

ACTUATOR LA35

Features:

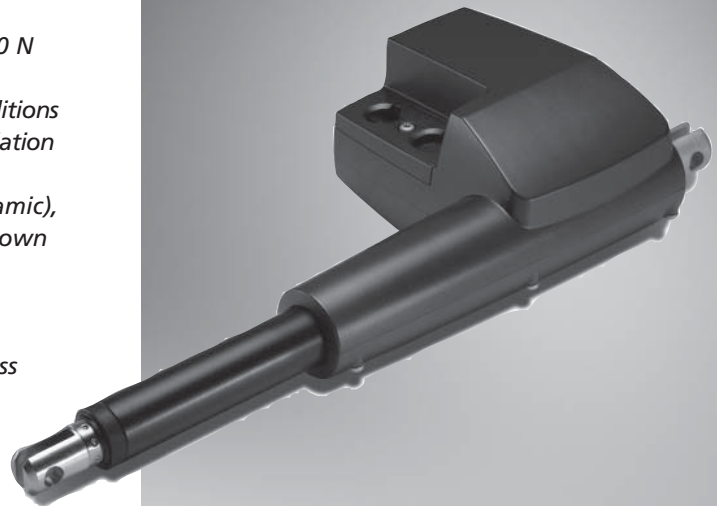
- 12 / 24V DC permanent magnet motor
- Thrust up to 6000 N in push and up to 4000 N in pull
- Heavy duty aluminum housing for harsh conditions
- Elegant and compact design with small installation dimensions
- Protection class: IP66 for outdoor use (dynamic), furthermore the actuator can be washed down by a high pressure cleaner (IP69K – static)
- Integrated brake, high self-lock ability
- Built-in limit switches
- Strong wear and corrosion resistant stainless steel inner tube
- Noise level 48dB(A); measuring method DSI/EN ISO 3746, actuator not loaded

Options:

- Hall effect sensor
- Potential free signal switches for detecting inner and outer position
- Long life absolute feedback
- Easy to use interface – with integrated power electronics for direct PLC connection
- Large variety of back fixtures and piston rod eyes
- Exchangeable cables in different lengths
- Safety nut in push

Usage:

- Duty cycle: Max 10% or 2 minutes continuous use followed by 18 minutes not in use, at an ambient temperature of 25° C
- Ambient temperature -25°C to +60°C



TECHLINE™
IMPROVING FLEXIBILITY

The LA35 is a member of the TECHLINE™ Family it is characterised by its robust design allowing the actuator to be used in harsh conditions. The LA35 is designed to meet the challenge, based on the philosophy that it must be able to operate under extreme conditions. The actuator is ideal for mobile "off-highway" equipment such as agricultural, forestry and construction machines. Furthermore the LA35 actuator is a very quiet and powerful actuator designed for a variety of applications both indoor and outdoor.

