

# Product catalogue

May 2023



**In control.**

# Intro

VDH Products has been a one of the world's leading manufacturers for more than 40 years of accurate control systems in all situations where temperature, pressure and relative humidity are critical parameters. VDH Products is known for the innovativeness and reliability of its solutions, combined with the high quality of its products.

## Reliability and quality

Throughout the years, VDH Products has grown to become an authority on high-tech measuring instruments and measuring systems. VDH Products keeps the development and production very much on a tight rein. Why? Because VDH Products makes no concessions whatsoever when it comes to reliability and durability. That is why just as much attention is paid to a simple thermometer, sensor, timer or interface as to the complete control unit for a specific application.

## The first choice in many sectors

Solutions from VDH Products are used in e.g. the following branches:

- Refrigeration and climate technology
- Agriculture and market gardening
- Refrigerated transport
- Spraying booths
- Fruit ripening and storage/preservation
- Baking technology
- Process technology and machine building
- Heating and ventilation technology

## R&amp;D

VDH Products has its own excellent Research & Development department. Our highly-qualified hardware and software engineers are able to use the most modern systems and dedicated software to develop our own printed circuits, embedded software, casings and front panels. A large number of tests are carried out in our own laboratory, which has a climate-controlled area and EMC testing equipment. The ISO-certified production process operates using fixed, controllable procedures.

## Worldwide dealer network

As well as its headquarters in Roden, VDH Products also has its own branch in Germany and it has built up a global network of dealers and preferred suppliers over the years.



# Contact information

## Visitors address:

Produktieweg 1  
9301 ZS Roden

## Postal address:

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BTW NL009783234B01  
KVK 04036720

Monday	:08:00-17:00u
Tuesday	:08:00-17:00u
Wednesday	:08:00-17:00u
Thursday	:08:00-17:00u
Friday	:08:00-16:00u
Saturday	:Closed
Sunday	:Closed

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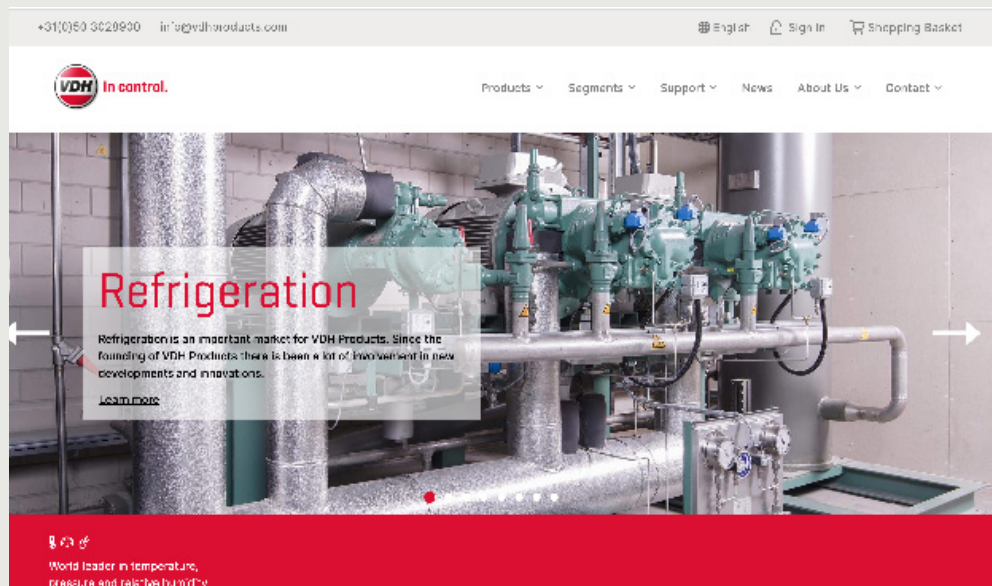
E-mail sales: [verkoop@vdhproducts.com](mailto:verkoop@vdhproducts.com)

## Website

The website of VDH Products provides an overview of the product range, interesting blog articles and practical information such as manuals and data sheets.

