

Air pressure rise sensor

Voltage rating: 12 V - 24 V
Power rating: 48 W
Max. safe pressure: 2943 kPa
Applications: trucks, buses.



Part number	Required pressure	Kind of thread	Terminal variety
501.13.20	$14,7^{+4,9}_{-9,8}$ kPa ($0,15^{+0,05}_{-0,1}$ kG/cm ²)	Metric thread 12 x 1,5	Flat
501.14.20	$49^{±9,8}$ kPa ($0,5^{±0,1}$ kG/cm ²)		Flat
501.17.20	$196^{±49}$ kPa ($2^{±0,5}$ kG/cm ²)		Round

Voltage rating: 12 V - 24 V
Power rating: 48 W
Max safe pressure: 2943 kPa
Applications: trucks, buses.



Part number	Required pressure	Kind of thread	Terminal variety
501.15.20	$441^{±49}$ kPa ($4,5^{±0,5}$ kG/cm ²)	Metric thread 12 x 1,5	Flat
501.16.20	$539^{±49}$ kPa ($5,5^{±0,5}$ kG/cm ²)		Flat

Voltage rating: 12 V - 24 V
Power rating: 48 W
Max. safe pressure: 2943 kPa
Applications: trucks.



Part number	Required pressure	Kind of thread	Terminal variety
501.18.20	$196^{±49}$ kPa ($2^{±0,5}$ kG/cm ²)	Taper thread 10 x 1	Flat

Air pressure fall sensor

Voltage rating: 12 V or 24 V
Power rating: 48 W
Max. safe pressure: 2943 kPa
Applications: trucks, buses, farm and building and other machines



Part number	Required pressure	Kind of thread	Terminal variety
502.13.20	$490^{\pm 49}$ kPa ($5^{\pm 0,5}$ kG/cm ²)	Metric thread 12 x 1,5	Flat
502.16.20	$539^{\pm 49}$ kPa ($5,5^{\pm 0,5}$ kG/cm ²)		Flat

Voltage rating: 12 V or 24 V
Power rating: 48 W
Max. safe pressure: 2943 kPa



Part number	Required pressure	Kind of thread	Terminal variety	Applications
502.20.20	$392^{\pm 39}$ kPa ($4^{\pm 0,4}$ kG/cm ²)	Metric thread 12 x 1,5	Flat	Tractor Ursus, MF
502.30.20	$490^{\pm 49}$ kPa ($5^{\pm 0,5}$ kG/cm ²)	Metric thread 12 x 1,5	Flat	Kamaz truck
502.32.20	$294^{\pm 29}$ kPa ($3^{\pm 0,3}$ kG/cm ²)	Taper thread 10 x 1 /cone/	Flat	Automatic lathe AS

Water temperature indicator sensor

Water temperature indicator sensor

Part number: 504.11.00

Applications: Tractor MF

Technical data:

Sensor resistance at a pressure 13,4 V:

- $R_T = 206 \Omega^{\pm 22}$ at a temperature 85°C

- $R_T = 96 \Omega^{\pm 10}$ at a temperature 110°C

Thread $5/8" \times 18$

Terminal – lamellar flat end type C



Coolant level sensor

Coolant level sensor

Part number: 621.12.00

Applications: buses (e.g.: Autosan)

Technical data:

Metric thread 10

Terminal – round contact terminal



Starter block breaker

Starter block breaker 650.11.00

Applications: tractor MF

Technical data:

Voltage rating 12 V

Power rating 60 W

Current transfer 5 A

Thread $\frac{3}{4}$ " 16 UNF ZA

Terminal – lamellar flat end type C



Starter block breaker 650.12.00

Applications: tractor MF

Technical data:

Voltage rating 12 V

Power rating 168 W

Current transfer 14 A

Thread $\frac{3}{4}$ " 16 UNF ZA

Terminal – lamellar flat end type C



Oil pressure indicator breaker

Oil pressure indicator breaker 503.11.00

Applications: URSUS C-330, C- 360

Technical data:

- working pressure - $85^{+/-35}$ kPa (0,5-1,2)

- max pressure - 1,5 MPa

- current loading 12V/0,5A (light bulb)

Metric thread 10 x 1

Terminal: lamellar flat end type C



Oil pressure indicator breaker 503.12.00

Applications: tractor Massey Ferguson

Technical data:

