

The burner control unit Quad400 is suitable for the control of direct ignition burners up to 350 kW, pursuant to EN 746-2.

Flame control by means of UV scanner or ionization rod (even shared with ignition).

Time and cycle are configurable: the same device can be used to control different types of gas and oil burners, meeting all relevant requirements.

A led-bar flame signal indicator and an advanced self-diagnostic system provides the display of either the cycle status, lockouts and failures.

A traditional electric interface allows remote control:

Thermostat input

Remote reset input

Burner on (dry contact output) or 2nd stage control

Burner lockout (dry contact output)



SAFETY INFORMATION

Read and understand this manual before installing, operating, or servicing this unit. This unit must be installed according to this manual and local regulations. The drawings may show units without covers or safety shields to illustrate details. Disconnect power supply and follow all usual safety precautions before carrying out any operation on the device. Be sure to reinstall covers or shields before operating any devices.

The device is not user serviceable, a faulty device must be put out of order and sent back for servicing.

CONTRIVE manufactures products used as components in a wide variety of industrial systems and equipment. The selection and application of products remain the responsibility of the equipment manufacturer or end user.

CONTRIVE accepts no responsibility for the way its products are incorporated into the final system design. All systems or equipment designed to incorporate a product manufactured by CONTRIVE must be supplied to the end user with appropriate warnings and instructions as to the safe use and operation of that part.

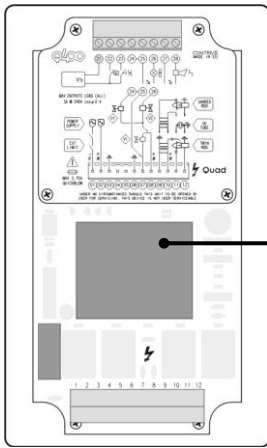
Any warnings provided by CONTRIVE must be promptly provided to the end user.

CONTRIVE guarantees for two years from the date of manufacture of its product to replace, or, at its option, to repair any product or part thereof (except fuses and with some limitations for tubes and photocells) which is found defective in material or workmanship or which otherwise fails to conform to the description of its sales order. CONTRIVE makes no warranty of merchantability or any other warranty express or implied. CONTRIVE assumes no liability for any personal injury, property damage, losses, or claims arising from misapplication of its products.

CONFORMITY

- Gas Equipment Directive (90/396/EEC)
- Low Voltage Equipment Directive (73/23/EEC)
- Machinery Directive (89/392/EEC)
- EMC Directive (89/336/EEC)

- EN298 compliant
- EN230 compliant
- EN746-2 compliant
- DVGW type certification No. CE-0085BM0346
- Certified by Gosstandart pursuant to GOST-R



INTERNAL LABEL

QR CODE

SERIAL NUMBER

Quad
CE-0085BM0346
 230V +10-15% 3VA
 50...60Hz IP65
 Q4.A.230.G.A.020.03.01.001.L-230

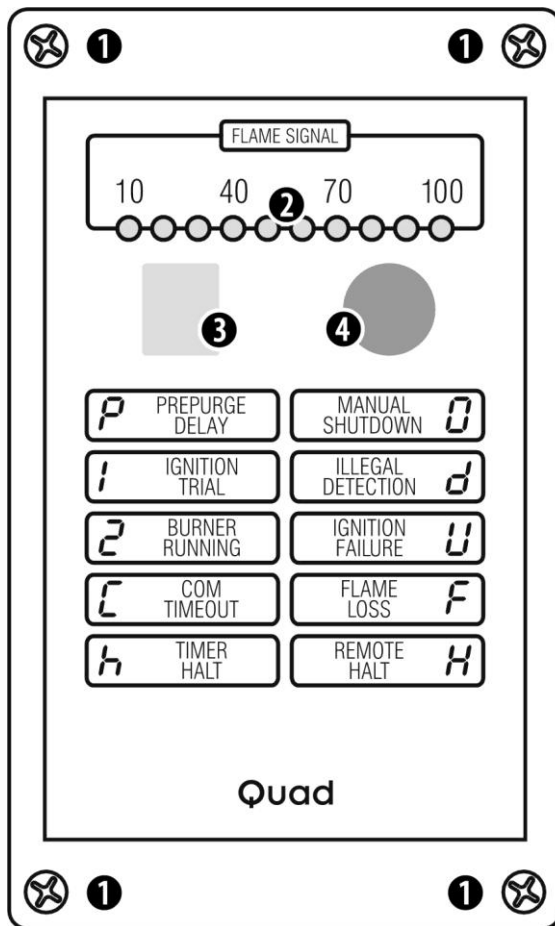
D1234 CONTRIVE

DEVICE DATA

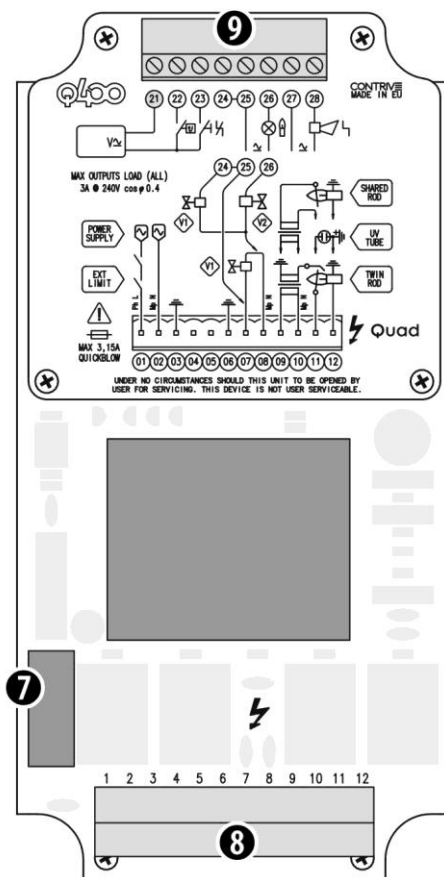
CONFIGURATION

Please perform the following tasks after receiving the product:

- Inspect the unit for damage. If the product appears damaged upon receipt, contact the shipper immediately.
- Verify receipt of the correct power supply voltage option by checking the label.
- If you have received the wrong model or the device does not function properly, contact your supplier.

