

Full control from one panel.

The GNG control unit for checkout conveyors runs the belt with an optical sensor and protects both the motor and the people using it.



Front view GNG conveyor control unit

2	4	24 mo	100-240 VAC
Operating modes	Indicator LEDs	Warranty	Supply

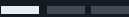
The GNG control unit in five chapters

The first two chapters are for everyone. Users and technical teams go deeper as the chapters go on.

1

Meet the unit

What it does and where it sits in the checkout.

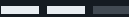


For everyone
Pages 3-5

2

How it works

Front panel, optical sensor, the two modes and a live simulator.

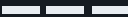


For everyone
Pages 6-10

3

Safety and alerts

Protection layers, indicator LEDs, troubleshooting.

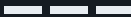


Users and technicians
Pages 11-14

4

Features and installation

Benefits, connections, technical data.

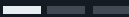


Dealers and technicians
Pages 15-17

5

Warranty and service

24-month warranty, repair within 48 hours.

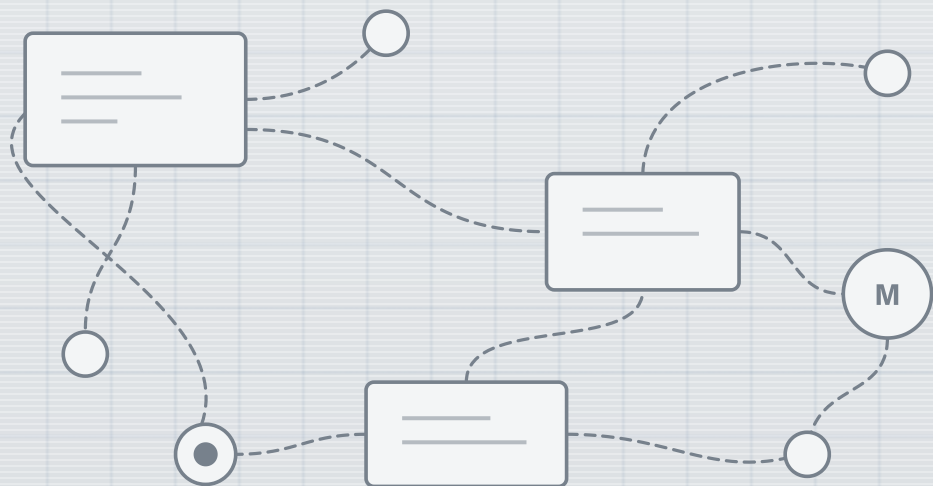


For everyone
Pages 18-19

Progress bar legend: Depth of detail: the more bars are filled, the more technical the chapter.

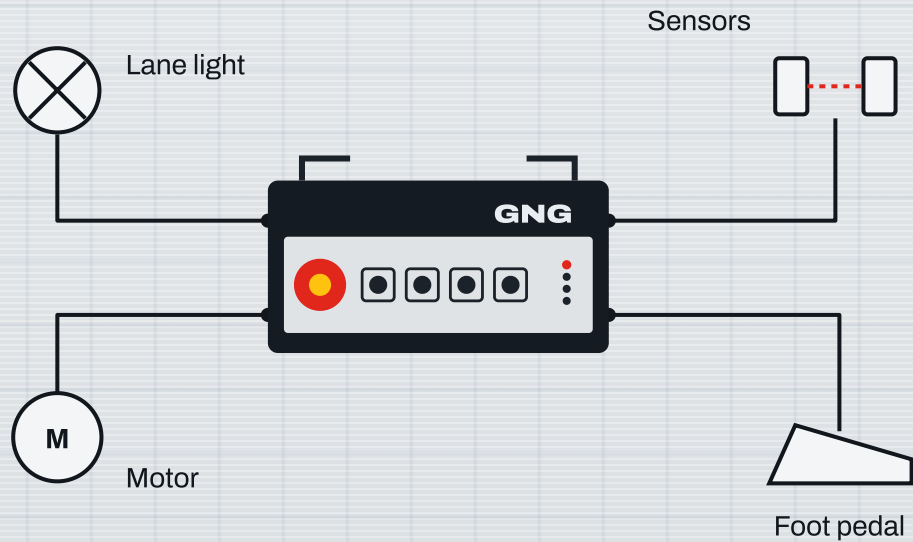
One unit instead of scattered boxes

Before



- ✗ Functions spread across separate devices
- ✗ Keys in different places
- ✗ More cables, longer installation
- ✗ Tracing a fault takes time