- working pressure - $55^{+/-15}$ kPa (0,4-0,7)

- max pressure - 1,5 MPa

- current loading 12V/0,5A (light bulb)

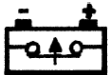
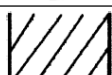
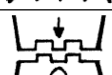
Taper thread B 1/8" / Briggs/

Terminal: lamellar flat end type C



Connector buttons



Name Applications	Code	Drawing and colour of a button	Insulation voltage rating	Manoeuvre rated current
Starting button	P40 – 14		12 V ÷ 24 V	25 A
Starting button	P40 – 14 U	Black cap		25 A
Horn actuator	P40 – 15			5 A
Horn actuator	P40 – 15U	Red cap		5 A
Axle block button	P40 – 20			5 A
Open load –carrying body signalling button	P40 – 21WO			5 A
Start disconnecting switch button for accumulator	P40 – 22			25 A
Stop disconnecting switch button for accumulator	P40 – 23			25 A
Stop engine button	P40 – 24WO			5 A
Pump switch button	P40 – 25WO			5 A
Power winch switch button	P40 – 26WO			5 A
Attachement disconnect button	P40 – 27			5 A
Front axle block button	P40 – 28			5 A

Stop lights contactors

Technical data:

Voltage rating – 12V or 24 V

Power rating – 90 W

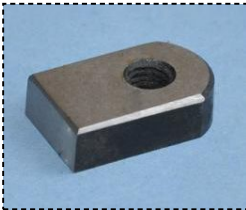
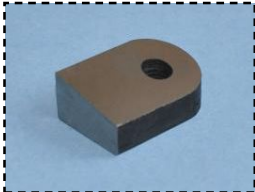
Max. safe pressure – 23544 kPa

Applications: trucks, farm tractors, machine tools, hydraulic lifts.



Part number	Pressure required	Kind of thread	Terminal variety
556.11.20	294 ÷ 588 kPa 3 ÷ 6 KG/cm ²	Briggs taper thread 1/8"	Round contact terminal
556.12.20			Lamellar flat end type C
556.13.20	127 ÷ 206 kPa 1,3 ÷ 2,1 KG/cm ²		
556.16.20	392 ÷ 490 kPa 4 ÷ 5 KG/cm ²		
556.14.20	1324 ÷ 1619 kPa 13,5 ÷ 16,5 KG/cm ²	Taper thread 10 x 1 Male cone	
556.15.20	1766 ÷ 2158 kPa 18 ÷ 22 KG/cm ²		

Contour band saw accesories

Cutting die ZT-2 Applications: Shears Celma PRMk 2		Alitng unit blade PRMk z II T nr II Applications: Shears Celma PRMk 2	
Cutting die Makita A-15051 Applications: Shears Makita JN 1601		Punch Nr A83951 (Austria) Nr A15067 (Japan) Applications: Shears Makita JN 1601	
Cutting die 1 G/1,6 2608639028 Applications: Shears Bosch Gna-1,6		Punch Bosch 2608639027 Applications: Shearas Bosch Gna - 1,6	
		Punch for straight cutting 2608639016 Applications: Shears Bosch Gna-2,0	
Slide blade PRMa-2,5II C-44919 Applications: Plate shears PRMa-2,5 PRMa-2,8		Bowed blade PRMa-2,5II C-44920 Applications: Plate shears PRMa-2,5 PRMa-2,8	
Sidle blade PRMa-3 C-40224 Applications: Plate shears PRMa-3		Bowed blade PRMa-3 C-40225 Applications: Plate sheras PRMa-3	