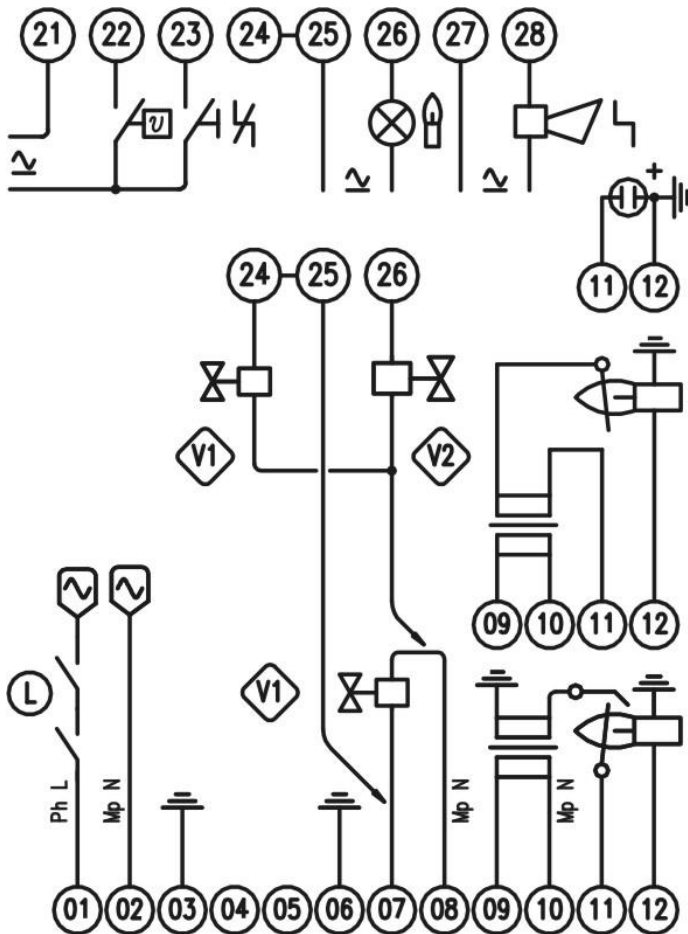


- #### FRONT PANEL
- | | |
|------------------------|----------|
| FITTING SCREWS | 1 |
| FLAME SIGNAL BARGRAPH | 2 |
| STATUS DISPLAY | 3 |
| RESET / SHUTOFF BUTTON | 4 |



- #### INTERNAL
- | | |
|--------------------------|----------|
| POWER SUPPLY FUSE | 7 |
| MAIN TERMINAL BOARD | 8 |
| EXPANSION TERMINAL BOARD | 9 |

WIRING DIAGRAM



01	POWER SUPPLY PHASE
02	POWER SUPPLY NEUTRAL
03	GROUND
04	TRAXBUS INTERFACE POSITIVE (UNAVAILABLE)
05	TRAXBUS INTERFACE NEGATIVE (UNAVAILABLE)
06	GROUND
07	GAS VALVE (V1)
08	POWER SUPPLY NEUTRAL
09	IGNITION TRANSFORMER OUTPUT
10	POWER SUPPLY NEUTRAL
11	FLAME DETECTOR INPUT (ROD, UV-)
12	GROUND
21	INPUTS COMMON RETURN
22	THERMOSTAT INPUT
23	RESET INPUT
24	BURNER ON CONTACT RETURN
25	BURNER ON CONTACT RETURN
26	BURNER ON CONTACT OR MAIN GAS VALVE (V2)
27	BURNER LOCKOUT CONTACT RETURN
28	BURNER LOCKOUT CONTACT
L	EXTERNAL LIMITS

USE POWER, SIGNAL AND CONTROL CABLE SUITABLE FOR THE TYPE OF OPERATION AND COMPLYING WITH ALL REGULATIONS DO NOT ROUTE CONNECTIONS TOGETHER WITH FREQUENCY CONVERTER CABLES OR CABLES EMITTING STRONG FIELDS PROVIDE RELIABLE CONNECTION TO PE (PROTECTION EARTH) AND BURNER FRAME, RECOMMENDED WIRE GAUGE > 4 mm² ALL ELECTRONIC SYSTEMS MUST BE SUPPLIED BY A DEDICATED TRANSFORMER IN A TN-S EARTHING SYSTEM

USE UNSCREENED HIGH-VOLTAGE CABLE FOR IGNITION AND IONIZATION ROD LINES, LAYING CABLES INDIVIDUALLY, AVOIDING METAL CONDUITS. KEEP HIGH VOLTAGE IGNITION CABLES AS SHORT AS POSSIBLE, AVOIDING LOOPS AND KEEP ALL OTHER CABLES, ESPECIALLY THOSE OF UV OR IONIZATION ROD, AS FAR APART AS POSSIBLE

OUTPUTS AT TERMINALS 24 25 26 27 ARE SPST UNPROTECTED DRY CONTACTS, LOAD MUST BE WITHIN THE RATED CURRENT

POWER SUPPLY FUSE

The device and following burner loads are protected by means of an embedded POWER SUPPLY FUSE [7]:

- TERMINAL 07 : GAS VALVE V1
- TERMINAL 09 : IGNITION TRANSFORMER

This fuse must be replaced only with same type and value component: 3,15 A quickblow (5x20mm).

STATUS DISPLAY

The STATUS DISPLAY [4] gives, at any time, a clear indication about the working conditions of both the burner and the equipment, making it easier to detect any failure occurring in the system or the device.

WARNINGS



SELF-TEST

SELF DIAGNOSIS, EVERY TIME THE UNIT IS POWERED OR THE BURNER IS STARTED.



LIFETIME EXPIRED

MAINTENANCE REQUIRED AFTER 500.000 IGNITIONS. PUSH AGAIN TO START ANYWAY.



CONFIGURATION

UNIT IN CONFIGURATION MODE THROUGH COMMUNICATION LINK.

CYCLE



MANUAL SHUTDOWN

UNIT HAS BEEN PUT OUT OF SERVICE FROM PUSH BUTTON. PUSH AGAIN TO RESTORE.



TIMER SHUTDOWN

BURNER HAS BEEN TURNED OFF BY OPTIONAL INTERNAL TIMER.



THERMOSTAT SHUTDOWN

BURNER HAS BEEN TURNED OFF BY LOCAL THERMOSTAT AT TERMINAL 22.



PREPURGE

PURGE OF COMBUSTION CHAMBER OR MIN TIME FOR ILLEGAL FLAME PROVING.



IGNITION

1ST SAFETY TIME. BURNER IGNITION TRIAL WITH PILOT GAS VALVE OPEN.