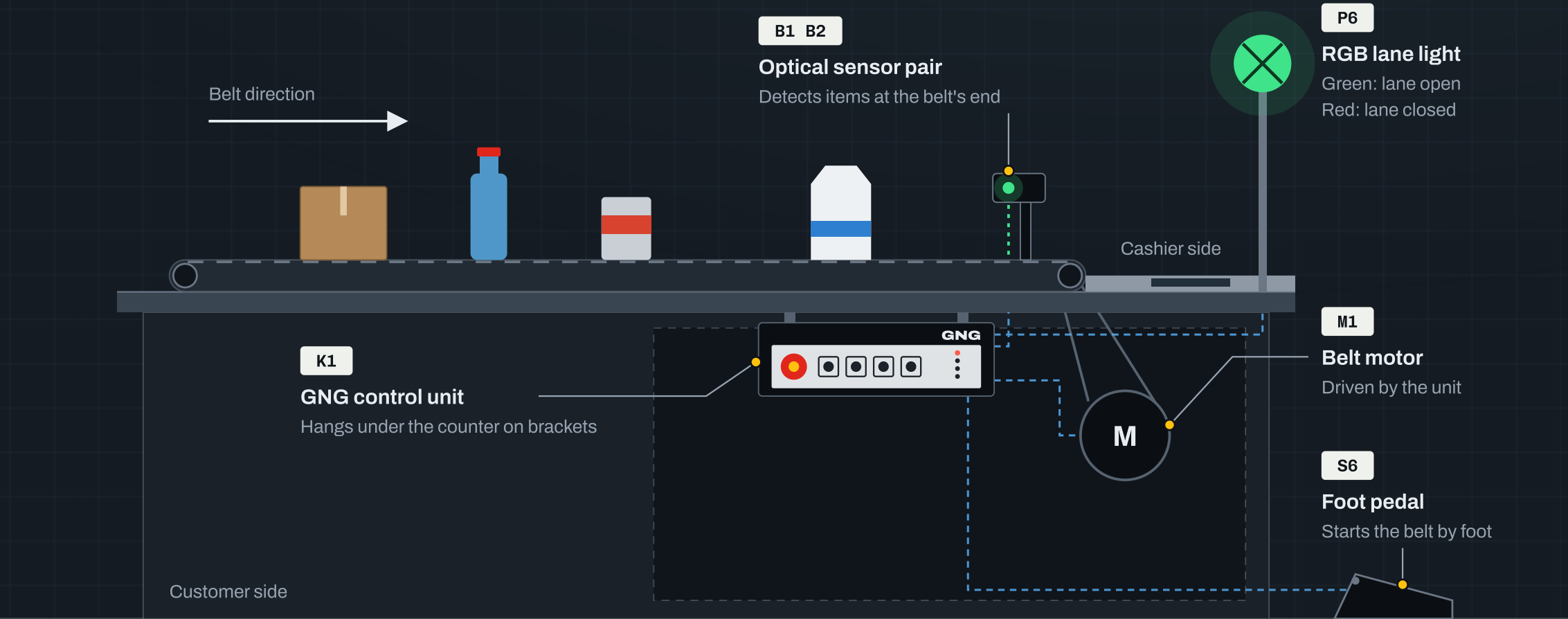
Now, with GNG



- ✓ Every function on one board
- ✓ Every key on one panel
- ✓ Tidy wiring, quick installation
- ✓ 4 indicator LEDs point to the fault

It sits under the counter and runs every move of the belt

The customer puts items on the belt, the belt carries them to the cashier, and the moment the sensor sees an item, the belt stops.



Lightweight PLA enclosure, mounting brackets, one front panel

The compact box hangs under the counter: controls at the front, connections at the back.



