



ALARM ANNUNCIATION

ALARM VIGIL

Alarm annunciator · 2 × 20 channels

A compensation panel fails quietly. A switching module stops firing, a detuned reactor runs hot — the plant keeps running and nobody knows which unit is at fault until someone opens the door and starts feeling busbars. **ALARM VIGIL names the unit.**

SWITCHING MODULE FAULT

20 CHANNELS

One channel per switching module. The module's own fault contact closes and the matching indicator lights — the operator reads a number, not a symptom.

REACTOR OVER HEAT

20 CHANNELS

One channel per detuned reactor. The thermal switch inside the winding closes long before the reactor is damaged, and the step can be shed before anything is lost.



Any volt-free contact will do — the two group names are printed on the front and rear labels, so the same forty inputs serve whatever the panel actually contains. A new alarm flashes and sounds the horn; acknowledging steadies the indicator and silences the horn but keeps the common alarm relay held, so an alarm that has been seen cannot be forgotten.

2 × 20

volt-free inputs

2

relay outputs

24 V DC

auxiliary supply

4

front keys

144 × 72

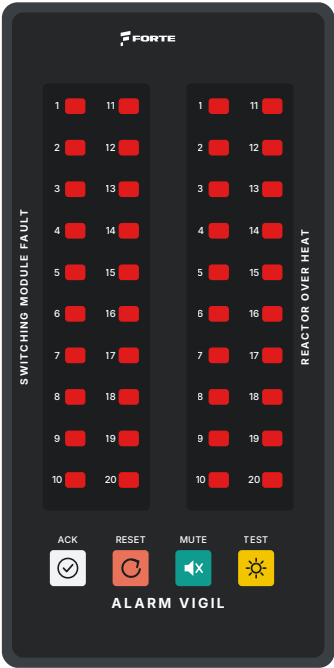
mm front bezel

Technical data and specifications

Function	40-channel alarm annunciator with first-out indication
Mounting	Panel mounting, front bezel with rear clamps
INPUTS	
Channels	40
Input type	Volt-free contact, optocoupler-coupled
Input current	10.3 mA at 24 V DC 2.2 kΩ series, LED V _F 1.3 V
Common	Supply (–) — all inputs share one common
Wiring rule	(+) → external contact → IN n
Input filter	RC per channel, plus a 30 ms stability requirement in firmware — an input must hold its state for 30 ms before the channel latches
OUTPUTS	
Relays	2
FAULT relay	Changeover, NO / NC / C — picks up while any alarm is latched
Horn relay terminal marked LAMP	NO / C — picks up when a channel latches a new alarm; released by MUTE or RESET. ACK does not release it
Contact form	SPDT (1 form C), silver alloy
Contact rating	1 A rated · 2 A max. switching current
Max. switching voltage	120 V AC / 60 V DC — 230 V AC must not be switched
SUPPLY	
Auxiliary supply	24 V DC
Protection	Reverse-polarity diode, 470 µF reservoir
INDICATION AND CONTROL	
Indicators	40 red LEDs in two groups of 20
Keys	ACK · RESET · MUTE · TEST
Flash rate, unacknowledged	2 s on / 2 s off
CONNECTION AND ENCLOSURE	
Terminals	Pluggable screw terminals, 3.81 mm pitch, one pole per channel
Front bezel	144.2 × 72.1 mm (landscape)
Body	129.2 × 61.3 mm, 61.3 mm behind the panel
Projection in front of panel	6.6 mm — overall depth 67.9 mm
Ambient temperature	–20 °C ... +50 °C
Degree of protection	IP55 front · IP20 behind the panel
Weight	260 g

Every electrical value here was read from the circuit diagrams, the bills of material and the component data sheets; dimensions come from the enclosure drawing. No value is taken from a 3D render.

Front panel



Indicator layout

Forty indicators are arranged in two groups of twenty. Within a group, channels 1–10 form the left column and 11–20 the right column, counting downwards.