PILOT BURNER ON

PILOT GAS VALVE IS OPEN, BURNER ON UNTIL SHUTDOWN, LOCKOUT OR FAILURE



POSTCOMBUSTION

WAITING FOR FLAME QUENCHING AFTER LOCKOUT OR SHUTDOWN REQUEST.



POSTPURGE

PURGE OF COMBUSTION CHAMBER, SHOWN TOGETHER WITH ASSOCIATED CODE.

LOCKOUTS



STANDBY

WAITING FOR RESET WHEN PROGRAMMED FOR STANDBY MODE AT POWER-ON.



ILLEGAL DETECTION

PARASITE FLAME DETECTION DURING PRE-PURGE, POSTPURGE OR POSTCOMBUSTION.



IGNITION FAILURE

NO FLAME DETECTED AT THE END OF IGNITION TRIAL, 1ST SAFETY TIME.



FLAME LOSS

FLAME QUENCHING DURING NORMAL BURNER OPERATION.



CONTROL BOARD COM FAILURE

EXPANSION CONTROL BOARD IS MISSING OR NOT WORKING PROPERLY.

RESETABLE FAILURES



IGNITION DEVICE FAILURE

IGNITION DEVICE UNPLUGGED, DEFECTIVE OR NOT WORKING PROPERLY.



GAS VALVE FAILURE

GAS VALVE(S) UNPLUGGED, DEFECTIVE OR NOT WORKING PROPERLY.



OUTPUT RELAYS FAILURE

SHORT CIRCUIT ON OUTPUT RELAY CONTACT LOADS DISCONNECTED BY SAFETY RELAY.



CONTROL BOARD ERROR

WRONG OPERATION OF CONTROL BOARD, ILLEGAL COMMAND



MISSING GROUND JOINT | SOFT JUMP

POOR SPARK RETURN PATH (I.E.: BAD GROUND CONNECTION TO BURNERS HEAD).



STRONG EMI | CONFIG ERROR

ELECTRO MAGNETIC INTERFERENCE ABOVE ADMISSIBLE LIMIT, CONFIGURATION ERROR.



TIMEBASE FAILURE

MISMATCH BETWEEN 1ST AND 2ND INTERNAL TIMEBASE GENERATORS.



SYSTEM WATCHDOG

MICROPROCESSOR ISN'T OPERATING PROPERLY.

NON RESETABLE FAILURES



PUSH BUTTON FAILURE

PUSH BUTTON FOUND CLOSED AT SELF TEST. FAILURE OR AVOID PUSHING DURING TEST.



SYSTEM ERROR

PROGRAM ERRORS, CORRUPTION IN FIRMWARE MEMORY.



MASTER SAFETY RELAY FAILURE

SHORT CIRCUIT ON SAFETY RELAY CONTACT. OUTPUT RELAYS WILL DISCONNECT LOADS.

SINGLE STAGE GAS BURNER

When the equipment is used for gas burners, the prescriptions set forth in the European Standard EN298 (including any further revision) must be completely fulfilled, along with the specific requirements of any National regulation in force in the Country where the equipment is installed.

Combustion air and optional process limits are controlled by external circuitry.

A complete self test is deployed at power-on and at any reset from lockout, possible failures are reported on the front panel display. A flame simulation test is carried out during Prepurge.

The gas valve will be activated only if the ignition device is detected (power supply current) during preignition time.

The gas valve remains open during the programmed safety time, if a valid flame signal is detected within the safety time the valve is kept open: the burner is on and 3 seconds later the contact at terminals 25/26 will be closed.

If no flame is detected the system will lockout and contact at terminals 27/28 will be closed.

Push the front panel button or close the reset input at terminal 23 to reset from lockout (will take place at release).

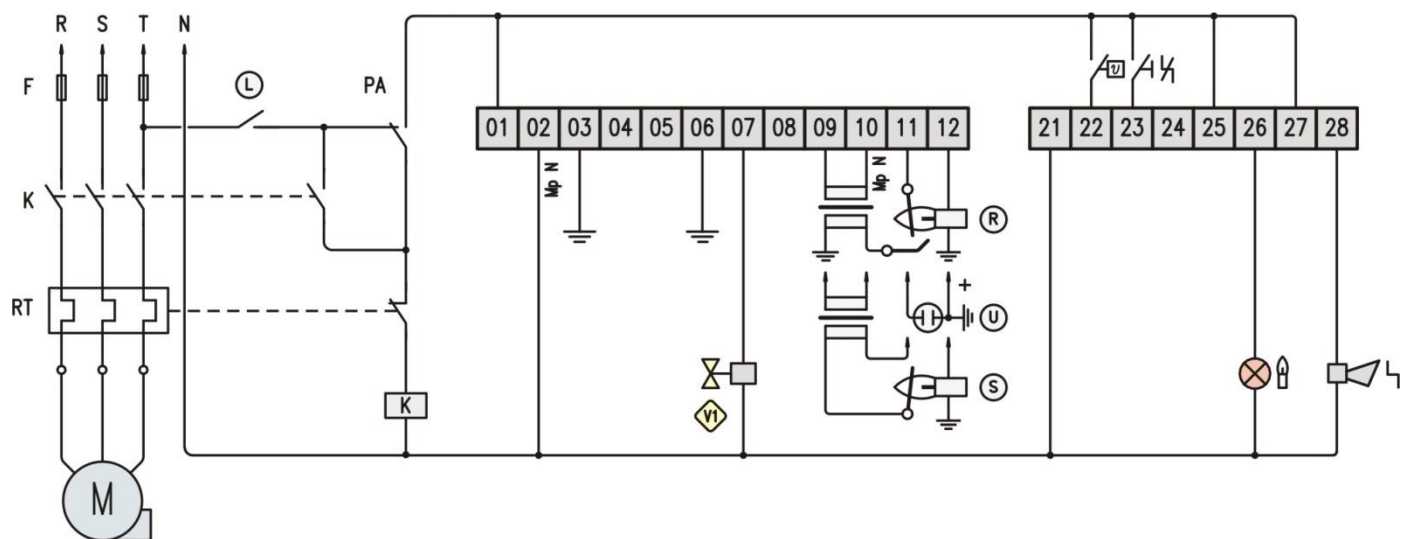
Flame quenching during burner operation will force the system to lockout, recycle or respark.

There are different options to operate the burner:

- switching on/off the power supply;
- pressing the front panel button (manual shutdown);
- by means of thermostat input (halt);
- internal timer (if enabled).