Front view
Emergency stop, four keys, four LEDs



Perspective
PLA enclosure and front panel



Top view
Four mounting brackets



Left side view
Emergency stop within reach at the front



Right side view
Closed, flat side panel



Rear view
Power inlet and connections

Nine elements on the front panel, each with one job

The red button on the left stops, the keys in the middle control, the LEDs on the right report.

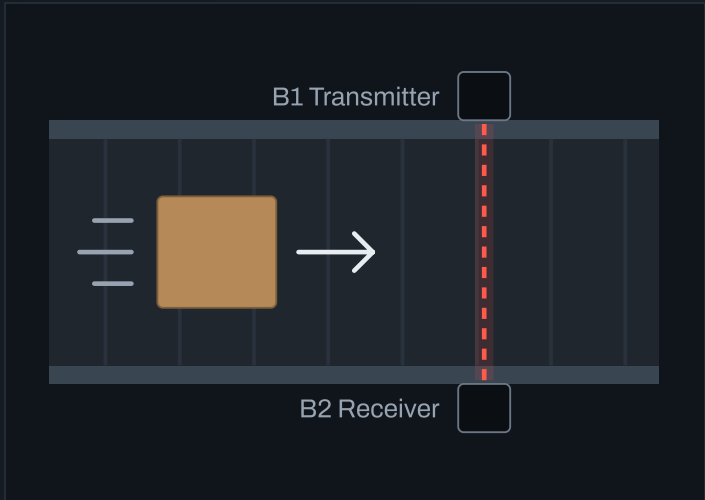
Controls		
S1	DUR/STOP	Emergency stop. Stops everything instantly; twist to release.
S2	MANUEL	Selects manual mode. Pressed while the belt runs, it stops the belt.
S3	AUTO	Selects automatic mode. Pressed while the belt runs, it stops the belt.
S4	START	Starts the belt when nothing is between the sensors.
S5	LAMB	Switches the lane light: checkout open or closed.
Indicators		
P1	POWER	Shows that the unit has power.
P2	TERMIC	Lights when the motor overheats; the belt stops.
P3	RECEIVER	Receiver sensor status. Steady light: replace it.
P4	TRANSMITTER	Transmitter sensor status. Steady light: replace it.



Front view Reference designators follow IEC 81346: S for keys, P for indicators.

An invisible beam is what stops the belt

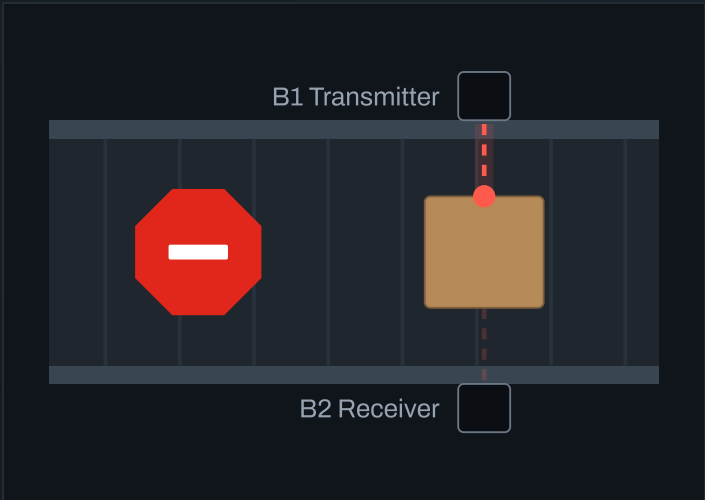
Two sensors face each other at the end of the belt: the transmitter sends a beam, the receiver watches for it. The moment the beam is broken, the unit stops the belt.



1 Beam unbroken

Nothing between the sensors; the belt carries the item forward.

