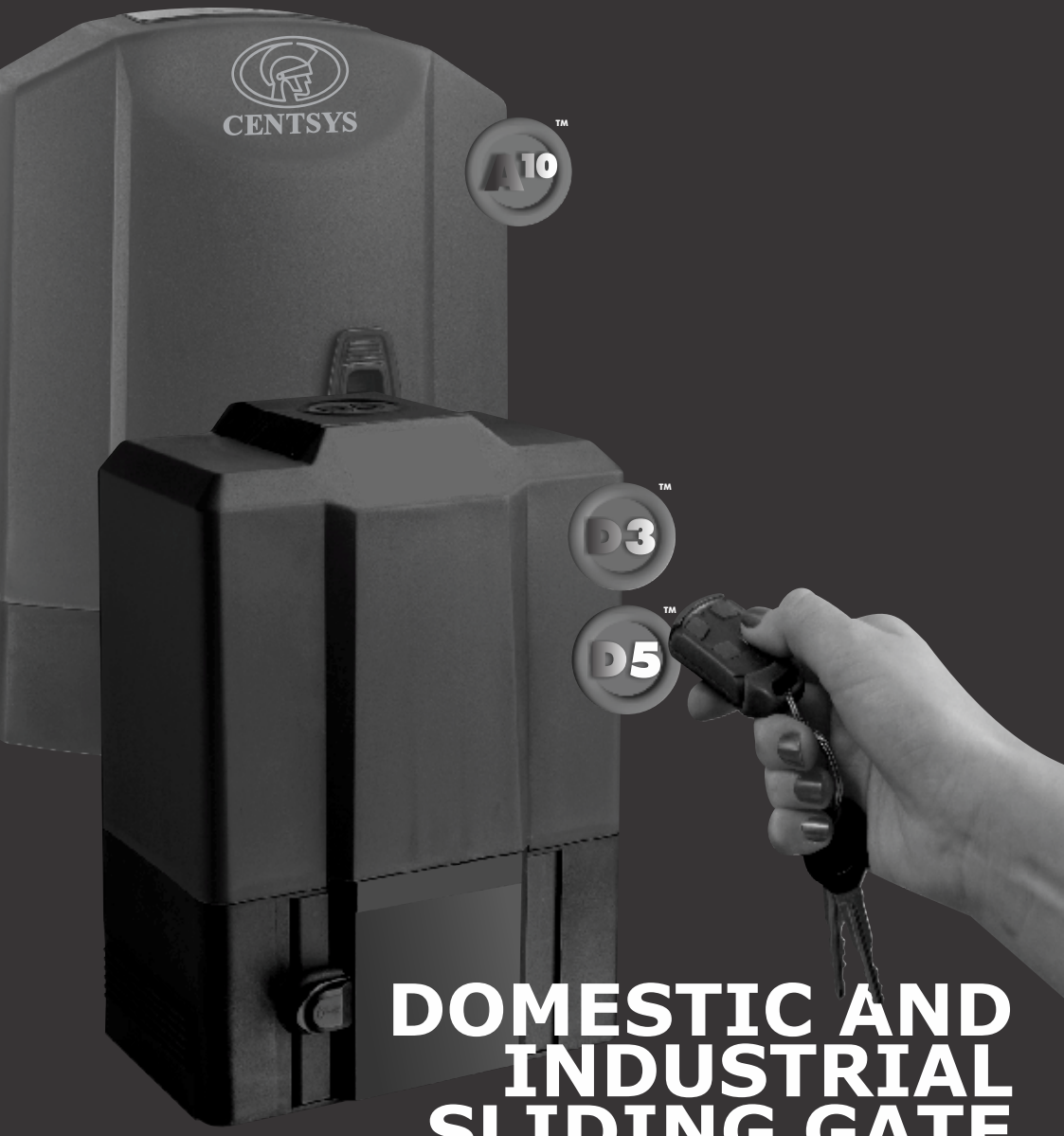
D3, D5 and A10 user guide

CENTSYS



DOMESTIC AND INDUSTRIAL SLIDING GATE OPERATORS

Product Guarantee D3 and D5

The CENTSYS D3 and D5 Version 3 sliding gate operators are manufactured with extreme care, thoroughly inspected and tested. The operators are only guaranteed against faulty materials or workmanship for a period of 24 months from the invoice date of the operator, or 26 months from the manufacturing date (as shown on the serial number label of the operator), whichever expires first.

The guarantee will cover the repair or replacement at our discretion of such faulty materials or parts free of charge, provided that the equipment is returned to our workshop.

The guarantee only applies to the gearbox, motor, controller and other components specific to the operator. Peripheral components such as the charger, battery and other ancillary devices connected to the operator carry the guarantee provided for these components.

This guarantee will not apply to any operator which:

a. Has been subject to misuse or which has been used for any purpose other than designed for by CENTSYS.
b. Has not been installed in accordance with the installation instructions provided.
c. Has damage caused as a result of handling during transit, atmospheric conditions, insect infestation, power surges or other forces outside of our control.
d. Has been repaired by any workshop and/or person NOT previously authorised by CENTSYS.
e. Has been repaired with components not previously tested, passed or authorised by CENTSYS.

Product Guarantee A10

All CENTSYS products are manufactured with extreme care, thoroughly inspected and tested. The products are only guaranteed against faulty materials or workmanship for a period of 12 months from the invoice date of the product, or 14 months from the manufacturing date (as shown on the serial number label of the operator), whichever expires first.

The guarantee will cover the repair or replacement at our discretion of such faulty materials or parts free of charge provided that the equipment is returned to our workshop.

This guarantee will not apply to any equipment which:

a. Has been subject to misuse or which has been used for any purpose other than designed for by the manufacturers.
b. Has not been installed in accordance with the installation instructions provided.
c. Has damage caused as a result of handling during transit, atmospheric conditions, insect infestation, power surges or other forces outside our control.
d. Has been repaired by any workshop and/or person NOT previously authorised by CENTSYS.
e. Has been repaired with components not previously tested, passed or authorised by CENTSYS.