A postcombustion time (max 20 seconds) is allowed after a lockout or shutdown request, followed by postpurge.

The device can stop the burner after programmed auto shutoff time (5m to 20h50m) of continuous operation and restart again, providing that all the equipment and burner safety tests are successfully performed.



Ⓛ	EXTERNAL LIMITS
F	LINE FUSE
K	BLOWER POWER RELAY
RT	BLOWER THERMAL PROTECTION
M	BLOWER MOTOR
PA	LOW AIR PRESSURE SWITCH
v1	GAS VALVE

⊗	THERMOSTAT
K	RESET INPUT
L	BURNER LOCKOUT
Ⓛ	BURNER ON
Ⓡ	DUAL ROD CIRCUIT
Ⓤ	UV SENSOR
Ⓢ	SINGLE ROD CIRCUIT



ALL SAFETY SWITCHES SHOULD BE APPROVED AS LIMIT CONTROLS
THE USE OF ELECTRONIC SWITCHES MAY CAUSE ERRATIC OPERATIONS

DUAL STAGE GAS BURNER

Contact output at terminal 25/26 can be used to manage a dual stage burner.

First stage intermittent gas valve is connected to terminal 24 (internally connected to terminal 25) and wired to terminal 7 (gas valve output). This output is kept open once the flame signal is detected.

Second stage gas valve is connected to terminal 26 and powered 3 seconds after pilot burner successfully ignited.

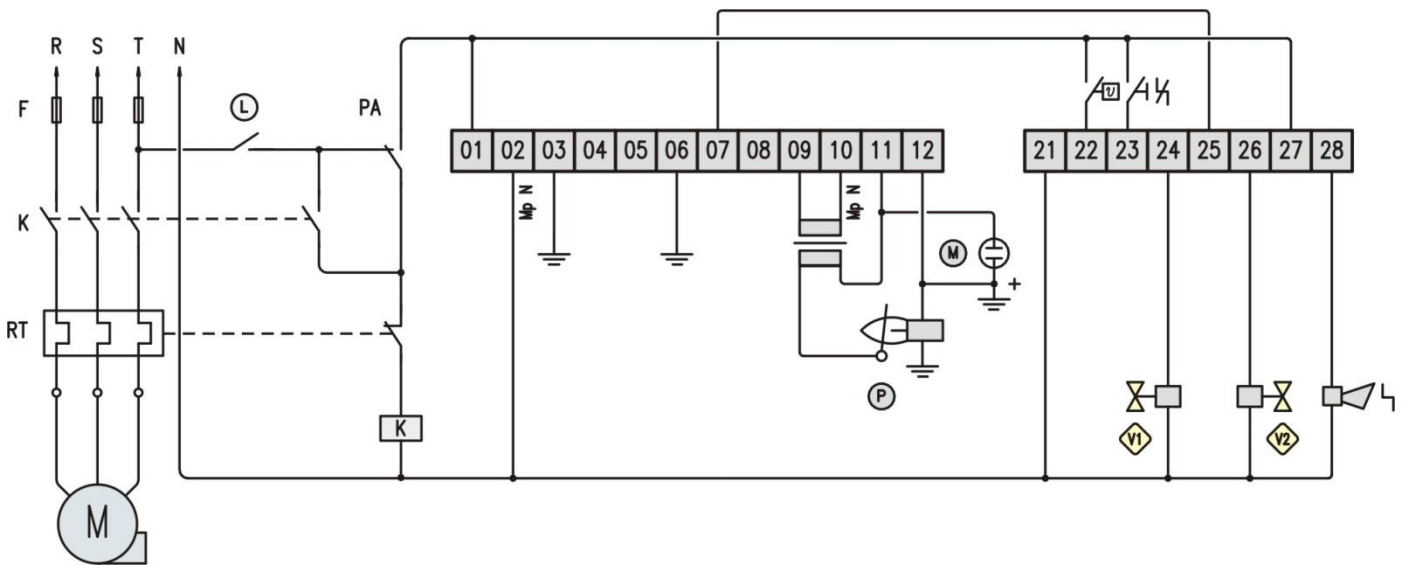
Both valves are turned off when flame quenches or following any lockout or shutdown request.

In the following example the ignition and detection of the first stage is achieved by means of shared rod, an UV detector could be installed on the 2nd stage of the burner. Both detectors are connected in parallel to same input.

Any lockout will turn on the alarm output at terminal 28.

Push the front panel button or close the reset input at terminal 23 to reset from lockout. The reset will take place only when the button or contact are released.

Input at terminal 23 is meant for reset purpose only, no action is performed closing this input while burner is running.



Ⓛ	EXTERNAL LIMITS
F	LINE FUSE
K	BLOWER POWER RELAY
RT	BLOWER THERMAL PROTECTION
M	BLOWER MOTOR
PA	LOW AIR PRESSURE SWITCH

⊗	THERMOSTAT
⌘	RESET INPUT
⌚	BURNER LOCKOUT
Ⓟ	PILOT SINGLE ROD
Ⓜ	MAIN UV SENSOR
Ⓥ1	PILOT GAS VALVE
Ⓥ2	MAIN GAS VALVE



ALL SAFETY SWITCHES SHOULD BE APPROVED AS LIMIT CONTROLS
THE USE OF ELECTRONIC SWITCHES MAY CAUSE ERRATIC OPERATIONS

OIL BURNER

When the equipment is used for oil burners, the prescriptions set forth in the European Standard EN230 (including any further revision must be completely fulfilled, along with the specific requirements of any National regulation in force in the Country where the equipment is installed.

Combustion air and optional process limits are controlled by external circuitry.

A complete self test is deployed at power-on and at any reset from lockout, possible failures are reported on the front panel display. A flame simulation test is carried out during Prepurge.

Ignition device is activated during Prepurge time for oil burners (long preignition).

The fuel valve will be activated only if the ignition device is detected (power supply current) during preignition time. The fuel valve remains open during the programmed safety time, if a valid flame signal is detected within the safety time the valve is kept open: the burner is on and 3 seconds later the contact at terminals 25/26 will be closed.

If no flame is detected the system will lockout and contact at terminals 27/28 will be closed.

Push the front panel button or close the reset input at terminal 23 To reset from lockout (will take place at release).