[www.vdhproducts.com](http://www.vdhproducts.com)

Follow VDH Products on LinkedIn, Facebook and Twitter for the latest developments.



# Conditions

General conditions for sales and delivery for the technological industry, filed with the Registry of the "Rechtbank" (District Court) of The Hague on April 16, 2010 under No. 29/2010.

Issued by the Association FME-CWM, P.O. Box 190, 2700 AD ZOETERMEER

The FME conditions can be found in Annex I at the back of the catalog.

## Pricelist

Prices mentioned in the pricelist are in Euro's. Prices are subject to change without notice.

Document is subject to misprints.

## Orders

Orders must preferably be confirmed via e-mail if possible, indicating the item number and the project or order number as reference.

## Transport conditions

Incoterms: FCA Roden.

Shipment costs  $\leq$  30 kg: euro 14,00.

Pallet transport: euro 87,00 (inside The Netherlands)

Express and courier costs will be charged extra.

Possibilities: Express delivery <9:00 or <12:00 guaranteed next business day.

All shipments are delivered, if stated otherwise, with GLS Transport.

## Returns

For returning products a term of 30 days after purchase is valid. The delivery date is the date of purchase.

Return Policy:

- Returns must be accompanied by the original invoice or packing list of the order.
- The product is complete, undamaged and unused.
- Custom made products as well as products with printed logo are not eligible for a return.

In case of a return shipment, a credit invoice for the original purchase price is given in consultation with the sales department

If an item is damaged by use, a part of the return amount may be withheld for depreciation.

If the article does not meet the requirements of the return policy, VDH Products BV may refuse the shipment. In that case the shipment will be returned to sender.

Returns must be at all times take place in consultation with the sales department of VDH Products BV.

Returns must be sent freight paid to VDH Products BV, Produktieweg 1, 9301 ZS Roden, The Netherlands.

The shipment must be accompanied by a completed return form, annex 2.

## Repair/calibration

Items which are offered for repair or calibration must be send freight paid to the address of VDH Products BV and must be accompanied by a completed return form, annex 2.

## Emergency service

Outside office hours an emergency service for urgent matters is offered by telephone

Support costs can be charged by the After sales department.

## Warranty

Warranty on the products of VDH Products BV is 12 months from the date of delivery.

# Logo prices

Many of our instruments can be provided with your company logo.

Please provide your logo in .eps format, so that we can offer you a proposal for a professional look.

## Prices logo imprint:

Setup costs € 135,00.

1 - 3 instruments	€ 31,-	for each color.
4 - 6 instruments	€ 20,-	for each color.
7 - 10 instruments	€ 12,-	for each color.
11 - 24 instruments	€ 4,-	for each color.
25 - 49 instruments	€ 3,-	for each color.
50 - 99 instruments	€ 2,-	for each color.
100 - 299 instruments	€ 1,50	for each color.
300 - 999 instruments	€ 1,-	for each color.

Logos that are made up of multiple colors can also be printed, with the exception of logos that have a fading.

Costs are calculated per printing, so a second or third color will double or triple the final price.

## Explanation of the symbols



Cooling



Interval defrost



Heating



Real Time defrost



Offcycle defrost



Dehumidifying



Electrical defrost



Humidifying



Hotgas defrost

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# Switch panels

A one-stop shop. VDH Products has a panel building department that offers a comprehensive package of capabilities, with just a single point of contact for engineering, production and commissioning.

VDH Products knows a great deal about control technology. For more than 35 years now, VDH Products has been developing and producing high-tech control systems.

Combining both control and switching technology lets VDH Products offer a unique total product, at the high levels of quality and reliability that VDH is known for.

From one-offs to serial production, VDH Products has a suitable solution for any question.

- Switching boxes
- Control boxes
- Operating panels

VDH Products has its own engineering department, where a detailed intake is following by translation of the customer requirements in a complete set of drawings. Production is started after the drawings are approved by the customer. A flexible team of professionals means that every project can be realised entirely in line with the norms and standards of the industry.