Company Profile

Centurion Systems (Pty) Ltd, South Africa, has been manufacturing automatic gate systems since 1986, and is committed to providing reliable, cost effective solutions in the field of gate and access automation.

We offer a diverse range of products including gate motors, GSM-based products, garage door motors, remote controls, keypads, traffic barriers, proximity access control and intercom systems.

Our products are developed by an in-house team of talented engineers that are constantly researching new and innovative technologies to improve our existing products and expand our product range.

Our production facility in Johannesburg is ISO:9001 quality assurance certified, and all our products are manufactured to the highest level of quality with a 100% test to specification.

Through a team of dedicated technicians and sales personnel, together with a fully fledged in-house training facility, we are committed to providing unmatched service to our customers and support for our products.

A worldwide network of distributors and installers ensure that our products remain The Automatic Choice in access automation .

Further information is available on our website www.centsys.com

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Introduction

This guide highlights the features and operation of CENTSYS SLIDING GATE OPERATORS to ensure that **you**, the user, get the most from your system. Basic maintenance is also described, but in the event of product malfunction, you are advised to contact your installer, or your local CENTSYS outlet.

Models covered

- CENTSYS D3 sliding gate operator
- CENTSYS D5 sliding gate operator
- CENTSYS A10 sliding gate operator

Main features

D3 and D5

A key feature of these products is the chassis/gearbox which is moulded from a high-tech engineering polymer. The user benefits from this material in terms of its aesthetics, and corrosion-free properties. Due to the self-locking action of the internal gearset, the unit is resistant to forced entry.

An optional theft-resistant cage is available to give additional peace of mind.

A revolutionary aspect of the CENTSYS range of operators is the limit switch mechanism. Mounted internally, and therefore tamper proof, the limit switch monitors the speed and location of the gate, ensuring reliable and safe anti-crushing protection and accurate position control.

Precise control of the gate stopping position is achieved by a high resolution encoder wheel and opto-electronic sensor built into the unit.

The electronic controller has many advanced features including variable sensitivity collision detection, adjustable delay Autoclose, pedestrian opening, etc.

Advanced lightning protection is built into the controller as standard. On the D3 and D5 domestic models, a 12V battery is the primary power source, thus providing a limited number of operations in the event of a mains power failure.

This battery is normally charged by an internal 220V* charger. For sites where a 220V mains supply is unavailable, an external 220-12V adaptor, or solar panel is optional (see SOLAR PANEL, page 17 for more details about solar charging).

In multi-user applications the D5 operator is available with a transformer rectifier unit (power-pack), which replaces the battery and charger. The power pack operates directly off a 220V* mains supply only. Battery backup is available by simply adding an externally mounted battery.

*Alternative voltage ratings are available on request

A10

Engineered for industrial and high-duty sites, the A10 is built around a precision-machined, die-cast aluminium chassis/gearbox incorporating a self-locking gearset. Accordingly, the unit is resistant to forced entry.

The integral electronic controller has similar functions to those of the D3 or D5 and uses the same technology in terms of origin and encoder signal inputs. Unique to the A10 is the high speed mode, enabling adjustable opening and closing speeds up to 30 metres per minute.

The key to the A10's outstanding torque and duty cycle lies in the three-phase induction motor and electronic inverter that form the heart of the system. Single-phase 220V AC power is converted into variable frequency three-phase power, allowing electronically controlled soft starting and stopping of the motor.

An optional DC converter is available, containing 12V batteries and UPS type backup circuits. This enables the A10 to continue operating for a limited period in the event of a power failure. Another option is the theft-resistant cage, to give additional peace of mind.

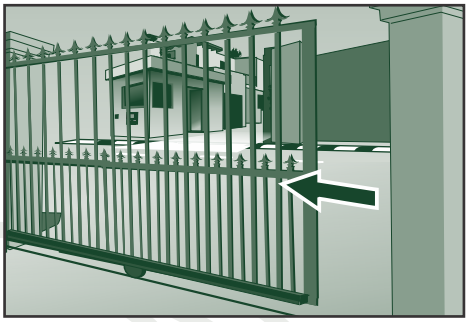
"**Endurance**" and "**Heavy Duty**" derivatives of the A10 are available to suit high duty, and high gate mass sites respectively.

Normal operation

The gates can be opened or closed in the following way:

Radio transmitter

A handheld radio transmitter, carried in the motor car, sends a coded signal to the receiver mounted in the control enclosure to open or close the gate.



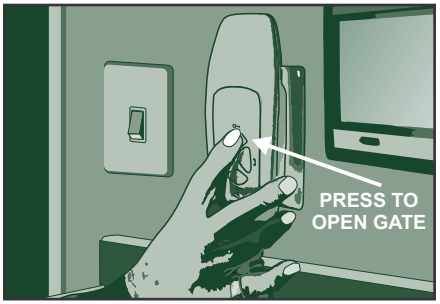
. Press once for approximately one second to initiate gate motion.

If the transmitter is pressed while the gate is either opening or closing the gate will immediately stop. Pressing the button again will cause the gate to reverse.

If the automatic closing feature (see Controller Features and Functions) has been selected and the gate is closing automatically when the transmitter is pressed, the gate will stop and stay in that position. Pressing the button again will cause the gate to re-open. If the gate is opening with the automatic closing facility selected, and the transmitter is then pressed, the gate will stop. The gate will close automatically after the Autoclose delay time.

Intercom pushbutton

Visitor outside gate requests entrance.



Gate opened from intercom pushbutton inside house.

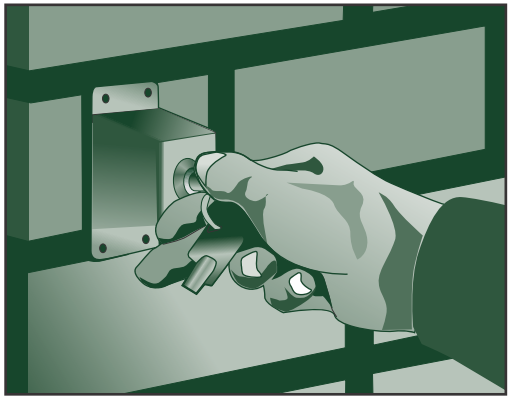
Most automatic gate installations are fitted with an intercom which provides for communication between the house and the gate.