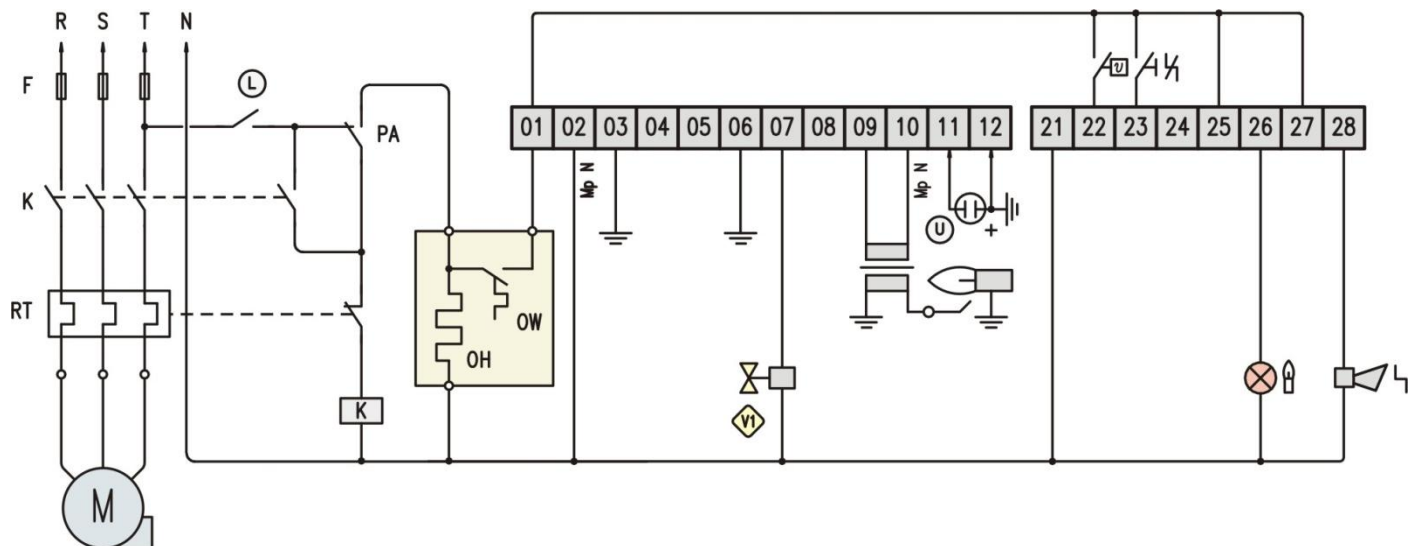
Flame quenching during burner operation will force the system to lockout, recycle or respark.

There are different options to operate the burner:

- switching on/off the power supply;
- pressing the front panel button (manual shutdown);
- by means of thermostat input (halt);
- internal timer (if enabled).

A postcombustion time (max 20 seconds) is allowed after a lockout or shutdown request, followed by postpurge.

The device can stop the burner after programmed auto shutoff time (5m to 20h50m) of continuous operation and restart again, providing that all the equipment and burner safety tests are successfully performed.



Ⓛ	EXTERNAL LIMITS
F	LINE FUSE
K	BLOWER POWER RELAY
RT	BLOWER THERMAL PROTECTION
M	BLOWER / PUMP MOTOR
OH	OIL HEATHER
OW	OIL THERMOSTAT

PA	LOW AIR PRESSURE SWITCH
⊗	THERMOSTAT
⚡	RESET INPUT
⚡	BURNER LOCKOUT
⚡	BURNER ON
Ⓛ	UV SENSOR
Ⓛ	FUEL VALVE



QUAD USES UV SCANNER FOR OIL, INCREASING SAFETY AND RELIABILITY
IGNITION DEVICE MUST BE SUITABLE FOR LONG PREIGNITION TIMES

PARAMETERS

HARDWARE

Q001	POWER SUPPLY VOLTAGE	230 Vac	230
		115 Vac	115
F003	PROCESS INPUTS VOLTAGE	230 Vac	2
		115 Vac	1
		48 Vac	8
		24 Vac	4
Q002	ENCLOSURE	LIGHT ALUMINIUM	N
		STANDARD ALUMINIUM	A
		LOW PROFILE ALUMINIUM	B
		POLYCARBONATE	P

BEHAVIOUR AT POWER ON – LOCKOUT

Q101	START-UP MODE	AUTOSTART	A
		STANDBY	S

BEHAVIOUR DURING PREPURGE

Q305	PREPURGE TIME	1" ...	001
		... 250"	250

BEHAVIOUR DURING IGNITION

Q401	PRE-IGNITION TIME	0,5"	
Q402	STARTUP SAFETY TIME	2" ...	02
		... 25"	25

BEHAVIOUR DURING OPERATION

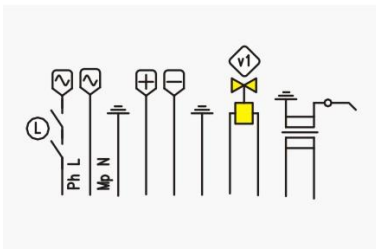
Q507	OPERATING SAFETY TIME	1" ...	01
		... 12"	12
Q508	ALLOWED POSTCOMBUSTION TIME	< 20"	
Q509	AUTO-SHUTOFF TIME	00:05 ...	01
		20:50 ...	FA
Q510	AUTO-SHUTOFF MODE	OFF	-
		MANUAL	M
		AUTOMATIC	A
Q512	FLAME LOSS	LOCKOUT	L
		RECYCLE	C
		RESPARK	K

BEHAVIOUR DURING POSTPURGE

Q602	POSTPURGE TIME	1" ...	001
		... 250"	250

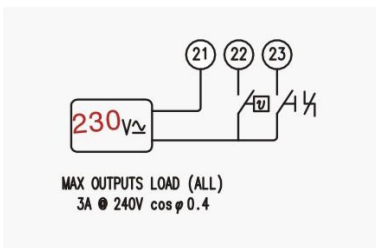
GENERAL SETTINGS

Q801	BURNER TYPE	GAS	G
		OIL	O
F809	DEVICE NOTES		
F810	DEVICE PASSWORD		



Q001 – POWER SUPPLY VOLTAGE

Power supply must be wired at terminal 01 and 02, for burner control unit and loads (air and gas valves and ignition transformer), both protected by the embedded fuse.
Optional safety interlock limits could be wired on the main supply phase.