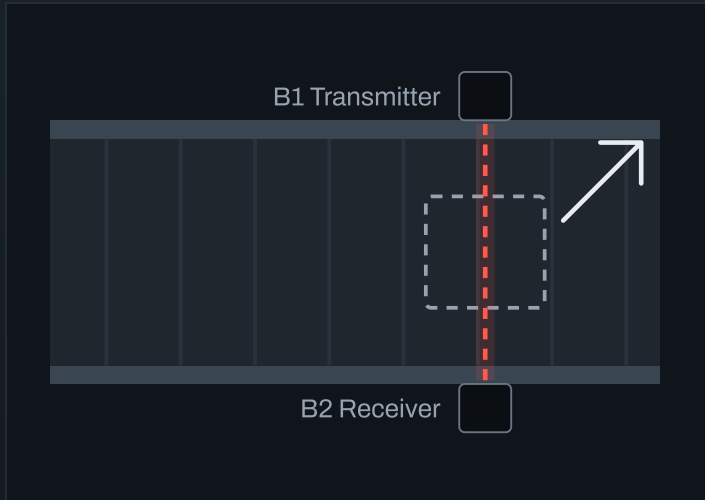
● Belt running



2 The item breaks the beam

The item reaches the sensor and the belt stops at once.

● Belt stopped



3 The item is taken

The beam is clear again. The belt resumes with **START** in manual mode, on its own in automatic mode.

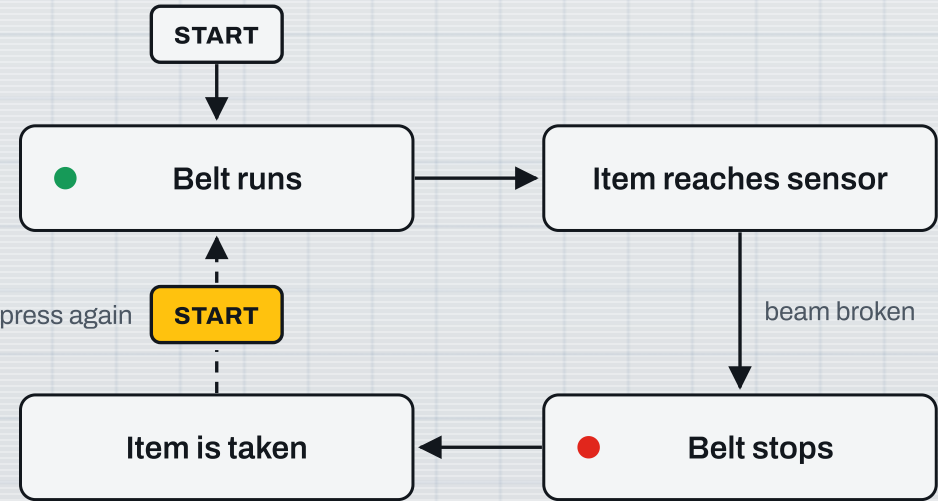
● Ready to run

 Compatible transmitters: **36 kHz** and **38 kHz**. The unit works with either type.

Both modes start the same way and part once the item is taken

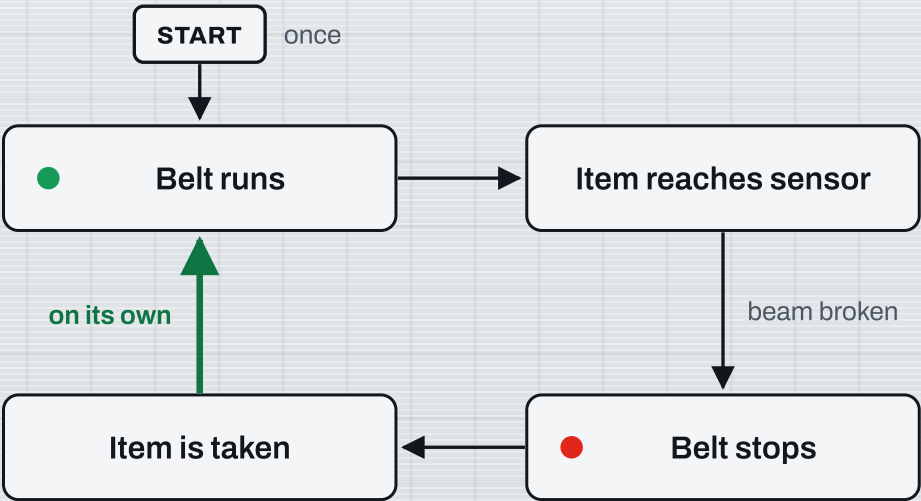
In both, START runs the belt and the belt stops when an item reaches the sensor. Manual mode needs START for every cycle; in automatic mode the belt follows the items by itself.