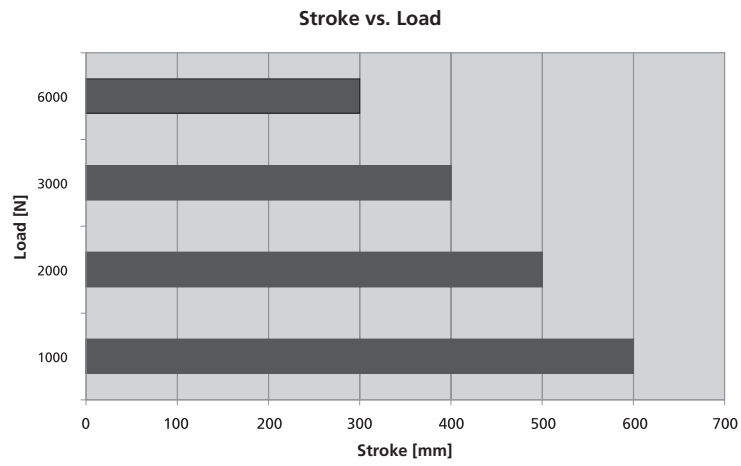
LA35 with 12V motor

Order number	Push max. (N)	Pull max. (N)	Self-lock min. (N) Push	Self-lock min. (N) Pull	Pitch (mm/spindle rev.)	Typical speed (mm/s)		Standard stroke lengths (mm) in steps of 50mm	Typical amp.	
						No load	Full load		No load	Full load
3510xx.	6000	4000	6000	4000	3	4.7	3.3	100-300	1.6	7.5
3520xx.	4000	4000	1500	1500	5	7.7	5.3	100-400	1.7	7.7
3521xx. push brake	4000	4000	2500	1500	5	7.2	5.4	100-400	3.2	7.8
3522xx. pull brake	4000	4000	1500	2500	5	6.9	5.9	100-400	4.2	8.4
3530xx.	1500	1500	750	750	9	14.0	12.3	100-500	1.7	5.9
3531xx. push brake	1500	1500	1000	750	9	14.2	12.6	100-500	2.9	5.5
3532xx. pull brake	1500	1500	750	1000	9	14.4	11.2	100-500	3.0	5.4
3540xx.	1000	1000	750	750	12	19.0	17.0	100-600	1.9	5.3
3541xx. push brake	1000	1000	1000	750	12	17.9	16.9	100-600	5.5	5.5
3542xx. pull brake	1000	1000	750	900	12	16.9	15.4	100-600	5.6	5.6

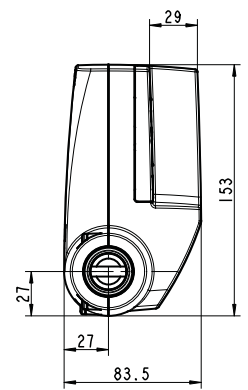
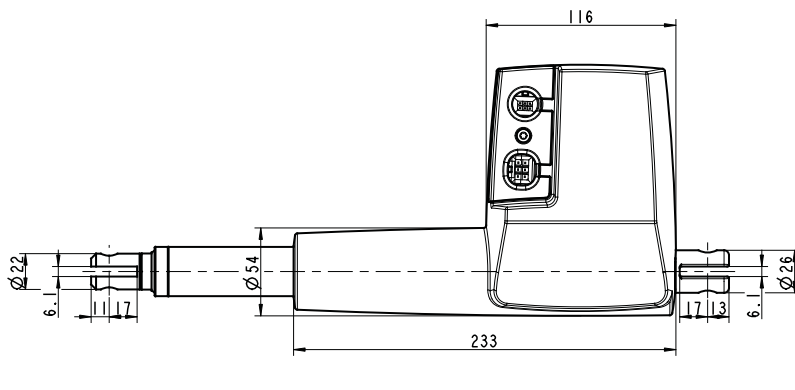
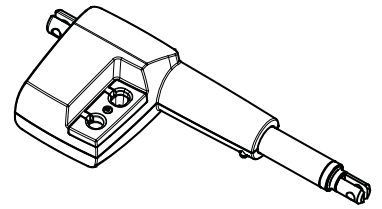
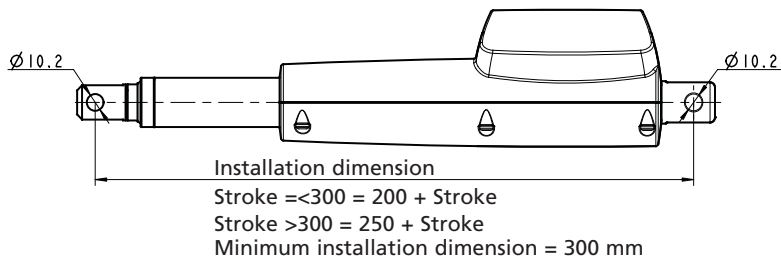
LA35 with 24V motor