F003 – PROCESS INPUT VOLTAGE

Inputs from external thermostat and remote reset are independent from device and burner power supply, allowing an isolated interface.
Different voltage options are available.
The use of electronic switches may cause erratic operation

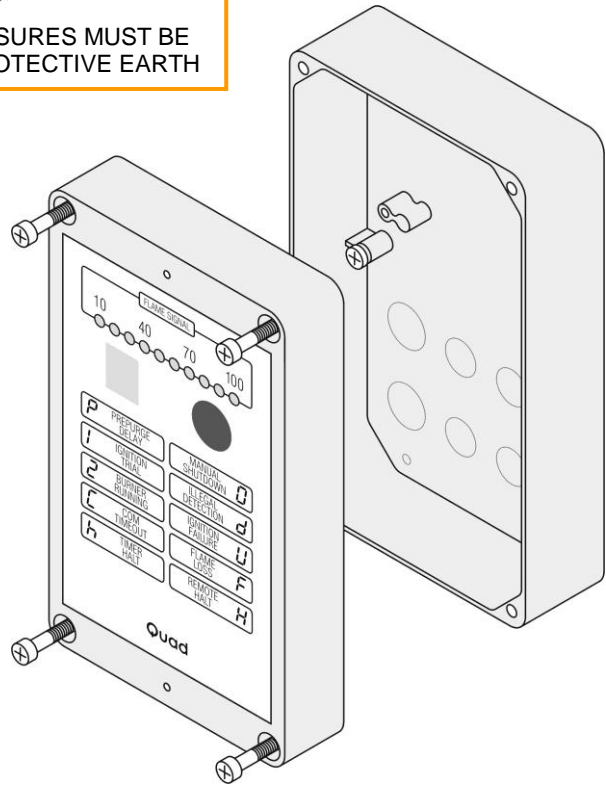
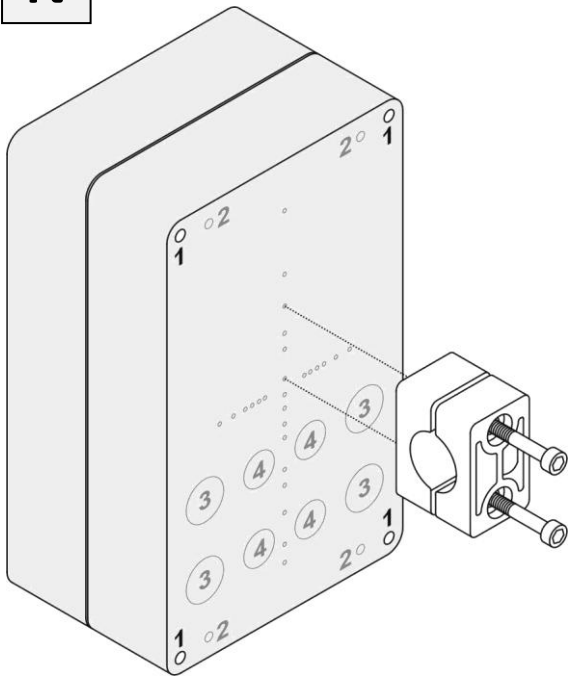
Q002 – ENCLOSURE

Quad600 is available in 4 different enclosure options. Standard version is N, all other types are available on request. According to European Standard EN60529 a minimum protection degree IP40 must be guaranteed, raised to IP54 for open air application.



ALUMINIUM ENCLOSURES MUST BE CONNECTED TO PROTECTIVE EARTH

N

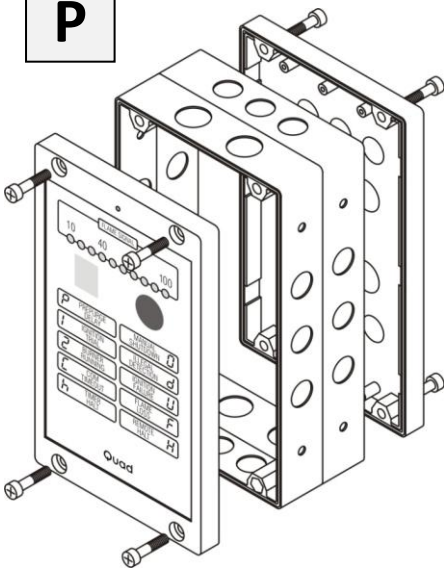


1	EXTERNAL FITTING HOLES (4) 4.2 mm SELF TAPPING OR M5 THREAD FORMING SCREW	106 x 186 mm
2	BREAKABLE FITTING HOLES (4) 4,0 mm DIAMETER	77 x 182 mm
3	BREAKABLE HOLES FOR WIRING (4) SUITABLE FOR PG11 CABLE GLAND	Ø 19,0 mm
4	BREAKABLE HOLES FOR WIRING (4) SUITABLE FOR PG9 CABLE GLANDS	Ø 15,5 mm

CAST ALUMINIUM ALLOY EN AB 46100	IP65
OVERALL DIMENSION: 200 x 120 x 71 mm	WEIGHT: 1180 g
ELECTROSTATIC POLYESTER POWDER COATING	COLOR: GRAY

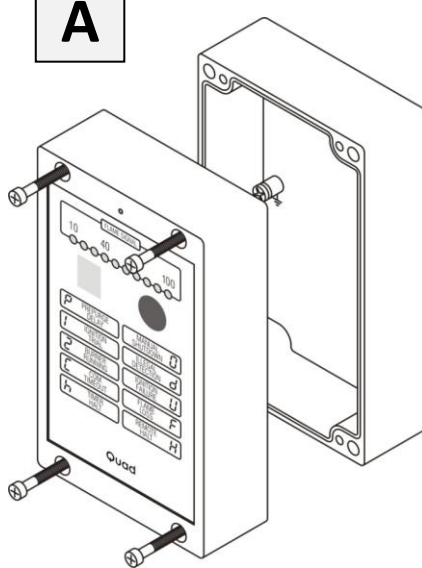
OPTIONAL FITTING CLAMPS FOR PIPES	
VERTICAL MOUNTING	OUTSIDE DIAMETER 6 ... 76 mm
HORIZONTAL MOUNTING	OUTSIDE DIAMETER 6 ... 63 mm

P



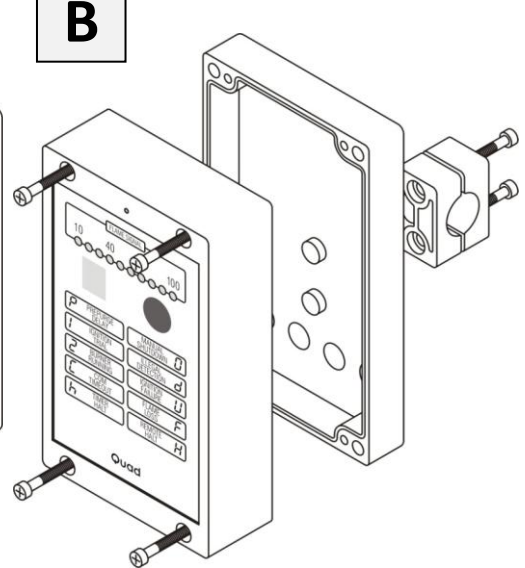
POLYCARBONATE UL-V0
200 x 120 x 96 mm | 800 g

