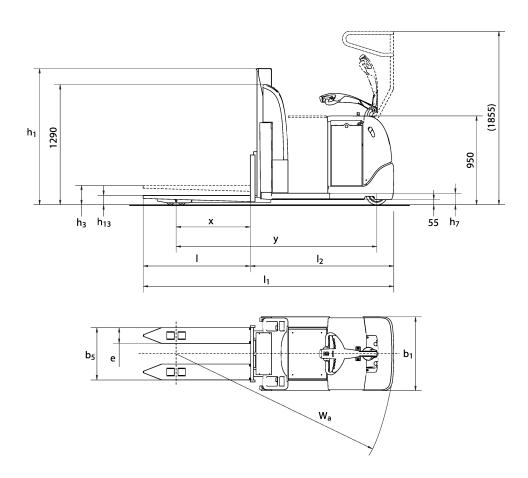
LOW LEVEL ORDER PICKER





Efficient picking machine with highest performance. Lowlifting model with tiller arm or Ergo steering as option. AC powered, truck computer ATC and Friction Force for optimum drive wheel pressure.



Mast type	Lift height H	Height of mast lowered h1	Max mast height h4
Standard/Duplex			
Triplex			



PPL 250 SN

	1.2	Manufacturer's type designation			FFL 230 3N
	1.3	Drive: electric (battery or mains), diesel, petrol, fuel gas			Electric
Distinguishing mark	1.4	Operator type: hand, pedestrian, standing, seated, order-picker			Hand
mark	1.5	Load capacity/rated load	Q	t	2,5
J S	_				
_	1.6	Load centre distance	С	mm	600
	1.8	Load distance, centre of load axle to fork	Х		975 - 1465
	1.9	Wheelbase	У	mm	1251 + x
	2.1	Service weight incl battery		kg	1125*
Ĕ	2.2	Axle load, with load, front/rear		kg	
Weight	2.3	Axle load, wihtout load, front / rear		kg	1100 / 2050
ב -	2.4	Axle load, fork outreached with load, front / rear		kg	825 / 300
7	2.5	Axle load, fork retracted with load, front / rear		kg	
	3.1	Tyres		9	Vulcollan
	3.2	Tyre size, drive side		mm	Ø 230x90
		Tyre size, load side			
	3.3	•		mm	Ø 85x70
	3.4	Dimensions additional wheels (castor wheels)		mm	Ø 150x55
	3.5	Wheels, number front/rear (drive side/load side, x = driven wheels)			1x 1/4
	3.6	Track, drive side	b10	mm	
	3.7	Track, load side	b11	mm	
	4.1	Tilt of mast/fork carriage, forward/backward		Grad	
	4.2	Height, mast lowered	h1	mm	
	4.3	Free lift	h2	mm	
	4.4	Lift height H = h13+h3	H	mm	230
	4.5	Height, mast extended			200
			h4	mm	
	4.6	Straddle lift	h5	mm	
	4.7	Height of overhead guard (cabin)	h6	mm	
	4.8	Seat height/stand height	h7	mm	123 - 146
	4.10	Height of wheel arms	h8	mm	
	4.11	Additional lift	h9	mm	
	4.14	Stand height, elevated	h12	mm	
	4.15	Height lowered	h13	mm	85
	4.19	Overall length	I1	mm	1430 + 1
	4.20	Length to face of forks	12	mm	1430
n	4.21	Overall width	b1		790
É			DI	mm	790
ה	4.21.1	Width over stabilizers		mm	
<u>-</u>	4.22	Fork dimensions	s/e/l	mm	55/175/1150-2375
Dimensions	4.23	Fork carriage to ISO 2328, clas / form A, B			
	4.24	Width of fork carriage	b3	mm	
	4.25	Width over forks, min/max	b5	mm	480 / 680
	4.26	Distance between wheel arms	b4	mm	V-350
4	4.27	Width across guide rolls	b6	mm	
	4.28	Reach distance	14	mm	
	4.00				
	14.29	Reach lateral	b7	mm	
	4.29	Reach lateral	b7	mm	
	4.30	Reach lateral from vehicle centerline	b8	mm	
	4.30 4.31	Reach lateral from vehicle centerline Ground clearance, mast	b8 m1	mm mm	55
	4.30 4.31 4.32	Reach lateral from vehicle centerline Ground clearance, mast Ground clearance, centre of wheelbase	b8 m1 m2	mm mm mm	55
	4.30 4.31 4.32 4.33	Reach lateral from vehicle centerline Ground clearance, mast Ground clearance, centre of wheelbase Aisle width with pallet 1000 x 1200, crosswise	b8 m1 m2 Ast	mm mm mm mm	2630
	4.30 4.31 4.32	Reach lateral from vehicle centerline Ground clearance, mast Ground clearance, centre of wheelbase Aisle width with pallet 1000 x 1200, crosswise Aisle width for pallet 800 x 1200, lenghtwise	b8 m1 m2 Ast Ast	mm mm mm	
	4.30 4.31 4.32 4.33	Reach lateral from vehicle centerline Ground clearance, mast Ground clearance, centre of wheelbase Aisle width with pallet 1000 x 1200, crosswise	b8 m1 m2 Ast Ast O	mm mm mm mm	2630