The intercom handset is usually provided with a “Gate" or "Door Release” pushbutton which, when pressed, sends a signal to the gate controller to open the gate.

The sequence of operation of this pushbutton is identical to the radio transmitter described under “Radio Transmitter”.

Pedestrian keyswitch (optional)

The pedestrian keyswitch is fitted to the gate pillar. It’s purpose is to open the gate a limited amount for pedestrians.



- Fit the key into the keyswitch and turn the key clockwise as though starting a motor car.
- Let key spring back to rest position and remove key immediately.

To allow time for removal of the key, there is a five second delay before the gate begins to open. If the courtesy light is connected to the control card it will flash five times, indicating that the signal has been accepted.

The gate will open approximately one metre and then stop. After five seconds the gate will automatically close.

The gate can be held open by keeping the key turned in the keyswitch. As soon as the key is released back to its normal rest position, the gate will close after the five second delay. (The opening distance and the time that the gate remains open can be adjusted to suit. Default values are described above).

If a protection beam has been fitted (refer section “Protection Beams”) and the beam is broken while the gate is closing, the gate will stop. The gate will remain in that position while the beam is broken and only close five seconds after the beam has been cleared.

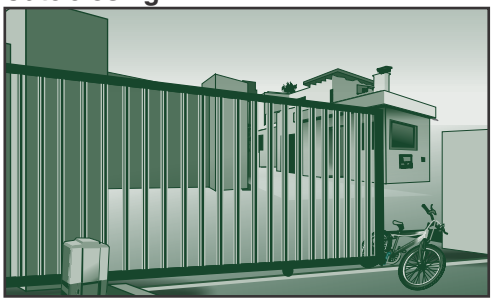
Controller features and functions

Introduction

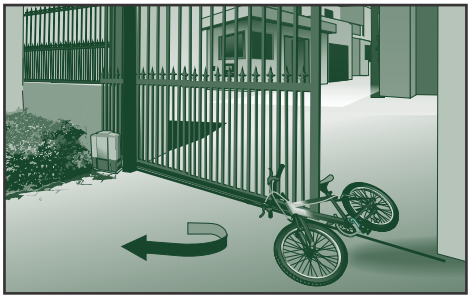
The electronic controller synchronizes the functions of the gate operator. Although the controllers for each operator are marginally different, the functions and safety features which are described below are similar.

Anti-crushing device

Gate closing

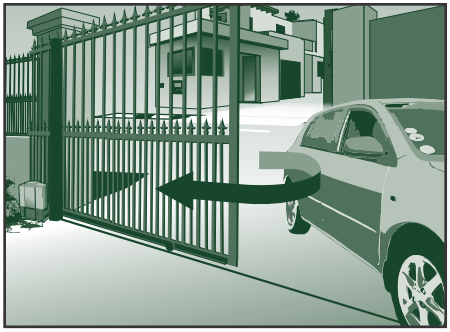


Gate closing into an obstruction



Gate automatically reverses and re-opens

Gate opening



Gate opening

Gate stops on hitting the obstruction

If the gate is obstructed repeatedly four times, either opening or closing, often referred to as **multiple collision**, the gate will stop and will not respond to trigger inputs for two minutes.

After this time the gate will once again respond to command signals. This function is a warning to the user that the obstruction must be removed. (The number of obstrutions before the system will shutdown can be adjusted to suit, default is four).

Automatic alignment

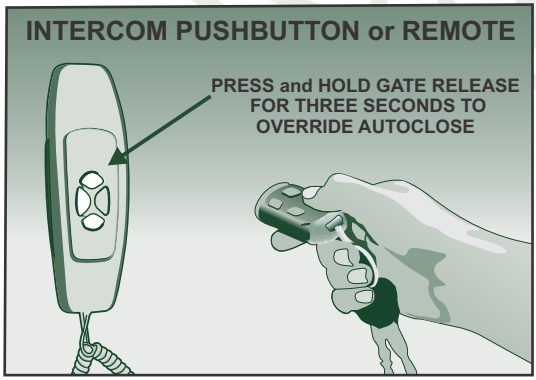
CENTSYS operators are fitted with a manual override mechanism. This is to allow the gate to be operated in the event of a total malfunction of the equipment. It is also required if the mains power has failed in the case of the 220V operators (A10 models). When a command signal is given after the gate has been moved manually and then re-engaged, the gate will drive to either it's fully open, or closed, position. Referred to as automatic alignment, the gate can only be stopped, but not reversed until the alignment cycle is complete. The system will then revert to normal operation.

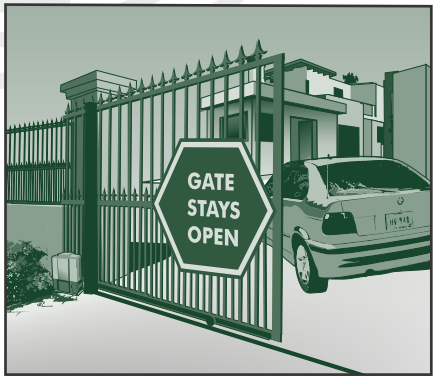
Automatic closing (optional)

The system has the facility to automatically close the gate after it has been opened. The default setting is that this facility is disabled. The time that the gate remains open can be adjusted up to four minutes where the default is 15 seconds.

Autoclose override

The Autoclose function can be temporarily overridden by holding down the remote control pushbutton or intercom gate release when opening the gate, until the gate stops. (Default setting is three seconds. It can be changed to suit.) This confirms that the Autoclose has been overridden. On releasing the button, the gate will continue to open fully, and remain open as long as required.





Closing the gate by using either the transmitter or intercom gate release button resets the system back to Autoclose.