Manual mode MANUEL



⌚ If no item arrives within **10 s**, the belt stops. To continue: START.

Automatic mode AUTO



⌚ If no item arrives within **30 s**, the belt stops. To continue, just pass an item between the sensors.

🕒 In both modes, pressing MANUEL or AUTO while the belt runs stops it.

Second by second: when the belt runs and when it stops

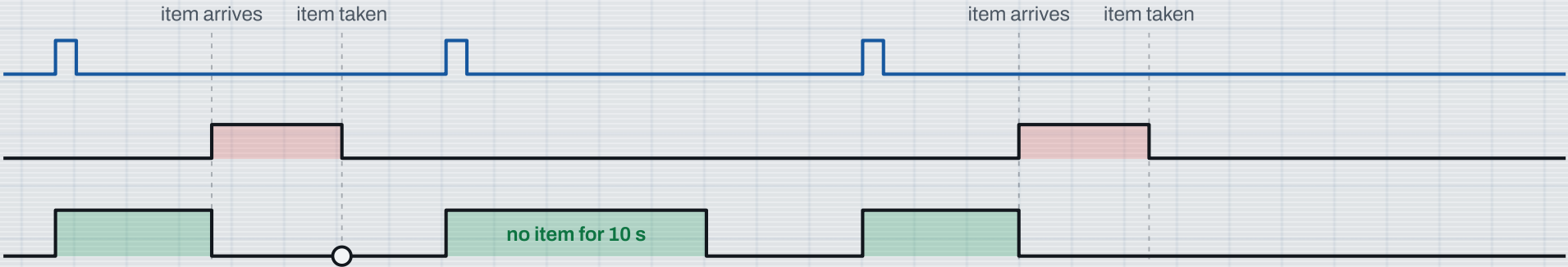
The same events play out differently in each mode. Green areas show when the belt is running.

Manual mode

START

Sensor beam
up: broken

Belt
up: running



Automatic mode

START

Sensor beam
up: broken

Belt
up: running



Belt running Beam broken: an item is at the sensor Automatic: the belt restarts by itself once the item is taken Manual: the belt waits for START

Try it yourself

Guided tour Step 1 / 10

Skip Close tour

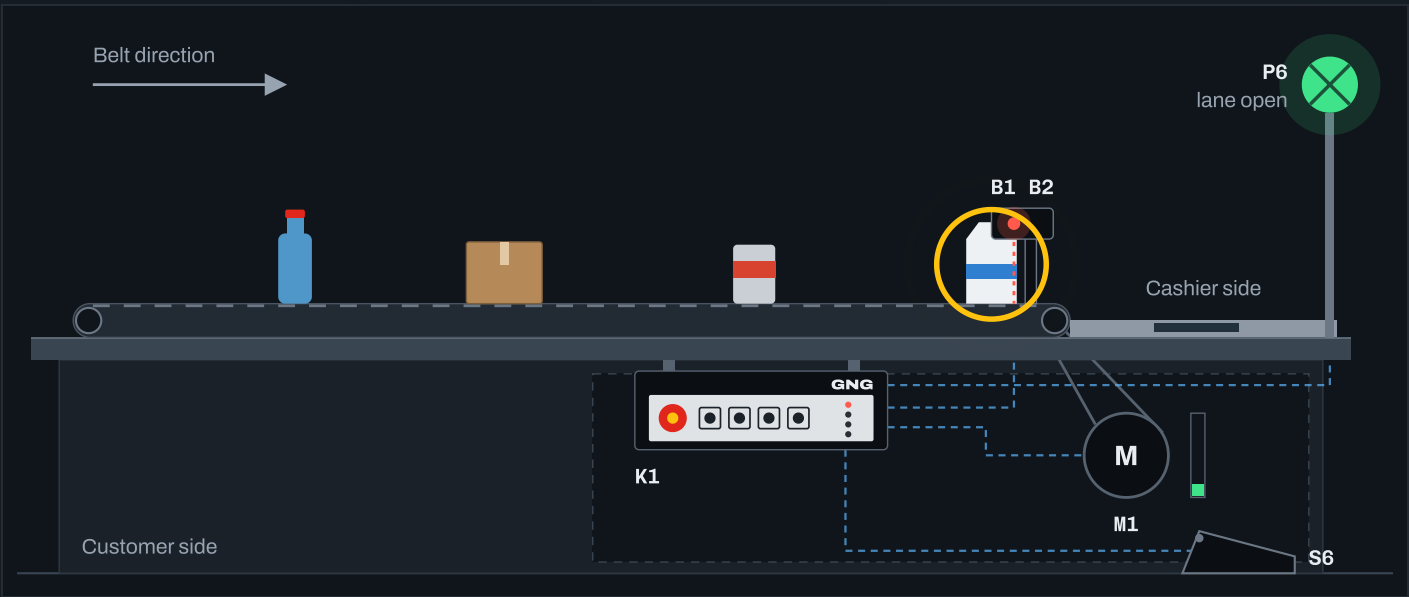
The belt has stopped because an item is at the sensor. Click **Take the item**, or click the item itself.