	4.30 4.31 4.32 4.33	Reach lateral from vehicle centerline Ground clearance, mast Ground clearance, centre of wheelbase Aisle width with pallet 1000 x 1200, crosswise Aisle width for pallet 800 x 1200, lenghtwise	b8 m1 m2 Ast Ast	mm mm mm mm	2630
	4.30 4.31 4.32 4.33 4.34	Reach lateral from vehicle centerline Ground clearance, mast Ground clearance, centre of wheelbase Aisle width with pallet 1000 x 1200, crosswise Aisle width for pallet 800 x 1200, lenghtwise Transfer aisle	b8 m1 m2 Ast Ast O	mm mm mm mm mm	2630 2830
	4.30 4.31 4.32 4.33 4.34	Reach lateral from vehicle centerline Ground clearance, mast Ground clearance, centre of wheelbase Aisle width with pallet 1000 x 1200, crosswise Aisle width for pallet 800 x 1200, lenghtwise Transfer aisle Turning radius	b8 m1 m2 Ast Ast O	mm mm mm mm mm mm	2630 2830
	4.30 4.31 4.32 4.33 4.34 4.35 4.37 4.38	Reach lateral from vehicle centerline Ground clearance, mast Ground clearance, centre of wheelbase Aisle width with pallet 1000 x 1200, crosswise Aisle width for pallet 800 x 1200, lenghtwise Transfer aisle Turning radius Length incl reach legs Distance to swivelling-fork pivot	b8 m1 m2 Ast Ast 0 Wa	mm	2630 2830
	4.30 4.31 4.32 4.33 4.34 4.35 4.37 4.38 5.1	Reach lateral from vehicle centerline Ground clearance, mast Ground clearance, centre of wheelbase Aisle width with pallet 1000 x 1200, crosswise Aisle width for pallet 800 x 1200, lenghtwise Transfer aisle Turning radius Length incl reach legs Distance to swivelling-fork pivot Travel speed, with/without load	b8 m1 m2 Ast Ast 0 Wa	mm	2630 2830 1430 + x
	4.30 4.31 4.32 4.33 4.34 4.35 4.37 4.38 5.1 5.1.1	Reach lateral from vehicle centerline Ground clearance, mast Ground clearance, centre of wheelbase Aisle width with pallet 1000 x 1200, crosswise Aisle width for pallet 800 x 1200, lenghtwise Transfer aisle Turning radius Length incl reach legs Distance to swivelling-fork pivot Travel speed, with/without load Travel speed with/without load, backwards	b8 m1 m2 Ast Ast 0 Wa	mm km/h km/h	2630 2830 1430 + x 9,5 / 12,0
	4.30 4.31 4.32 4.33 4.34 4.35 4.37 4.38 5.1 5.1.1 5.2	Reach lateral from vehicle centerline Ground clearance, mast Ground clearance, centre of wheelbase Aisle width with pallet 1000 x 1200, crosswise Aisle width for pallet 800 x 1200, lenghtwise Transfer aisle Turning radius Length incl reach legs Distance to swivelling-fork pivot Travel speed, with/without load Travel speed with/without load, backwards Lift speed, with/without load	b8 m1 m2 Ast Ast 0 Wa	mm km/h km/h	2630 2830 1430 + x 9,5 / 12,0 0,045 / 0,07
	4.30 4.31 4.32 4.33 4.34 4.35 4.37 4.38 5.1 5.1.1 5.2 5.3	Reach lateral from vehicle centerline Ground clearance, mast Ground clearance, centre of wheelbase Aisle width with pallet 1000 x 1200, crosswise Aisle width for pallet 800 x 1200, lenghtwise Transfer aisle Turning radius Length incl reach legs Distance to swivelling-fork pivot Travel speed, with/without load Travel speed with/without load Lift speed, with/without load Lowering speed, with/without load	b8 m1 m2 Ast Ast 0 Wa	mm	2630 2830 1430 + x 9,5 / 12,0
	4.30 4.31 4.32 4.33 4.34 4.35 4.37 4.38 5.1 5.1,1 5.2 5.3 5.4	Reach lateral from vehicle centerline Ground clearance, mast Ground clearance, centre of wheelbase Aisle width with pallet 1000 x 1200, crosswise Aisle width for pallet 800 x 1200, lenghtwise Transfer aisle Turning radius Length incl reach legs Distance to swivelling-fork pivot Travel speed, with/without load Travel speed with/without load Lowering speed, with/without load Reach speed, with / without load	b8 m1 m2 Ast Ast 0 Wa	mm	2630 2830 1430 + x 9,5 / 12,0 0,045 / 0,07 0,052 / 0,055