## Turn-key delivery

The reliable quality of VDH Products is guaranteed by a strict final inspection.

Each finished product that leaves the factory is tested for correct operation. By using our own products, the control equipment can also be installed directly and parameters can be set according to the customer's wishes. On location VDH Products also offers the possibility for guidance in commissioning.



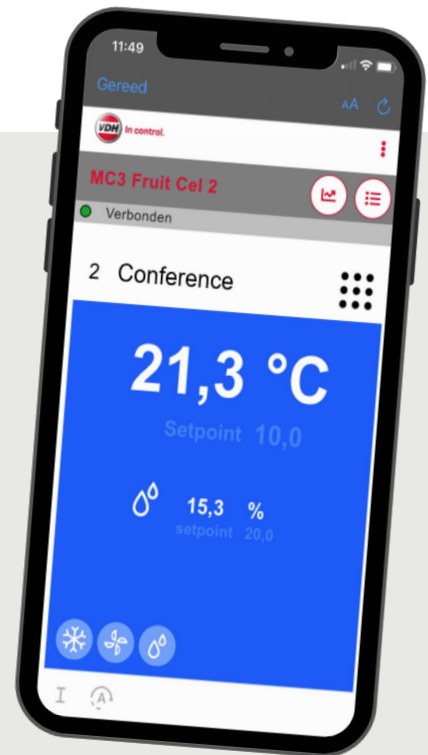


# VASP

## Advanced management and control system

In many industrial and commercial processes, maintaining the right ambient conditions is vital. Even the smallest deviation of temperature, pressure or relative air humidity could have dramatic consequences. Such as in cold storages and frozen food stores or in large hotel or restaurant kitchens. In all of these cases, total process control is essential. The VASP management and information system gives you integrated control of all your systems, as well as detailed data recording and full-featured alarm functionality.

VASP is a management system which converts all the data from your cold-storage, freezer and other systems into real-time process information. The system runs on a dedicated server or computer, which communicates with the connected interfaces and controllers via Ethernet. VASP gives you insight into all running processes so you can closely monitor them and intervene immediately when needed.



### Unique features:

- User-friendly, logical and intuitive to operate
- Clear process visualization
- Extensive alarm functionality by e-mail or VASP smartphone app
- Detailed data recording
- Multi language
- Webbased

For more information or a live demonstration of VASP, please contact the sales department of VDH Products.





VASP is available with a number of different options. This makes VASP adaptable to the needs of each application. By default VASP offers the possibility to read out and control all Alfamet controllers including the MC 585 and the MC 885. If MC3 controllers or the Proba 5 Compact also need to be read out and operated, the VASP software in the Pro version can be used. VASP Proba is available for reading out and operating the Proba 4 and Proba 5.

All above versions work with the standard control screen. Besides this standard control screen, VASP can also be expanded with a map on which controllers of multiple locations can be read out and operated. An almost unlimited number of locations can be created and positioned exactly on the map. An example of an application for this solution is an incident room. The manager of the control room can continue to monitor all the locations simultaneously. In case of an alarm at one of the locations, this is immediately visible on the map.

Another option of VASP is the use of layers. Each layer can be provided with an image which can be installed by the user. Each individual controller can be placed exactly on a layer. This way e.g. temperatures can be placed exactly where they are measured.

The additional costs for the different options can be requested from the sales department of VDH Products BV.

Article number	Product name	Price
907.000384	VASP Software - Proba versie	On request
907.000411	VASP Software - Basis versie	On request
907.000412	VASP Software - Pro versie	On request

# Temperature

- [Thermostats](#)
- [Temperature loggers](#)
- [Temperature sensores](#)
- [Thermometers](#)



# Proba 5

## Technical Specifications

The PROBA 5 is the successor of the PROBA 4 ripening controller. The PROBA 5 is characterized by the central DIN-Rail control module, which can be mounted in a (central) switch cabinet. The operator can use the Proba 5 remotely by the VASP software or local at the ripening room by a touchscreen control panel.