Put an item on the belt

Take the item

Pass an item through the sensor

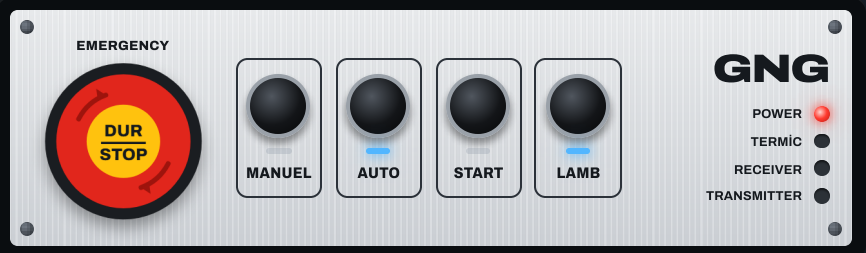
Press the foot pedal



● Right now An item reached the sensor and the belt stopped. You are in automatic mode: take the item and the belt carries on by itself.

Press the panel keys, put items on the belt and trigger fault scenarios. The line under the scene explains what the unit is doing.

Control panel: every key and the red button can be clicked



Mode	Belt
Automatic	Waiting
Stops if no item arrives in	Motor temperature
—	

Fault scenarios

Overheat the motor

Receiver fault

Transmitter fault

Blow the fuse

Switch off

Start over

☒ Sound

☐ Fast time x5

Three layers of protection for the user, the board and the motor

One is triggered by hand; the other two step in on their own.



S1 Emergency stop

Protects the user By hand

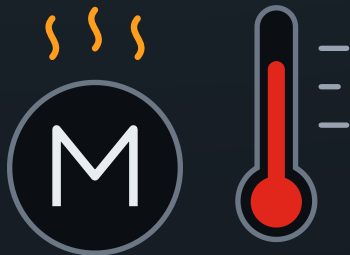
Stops the belt instantly in any abnormal situation, such as a belt jam or an unusual noise from the motor.



F1 Fuse

Protects the board Automatic

Blows on sudden mains voltage surges and protects the circuit.



F2 Thermal protection

Protects the motor Automatic

If the motor overheats after long hours without a break, it stops the belt and lights the TERMIC LED.

Twist the button to release it.

To replace it, pull out the fuse holder on the AC power inlet.

Once the motor cools down, the unit is ready again.

Four LEDs and a buzzer tell you how the unit is doing

In normal operation POWER is lit; TERMiC, RECEIVER and TRANSMITTER do not stay lit.

