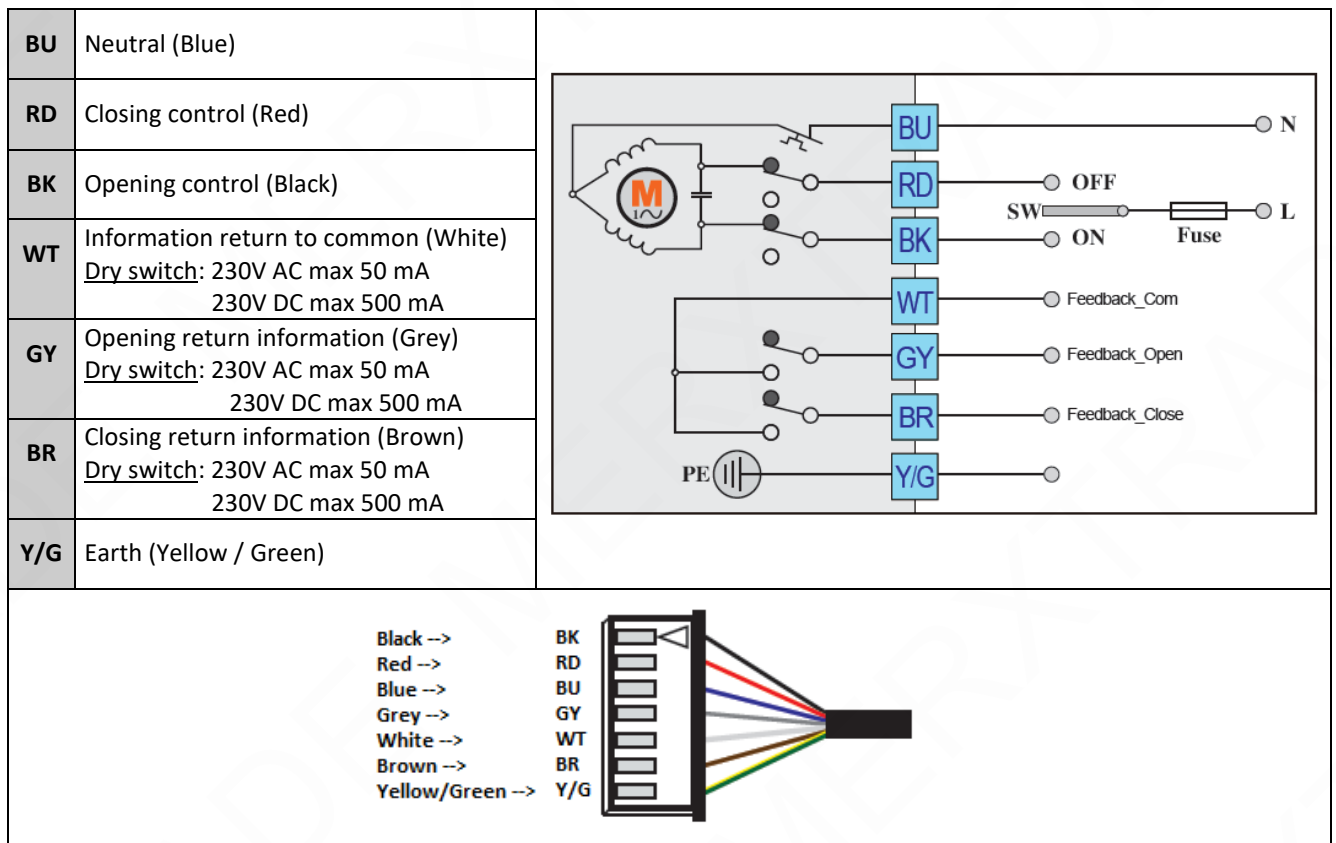
TCR-11N					
No.	Name	Material	No.	Name	Material
1	Casing + lid	Plastic (ABS)	6	Rating plate	PVC
2	Position indicator	Polycarbonate plastic	7	Key support	Plastic (ABS)
3	Screw x 6	Aisi 304	8	Hex key	Steel
4	Backup control stem	Aisi 304	9	X 2Packing gland	Nylon
5	Gasket	NBR	10	Cover gasket	NBR
Weight (kg): 2.200			11	Cable gland unit	Plastic (ABS)



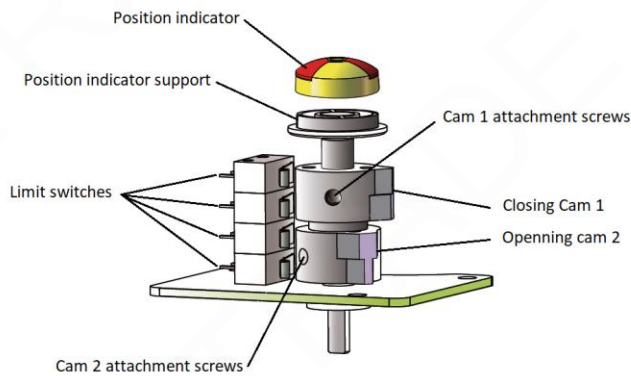
DIMENSIONS (mm)



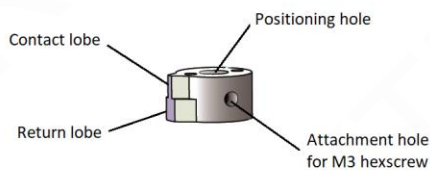
WIRING DIAGRAM



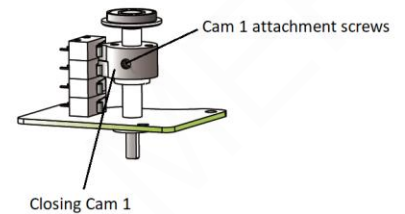
SWITCH SETTING



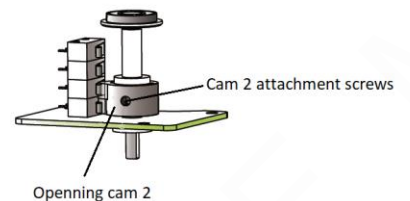
GENERAL VIEW



CAM DETAIL



CLOSING CAM ADJUSTMENT



OPENING CAM ADJUSTMENT

TROUBLESHOOTING

Defect met	Cause of defect	Method of solving
Inactive actuator	Non-connected electrical grid.	Connect to the electrical grid.
	Wrong voltage.	Check the actuator's voltage.
	Motor overheating.	Check the torque on the valve.
	Faulty connection.	Check the connection to the terminal box.
	Damaged start capacitor.	Contact the supplier for repair.
No switch signal	Faulty connection.	Check the connections.
	Damaged microswitch	Change the microswitch
Valve that is not fully closed	Use the return signal from the actuator check.	Receiving a return signal does not mean that the actuator is fully closed, hence do not cut the power supply.
	The hysteresis increases due to wear or between the actuator and the valve's stem.	Readjust the limit cams. Contact the supplier for repair.
Presence of humidity or water in the actuator	Unsuitable cable cross-section being used.	Contact the supplier for repair.
	The cable connection is not leak-tight.	
	Worn sealing gaskets.	
	Loose cover screws.	Dry the internal parts and tighten the cover screws.