



INT278 CAN EX

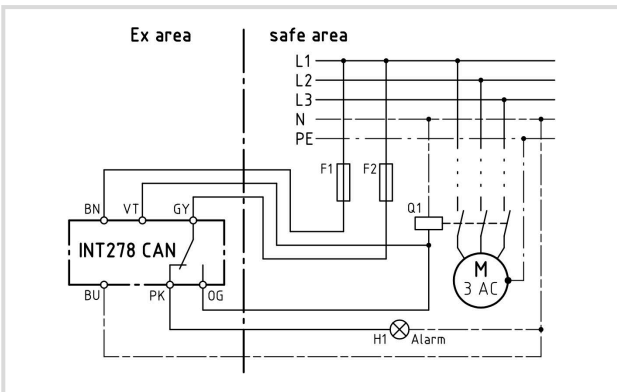
Illustration similar. Scope of delivery may deviate.

### Application

The optical level monitor INT278 CAN EX enables non-contact single-point measurement of liquid levels, preferably in compressors, pumps or vessels. For this purpose, the optical screw-in part is permanently installed at the measuring point. The electronic evaluation part is mounted in the screw-in part and can be replaced without opening the circuit of the medium to be monitored. The INT278 CAN EX is suitable for use in hazardous areas (see technical data).

### Functional description

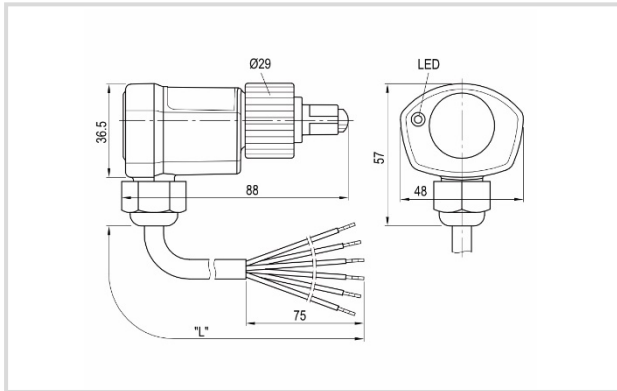
Infrared light pulses of the evaluation part are absorbed in the glass cone of the screw-in part with liquid and reflected in a gaseous environment. The INT278 CAN EX thus reliably detects the liquid level. After the compressor has started, level monitoring is active after the start-up bypass has elapsed. Time-delayed reactions prevent faulty switching caused by short-term fluctuations in the liquid. If the level is too low or a fault occurs, the relay switches off locked. The relay is switched on again after a reset of the supply voltage. The potential-free normally open contact can be wired directly in a safety chain without an auxiliary relay. An integrated self-monitoring system ensures increased operational safety, while an installation check ensures correct installation. A built-in LED indicates the current status. (see blinking code).



Wiring diagram

### Blinking code

- Level good
- Level missing
- Internal error, voltage supply too low or faulty assembly



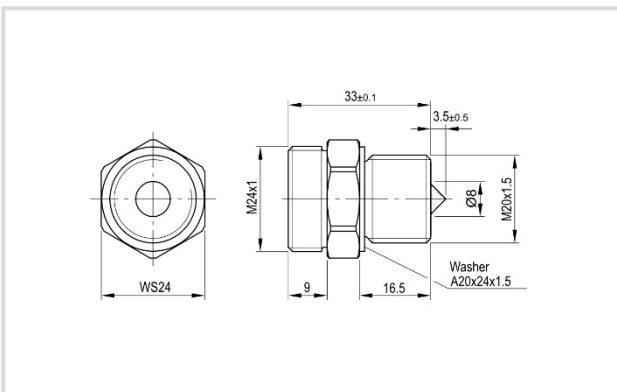
Electronic device: Dimensions in mm

### Order data

INT278 CAN EX (115V)	41 K 482 S080
INT278 CAN EX (230V)	52 K 482 S080
Further product information	See <a href="http://www.kriwan.com">www.kriwan.com</a>

### Safety instructions

- Assembly, disassembly and operation may only be carried out by qualified personnel. The valid European and country-specific directives for the connection of electrical and refrigeration equipment must be observed.
- All parts of the system may be under pressure. Before mounting or dismantling the optical screw-in part, the installation point must be brought into a depressurized state.
- The liquid to be measured can run out at the measuring point. Therefore make sure that no oil is present at the mounting point.
- The evaluation part INT278 CAN EX may only be used with the enclosed screw-in part (02 K 465 S21).