	4.30 4.31 4.32 4.33 4.34 4.35 4.37 4.38 5.1 5.1 5.2 5.3 5.4 5.7	Reach lateral from vehicle centerline Ground clearance, mast Ground clearance, centre of wheelbase Aisle width with pallet 1000 x 1200, crosswise Aisle width for pallet 800 x 1200, lenghtwise Transfer aisle Turning radius Length incl reach legs Distance to swivelling-fork pivot Travel speed, with/without load Travel speed with/without load Lowering speed, with/without load Reach speed, with / without load Gradient, with/without load	b8 m1 m2 Ast Ast 0 Wa	mm km/h km/h	2630 2830 1430 + x 9,5 / 12,0 0,045 / 0,07
	4.30 4.31 4.32 4.33 4.34 4.35 4.37 4.38 5.1 5.1,1 5.2 5.3 5.4 5.7 5.8	Reach lateral from vehicle centerline Ground clearance, mast Ground clearance, centre of wheelbase Aisle width with pallet 1000 x 1200, crosswise Aisle width for pallet 800 x 1200, lenghtwise Transfer aisle Turning radius Length incl reach legs Distance to swivelling-fork pivot Travel speed, with/without load Travel speed with/without load Lowering speed, with/without load Lowering speed, with / without load Reach speed, with / without load Gradient, with/without load Max gradeability, with / without load, 5 min rating	b8 m1 m2 Ast Ast 0 Wa	mm km/h km/h	2630 2830 1430 + x 9,5 / 12,0 0,045 / 0,07 0,052 / 0,055
	4.30 4.31 4.32 4.33 4.34 4.35 4.37 4.38 5.1 5.1.1 5.2 5.3 5.4 5.7 5.8 5.9	Reach lateral from vehicle centerline Ground clearance, mast Ground clearance, centre of wheelbase Aisle width with pallet 1000 x 1200, crosswise Aisle width for pallet 800 x 1200, lenghtwise Transfer aisle Turning radius Length incl reach legs Distance to swivelling-fork pivot Travel speed, with/without load Travel speed with/without load Lowering speed, with/without load Lowering speed, with/without load Reach speed, with/without load Gradient, with/without load Max gradeability, with / without load, 5 min rating Acceleration time 0-10 m, with/without load	b8 m1 m2 Ast Ast 0 Wa	mm km/h km/h	2630 2830 1430 + x 9,5 / 12,0 0,045 / 0,07 0,052 / 0,055
	4.30 4.31 4.32 4.33 4.34 4.35 4.37 4.38 5.1 5.1.1 5.2 5.3 5.4 5.7 5.8 5.9 5.10	Reach lateral from vehicle centerline Ground clearance, mast Ground clearance, centre of wheelbase Aisle width with pallet 1000 x 1200, crosswise Aisle width for pallet 800 x 1200, lenghtwise Transfer aisle Turning radius Length incl reach legs Distance to swivelling-fork pivot Travel speed, with/without load Travel speed with/without load Lowering speed, with/without load Lowering speed, with / without load Reach speed, with / without load Gradient, with/without load Max gradeability, with / without load, 5 min rating	b8 m1 m2 Ast Ast 0 Wa	mm km/h km/h	2630 2830 1430 + x 9,5 / 12,0 0,045 / 0,07 0,052 / 0,055
	4.30 4.31 4.32 4.33 4.34 4.35 4.37 4.38 5.1 5.1.1 5.2 5.3 5.4 5.7 5.8 5.9	Reach lateral from vehicle centerline Ground clearance, mast Ground clearance, centre of wheelbase Aisle width with pallet 1000 x 1200, crosswise Aisle width for pallet 800 x 1200, lenghtwise Transfer aisle Turning radius Length incl reach legs Distance to swivelling-fork pivot Travel speed, with/without load Travel speed with/without load Lowering speed, with/without load Lowering speed, with/without load Reach speed, with/without load Gradient, with/without load Max gradeability, with / without load, 5 min rating Acceleration time 0-10 m, with/without load	b8 m1 m2 Ast Ast 0 Wa	mm km/h km/h	2630 2830 1430 + x 9,5 / 12,0 0,045 / 0,07 0,052 / 0,055