If a gate status indicator (LED) has been fitted inside the house, an additional confirmation of the functioning of the override is provided. The status LED will stop flashing and remain ON when the Autoclose has been overridden.

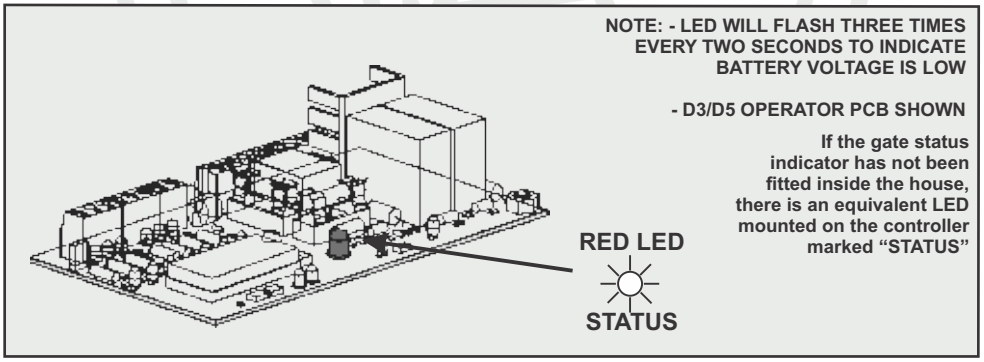
Mains failure detection (D3/D5 only)

Although these systems will continue to operate in the event of a mains power failure due to the built-in battery, it is important to register that there is a problem before the battery is run flat.

The controller (CP80) monitors whether mains voltage (via the charger transformer) is present. If not, the gate status LED, will flash twice every two seconds to indicate mains loss.

Battery low protection (D3/D5 only)

The controller has circuitry that monitors the state of the battery. During a power failure energy is drawn from the battery, but not replaced. To prevent the battery running flat and being damaged, the protection circuitry shuts off the gate system when the battery voltage drops below 10.6V.



Thermal overload (A10 only)

In the event of the A10 operator being used excessively and the duty cycle rating of the unit exceeded, the unit will shut down due to thermal overload in order to protect the system from abuse.

The unit cannot be re-operated until the unit has cooled. To provide indication to the user that this is the cause of the fault the status LED will flash twice every two seconds.

Origin sensor fail (A10 only)

The A10 operator uses an origin switch to ensure it stops in the correct open and closed positions. If this switch fails for any reason, the operator will shut down. To provide indication to the user that there has been an origin sensor failure, the status LED will flash three times every two seconds.

This condition is treated as serious and the unit cannot be activated again until the gate has been moved manually either fully-open or fully-closed, ensuring that the gate magnet has passed the sensor. If the sensor registers correctly, the unit will reset, and can be operated again. If the sensor does not re-register, the unit will remain in the locked state.

⚠ If the system cannot be reset by following the procedure above, it is a clear indication that the SENSOR is faulty or not switching reliably. It is important that the operation of the SENSOR is checked by a qualified technician.

Lightning protection

All CENTSYS controllers have onboard lightning protection. The protection circuitry was designed in conjunction with the CSIR. Provided that the system has been properly earthed the protection will significantly improve the resistance of the system against lightning strikes.

Ancillary equipment

Protection beams (optional, but recommended)

An infrared beam, or underground loop across the gate entrance may be connected to the controller as an additional safety feature. When a motor vehicle activates the loop or beam the following occurs:

- If the gate is closing, it will immediately stop and reopen
- If the transmitter or intercom gate release pushbutton is pressed while the beam is broken, or the loop activated, the gate will remain open. The Autoclose time will restart its countdown

Holiday Lockout (optional)

A keyswitch can be connected to the gate system that will allow the system to be totally immobilised. The keyswitch is mounted with access from the outside of the property. When the keyswitch is OFF, the gate system will shut down and it will not be possible to operate the gate. When the keyswitch is ON, the gate system will operate normally.

This is an added security feature should the property be unattended for an extended length of time.

The Holiday Lockout facility could also be activated using a keypad, radio receiver with a latching output or an ON/OFF toggle switch.

Courtesy light timer (optional)

If a 220V power supply is available at the gate, timed courtesy lights can be connected through the controller. Each time the gate is opened, the lights will switch on for a period of time and switch off. The time can be adjusted up to forty minutes in ten second increments.

A courtesy light pushbutton can be mounted inside the house (typically on the intercom) allowing convenient control of the lights. By pressing the pushbutton.

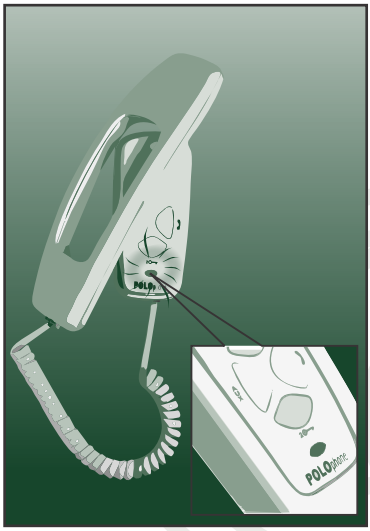
By pressing the courtesy light pushbutton (if fitted), momentarily the light will switch on for the light timer period and automatically switch off. By pressing and holding the pushbutton down for three seconds the lights will switch on and remain on. The status LED (if fitted) will flash once every two seconds to confirm this. To switch off the lights, press the pushbutton momentarily. If courtesy lights are fitted to the controller, and the pedestrian keyswitch is operated, the courtesy lights will flash for five seconds before the gate opens. This warns the pedestrian that the gate will open within five seconds allowing time to remove the key and stand back from the gate.

Pre-flashing

The courtesy light can be programmed to flash for a period of time before the gate starts to open or close. The courtesy light timer will function as normal. (Pre-flash time can be adjusted to suit, from 1 to 250 seconds, where the default is five seconds). By default pre-flashing is off.

