User Manual ALFA(NET) 3-IRS Spraydetector
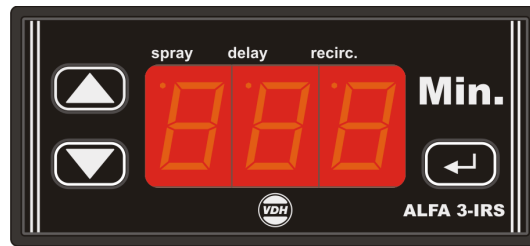
VDH doc. 080028	Version: v1.0	Date: 09-01-2008
Software: 060721_ALFA(NET) 3-IRS	File: Do080028.wpd	Range: 0/99 Minutes

* Installation.

On the topside of the **ALFA(NET) 3-IRS** is shown how the input, power supply and relay have to be connected. The **ALFA_NET_ 3-IRS** has a RS 485 network connection so it can be read out and adjusted on the Alfanet.

* Function.

After connecting the **ALFA(NET) 3-IRS** to the power supply, the led 'recirc' will light-up (= recirculation position), unless the airflow detector detects an airflow.
As soon as an airflow is detected, the relay will be energized (P02=0) and the led 'spray' in the display (=spray position) will light-up. With parameter P02 it is possible to reverse the relay function.
If the airflow stops the delay-timer will start, the led 'delay' lights-up and the remaining delay time is shown on the display. After the delay time has passed, the relay will be de-energized and the led 'recirc.' lights-up. The controller is ready for the next spray cycle.

* Manual mode.

The **ALFA(NET) 3-IRS** has also a manual mode. By pushing the **UP** and **DOWN** keys simultaneous (**UP** key first and than the **DOWN** key) the spray detector comes into the manual mode. The display shows "hnd" and the relay is energized. By pushing **UP** + **DOWN** again, the manual mode will switch off.

* Controlling.

The **ALFA(NET) 3-IRS** airflow detector can be controlled by three push buttons on the front.

These buttons are:
- ↵ **SET** - view / change the set point and reset alarm.
- ▲ **UP** - raise the value.
- ▼ **DOWN** - lower the value.

* **<u>Viewing the adjusted delay time.</u>**

By pushing the **SET** key the adjusted delay time is shown. Also the led 'delay' starts flashing. A few seconds after releasing the **SET** key, the delay time disappears and the status of the controller is visible again.

* **<u>Changing the delay time.</u>**

Push the **SET** key and the delay time appears in the display. Release the **SET** key.
Now push the **SET** key again and together with the **UP** or **DOWN** keys the delay time can be changed. A few seconds after releasing the keys, the status of the controller is visible again.

* **<u>Setting internal parameters.</u>**

By pushing the **DOWN** key more than 10 seconds, you enter the 'internal programming menu'. In the left display the upper and lower segment are blinking.
Over the **UP** and **DOWN** keys the required parameter can be selected (see table for the parameters). If the required parameter is selected, the value can be read-out by pushing the **SET** key. Pushing the **UP** or **DOWN** keys together with the **SET** key allows you to change the value of this parameter.
If after 20 seconds no key is pushed, the **ALFA(NET) 3-IRS** changes to it's normal operation mode.

* **<u>Parameter tabel.</u>**

Para-meter	Description parameter	Range	Standard value
01	Selection unit of time Min./Sec. 0 = Minutes, 1 = Seconds	0..1	0
02	Working air flow detector 0 = Normal, 1 = Reverse	0..1	0
90	Network number (only at ALFANET)	1..250	1
95	Software version	0..255	-
96	Production year	00..99	-
97	Production week	1..52	-
98	Serial number (x1000)	0..255	-
99	Serial number (units)	0..999	-

*   Error messages.

In the display of the **ALFA 3-IRS** the following error messages can appear:

EE - Settings are lost.

Solution: - Reprogram the settings.

*   Technical details.

ALFA 3-IRS Airflow detector

Mounting	:	Panel mounting
Dimensions	:	35 x 77 x 71,5 mm (hwd)
Panel hole	:	28 x 70 mm (wb)

Common:

Supply	:	230 Vac / 1,2VA 50/60Hz (Or else, see product sticker)
Relay	:	SPDT 250V/16A(C-NO), 8A(C-NC) (cos phi=1)
Control	:	through push buttons on the front.
Front	:	Polycarbonate
Range delay time	:	0/+99 minutes(or seconds)
Sensor	:	IRS-sensor (approach switch)
Communication (Option)	:	RS485 Network (A,B,Gnd: 2x twisted pair shielded min. 0,5mm^2)