Tree-jaw drill chucks



Rated size and variety of a chuck	Type of clamping	Diameter range of clamped drills		D max.	L max.	Wiegth	Rated size of a chuck key
		from	to				
PTRk – 6 B10	Morse taper	0,8	6,0	30,5	50	0,11	S1
PTRk – 10 B16		1,0	10,0	36,5	72	0,25	S2
PTRk – 10 B10		1,0	10,0	36,5	63	0,22	S2
PTRk – 10 B12		1,0	10,0	36,5	63	0,22	S2
PTRk – 13 B16		2,5	13,0	42,5	78	0,37	S2
PTRk – 13 B12		2,5	13,0	42,5	78	0,38	S2
PTRk – 13 J33	Jacobs taper	2,5	13,0	42,5	78	0,37	S2
PTRk – 13 J6		2,5	13,0	42,5	78	0,40	S2
PTRk – 16 B16	Morse taper	3,0	16,0	52	87	0,62	S3
PTRk – 16 B18		3,0	16,0	52	87	0,60	S3
PTRk – 20 B18		3,0	20,0	65	111	1,13	S4
PTRk – 20 B22		3,0	20,0	65	111	1,00	S4
PTRz – 6 3/8" x 24	Screw thread	0,8	6,0	30,5	50	0,11	S1
PTRd – 10 1/2" x 20		1,0	10,0	36,5	63	0,23	S2
PTRz – 10 3/8" x 24		1,0	10,0	36,5	63	0,22	S2
PTRw – 10 1/2" x 20		1,0	10,0	42	67	0,28	no key
PTRd – 13 1/2" x 24		2,5	13	42,5	78	0,39	S2
PTRz – 13 3/8" x 24		2,5	13	42,5	78	0,38	S2
PTRd – 13 M12x1,25	Metric thread	2,5	13	42,5	78	0,38	S2
PTRz – 16 1/2" x 20	Skrew thread	3	16	52	87	0,64	S3
PTRz – 16 5/8" x 16		3	16	52	87	0,62	S3

D – chuck outer diameter, L – chuck length when chucks are compact

Mechanical terminals

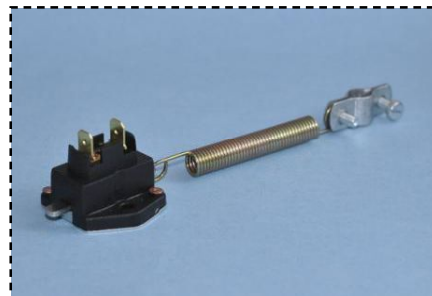
Direction indicator terminal 653.11.00
Applications: tractor Massey Ferguson

Technical data:
Power rating 80 W
Voltage rating 12 V



Stop lights contactor 657.12.00
Applications: tractor Massey Ferguson

Technical data:
Power rating 126 W
Voltage rating 12 V



Light and signal terminal 654.12.00
Applications: tractor Massey Ferguson

Technical data:
Power rating 80 W
Voltage rating 12 V



Roof window hardware elements



ANGLE ROTO



ANGLE COLT



MITTELBAND L / P



ANGULAR HOLDER



Blechbefstigung



Zenterblech



Oeffnunbegrenzer

Switches

Front-wheel drive switch 561.14.20
Applications: trucks

Technical data:
Voltage rating 12 V – 24 V
Power rating 40 W
Metric thread 12 x 1,25
Terminals- lamellar end type C