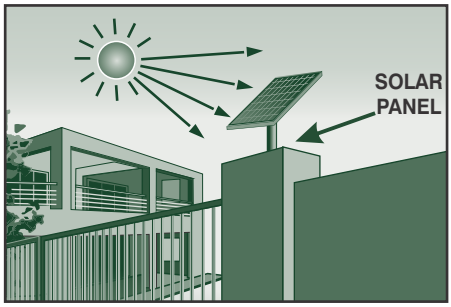
Gate status indication (optional)

The controller can provide visual indication inside the house of the position of the gate and the condition of the battery and power supply. An LED is typically mounted on the intercom inside the house. The different signals of the LED are shown in the following table:



LED STATUS	*INDICATION*
Slow regular flash	Gate is opening
Quick regular flash	Gate is closing
Off	Gate is closed
On	Gate is open
1 Flash/2 seconds	Courtesy light switched on (see Courtesy Light Timer, page 15)
2 Flashes/2 seconds	Mains failure (D3/D5 only. See Mains Failure Detection, page 13) Or: Over temperature (A10 only. See Thermal Overload, page 14)
3 Flashes/2 seconds	Battery low (D3/D5 only. See Battery LowProtection, page 13) Or: Missed origin (A10 only. See Origin Sensor Fail, page 14)
4 Flashes/2 seconds	Collision shutdown (See Anti-crushing Device, page 11)

Solar panel (optional on D3/D5 systems only)



The battery of the 12V DC operator may be charged using a solar panel in place of the conventional charging circuit. A 12 Watt panel will provide on average 10 - 12 operations of an average gate without causing the battery to discharge over a period of time.

It is necessary to have at least a 35Ah deep cycle low-maintenance battery fitted, in order to provide sufficient backup capacity during days of poor weather.

For further details contact your local CENTSYS agent.

DC Converter module (optional for A10 only)

The DC converter module allows the A10 gate operator to function from a 12V battery in the absence of AC mains. The converter module steps up the 12V battery supply to 310V DC. The inverter drive on the A10 operator then switches the high voltage DC supply to run the three-phase induction motor.

⚠ WARNING **The 310V DC supply is hazardous and potentially lethal. The A10 DC converter module should be installed and maintained by a qualified installer.**

The following features are of interest:

The converter module includes battery protection circuitry. This circuitry prevents the converter module from being damaged in the event of reverse polarity connection. In addition the circuitry automatically disconnects the battery when the battery drops into a low-voltage state. This prevents the converter module from running the battery flat and potentially damaging the battery.

There is a pushbutton on the converter module that manually reconnects the battery in the event of a power failure and low battery voltage state.

Upon activation, and if the battery voltage exceeds the low-voltage parameter, the protection circuitry will automatically keep the battery connected to the converter. If, on the other hand, the battery voltage is below the low-voltage parameter, the

protection circuitry will not connect the battery to the converter.

The DC Converter module has three status LEDs. These LEDs indicate battery status, AC mains status, and lastly the temperature of the converter. The LEDs operate in the following manner:

LED	When *ON*, it indicates:	Logic	When *OFF*, it indicates:	Logic
Battery status	Battery is fully charged		Voltage low	DC converter will shut down until battery reaches normal operating voltage.
AC Mains	Mains present		Mains failure	DC converter will power A10 until mains restored or battery voltage < threshold.
Converter temperature	Overheated	DC converter will shut down until it has cooled to normal operating temperature range.	Converter temperature normal	

The converter module has a current limiting fuse on the high-voltage supply. Caution must be exercised when checking this fuse.

The procedure to replace the fuse is outlined below:

1. Disconnect the mains from the entire system. This includes the A10, and the converter module
2. Disconnect the battery
3. Disconnect the six-way header that connects the converter module to the A10. The converter module is now off, and the board is safe to handle
4. Remove the fuse protection housing (If the housing is still in place)
5. Remove the fuse and replace it with a 5A, 250V, fast-blow fuse. (Dimensions 5mm x 20mm)
6. Reconnect the six-way header
7. Reconnect the battery
8. Reconnect the mains

Upon reconnecting, if the converter module fails to function correctly in the event of

Special Functions

Reversing mode

Apart from the standard mode of operation as described in the section Normal Operation, the system offers another mode of operation. Referred to as Reversing mode, if the transmitter is pressed while the gate is moving, the gate will automatically reverse direction. The gate can never be left in mid position with this mode selected.

Other modes of operation which can be selected and operated using a radio transmitter are CONDOMINIUM and PIRAC, which are described below.

Condominium

The system can be programmed for “Condominium” operation. This mode of operation will override the normal mode of operation described under the section “Normal Operation”. This facility is designed for greater safety and security in applications where there will be a number of users, such as the gate at a townhouse estate, factory or office park the “Autoclose” facility described earlier.

In “Condominium” Mode “Autoclose” cannot be overridden. If the remote control or intercom pushbutton is pressed while the gate is open the “Autoclose” will restart its countdown. If the gate is activated while the gate is closing the gate will reopen. The gate cannot be stopped in a midway position and will therefore always close.

A protection beam should be used in conjunction with this facility to prevent the “Autoclose” from closing the gate onto a vehicle passing through.

Passive Infrared Autoclose (PIRAC)

This facility is an extension of the Condominium facility described above. It is designed for applications requiring greater security as the gate closes immediately behind the vehicle or person passing through.

PIRAC will operate only if a protection beam or other type of vehicle detection system (e.g. Inductive loop) has been fitted.

The remote control or intercom pushbutton will only open the gate. As a vehicle drives through the entrance it activates the protection beam and as soon as the vehicle clears the beam the gate will close immediately, even before it is fully-open. If the gate reaches the fully-open position without the beam being activated the gate will close immediately.

In this mode and for a particular application should the gate start to close too quickly

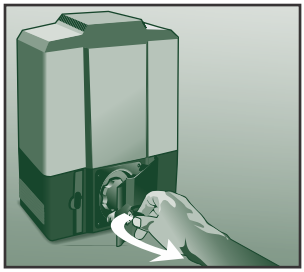
the "Autoclose" facility described earlier can be enabled.