With the touchscreen control panel (optional) it is possible to readout the room temperature and to change the set point. It is also possible to stop a program and to start the stand-by mode. This is important if the server crashes or the network is damaged. The normal operation will be taken place on the pc with VASP.

Each Proba 5 controller has got its own IP address and can be connected to a network switch, which is connected to the VASP pc. The VASP pc software should be installed on a server pc and can be used with every pc which on the network. The pc should have a browser with java.

The VASP software can control a maximum of 100 PROBA's 5. If necessary, it is possible to make more locations. Each location can contain 100 controllers.

Ripening programs can be made by using a graph. In this graph it is very easy to make adjustments. Not only in default programs but also in running programs. Set point changes can take place with a ramp, with a step. or with a combination of these two. It is possible to make as many set point changes per day as you want.

In case of an alarm, there can made a difference between office times and out of office times. It is possible to send the alarm message by e-mail or push message by the VASP app.

The PROBA 5 meets the strong requirements of the TÜV Rheinland. We have received a TÜV Rheinland ID number for the PROBA 5. This ID number is worldwide known and means that the quality from the PROBA 5 is guaranteed en meets the strong requirements.

<b>Type:</b>	<b>Supply:</b>
Proba 5	12-15 Vdc (2A max)
<b>Housing:</b>	<b>Range:</b>
Mounting plate with anodized aluminium housing	-40/+50°C
<b>Dimensions:</b>	<b>Inputs:</b>
308 x 191 x 100mm	Pt 1000 temp.sensor
<b>Front:</b>	Analogue inputs
Anodized aluminium	Digital inputs
<b>Connections:</b>	<b>Outputs:</b>
Terminals on pcb	Analogue outputs
	Relays outputs
	RS485 output
	<b>Network:</b>
	1x ethernet for pc

Analogue inputs can be configured for:

- ↳ Humidity sensor
- ↳ Gas sensor
- ↳ Pressure sensor

Digital inputs can be configured for:

- ↳ Fan failure
- ↳ Cooling failure
- ↳ Heating failure
- ↳ Door switch
- ↳ External alarms

Article number	Product name	Supply voltage	PT1000 temperature sensors	Analogue inputs for e.g. gas and humidity sensors	Digital inputs for door contact and external alarms	Analogue output for e.g. three-way valves	Relay outputs	RS485 output to control unit	Ethernet connection for network	Price
907.000413	Proba 5 Controller	12 VDC	10	10	16	8	24	●	●	On request
907.000401	Compact controller	12 VDC	4	1	8	10	6	●	●	On request
907.000422	Proba 5 7" Touchscreen									On request
907.000428	Proba 5 7" Door cabinet									On request



# MC3-Fruit

## Technical Specifications

The MC3-FRUIT is latest generation store controllers and is the successor of the well-known FC 785-PC controller.

The MC3-FRUIT is special developed as an economical way of storing fruit like apples, pears and berries.  
The MC3-FRUIT is developed on experience and feedback from professional fruit retailers.  
The controller is tested extensive and is qualified by the TÜV etcetera.

The MC3-FRUIT controller offers more control than its predecessors. Especially for cooling and defrost the controller has more advanced functions. The controllers can be divided in separate groups and sub groups.

For energy savings the cool- and defrost groups can be configured separately.  
Depending on the required in- and outputs, the MC3-Fruit can control up to five storage room with one controller.  
It is also possible to use one controller for one room. If one room is cooling, another room can use the hot gas for defrosting.  
One MC3-FRUIT controller can control a maximum of eight evaporators.

Multiple thermostats can form a network.  
With hot gas defrost the defrost will only start when at least one other room is cooling.  
If no rooms are cooling, the defrost will be delayed. If this takes too much time the room with the largest deviation to its setpoint will be forced to cool te produce hot gas.

The measured values from the MC3-FRUIT controller can be read out and adjusted with a control panel. Most of the time the control panel will be installed in the neighbourhood of the room. One control panel can control a maximum of five rooms.  
A small network cable connects the MC3-FRUIT with the control panel.  
The MC3-Fruit can be connected to VASP.