	4.30 4.31 4.32 4.33 4.34 4.35 4.37 4.38 5.1 5.1.1 5.2 5.3 5.4 5.7 5.8 5.9 5.10	Reach lateral from vehicle centerline Ground clearance, mast Ground clearance, centre of wheelbase Aisle width with pallet 1000 x 1200, crosswise Aisle width for pallet 800 x 1200, lenghtwise Transfer aisle Turning radius Length incl reach legs Distance to swivelling-fork pivot Travel speed, with/without load Travel speed with/without load Lowering speed, with/without load Reach speed, with/without load Reach speed, with/without load Gradient, with/without load Max gradeability, with / without load, 5 min rating Acceleration time 0-10 m, with/without load Service brake: electric, hydraulic	b8 m1 m2 Ast Ast 0 Wa	mm km/h km/h	2630 2830 1430 + x 9,5 / 12,0 0,045 / 0,07 0,052 / 0,055 7 / 15
	4.30 4.31 4.32 4.33 4.34 4.35 4.37 4.38 5.1 5.1.1 5.2 5.3 5.4 5.7 5.8 5.9 5.10 5.10.1	Reach lateral from vehicle centerline Ground clearance, mast Ground clearance, centre of wheelbase Aisle width with pallet 1000 x 1200, crosswise Aisle width for pallet 800 x 1200, lenghtwise Transfer aisle Turning radius Length incl reach legs Distance to swivelling-fork pivot Travel speed, with/without load Travel speed with/without load Lowering speed, with/without load Lowering speed, with/without load Reach speed, with/ without load Gradient, with/without load Max gradeability, with / without load, 5 min rating Acceleration time 0-10 m, with/without load Service brake: electric, hydraulic	b8 m1 m2 Ast Ast 0 Wa	mm km/h km/h	2630 2830 1430 + x 9,5 / 12,0 0,045 / 0,07 0,052 / 0,055 7 / 15 Electric Electric
D	4.30 4.31 4.32 4.33 4.34 4.35 4.37 4.38 5.1 5.1,1 5.2 5.3 5.4 5.7 5.8 5.9 5.10 5.10,1 6.1 6.1	Reach lateral from vehicle centerline Ground clearance, mast Ground clearance, centre of wheelbase Aisle width with pallet 1000 x 1200, crosswise Aisle width for pallet 800 x 1200, lenghtwise Transfer aisle Turning radius Length incl reach legs Distance to swivelling-fork pivot Travel speed, with/without load Travel speed with/without load Lowering speed, with/without load Reach speed, with/without load Gradient, with/without load Gradient, with/without load Max gradeability, with / without load Service brake: electric, hydraulic Parking brake: electric, hydraulic Drive motor, rating \$2.60 min Lift motor	b8 m1 m2 Ast Ast O Wa 17 O	mm km/h km/h	2630 2830 1430 + x 9,5 / 12,0 0,045 / 0,07 0,052 / 0,055 7 / 15 Electric Electric 2,2 AC
D = = = =	4.30 4.31 4.32 4.33 4.34 4.35 4.37 4.38 5.1 5.1.1 5.2 5.3 5.4 5.7 5.8 5.9 5.10 5.10.1 6.1 6.2 6.3	Reach lateral from vehicle centerline Ground clearance, mast Ground clearance, centre of wheelbase Aisle width with pallet 1000 x 1200, crosswise Aisle width for pallet 800 x 1200, lenghtwise Transfer aisle Turning radius Length incl reach legs Distance to swivelling-fork pivot Travel speed, with/without load Travel speed with/without load Lowering speed, with/without load Reach speed, with/without load Gradient, with/without load Max gradeability, with / without load, 5 min rating Acceleration time 0-10 m, with/without load Service brake: electric, hydraulic Parking brake: electric, hydraulic Drive motor, rating \$2 60 min Lift motor Battery according to DIN 43531/35/36	b8 m1 m2 Ast Ast 0 Wa	mm km/h km/h	2630 2830 1430 + x 9,5 / 12,0 0,045 / 0,07 0,052 / 0,055 7 / 15 Electric Electric 2,2 AC 2,2