Screw-in part: Dimensions in mm

## INT278 CAN EX

### Special conditions for the safe operation

Plastic enclosures and parts have been tested to EN60079-0 for Group II and low mechanical hazard with an impact energy of 4 joules.


### Installation instructions

- The installation point of the screw-in part must be pressureless and there is no liquid at the installation point.
- The screw-in part must be clean, dry and undamaged in the glass area and thread!
- Screw the screw-in part with the appropriate sealing washer into the intended mounting hole. (torque 75Nm).
- Check the housing and cable of the evaluation unit for assembly errors or damage.
- Both O-rings must be mounted on the front part of the evaluation part.
- The safety edge at the sensor tip must be easy to operate.
- The optical channels at the tip of the evaluation unit must be free of dirt.
- Insert the evaluation part into the screw-in part and tighten the union nut (torque 10Nm) under uniform pressure on the evaluation part. The union nut must be completely screwed on.
- The cable outlet must point downwards.
- After assembly of the screw-in part, the system must be checked for leaks.
- Observe the instructions of the system manufacturer.

### Commissioning

- Before electrical connection, observe the supply voltage on the nameplate of the device.
- Apply supply voltage to L (BN) and N (BU) of the connecting cable on the evaluation unit.
- When mounted, the contact (GY) -(OR) closes after approx. 3s.
- Level monitoring is activated when L potential of the supply voltage is applied to the start-up suppression (VT).
- If the level is sufficient, the LED remains off and the contact (GY) - (OR) remains closed.
- If the level is too low, the LED lights up and after the start-up delay of 90s or 5s has elapsed during operation, the contact (GY) - (PK) closes locked.
- If the evaluation part is removed from the screw-in part, the LED flashes and after 5s the contact (GY) - (PK) closes locked.
- With a reset of the supply voltage of approx. 3s the interlocking is cancelled again.

### Technical data electronic device

Supply voltage - 52 S 482 S080 - 41 S 482 S080	AC 50/60 Hz 230V ±10% 3 VA AC 50/60 Hz 115V ±10% 3 VA
Permitted ambient temperature	-20 ≤ T <sub>a</sub> ≤ +60°C
Permitted medium temperature	max. 120°C (<1h), max. 100°C
Permitted relative humidity	10-100% r. F. mit Betauung im montierten Zustand
Input running detection Motor	L potential at connection VT
Start-up bridging time	90 s ± 5 s
Switching delay - After applying the supply voltage - Missing level or fault	3 s ± 1 s 5 s ± 2 s locked
Resetting the lock	Main reset > 3 s
Relay - Contact	AC 240V 2,5A C300 Mind. AC/DC 24V 20mA
- Mechanical service life	Approx. 1 Mio. switching cycles
Protection class acc. to EN 60529	IP54 in assembled condition
Connection type	Cable 6xAWG18/7, L=1m
Housing material	PA glas-fibre-reinforced
Mounting	Union nut (torque 10Nm)
Dimensions	See dimensions in mm
Weight	Approx. 180g
Check base	EN 61000-6-2, EN 61000-6-3, EN 61010-1, EN 60079-7, EN 60079-15 UL 873 Overvoltage category II Pollution level 2  II 3G Ex ec nC IIC T4 Gc KR 24.0001 X
Approval	UL File Nr. E222056 cUR <sub>us</sub>

### Technical data screw-in part

Ambient temperature	-30 ≤ T <sub>a</sub> ≤ +60°C
Medium temperature	max. 120°C (<1h), max. 100 °C
Relative Humidity	10-100% r.h. with condensation in assembled condition
Operating pressure	42 bar
Burst pressure	210 bar
Permissible media	Oils, refrigerants (in individual cases compatibility testing is recommended) Suitable for NH3
Screw-in thread	M20x1,5mm
Width across flats	SW24
Housing material	steel nickel plated
Dimensions	see dimensions in mm
Weight	Approx. 60g