Indicator	Normal	Warning	What to do
P1 POWER	 On: power present	 Off: no power	Check the power switch, emergency stop, power inlet and socket, in that order. If all are fine, call technical service.
P2 TERMiC	 Off	 On: motor overheated, belt stopped	Let the motor cool down; it can then be used again.
P3 RECEIVER	 Not steadily lit	 Steady: receiver sensor faulty	Replace the receiver sensor.
P4 TRANSMITTER	 Not steadily lit	 Steady: transmitter sensor faulty	Replace the transmitter sensor.
P5 Buzzer	 Short beep on every key	 Audible alarm on a sensor fault	No beep when you press the keys: contact technical service.

Something wrong?

From symptom to fix

Many situations can be solved on the spot, without calling service.

Symptom	Likely cause	What to do
The belt stopped by itself; no item, LEDs normal	● Not a fault The idle time ran out: 10 s manual, 30 s automatic	Manual: START . Automatic: pass an item between the sensors.
START is pressed but the belt does not run	Something is between the sensors	Take the item and try again; then check the LEDs.
● No LED is lit	No power, or the fuse has blown	Power switch, emergency stop, power inlet and socket; then the fuse. If it persists, call service.
● Belt stopped, TERMiC lit	The motor overheated	Let the motor cool down; give it breaks during long use.
● Buzzer sounding, RECEIVER or TRANSMITTER steady	Sensor fault	Replace the sensor whose LED stays lit.
No beep when pressing the keys	Buzzer fault	Contact technical service.
Belt jammed, or an unusual noise from the motor	Mechanical problem	Press the DUR/STOP emergency stop right away, then call technical service.

Four rules for a long service life

Four simple rules from the operating conditions that directly affect the life of the unit and its sensors.

100–240_{VAC}

50–60 Hz

The supply must stay within this range.

≤ 100_W

External lamp

The lamp connected to the unit must not exceed 100 W.



Long breaks

Switch it off at the power switch before long breaks; the unit and its sensors last longer.



Continuous use

Avoid running it all day without a break. If thermal protection trips, let the motor cool down.

Everything a checkout conveyor needs, in one unit

Nine features that simplify installation and daily use, and make faults visible.



Single circuit board

Every function on one newly developed board.



Single panel

All keys in one place for quick, simple installation.



36 / 38 kHz compatible

Works with both transmitter sensor types.



Foot pedal

The belt can be started with a foot pedal.



Running-time counter

Counts and shows how long the unit ran during the year.



RGB lane light

Green when the checkout is open, red when closed; on the side or top of the checkout.



Two operating modes

Manual and automatic, switched with a single key.



Audible and visual alerts

Four indicator LEDs and a buzzer.