Order number	Push max. (N)	Pull max. (N)	Self-lock min. (N) Push	Self-lock min. (N) Pull	Pitch (mm/spindle rev.)	Typical speed (mm/s)		Standard stroke lengths (mm) in steps of 50mm	Typical amp.	
						No load	Full load		No load	Full load
3510xx.	6000	4000	6000	4000	3	5.1	4.0	100-300	0.9	4.2
3520xx.	4000	4000	1500	1500	5	8.3	6.6	100-400	0.8	4.8
3521xx. push brake	4000	4000	2500	1500	5	8.0	6.7	100-400	1.4	4.3
3522xx. pull brake	4000	4000	1500	2500	5	8.0	7.0	100-400	2.1	4.6
3530xx.	1500	1500	750	750	9	15.0	13.9	100-500	0.6	2.6
3531xx. push brake	1500	1500	1000	750	9	14.5	14.1	100-500	1.2	2.9
3532xx. pull brake	1500	1500	750	1000	9	14.7	13.9	100-500	1.5	3.0
3540xx.	1000	1000	750	750	12	19.5	18.9	100-600	0.9	2.8
3541xx. push brake	1000	1000	1000	750	12	18.5	18.7	100-600	1.3	2.8
3542xx. pull brake	1000	1000	750	900	12	18.4	18.6	100-600	1.5	2.9

Stroke length v's load:



Dimensions:



Drawing no.: 0359012

Back fixtures:



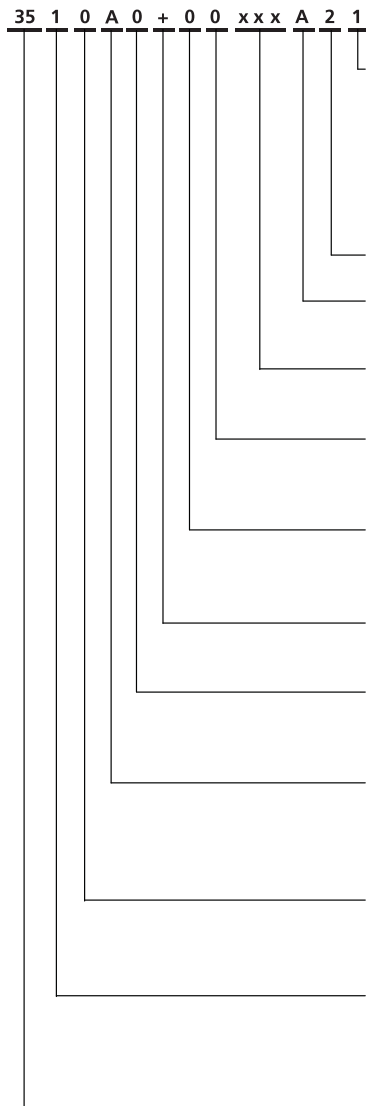
Type 1, 3, A



Type 2, 4, B

LA35

Ordering example:



Cable:

- 0 = No cable
- 1 = 1.5 m power cable (0367002 - 1500)
- 2 = 5.0 m power cable (0367002 - 5000)
- 3 = 0.2 m power cable with AMP connector (0367006)
- 4 = 1.5 m power and 1.5 signal (0367002 - 1500/0367003 - 1500)
- 5 = 5.0 m power and 5.0 m signal (0367002 - 5000/0367003 - 5000)
- 6 = 1.5 m Y-cable power and signal in one (0367020)

IP-degree:

- 2 = IP66 Dynamic / IP69K Static

Motor type:

- A = 12 V DC
- B = 24 V DC

Stroke length:

- XXX = mm Acme spindle:
100, 150....600 mm

Feedback:

- 0 = Standard (No feedback)
- H = Hall signal
- A = Analog feedback

PCB Options:

- 0 = None
- 1 = Potential free endstop signals
- 2 = PLC option

Safety Options:

- + = None
- 1 = Safety Nut

Piston rod eye:

- 0 = Coated steel with $\varnothing 10.2$ hole for 10 mm pin- 0351006
- 1 = Stainless Steel (AISI:303) with $\varnothing 10.2$ hole for 10 mm pin-0321038
- 2 = Coated steel with $\varnothing 12.9$ hole for 1/2 inch pin- 0351008

Back fixture:

- A = Stainless steel (AISI 304), with 10.2 mm hole for 10 mm pin
- B = Stainless steel (AISI 304) turned 90°, with 10.2 mm hole for 10 mm pin
- C = Stainless steel (AISI 304) with $\varnothing 12.9$ mm for 1/2 inch pin
- D = Stainless steel (AISI 304) turned 90° with $\varnothing 12.9$ hole for 1/2 inch pin"

Brake:

- 0 = None
- 1 = Brake Push
- 2 = Brake pull

Spindle type:

- 1 = 3 mm - 6000 N
- 2 = 5 mm - 4000 N
- 3 = 9 mm - 1500 N
- 4 = 12 mm - 1000 N

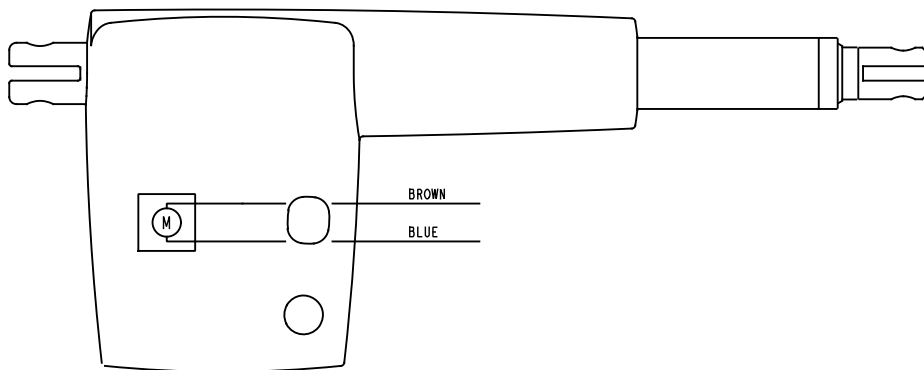
Actuator type:

- 35 = LA35

Connection diagrams:

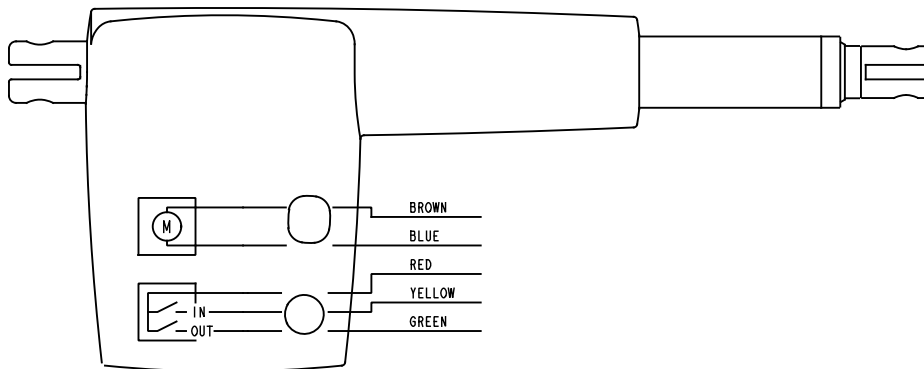
Basic actuator

Fig.1 : 35xxxxx00xxxxx



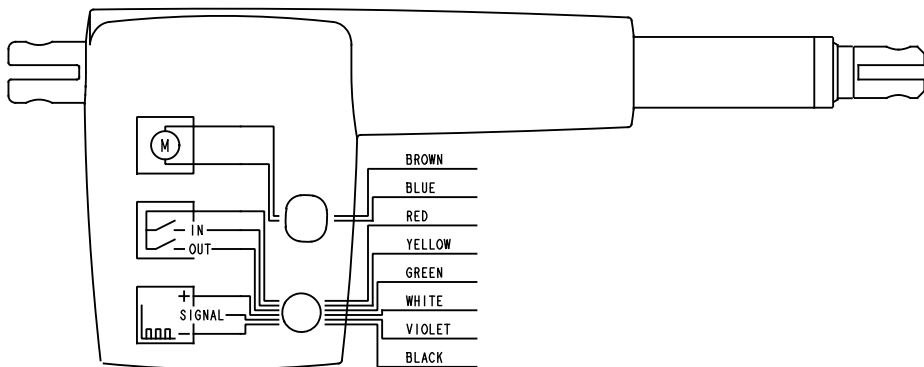
Actuator with potential free switches

Fig.2 : 35xxxxx10xxxxx



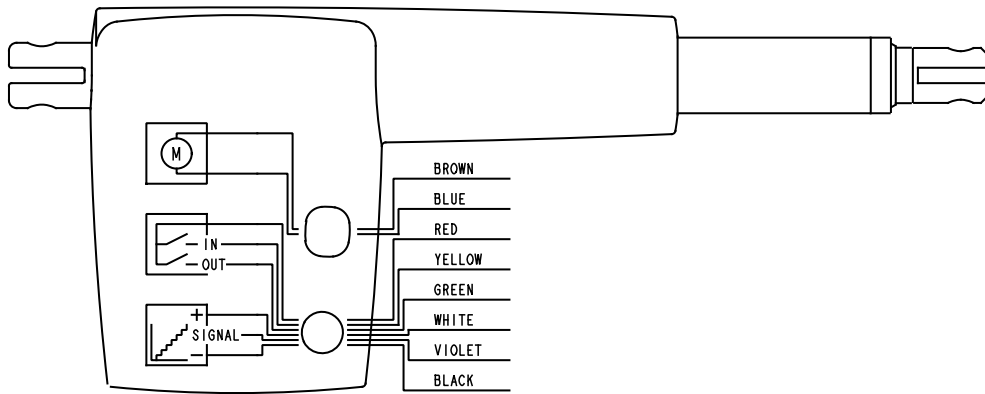
Actuator with potential free switches and relative positioning

Fig.3 : 35xxxxx0Hxxxxx & 35xxxxx1Hxxxxx



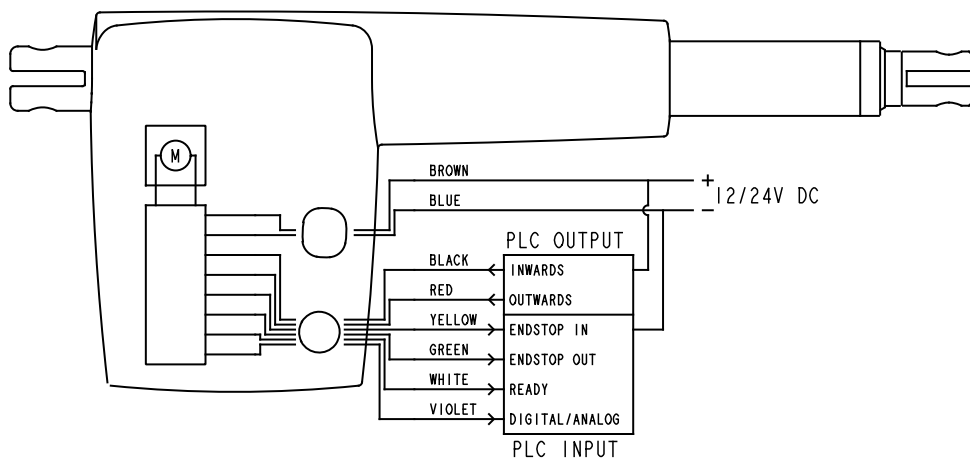
Actuator with potential free switches and absolute positioning