The gate will now remain in the open position until either the "Autoclose" facility has timed out, or a vehicle has driven through the entrance, in which case the gate will start to close immediately the vehicle has passed.

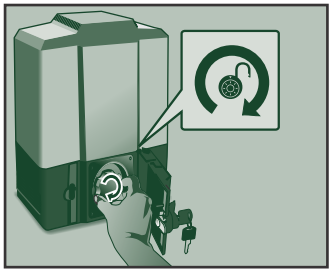
Manual release

All operators are fitted with a manual release mechanism. This is to allow the gate to be operated in the event of a total malfunction of the equipment. It is also required if the mains power has failed in the case of the A10 (without DC converter) operator.

CENTSYS D3 and D5



Open manual override

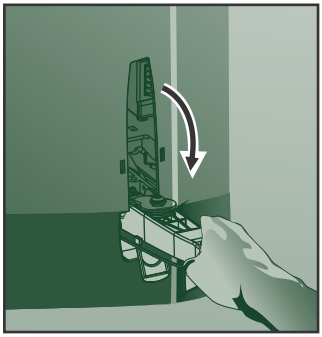


Rotate thumbwheel clockwise until gate is free to move

CENTSYS A10

Manual release handle in closed position.

Open lock cover and insert key. Turn key ¼ turn counter clockwise to unlock.



Pull manual release handle down to disengage manual release

Re-engaging the manual release (A10 only)

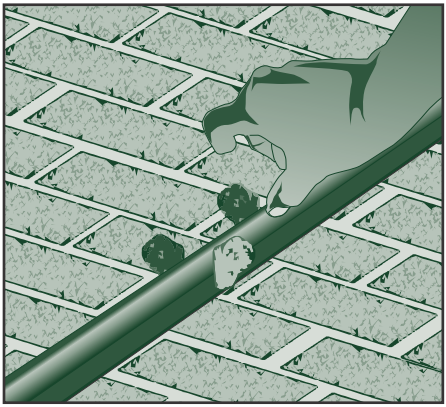
It is strongly recommended that the gate is first pushed to the fully-open position, and then to the fully-closed position before the release handle is re-engaged. This is to ensure that no untoward behavior occurs due to the system having lost its position information.

Basic maintenance

CENTSYS operators are designed to be maintenance-free. However, there are some basic checks that should be carried out regularly (every six months). These will increase the long term reliability of the system, and obviate false triggering of the protection systems leading to erratic operation of the gate.

Isolate mains supply to system before cleaning or working on the equipment.

General



- Keep the track clear of stones, dirt and obstructions.
- Ensure that all rollers are free.
- In manual mode check that the gate runs freely on its rail and does not catch or foul against the walls or pillars.
- Ensure that the gate wheels and guide rollers are rotating freely and are not worn. In high volume applications it will be necessary to replace these components regularly.
- Ensure that the rack is properly secured to the gate and that it does not press down onto the operator pinion at any point along its travel.
- Keep shrubs and vegetation clear of the motor, rack or chain.
- Check that the key still operates the manual override access door or flap. Spray with oil if necessary.
- Keep the inside of the motor housing clear of insects and dust.
- On operators fitted with a cooling fan, check that the air inlet ducts in the cover and the outlet ducts in the gearbox are clear.

The battery (D3/D5 Operators only)

CENTSYS systems that are fitted with maintenance-free lead-acid batteries, should provide at least three years of normal service life.

For sites utilizing an external 35Ah battery, ensure that the level of liquid (electrolyte level) is correct. Check for corrosion of the battery terminals. Clean and apply copper based grease as necessary.

⚠WARNING **Ensure that the enclosure which houses the 35Ah battery can adequately vent any battery gases generated.**

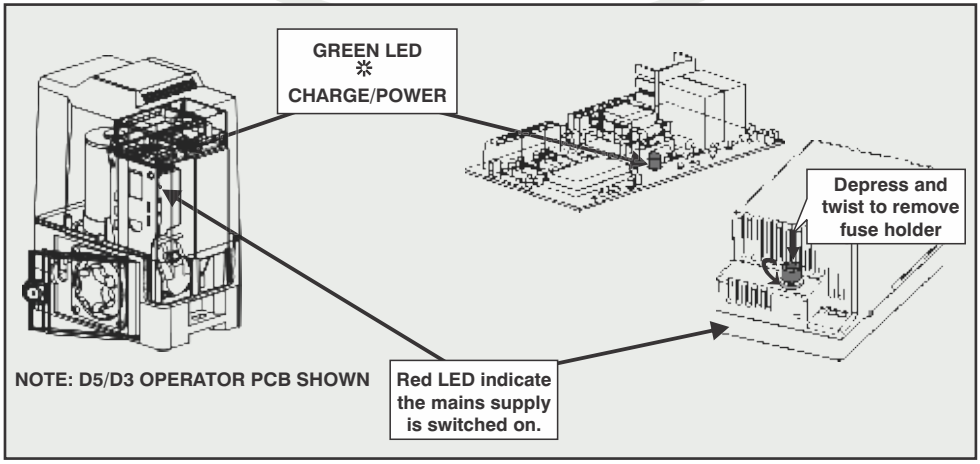
Gearbox oil level

Check the oil level as described in the section, Lubrication, of the Installation Manual. Should the installation manual be unavailable, please refer to the Online Manuals on our website, www.centsys.com. Alternatively, please contact your CENTSYS installer.

Power Supply

All CENTSYS operators have power supplies separate to the controllers. In the case of product malfunction, the power supply fuses should be checked.

A10 models are supplied with spare fuses housed in the controller card cover.