שׁבְּיבֶּי	4.30 4.31 4.32 4.33 4.34 4.35 4.37 4.38 5.1 5.1.1 5.2 5.3 5.4 5.7 5.8 5.9 5.10 6.1 6.1 6.2 6.3 6.4	Reach lateral from vehicle centerline Ground clearance, mast Ground clearance, centre of wheelbase Aisle width with pallet 1000 x 1200, crosswise Aisle width for pallet 800 x 1200, lenghtwise Transfer aisle Turning radius Length incl reach legs Distance to swivelling-fork pivot Travel speed, with/without load Travel speed with/without load Lowering speed, with/without load Covering speed, with/without load Reach speed, with / without load Gradient, with/without load Max gradeability, with / without load, 5 min rating Acceleration time 0-10 m, with/without load Service brake: electric, hydraulic Parking brake: electric, hydraulic Drive motor, rating S2 60 min Lift motor Battery according to DIN 43531/35/36 Battery voltage / Battery capacity	b8 m1 m2 Ast Ast O Wa 17 O	mm km/h km/h	2630 2830 1430 + x 9,5 / 12,0 0,045 / 0,07 0,052 / 0,055 7 / 15 Electric Electric 2,2 AC 2,2 24 / 300-600
פווסו	4.30 4.31 4.32 4.33 4.34 4.35 4.37 4.38 5.1 5.1,1 5.2 5.3 5.4 5.7 5.8 5.9 5.10 5.10.1 6.1 6.1 6.2 6.3 6.4 6.5	Reach lateral from vehicle centerline Ground clearance, mast Ground clearance, centre of wheelbase Aisle width with pallet 1000 x 1200, crosswise Aisle width for pallet 800 x 1200, lenghtwise Transfer aisle Turning radius Length incl reach legs Distance to swivelling-fork pivot Travel speed, with/without load Travel speed with/without load Lowering speed, with/without load Reach speed, with/without load Gradient, with/without load Max gradeability, with / without load, 5 min rating Acceleration time 0-10 m, with/without load Service brake: electric, hydraulic Parking brake: electric, hydraulic Drive motor, rating S2 60 min Lift motor Battery voltage / Battery capacity Battery weight	b8 m1 m2 Ast Ast O Wa 17 O	mm km/h km/h	2630 2830 1430 + x 9,5 / 12,0 0,045 / 0,07 0,052 / 0,055 7 / 15 Electric Electric 2,2 AC 2,2
ם בולום	4.30 4.31 4.32 4.33 4.34 4.35 4.37 4.38 5.1 5.1 5.2 5.3 5.4 5.7 5.8 5.9 5.10 5.10.1 6.1 6.2 6.3 6.4 6.5 6.6	Reach lateral from vehicle centerline Ground clearance, mast Ground clearance, centre of wheelbase Aisle width with pallet 1000 x 1200, crosswise Aisle width for pallet 800 x 1200, lenghtwise Transfer aisle Turning radius Length incl reach legs Distance to swivelling-fork pivot Travel speed, with/without load Travel speed with/without load Lowering speed, with/without load Lowering speed, with/without load Reach speed, with / without load Gradient, with/without load Max gradeability, with / without load, 5 min rating Acceleration time 0-10 m, with/without load Service brake: electric, hydraulic Parking brake: electric, hydraulic Drive motor, rating S2 60 min Lift motor Battery according to DIN 43531/35/36 Battery voltage / Battery capacity Battery weight Power consumption according to VDI cycle	b8 m1 m2 Ast Ast O Wa 17 O	mm km/h km/h	2630 2830 1430 + x 9,5 / 12,0 0,045 / 0,07 0,052 / 0,055 7 / 15 Electric Electric Electric 2,2 AC 2,2 24 / 300-600 460*