GROUP	FRONT LABEL	INPUT
Left	SWITCHING MODULE FAULT 1–20	1–20
Right	REACTOR OVER HEAT 1–20	21–40

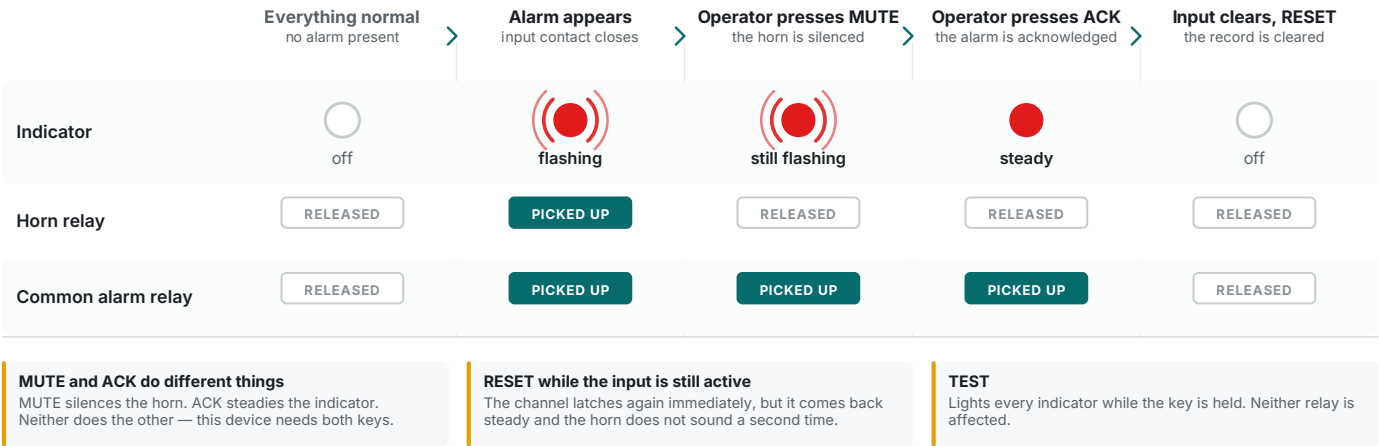
Both groups are numbered 1 to 20. The hardware and the firmware keep one flat sequence of forty; the translation above is the published mapping and the only one that may be used in a manual, a fieldbus register map or a terminal marking.

Keys

KEY	ACTION
ACK	Steadies every flashing indicator. The horn is not affected — use MUTE for that
RESET	Clears the record. A channel whose input is still active latches again at once, but comes back steady and does not sound the horn a second time
MUTE	Releases the horn relay. Indicators keep flashing and the common alarm relay is unchanged
TEST	Lights every indicator while the key is held. Relay outputs are not affected

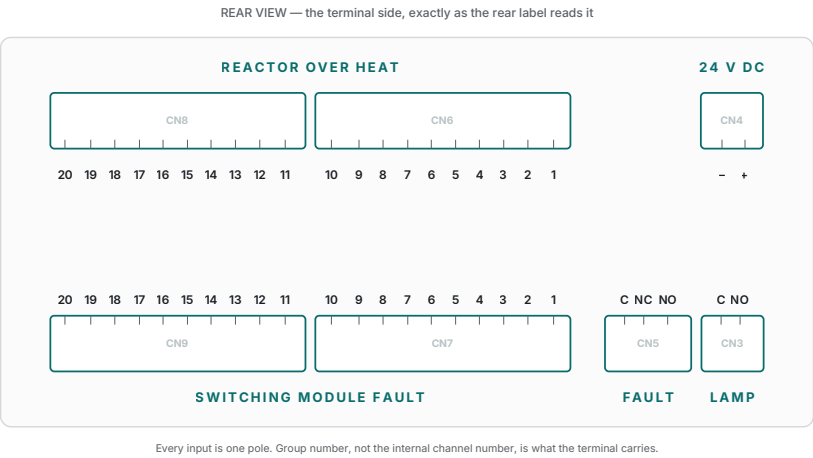
Annunciation sequence

The device latches. An alarm that has appeared stays on the front until an operator clears it — even if the fault itself has gone. **A flashing indicator means nobody has acknowledged it yet.** MUTE and ACK are separate actions here: one silences the horn, the other steadies the indicator.



Terminal arrangement

The drawing below is the rear face as the rear label reads it. A terminal is identified the way it is marked on the device — **group name and number**. There is no 1–40 sequence on the device: there are two sets of 1–20.



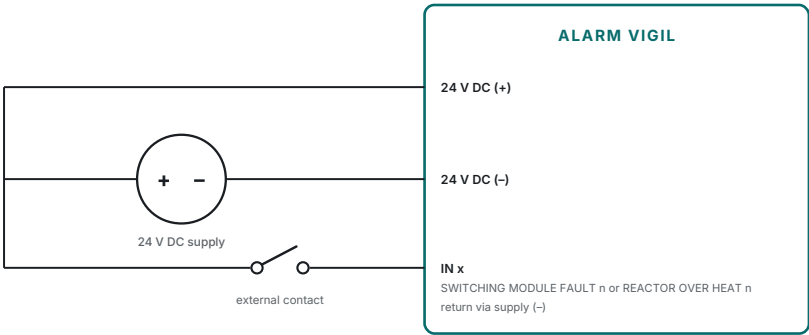
TERMINAL GROUP	POLES	MARKING	FUNCTION
SWITCHING MODULE FAULT	20	1 ... 20	Alarm inputs, one pole each
REACTOR OVER HEAT	20	1 ... 20	Alarm inputs, one pole each
24 V DC	2	- +	Auxiliary supply
FAULT	3	C NC NO	Changeover — picks up while any alarm is latched
LAMP	2	C NO	Horn output — picks up on a new alarm, released by MUTE or RESET

SERVICE MAPPING

Internally the firmware keeps one flat sequence of forty. **SWITCHING MODULE FAULT 1–20 are channels 1–20; REACTOR OVER HEAT 1–20 are channels 21–40**. This sequence is not marked on the device and is not used in wiring schedules — it exists for service and for a future fieldbus register map. Connector references (CN3...CN9) are printed on the boards and shown greyed in the drawing above.