<b>Type:</b>	<b>Supply:</b>
MC3-Fruit	12-15 Vdc (2A max)
<b>Housing:</b>	<b>Range:</b>
Mounting plate with anodized aluminium housing	-40/+50°C
<b>Dimensions:</b>	<b>Inputs:</b>
308 x 191 x 100mm	Pt 1000 temp.sensor
<b>Front:</b>	Analogue inputs
Anodized aluminium	Digital inputs
<b>Connections:</b>	<b>Outputs:</b>
Terminals on pcb	Analogue outputs
	Relays outputs
	RS485 outputs
	<b>Network:</b>
	1x ethernet for pc

Article number	Product name	Total in-/ Outputs	PT1000 temperature sensor Input	Digital contact input	Analog voltage (0..1/10V) input	Analog current (0/4.. 20mA) input	Relay contact output	Analog (0..10V/ 20mA) output	Price
907.100004	MC3-Fruit Controller 3v		16	16	12		13	16	On request
907.100012	MC3-Fruit Controller 3v		16	16	12		25		On request
907.100014	MC3-Fruit Controller 3v		8	8			19	8	On request
907.100015	MC3-Fruit Controller 2v		16	16			13		On request
907.100016	MC3-Fruit Controller 3v		18	16	2	2	25	8	On request
907.100017	MC3-Fruit Controller 2v		8	4		3	13		On request

Article number	Product name	Total in- / Outputs	PT1000 temperature sensor input	Digital contact input	Analog voltage (0..1/10V) input	Analog current (0/4.. 20mA) input	Relay contact output	Analog (0..10V/ 20mA) output	Price
907.100018	MC3-Fruit Controller 3v		32				25		On request
907.100019	MC3-Fruit Controller 3v		16				25		On request
907.100021	MC3-Fruit Controller 3v		16	16			25		On request
907.100025	MC3-Fruit Controller 3v		16	16			13		On request
907.100031	MC3-Fruit Controller 3v		32		12		25		On request
907.100037	MC3-Fruit Controller 3v		32	16			25		On request
907.100038	MC3-Fruit Controller 3v		32	8			19		On request
907.100051	MC3-Fruit Controller 4v		34	8	4	6	19	16	On request
907.100063	MC3-Fruit Controller 3v		32	24			19		On request
907.100066	MC3-Fruit Controller 4v		34	11	1	12	19	16	On request
907.100050	MC3-Touch Fruit/Cool 4.3								On request
907.100104	MC3-Touch Fruit/Cool 7" construction								€895,00
907.100103	MC3-Touch Fruit/Cool 7" in-built								€795,00



# MC3-Cool

## Technical Specifications

<b>Type:</b>	<b>Supply:</b>
MC3-Cool	12-15 Vdc (2A max)
<b>Housing:</b>	<b>Range:</b>
Mounting plate with anodized aluminium housing	-40/+50°C
<b>Dimensions:</b>	<b>Inputs:</b>
308 x 191 x 100mm	Pt 1000 tem.sensor
<b>Front:</b>	Analogue inputs
Anolized aluminium	Digital inputs
<b>Connections:</b>	<b>Outputs:</b>
Terminals op pcb	Analogue outputs
	RS485 outputs
	<b>Network:</b>
	1x ethernet for pc

The MC3-Cool is an universal cool/freeze thermostat for the control of maximum 5 rooms per controller and up to 8 evaporators per room. The new MC3 hardware platform is modular build, that's why the controller fits every cooling or freeze project.

The MC3-Cool can be mounted on DIN rail in the switch board, from which all the valves, fans and defrost actions will be controlled.

Operating of the controller can be done at the cooling room by a remote panel as well on a PC with VASP software.

The MC3-Cool has its own IP-address and can be connected by Ethernet to the VASP network.

The following connections are available:

- Pt-1000 2-wired temperature input
- Digital input
- Relay
- Analog input (0-10V / 4-20mA)
- Analog output (0-10V / 4-20mA)

Dual sectional housing: contains a maximum of 4 in/output boards  
triple sectional housing: contains a maximum of 6 in/output boards

The MC3-Cool requires a power supply of 12Vdc.