D E D E D E D E D E D E D E D E D E D E	4.30 4.31 4.32 4.33 4.34 4.35 4.37 4.38 5.11 5.2 5.3 5.4 5.7 5.8 5.9 5.10.1 6.1 6.1 6.2 6.3 6.4 6.5 6.6 8.1	Reach lateral from vehicle centerline Ground clearance, mast Ground clearance, centre of wheelbase Aisle width with pallet 1000 x 1200, crosswise Aisle width for pallet 800 x 1200, lenghtwise Transfer aisle Turning radius Length incl reach legs Distance to swivelling-fork pivot Travel speed, with/without load Travel speed with/without load Lowering speed, with/without load Lowering speed, with/without load Gradient, with/without load Max gradeability, with / without load, 5 min rating Acceleration time 0-10 m, with/without load Service brake: electric, hydraulic Parking brake: electric, hydraulic Drive motor, rating S2 60 min Lift motor Battery according to DIN 43531/35/36 Battery voltage / Battery capacity Battery weight Power consumption according to VDI cycle Speed regulation	b8 m1 m2 Ast Ast O Wa 17 O	mm km/h km/h	2630 2830 1430 + x 9,5 / 12,0 0,045 / 0,07 0,052 / 0,055 7 / 15 Electric Electric 2,2 AC 2,2 24 / 300-600 460* AC Transistor
	4.30 4.31 4.32 4.33 4.34 4.35 4.37 4.38 5.1 5.1 5.2 5.3 5.4 5.7 5.8 6.9 5.10 6.1 6.2 6.3 6.4 6.5 6.6 8.1 10.1	Reach lateral from vehicle centerline Ground clearance, mast Ground clearance, centre of wheelbase Aisle width with pallet 1000 x 1200, crosswise Aisle width for pallet 800 x 1200, lenghtwise Transfer aisle Turning radius Length incl reach legs Distance to swivelling-fork pivot Travel speed, with/without load Travel speed with/without load Lowering speed, with/without load Lowering speed, with/without load Gradient, with/without load Max gradeability, with / without load, 5 min rating Acceleration time 0-10 m, with/without load Service brake: electric, hydraulic Parking brake: electric, hydraulic Drive motor, rating S2 60 min Lift motor Battery according to DIN 43531/35/36 Battery voltage / Battery capacity Battery weight Power consumption according to VDI cycle Speed regulation Operating pressure attachments	b8 m1 m2 Ast Ast O Wa 17 O	mm km/h km/h	2630 2830 1430 + x 9,5 / 12,0 0,045 / 0,07 0,052 / 0,055 7 / 15 Electric Electric Electric 2,2 AC 2,2 24 / 300-600 460*
data engine	4.30 4.31 4.32 4.33 4.34 4.35 4.37 4.38 5.11 5.2 5.3 5.4 5.7 5.8 5.9 5.10.1 6.1 6.1 6.2 6.3 6.4 6.5 6.6 8.1	Reach lateral from vehicle centerline Ground clearance, mast Ground clearance, centre of wheelbase Aisle width with pallet 1000 x 1200, crosswise Aisle width for pallet 800 x 1200, lenghtwise Transfer aisle Turning radius Length incl reach legs Distance to swivelling-fork pivot Travel speed, with/without load Travel speed with/without load Lowering speed, with/without load Lowering speed, with/without load Gradient, with/without load Max gradeability, with / without load, 5 min rating Acceleration time 0-10 m, with/without load Service brake: electric, hydraulic Parking brake: electric, hydraulic Drive motor, rating S2 60 min Lift motor Battery according to DIN 43531/35/36 Battery voltage / Battery capacity Battery weight Power consumption according to VDI cycle Speed regulation	b8 m1 m2 Ast Ast O Wa 17 O	mm km/h km/h	2630 2830 1430 + x 9,5 / 12,0 0,045 / 0,07 0,052 / 0,055 7 / 15 Electric Electric 2,2 AC 2,2 24 / 300-600 460* AC Transistor

^{*} Varies according to battery size