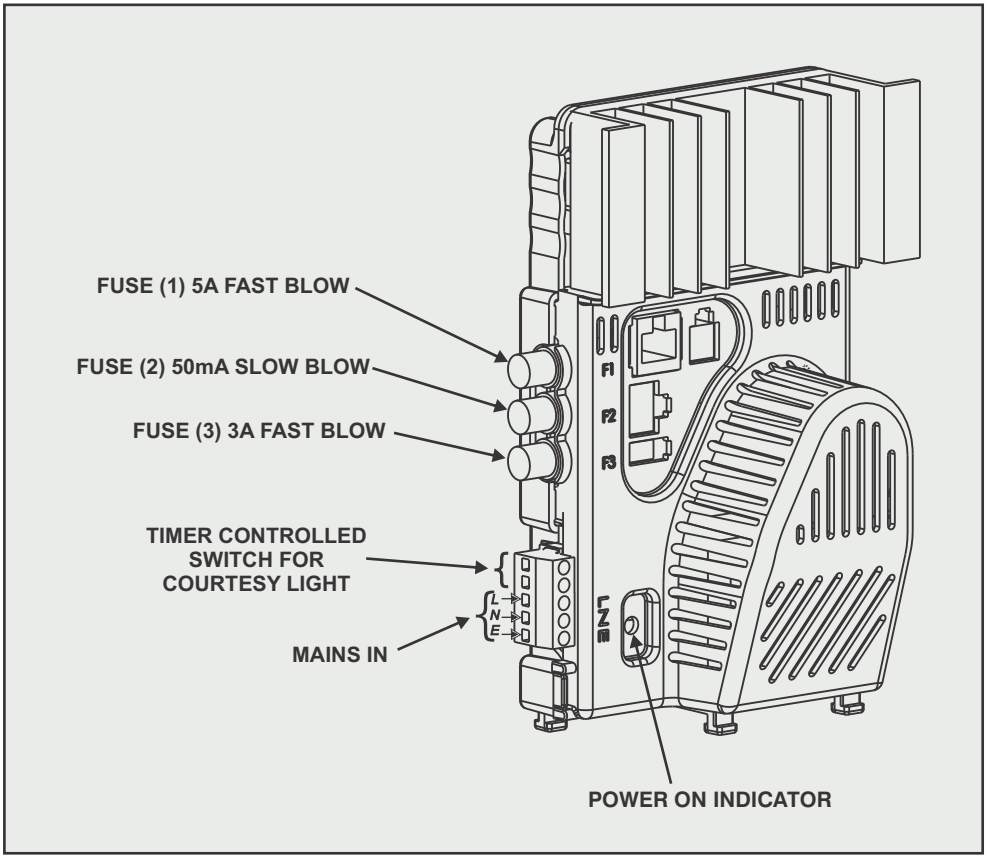


A10 Inverter module

⚠WARNING **The 310V DC supply is hazardous and potentially lethal. The A10 inverter module should be installed and maintained by a qualified installer.**

Be careful to replace A10 fuses with those of the correct rating (see diagram below).

The small green light (LED) on the controller marked - “POWER” - indicates if the card is active. Each power supply has a red light (LED) to indicate mains supply.



CENTSYS D3 and D5

SPECIFICATIONS	D3	D5
Power supply voltage (Depending on power supply used)	220-240V AC ± 10% 50Hz 110V AC ± 10% 50Hz 19V AC ± 10% 50Hz	220-240V AC ± 10% 50Hz 110V AC ± 10% 50Hz 19V AC ± 10% 50Hz
Motor Voltage	12V DC	12V DC
AC Current draw @ 220V	60mA	170mA
DC Current draw (Max)	15A	15A
Output shaft rotational speed	73rpm	91rpm
Rated Gate Speed (With gate pull force <5kg)	16m/min	20m/min
Starting pull force	20kgF	30kgF
Rated pull force	12kgF	20kgF
Maximum gate mass	300kg	500kg
Maximum gate length	11m	11m
Maximum number of operations per day (Average) Mains Present: Battery driven (1A charger, 7Ah battery) Battery driven (2A charger, 7Ah battery) Power pack (10A power pack, no battery)	 20 N/A N/A	 50 150 100
Standby; With 7Ah Battery (Half day)	20	61
With 40Ah Battery (One day)	N/A	150
Maximum number of continuous operations per hour Mains Present: Battery driven (1A charge, 7Ah battery) Battery driven (2A charger, 7Ah battery Power pack (10A power pack, no battery)	 10 N/A N/A	 10 30 20
Typical time to open/close a 4m gate (With gate pull force <5kg)	16 seconds	13 seconds
End of travel control	Sealed optical counter with origin switch	Sealed optical counter with origin switch
Collision sensitivity	Electronic, adjustable	Electronic, adjustable
Temperature range	-10° to +50°C	-10° to +50°C
Housing protection	IP55	IP55
Control card *	CP80	CP80
Corrosion protection (baseplate)	Galvanized	Galvanized
Mass of unit (packed) including 7.5Ah Battery	12kg	13.5kg

** D3 and D5 have different micro-controller versions*

CENTSYS A10

SPECIFICATIONS	A10 ENDURANCE		A10
Power Supply	220-240V, 50Hz - Single-phase		220-240V, 50Hz - Single-phase
Maximum absorbed current	6A		6A
Motor voltage	220V three-phase		220V three-phase
Output pinion	20 Tooth Mod 4		17 Tooth Mod 4
Starting thrust	40kgF*	30kgF**	47kgF
Rated thrust	30kgF*	22.5KgF**	35kgF
Operating speed @ rated thrust	16m/min	[2]Adj. Up to 30m/min	13.6m/min
Motor cooling	High Efficiency Fan (2300 RPM)		High Efficiency Fan (2300 RPM)
Duty cycle (continuous)[1]	90%		90%
Duty cycle (½ hr endurance)[1]	95%		95%
Ambient temperature range	-20°C to +50°C		-20°C to +50°C
Anti-crushing sensing	Electronic		Electronic
Motor thermal protection	Electronic		Electronic
Maximum gate length	20m		17m
IP rating	44		44
Optional battery backup	Yes		Yes
Shipping mass of unit	15.7kg		15.6kg
Maximum gate mass	1 000kg*	600kg**	2 000kg

(1) At rated thrust and 25°C maximum ambient temperature, unit in full shade.
(2) Refer to RATED THRUST values.