A



CAST ALUMINIUM ALLOY
200 x 120 x 92 mm | 1560 g

B

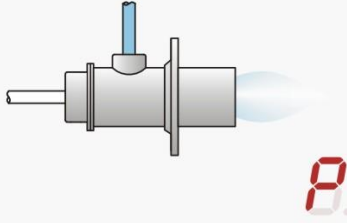


CAST ALUMINIUM ALLOY
200 x 120 x 71 mm | 1350 g



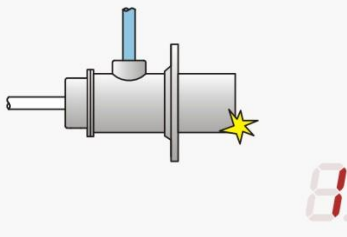
Q101 – START-UP MODE

At power-on, once the self-test has been successfully completed, the unit waits in STANDBY mode until a reset operation is performed from local push button or through a fieldbus remote command. Setting AUTOSTART mode, the cycle starts automatically, unless the units has been turned off while in lockout.



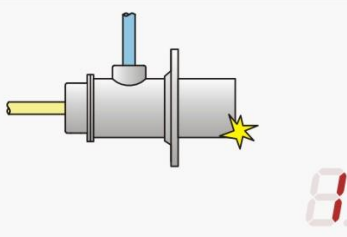
Q305 – PREPURGE TIME

Set prepurge time in forced draught burners according to EN 676 requirements. Any air valve and/or butterfly valve controlled by external process must be kept open during the whole prepurge time. During this time an illegal flame test is carried out.



Q401 – PRE-IGNITION TIME

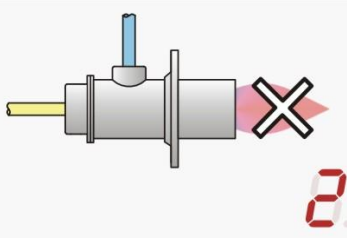
The ignition transformer is turned on 500 ms before the gas valve to check the correct operation before to open the gas. This is a fixed time and cannot be changed.



Q402 – STARTUP SAFETY TIME

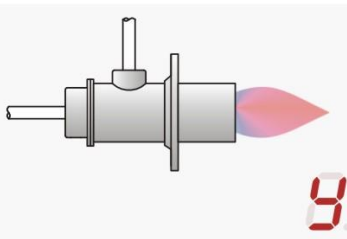
Set the correct time following EN 746-2 (or other relevant) requirements:

Natural draught burners	≤ 70 kW → 10"	> 70 kW → 5"
IGNITION POWER ≤ 33% NOMINAL POWER WITH MAXIMUM OF 350 KW		
Forced draught burners	≤ 350 kW → 5"	>350kW→3"
IGNITION POWER ≤ 10% NOMINAL POWER WITH MAXIMUM OF 350 KW		



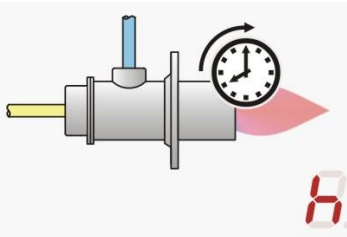
Q507 – OPERATING SAFETY TIME

If the flame fails during operation, gas valve is switched off within this safety time that must be in accordance with relevant application standards (default for EN 298 is 1" and must not exceed 3" including valves closing time for EN 746-2).



F508 – ALLOWED POST-COMBUSTION TIME

The flame signal is allowed for 20" once gas valve has been closed. Lockout occurs if the flame is detected after the post-combustion time.

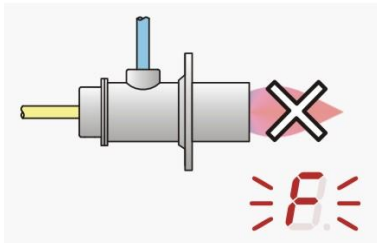


Q509 – AUTO SHUT-OFF TIME

An automatic shutoff is performed after the specified time since burner on.

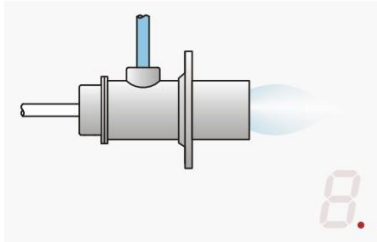
Q510 – AUTO SHUT-OFF MODE

Behavior after an automatic shut-off. In AUTOMATIC mode a complete burner restart cycle is deployed, performing the test of the whole system, as per Standard requirements, within 24 hours of continuous operation. In MANUAL mode the burner waits for reset.



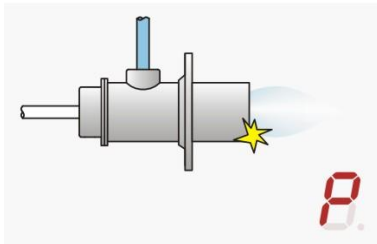
Q512 – FLAME LOSS

Determines the behavior at flame loss during normal burner operation. For burners with occasionally unstable flame signal a single recycle (including prepurge) or direct respark can be attempted. The setting is to be determined on the basis of burner capacity and relevant application standard.