Article number	Product name	Total in-/ Outputs	PT1000 temperature sensor input	Digital contact input	Analog voltage (0..1/10V) input	Analog current (0/4.. 20mA) input	Relay contact output	Analog (0..10V/ 20mA) output	Price
907.100026	MC3-Cool Controller 3v	8	8				19	8	On request
907.100028	MC3-Cool Controller 2v	8	4			3	13		On request
907.100034	MC3-Cool Controller 3v	16	16				25		On request
907.100035	MC3-Cool Controller 2v	16	16				13		On request
907.100055	MC3-Cool Controller 3v	16					25	16	On request
907.100069	MC3-Cool Controller 2v	8	8				7	8	On request
907.100104	MC3-Touch Fruit/Cool 7" construction								€895,00
907.100103	MC3-Touch Fruit/Cool 7" in-built								€795,00



# MC2-FC

## Technical Specifications

<b>Type:</b>	<b>Range:</b>
MC2-FC	-40/+50°C
<b>Housing:</b>	<b>Supply:</b>
Grey plastic	230 Vac
<b>Dimensions:</b>	<b>Input:</b>
213 x 180 x 85 mm (whd)	5x Pt 1000 temp. sensor
<b>Font:</b>	<b>Output:</b>
Polycarbonate	5x relay output
<b>Connections:</b>	2x RS485 output
Screw terminals	<b>Network:</b>
	1x ethernet for pc

The MC2-FC is a controller that can control, monitor and register the temperature, humidity and ventilation of cooling and storage cells. The controller is very suitable for the control of fruit storage cells, but it can also be used for many other control applications.

The controller has Pt1000 temperature sensor inputs, digital inputs and relay outputs that are freely configurable. The inputs are used to supply the controller with the measurements and external data required for the control processes. The controller uses these inputs in combination with the control settings (setpoints, parameters, etc.) to calculate the control values. The control values are transmitted by means of relays to the processes to be controlled. Multiple controllers can be connected to each other through a network (RS485 or Ethernet, depending on the mode) so that they can exchange technical control data. In this way, they can be combined to create an integrated control system with mutually coordinated control actions, while retaining their autonomous operation in the event of network malfunctions. The controller supports two modes: the FC mode (standard) and the MC mode. In the FC mode, the controller functions in the same way as the FC785-PC controllers.

The controller can work together with FC785-PC controllers and other MC2-FC controllers through the RS485 Alfabet. In the FC mode, has the controller the same parameters as the FC785-PC controller.

There are two difference between the MC2-FC in FC mode and the FC785-PC:

- The MC2-FC uses 2-conductor Pt1000 sensors instead of 3-conductor Pt100 sensors.
- The MC2-FC cannot be operated with the Alfabet PC program. Instead, the VDH Alfa Server Program (VASP) is now available. That program can be used to operate both the MC2-FC controllers and the FC785-PC controllers (from software version 2.10).

In the MC mode, the controller can work together with MC3-FRUIT and MC3-COOL controllers through the Ethernet. This mode is described in another user guide. It is possible to switch between the two modes using an internal web page (see section 5.2).

The controller can be operated using the touchscreen. Remote operation is possible using the VASP.

VASP provides access to the advanced control functions such as registrations, alarm handling settings, etc.

The controller has 5 temperature sensor inputs (which can also be used as digital inputs) and 5 relays. If more inputs or relays are necessary, the controller can be expanded with an optional 907.100054 MC3-EM [1Do12,1Rth16] extension module. That adds 11 temperature sensor inputs and 12 relays to the controller.

Article number	Product name	Price
907.200001	MC2-FC Building 4,3"	€921,00
907.200002	MC2-FC Build-in 4.3"	€921,00
907.100054	MC2 Extension module MC3-EM	€732,00





# MC 585

## Technical Specifications

The MC 585 is an universal controller for cool- and freezer rooms.