Fig.4 : 35xxxxx0Axxxxx & 35xxxxx1Axxxxx



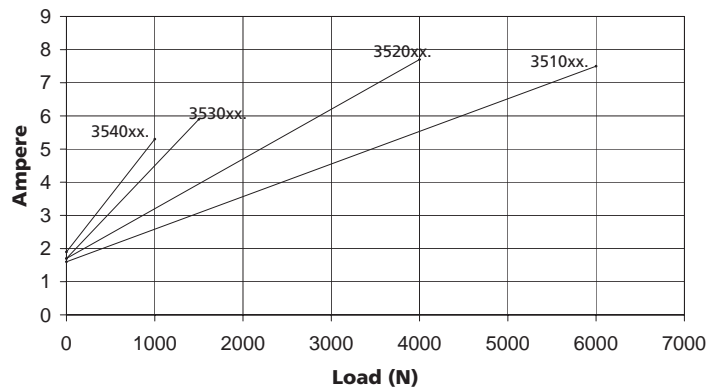
Actuator with PLC-option

Fig.5 : 35xxxxx20xxxxx & 35xxxxx2Hxxxxx & 35xxxxx2Axxxxx

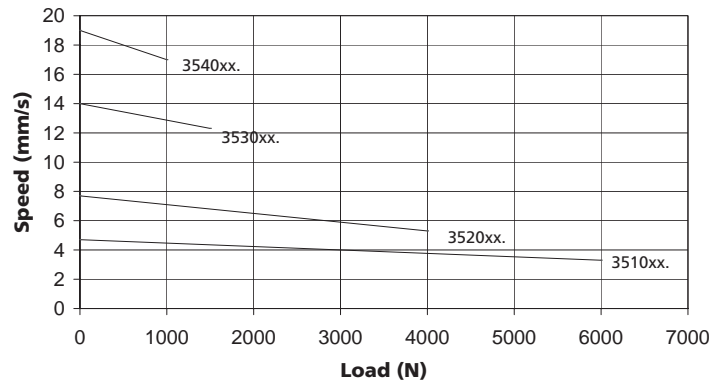


Speed and current curves:

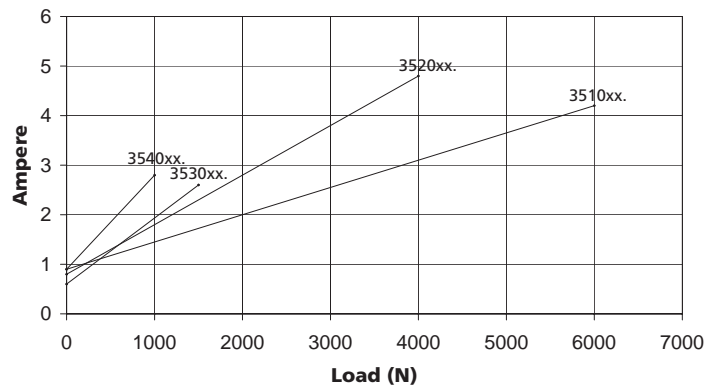
LA35 12V Motor current v's load



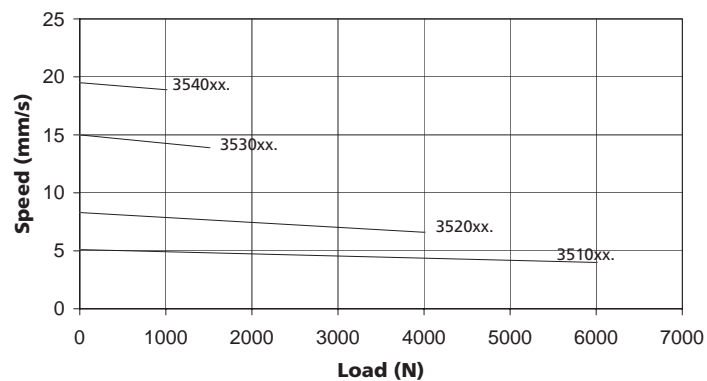
LA35 12V Motor speed v's load



LA35 24V Motor current v's load



LA35 24V Motor speed v's load



The LA35 is tested according to the following standards:

Test	Specification	Comment
Cold test	EN60068-2-1 (Ab) EN60068-2-1 (Ad)	Storage at low temperature: -40°C Operating at low temperature: -30°C
Dry heat	EN60068-2-2 (Bb) EN60068-2-2 (Bd)	Storage at high temperature: +90°C Operating at high temperature: +60°C
Change of temperature	EN60068-2-14 (Na) EN60068-2-14 (Nb)	Rapid change in temperature: +100°C to -30°C Controlled change of temperature: +70°C to -30°C
Damp heat	EN60068-2-30 (Db) EN60068-2-3 (Ca)	Damp heat, Cyclic: Relative humidity 93 - 98 %, High +55°C, low +25°C Damp heat, Steady: Relative humidity 93 - 95 %, +40°C ± 2°C
Salt spray	EN60068-2-52 (Kb)	Salt spray test: 500 hours incl. spraying periods + humidity storage
Degrees of protection	EN60529-IP66 DIN40050 -IP69K DUNK test	IP6X – Dust: Dust-tight IPX6 – Water: No ingress of water causing damage Warmed up to 115°C for 20 hours, cooled down in 20°C saltwater
Chemicals	BS7691/96 hours	Resistant against: diesel, hydraulic oil, ethylene glycol, urea nitrogen, liquid lime, NPK fertilizers
Free fall		Free fall from all sides: 0.4 meters on to steel
Vibration	EN60068-2-36 (Fdb) EN60068-2-6 (Fc)	Random vibration: Short time 6.29 g RMS (Rod Mean Square) Long time 7.21 g RMS Sinus vibration: Freq. 5 - 25 Hz, amplitude = 3.3 mm pp Freq. 25 - 200 Hz, acceleration 4 g
Bump	EN60068-2-29 (Eb)	Bump test: Level 40 g for 6 milliseconds. 3,000 bumps
Shock	EN60068-2-27 (Ea)	Shock test: Level 100 g for 6 milliseconds
Electromagnetic fields	ISO 11452-2 1m distance EN 61000-4-3	30 V/m, 80%AM, 1 kHz 20 - 2.700 Mhz 10 V/m, 80% AM, 1kHz 80 - 1000 Mh 3 V/m, 80% AM, 1 kHz 1.4 - 2.0 GHz 1 V/m, 80% AM 2.0 - 2.7 GHz
Radio frequency common mode	IEC 61000-4-6	10 Vrms, 80% AM 0.15 - 80 MHz
Conducted transients	ISO 7637-2:2004	Pulses 1, 2, 3a, 3b, 4, 5
ESD	ISO 10605 IEC 61000-4-2	8 kV contact discharge 15 kV air discharge 330 pF + 2.000 Ω ± 6 kV contact discharge ± 8 kV air discharge
Burst transients	IEC 61000-4-4	± 2 kV
Surge transients	IEC 61000-4-5	± 2 kV (42Ω output)
Narrow Band 1m distance	ISO 13766	52 - 42 dBμ V/m, 30 - 75 MHz 42 - 53 dBμ V/m, 75 - 400 MHz 53 dBμ V/m, 400 - 1000 MHz
Broad Band 1m distance	ISO 13766	62 - 52 dBμ V/m, 30 - 75 MHz 52 - 63 dBμ V/m, 75 - 400 MHz 63 dBμ V/m, 400 - 1000 MHz
Radiated emission 10 m distance	CISPR 22	30 dBμ V/m, 30 - 230 MHz 37 dBμ V/m, 230 - 1000 MHz
Conducted emission DC port	CISPR 22	79 dBμ V (QP), 0.15 - 0.5 MHz 66 dBμ V (AV), 0.15 - 0.5 MHz 73 dBμ V (QP), 0.5 - 30 MHz 60 dBμ V (AV), 0.5 - 30 MHz

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