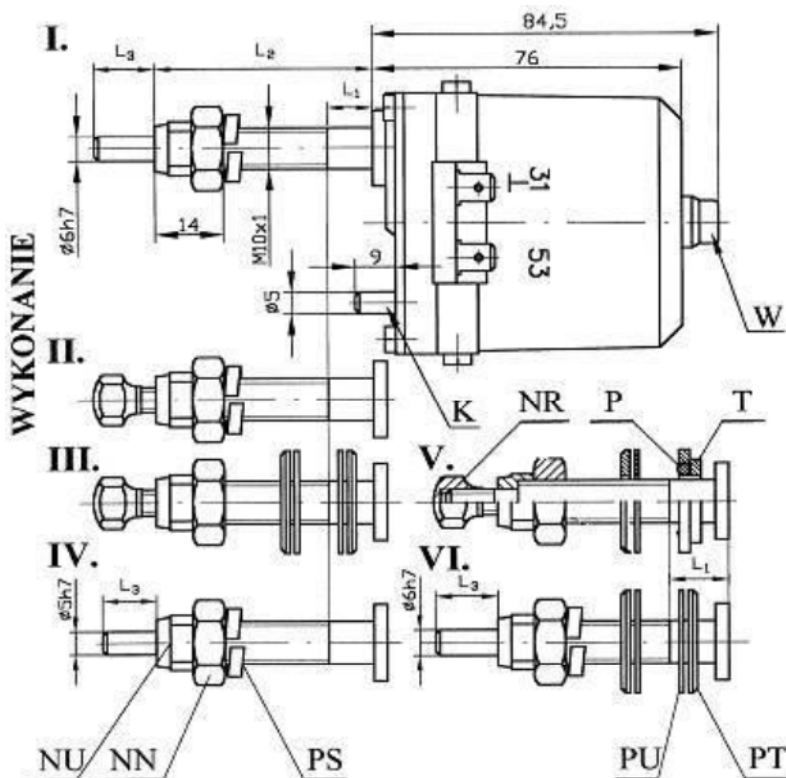


Cabin lock switch 561.15.20
Applications: trucks

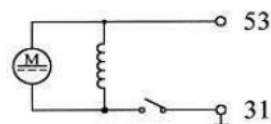
Technical data:
Voltage rating 12 V – 24 V
Power rating 40 W
Metric thread 12 x 1,25
Terminals- lamellar flat end type C



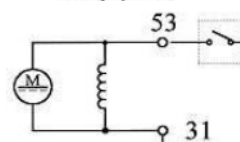
Wiper mechanism with the wiper held in „off” position