The thermostat is available for panel mounting and wall mounting and is equipped with the following functions:

- room-thermostat
- several fan control functions
- defrost clock for starting the defrost on interval base or real-time base
- off-cycle defrost, electric defrost and hot gas defrost possible
- end of defrost thermostat with time limitation
- digital inputs for door switch, an external lightning switch and an alarm input
- heavy duty cool relay

The MC 585 has a range from -40/+50°C with a read out per 0,1°C.

The MC 585 needs a power supply of 230Vac. On request other supply voltages can be delivered.

The MC 585 supports modbus RS-485 communication to external applications.

<b>Type:</b>	<b>Relay outputs:</b>
MC 585 thermostat	Compressor 230 Vac, 16(16)A
<b>Housing:</b>	Fan 230 Vac 16(8)A
Grey plastic	Defrost 230 Vac 16(8)A
<b>Dimensions:</b>	Light 230 Vac 5A
213 x 180 x 85 mm (whd)	Alarm (SPDT) C-NO-NC
<b>Supply:</b>	<b>Communication:</b>
230 Vac 50/60Hz 9VA	RS-485 Network
<b>Range:</b>	ALFANET
-40,0 / +50,°C per bereik 0,1°C	<b>Working temp:</b>
<b>Temp. sensors:</b>	-20 / +50°C
2x SM811, 2-wire (KTY-81)	<b>Store temp:</b>
<b>Digital inputs:</b>	-20 / +60°C
3x C/NO pot.free contact, Light, Door, External alarm	<b>Humidity:</b>
	10/90% RH not condensing
	<b>Accuracy:</b>
	± 0.5% from the range

Article number	Product name	Sensors	Control functions	Defrost	Alarm relay	Price
			❄️ 🌊	❄️ ⚡ ⚡ ⚡ ⚡ ⚡		
904.000849	MC 585 Building	2	•	• • • • •	•	€391,00
904.000879	MC 585 Building with door	2	•	• • • • •	•	€391,00
904.000822	MC 585 Build-in	2	•	• • • • •	•	€453,00



# MC 885

## Technical Specifications

The MC 885 is an universal three stage thermostat.

The three relays outputs can be configured for the following functions:

- cooling on/off
- heating on/off
- modulating P(ID) cooling
- modulating P(ID) heating
- day/night indication
- on/off indication
- several alarms

The thermostat is equipped with an analogue output which can be configured for one of the following functions:

- P(ID) cooling
- P(ID) heating
- sensor value
- set point value

The output can be configured as a 0-5Vdc or a 0-10Vdc output.

The digital input of the MC 885 can be con-figured for one of the following functions:

- external day/night contact
- external alarm input
- external alarm reset
- external on/off switch

Two SM800 sensors can be connected to the MC 885. The sensor can be configured to control their own thermostat funtion but it's also possible to control on the average of the two sensor or on the differential between the two sensors.

The internal buzzer can be activated as soon as an alarm occurs.

The range of the MC 885 is -50/+100°C with the readout per 0,1°C.

The MC 885 can be equipped with a RS 485 output for readout an adjusting on the Alfabet.

The MC 885 uses a supply voltage between 100 and 260Vac.

A clear usermanual will be deliverd with the controller.

<b>Type:</b>	<b>Display:</b>
MC 885	4- digit temperature display
<b>Housing:</b>	4- digit setpoint display
Black plastic	
<b>Dimensions:</b>	LEDs for statusus
96 x 96 x 122 mm (whd)	
<b>Panel cut-out:</b>	<b>Function:</b>
90 x 90 mm	Cooling, heating and alarm
<b>Front:</b>	<b>Range:</b>
Polycarbonate IP-44	-50/+50°C read-out per 0,1°C
<b>Connections:</b>	<b>Input:</b>
Screw terminals	2x SM800, Pt-100
<b>Supply:</b>	1x digital input
100 - 260Vac 47-440Hz	<b>Output:</b>
	1x SPST relays contacts
	2x SPDT relays contacts
	1x analogue output
	<b>Network:</b>
	1x RS 485 for the Alfabet
	<b>Accuracy:</b>
	± 0.5% from the range