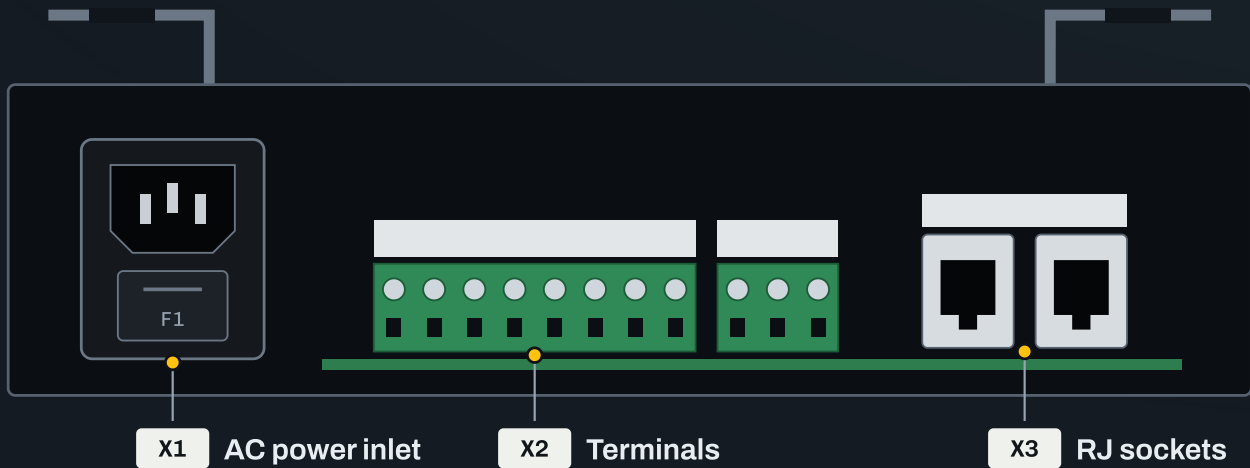


Lightweight PLA enclosure

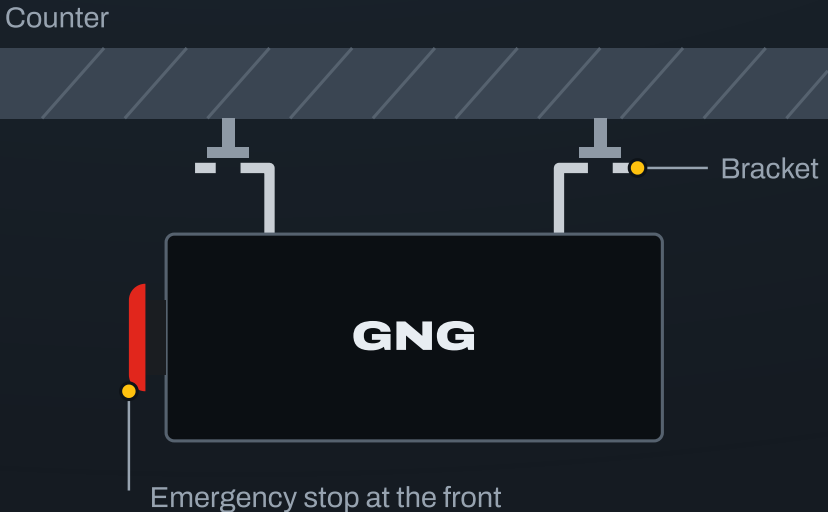
Lightweight PLA plastic body with mounting brackets.

Connections at the back, mounting brackets on top

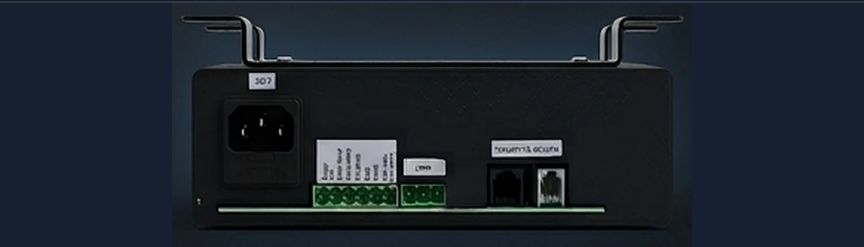
Every unit ships fully tested and ready to install.



- X1** 100–240 VAC, 50–60 Hz. The fuse holder (F1) is built into the inlet.
- X2** Screw terminal blocks for external connections.
- X3** Sockets for plug-in connections.



Four brackets on top let the unit hang neatly under the counter.



Rear view

Technical data

Compiled from the operating conditions of the GNG control unit.

Electrical	
Supply voltage	100–240 VAC
Mains frequency	50–60 Hz
External lamp	max. 100 W
Fuse	In the AC inlet, replaceable
Indication and protection	
Indicator LEDs	POWER, TERMiC, RECEIVER, TRANSMITTER
Audible alert	Buzzer
Protection	Emergency stop, fuse, thermal
Lane light	RGB: green open, red closed

Control	
Operating modes	Manual, automatic
Idle stop	manual 10 s, automatic 30 s
Controls	MANUEL, AUTO, START, LAMB, foot pedal
Sensor	Optical transmitter and receiver, 36 / 38 kHz
Enclosure and service	
Enclosure	Lightweight PLA plastic, with mounting brackets
Counter	Annual running time
Warranty	24 months
Service	Repair within 48 hours

24-month warranty, repair within 48 hours

Once a faulty unit reaches us, it is checked, repaired and returned to you within 48 hours.

24 months

Warranty

Faults caused by the customer are excluded.

48 hours

Diagnosis and repair

Counted from when we receive the faulty unit.



Delivered ready to install

Every unit passes all checks before delivery.



All four steps within 48 hours

GNG

Full control from one panel.

Thank you for your time. Contact the GNG team for a live demo and a quote.