Schemat elektryczny
z wbudowanym wyłącznikiem



Schemat elektryczny
bez wyłącznika

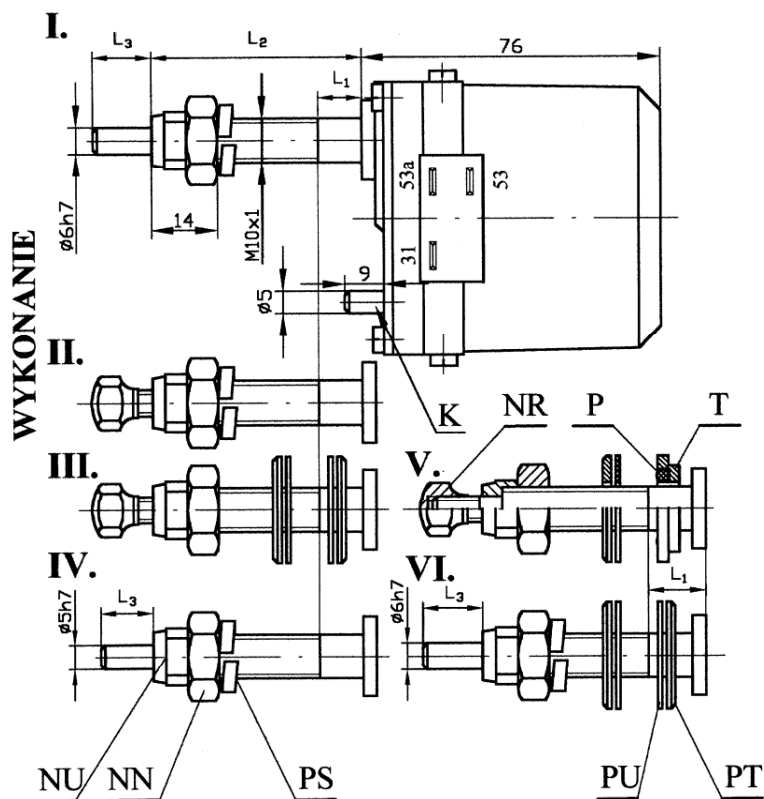


Certified according to: BN-90/3687-06

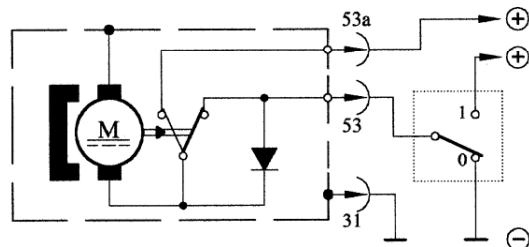
Part number	Volt. rating	Available rating	Current rating. max.	Variation angle $\pm 5^\circ$	Dimensions:			Work	
					L_1	$L_2^{\pm 2}$	$L_3^{\pm 2}$		
410.000.001	12 V	13,5 V	1,8 A	105°	max 5	94	16,5	I K W	PS-spring washer
410.000.002	12 V	13,5 V	1,8 A	115°	max 10	61	16,5	I K W	PT-saucer washer
410.000.003	12 V	13,5 V	1,8 A	105°	max 5	30	16,5	VI W	PU-packing washer
410.000.021	24 V	27 V	1 A	105°	max 5	94	16,5	I K W	NR-arm nut
410.000.022	24 V	27 V	1 A	115°	max 10	61	16,5	I K W	NU-packing nut
VAPORMATIK VLC 3005	12 V	13,5 V	1,8 A	90°	max 5	94	16,5	I K W	NN- low metric nut10x1
VAPORMATIK VLC 3007	12 V	13,5 V	1,8 A	115°	max 5	94	16,5	I K W	P-packing ring
412.000.000	12 V	13,5 V	1,8 A	80°	max 10	49	-	II W	T-sleeve; K-pin
412.000.000/K	12 V	13,5 V	1,8 A	80°	max 10	67,5	-	II W	W-switcher
412.000.020	24 V	27 V	1 A	80°	max 10	49	-	II W	Weight - 0,7 Kg
413.000.000	12 V	13,5 V	1,8 A	115°	max 10	30	-	III W	Starting torque- 3,5 Nm
413.000.020	24 V	27 V	1 A	115°	max 10	30	-	III W	Amount of variations./min - 50
414.000.000	12 V	13,5 V	1,8 A	115°	max 58	94	16,5	I K	Rating moment. - 0,35 Nm
417.000.000	12 V	13,5 V	1,8 A	115°	max 10	35	10	IV	Applications: farm tractors, self-propelled farm and building machines.
417.000.001	12 V	13,5 V	1,8 A	115°	max 10	35	15	VI K	
417.000.002	12 V	13,5 V	1,8 A	115°	max 10	61	10	IV	
422.000.000	12 V	13,5 V	1,8 A	90°	max 10	30	-	V W	

We declare the correct work of a mechanism with installed wipers that have their arm length max 350 mm and a wiper blade max 380 mm.
Wipers with bigger dimensions require intensive window moistening.

Wiper mechanism with the wiper held in its initial position



Schemat elektryczny



Certified according to: BN-90/3687-06

Part number	Volt. rating	Available rating	Current rating max	Variation angle $\pm 5^\circ$	Dimensions :			Work	
					L_1	$L_2^{\pm 2}$	$L_3^{\pm 2}$		
410.000.001 M	12 V	13,5 V	1,4 A	105°	max 5	94	16,5	I K	PS-spring washer
410.000.002 M	12 V	13,5 V	1,4 A	115°	max 10	61	16,5	I K	PT-saucer washer
410.000.003 M	12 V	13,5 V	1,4 A	105°	max 5	30	16,5	VI	PU-packing washer
410.000.021 M	24 V	27 V	0,8 A	105°	max 5	94	16,5	I K	NR-arm nut
410.000.022 M	24 V	27 V	0,8 A	115°	max 10	61	16,5	I K	NU-packing nut
410.000.023 M	24 V	27 V	0,8 A	105°	max 5	30	16,5	VI	NN- low metric nut10x1
412.000.000 M	12 V	13,5 V	1,4 A	80°	max 10	49	-	II	P-packing ring
412.000.000/K M	12 V	13,5 V	1,4 A	80°	max 10	67,5	-	II	T-sleeve
412.000.020 M	24 V	27 V	0,8 A	80°	max 10	49	-	II	K-pin
413.000.000 M	12 V	13,5 V	1,4 A	115°	max 10	30	-	III	Weight - 0,7 Kg
413.000.020 M	24 V	27 V	0,8 A	115°	max 10	30	-	III	Starting torque- 3,5 Nm
414.000.000 M	12 V	13,5 V	1,4 A	115°	max 58	94	16,5	I K	Amount of variations./min - 50
417.000.000 M	12 V	13,5 V	1,4 A	115°	max 10	35	10	IV	Rating moment. - 0,35 Nm
417.000.001 M	12 V	13,5 V	1,4 A	115°	max 10	35	15	VI K	Applications: farm
417.000.002 M	12 V	13,5 V	1,4 A	115°	max 10	61	10	IV	tractors, self-propelled
422.000.000 M	12 V	13,5 V	1,4 A	90°	max 10	30	-	V	farm and building machines.

We declare the correct work of a mechanism with installed wipers that have their arm length max 350 mm and a wiper blade max 380 mm. Wipers with bigger dimensions require intensive window moistening.