Q602 – POSTPURGE TIME

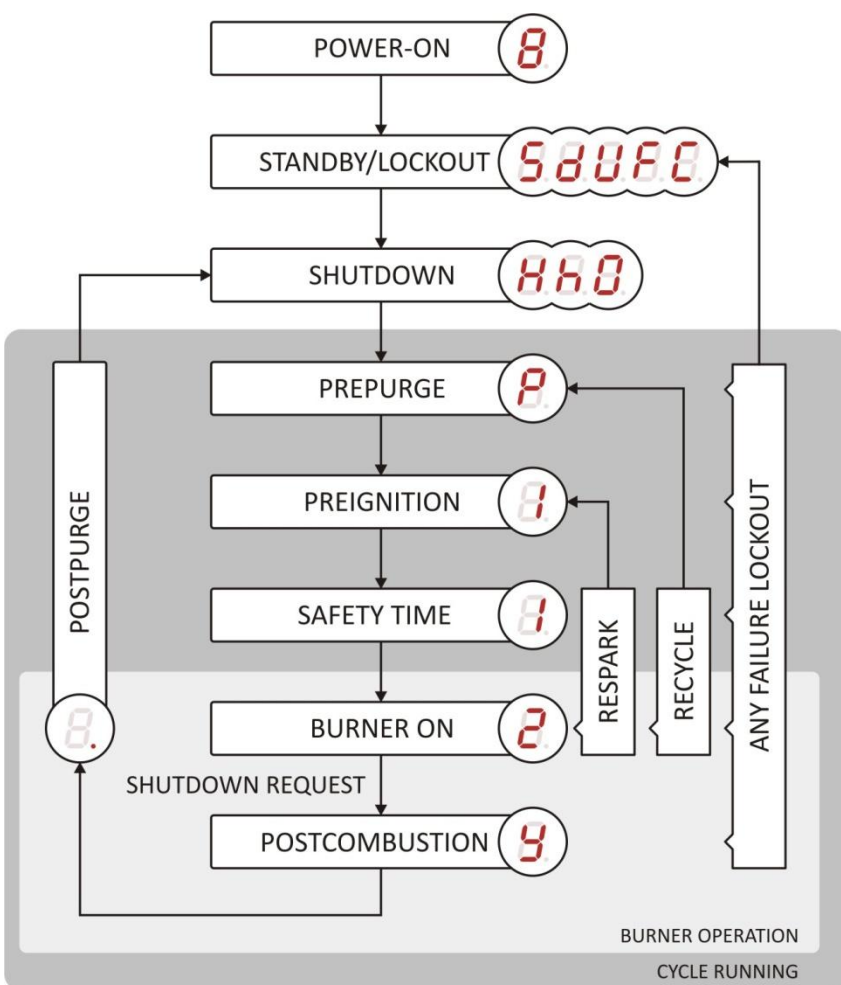
Follow EN 676 requirements to set correct postpurge time in forced draught burners. Any air valve and/or butterfly valve controlled by external process must be kept open during the whole postpurge time. During this time an illegal flame test is carried out.



Q801 – BURNER TYPE

Selecting OIL type burner the ignition device will be activated also during the prepurge to allow the detection of oil leakage that will be ignited, leading to an illegal flame detection. Application and settings must be made in accordance to EN 230 (or other relevant standard) requirements.

PROGRAM SEQUENCE



A **SELF TEST** IS PERFORMED IN LESS THAN 1", ONCE SUCCESSFULLY COMPLETED THE BURNER IS READY TO START.

IF THE UNIT HAS BEEN TURNED OFF WHILE IN **LOCKOUT** OR PARAMETER Q101 HAS BEEN SET TO **STANDBY**, IT WILL BE NECESSARY TO RESET THE UNIT BY MEANS OF LOCAL PUSH BUTTON.

A **FLAME SIMULATION** CHECK IS CONDUCTED DURING WAITING OR PREPURGE TIME.

AFTER THE PRESET **WAITING OR PREPURGE** TIME HAS ELAPSED, THE IGNITION DEVICE IS ACTIVATED AND VERIFIED, THEN THE PILOT VALVE IS OPEN.

PILOT PROVING PERIOD STARTS IF THE FLAME IS DETECTED WITHIN THE **SAFETY TIME**.

IF NO FLAME IS DETECTED DURING THE SAFETY TIME A FAULT LOCKOUT OCCURS.

FLAME FAILURES DURING OPERATION LEADS TO LOCKOUT RESTART OR RECYCLE DEPENDING ON Q512 PARAMETER SETTING.

A **SHUTDOWN REQUEST** FROM THERMOSTAT OR LOCAL PUSH BUTTON TURNS OFF THE BURNER, WAITING FOR ALLOWED POST-COMBUSTION AND POSTPURGE

AN **AUTOMATIC SHUTOFF** OF THE BURNER CAN BE ACTIVATED, AFTER A PRESET TIME OF BURNER RUNNING. THE BURNER CAN WAIT FOR A MANUAL RESET OR RESTART IN AUTOMATIC MODE.

A SELF TEST IS MADE AT EVERY RESTART. THIS PARAMETER MAY BE SET IN THIS WAY ONLY IF THE BURNER CAN RESTART AS INTENDED IN ALL OPERATING PHASES.

TECHNICAL DATA

POWER SUPPLY

VOLTAGE	115 or 230 V +10-15%
FREQUENCY	50/60 Hz §1
LINE FUSE	3,15 A QUICKBLOW - 5x20mm
POWER CONSUMPTION	4 VA MAX
POWER DISSIPATION	3 W MAX
LIFECYCLE COUNTER	524288 IGNITIONS

§1 SINEWAVE, QUASI-SINEWAVE, SQUAREWAVE

FLAME DETECTION

MINIMUM IONIZATION CURRENT	> 1 μ A
CURRENT LIMITATION	1 mA
SIGNAL DISPLAY	0...100 μ A
DETECTOR LINE LENGTH	< 30 m
SINGLE ROD LINE LENGTH	< 1 m
DETECTOR VOLTAGE	250 Vac
DETECTOR INSULATION	> 50 M Ω

ENVIRONMENT

OPERATING TEMPERATURE	0...60 °C
STORAGE TEMPERATURE	-20...80 °C
PROTECTION CLASS (EN 69529)	IP65
RELATIVE HUMIDITY	90% MAX
MOUNTING POSITION	ANY

OUTPUTS

RATED VOLTAGE	250 Vac MAX
SWITCHING VOLTAGE	277 Vac MAX
LOAD CURRENT	3 A MAX
MINIMUM CURRENT	1 mA @ 5 V
BREAKING CAPACITY	750 VA MAX

PROCESS INPUTS

RATED VOLTAGE	230, 115, 48, 24 Vac
CURRENT	5 mA MAX

CONFIGURATION

	Q002	Q001	Q801	Q101	Q305	Q402	Q507	Q602	Q512	Q510	F003	
Q4	N	230	G	A	020	03	01	001	L	-	230	DEFAULT

DEVICE CLASSIFICATION ACCORDING TO EN298	A / B	M / B	L / C / R	L	B	N (B)
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DEVICE CLASSIFICATION ACCORDING TO EN230	A / B	I / T / M	L / C / R	L	B	N (B)
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