How an input is wired

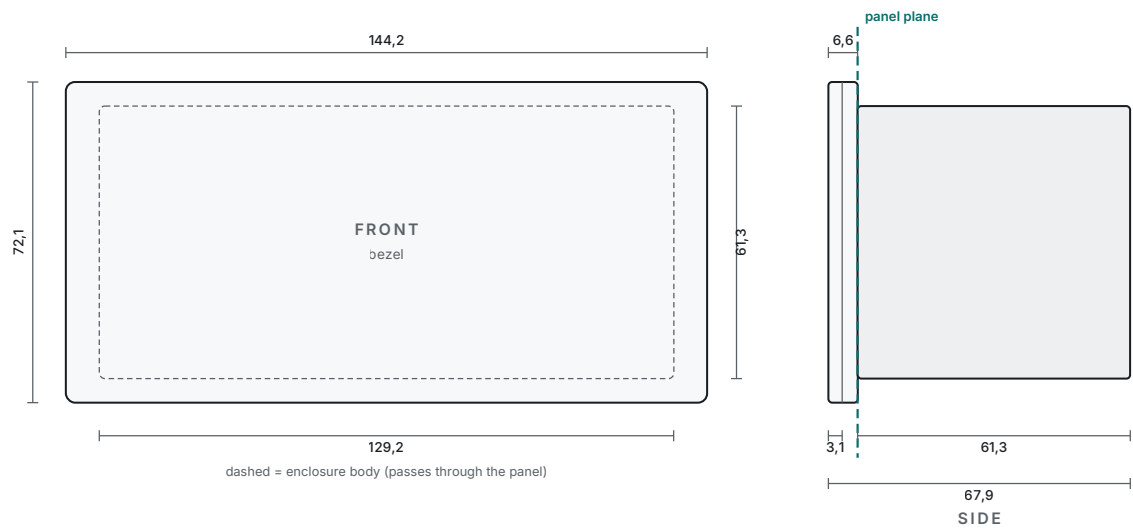
Every input needs one wire. The return path is the supply negative, which is common to all forty channels.



WIRING RULE

All forty inputs share one common return — the supply negative. **Drive the contacts from this device's own 24 V supply**. Feeding them from a second supply would join two systems through that common return.

Dimensions



DIMENSION	VALUE	NOTE
Front bezel	144.2 × 72.1 mm	visible face on the panel — landscape
Body cross-section	129.2 × 61.3 mm	must pass through the panel opening
Body flange	139.4 × 72.2 mm	bears on the rear face of the panel
Projection in front	6.6 mm	bezel face plate is 3.1 mm of this
Depth behind the panel	61.3 mm	terminals and wiring are additional
Overall depth	67.9 mm	6.6 mm in front + 61.3 mm behind
Panel opening	129.2 × 65.3 mm	cut-out in the panel plate

Allow clearance behind the device for the plug-in terminals and the input wiring. Forty single-core input wires converge on this device; plan the cable route before the panel plate is cut.

Ordering information

There is one product and one code. No variants, no options, no segments to choose — the device is always supplied in the same configuration.

1VGL2-D24S01

ALARM VIGIL · 2 × 20 channel alarm annunciator, 24 V DC, panel mounting

INCLUDED	WHAT IS SUPPLIED
Device	Annunciator in its panel-mounting enclosure, front bezel fitted
Terminals	All plug-in terminal blocks fitted: 4 × 10-pole inputs, 24 V DC, two relay outputs
Labels	Front and rear labels applied; identification label with serial number on the side wall

The serial number is on the side-wall label, in plain text and as a barcode. Quote it in any correspondence about a particular unit; the order code identifies the product, the serial number identifies the unit.

Firmware

This datasheet describes the device with **firmware v1.1**. All forty channels are active and the flash rate is timed from the system clock.

VERSION	WHAT CHANGED
v1.1	All forty channels scanned — the terminal marked REACTOR OVER HEAT 20 is now read. Input debounce set to 30 ms. Flash period timed from the system tick, 2 s on / 2 s off
v1.0	First release. REACTOR OVER HEAT 20 is not read — 20 + 19 working channels

Units built with firmware v1.0 must be updated. With v1.0 the terminal marked **REACTOR OVER HEAT 20** is dead. This datasheet describes v1.1 behaviour throughout.

Note on the keys

MUTE and ACK are separate actions on this device: MUTE releases the horn relay and ACK steadies the indicators. In some annunciators a single key does both. Here the operator presses two — this is deliberate, so that silencing the horn never hides the fact that an alarm has not yet been acknowledged.