CENTSYS A10 DC converter

SPECIFICATIONS	DC CONVERTER
Input voltage	12V DC
Input current @ rated thrust	30A
Rated output voltage	310V DC
Battery charger	1A[3]
Maximum duty cycle	20%
Thermal protection	Electronic
Enclosure	IP65 External Plastic Enclosure
Dimensions	310mm x 240mm x 110mm
Maximum battery size	12V 7Ah (External 35Ah optional)
Open and close cycles[4]	7 - 12 (7Ah battery) 40 - 70 (40Ah battery)
Shipping mass	10kg (Inc 7Ah battery)

(3) Upgradable on request.
(4) Dependant on site / environmental conditions.

Optional extras

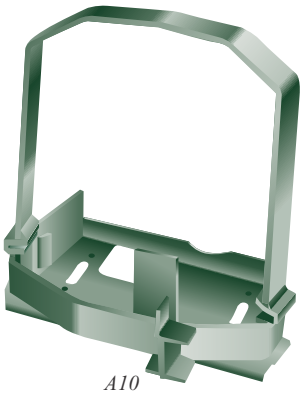
Safety beams

Access control proximity unit

Intercom

Access control keypad

D3/D5
Theft-resistant cage



A10
Theft-resistant cage

Declaration of Conformity

Manufacturer: Centurion Systems (Pty) Ltd
Unit 13 Northlands Production Park
Epsom Avenue
North Riding
Gauteng
South Africa

Declares that the product:
Product Name: D3 / D5 Sliding Gate Operator
Product Options: All variants

Conforms with the following specifications:
Safety: IEC 60355-1:1991 & Am1:1994 & Am2:1999
For D3:
EN 12453:2000 EN 12978:2003 when fitted with CE chip and a P36 Passive Sensitive Edge according to instructions.
Emissions: CISPR 14: 2nd edition 1985
CISPR 22 CLASS B: RADIATED EMISSIONS - 30MHZ TO 1000MHZ
CISPR 22 CLASS B: CONDUCTED EMISSIONS - 150MHZ TO 30MHZ
Immunity: IEC 801-2: 2nd edition 1991 - 4kV CD, 8kV AD
IEC 801-3: 1st edition 1984 - 10V/m
IEC 801-4: 1st edition 1988 - 1.0kC Power Lines
IEC 1000-3-2: 1997
IEC 1000-3-3: 1997
IEC 1000-4-5: 1997
IEC 61000-4-2 - ELECTROSTATIC DISCHARGE
IEC 61000-4-3 - RADIATED IMMUNITY - 80MHZ TO 1000MHZ
IEC 61000-4-4 - ELECTRICAL FAST TRANSIENTS / BURST
IEC 61000-4-5 - SURGE IMMUNITY TEST
IEC 61000-4-6 - CONDUCTED IMMUNITY - 150KHZ TO 80MHZ
IEC 61000-4-11 - VOLTAGE DIPS AND INTERRUPTION

Supply Information: The product herewith complies with the requirements fo the following directives and carries the CE-marking accordingly.
- the Low Voltage Directive 73/23/EEC
- the EMC Directive 89/336/EEC (inclusive 93/68/EEC)]
This product was tested in a typical configuration with simulated gate load.

Standard to which conformity is declared:
IEC 60355-1:1991 & Am1: 1994 & Am2: 1999
IEC 1000-6-3 & IEC 1000-6-1: Generic Emission and Immunity

Signed at North Riding, South Africa on 15 August, 2005

Ian Rozowsky
Research & Development Director

General commissioning check sheet

Fill in data for later reference

Model:		Actual	Default	L.E.D. Quick Ref.
All	AUTOCLOSE ON	ON OFF	OFF	2/1 2/2
All	AUTOCLOSE TIME		15 Secs	3/Time
All	MODE Standard Condominium PIRAC Reversing PLC (A10 only)	☐ ☐ ☐ ☐ ☐	Standard	4/1 4/2 4/3 4/4 4/5
All	PED. AUTOCLOSE TIME		5 Secs	5/Time
All	COURTESY LIGHT TIME		120 Secs	6/Time
All	COLLISION SENSITIVITY High Medium Low	☐ ☐ ☐	Medium	7/1 7/2 7/3
All	AUTOCLOSE OVER-RIDE		3 Secs	8/Time
All	POSITIVE CLOSE MODE	YES NO	NO	9/1 9/2
All	PRE-FLASHING MODE	1 2 3 OFF	OFF	10/1 10/2 10/3 10/4
All	PRE-FLASH TIME		5 Secs	11/Time
All	COLLISION COUNT		4	12/Count
D3/D5	CRAWL DISTANCE (1 FLASH = 350mm)		350mm	13/Count
A10	OPENING SPRINT MODE SELECT: *Standard speed* *Standard speed + 30%* *Standard speed + 60%* *Standard speed + 90%*	☐ ☐ ☐ ☐	Standard	13/1 13/2 13/3 13/4

Fill in data for later reference

Model:		Actual	Default	L.E.D. Quick Ref.
A10	CLOSING SPRINT MODE SELECT: *Standard speed* *Standard speed + 30%* *Standard speed + 60%* *Standard speed + 90%*	☐ ☐ ☐ ☐	Standard	14/1 14/2 14/3 14/4
A10	MOTOR CUTOUT TIME		60 Secs	15/Time
A10	INVERTED RACK Rack below pinion Rack above pinion	☐ ☐	Above	16/1 16/2

⚠ CE Compliance

The following checks must be made in addition to the above checks to ensure a CE compliant installation:

P36 PASSIVE EDGES FITTED TO ALL HAZARDOUS EDGES	YES
D3/D5 OPERATORS INSTALLED, WITH CE CHIP FITTED TO CONTROLLER	YES
COLLISION SENSITIVITY (see above) SET TO HIGH OR MEDIUM	YES

Notes

Notes

Notes

CENTSYS

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Technical Support: +27 11 699 2481

from 07h00 to 18h00 (GMT+2)

0.07.B.0051

www.centsys.com.au