  - Provided with memory protection during power failure.
  - Connection with screw terminals on top and bottom side.
  - Special version on request available.
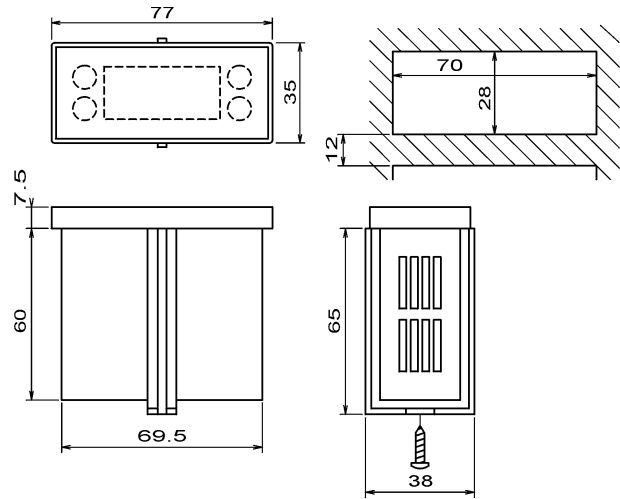

*   Adress.

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* Dimensions.

* Connections.

If applicable


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Trafo 3VA
230/12Vac

VDH art.nr.
350.010073
```

L   N
230Vac   12Vac
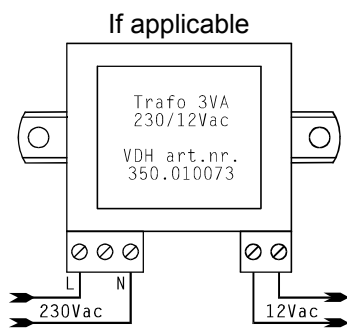
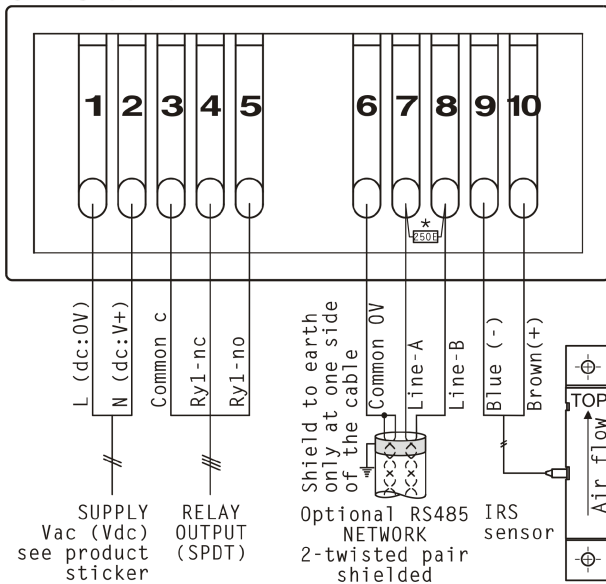## ALFA(NET) 3-IRS serie

*)REMARK: To terminate RS485-Network
Connect a 250 Ohm resistor between
Line-A and Line-B at both cable-ends

| 1 | 2 | 3 | 4 | 5 | | 6 | 7 | 8 | 9 | 10 |

L (dc:0V)
N (dc:V+)
Common c
Ry1-nc
Ry1-no
Shield to earth only at one side of the cable
Common 0V
Line-A
Line-B
Blue (-)
Brown(+)
TOP
Air flow

SUPPLY
Vac (Vdc)
see product
sticker

RELAY
OUTPUT
(SPDT)

Optional RS485
NETWORK
2-twisted pair
shielded

IRS
sensor

RS 485 NETWORK CONNECTIONS 2-twisted pair shielded cable:

Controller-1	One of the Controllers can be the PC-Interface (Repeater is also a contr.)	Controller-2	*) Place Terminator resistor of 250 Ohm only at both ends of the RS485-cable, between line-A and line-B. May be provided in the controller with a jumper.	Controller-x

A B GND
RS485

Line-A (Hi)
R=250E *
Line-B (LO)
GND (0V)

Shield only at one side of the cable to Earth

Line-A(Hi)
Line-B(LO)
GND (0V)

Shield only at one side of the cable to Earth

#) For signal conditioning Place Pullup/-down resistors only at one point in the Network! May be provided in the controller with jumpers. Or use ALFA 1 TERMINATOR

V+ #
Line-A(Hi)
R=250E *
Line-B(LO)
GND (0V)
0V

Network connections:
Pair-1:
   Connect A (HI) to A (HI)
   Connect B (LO) to B (LO)
Pair-2:
   Connect GND (0V) to GND (0V)
Shield:
   Connect Shield to (clean) Earth
   only on one side of cable

Endpoint
Network
*

Network-cable
2 twisted pair shielded
min. 0,5mm²
Pair-1: (A/B), Pair-2: (Gnd)

Connection-
point
Network

Network-cable
2 twisted pair shielded
min. 0,5mm²
Pair-1: (A/B), Pair-2: (Gnd)

Endpoint
Network
*

Max Cable length 1KM

Note: 1) AVOID LONG STUB CABLES (No longer than 0,5M), otherwise use a Repeater.