Article number	Product name	Description	Sensors	Control functions	Defrost	0-10V Output	Alarm relay	Price
903.000768	MC 885 -50/100°C 100-260V	100-260V	2	• •	❄️ ⚡️ 🔌 ⚡️ 🔌 🔌 🔌 🔌	1	•	€446,00



# Alfa 10 series

## Technical Specifications

<b>Type:</b>	<b>Supply:</b>
Alfa 10 series	230 Vac, 50/60 Hz
<b>Housing:</b>	(-10/+5%)
Grey ABS pastic	<b>Operation:</b>
<b>Dimensions:</b>	By push buttons on
53 x 90 x 58 mm (wlh)	the front
<b>Connections:</b>	<b>Sensor:</b>
Screw terminals	SM 811 (PTC sensor;
<b>Front:</b>	1000 Ohm at 25°C)
Polyester	(not included)
	<b>Relay:</b>
	SPDT contact
	250V/16A (C-NO), 8A
	(C-NC) not inductive
	<b>Accuracy:</b>
	± 0.5% of the range

The Alfa 10 series is an universal range of rail mounting thermometers and thermo-stats. Due to the easy connection at the DIN rail the Alfa 10 can be used for many different applications.

Two different ranges are available: -50/+150°C with a read-out per degree or -10/+90°C with a read-out per tenth of a degree.








With the push buttons on the front a possible sensor deviation can be corrected.

The Alfa 10 is supplied directly with 230 Vac. The required temperature sensor is a SM 811.

There are several different types available, own with their specific functions. In the diagram below there is an over view with the several types and their specific functions.

If the required function is not in the diagram, you can contact VDH Products for more information.

Article number	Product name	Description	Sensors	Control functions	Defrost	Alarm relay	Price
904.010011	Alfa10 DP PT100 3-Wire -10/+40°C	thermometer	1				€127,00
904.010012	Alfanet 10 -50/+50°C	thermometer	1				€156,00
904.010013	Alfanet 10 DP -10/+40°C	thermometer	1				€156,00
904.010056	Alfanet 10 -50/+150°C	thermometer	1				€156,00
904.010120	Alfa 11 DP 24VAC -10/+40°C	thermostat	1	• •			€130,00
904.010137	Alfa 11 +50/+150°C	thermostat	1	• •			€130,00
904.010161	Alfa 11 PT100 3-Wire -50/+50°C	thermostat	1	• •			€130,00
904.010241	Alfa 11 PT100 3-Wire 0/+250°C	thermostat	1	• •			€130,00
904.010253	Alfa 11 -50/+150°C	thermostat	1	• •			€130,00
904.010014	Alfanet 11 -50/+50°C	thermostat	1	• •			€159,00
904.010117	Alfanet 11 0/+100°C	thermostat	1	• •			€159,00
904.010206	Alfanet 11 DP -10/+90°C	thermostat	1	• •			€159,00
904.010060	Alfa 13 0/+100°C	Alarm thermo-stat	1			•	€130,00
904.010138	Alfa 13 -50/+150°C	Alarm thermo-stat	1			•	€130,00

Article number	Product name	Description	Sensors	Control functions	Defrost	Alarm relay	Price
				      			
904.010141	Alfa 13 12Vdc -50/+150°C	Alarm thermostat	1			●	€130,00
904.010185	Alfa 13 24Vac -50/+50°C	Alarm thermostat	1			●	€130,00
904.010186	Alfa 13 24Vdc -50/+50°C	Alarm thermostat	1			●	€130,00
904.010193	Alfa 13 PT100 -50/+50°C	Alarm thermostat	1			●	€130,00
904.010200	Alfa 13 DP -10/+90°C	Alarm thermostat	1			●	€130,00
904.010225	Alfa 13 Pt1000 -100/+50°C	Alarm thermostat	1			●	€130,00
904.010153	Alfanet 13 -50/+50°C	Alarm thermostat	1			●	€159,00
904.010194	Alfanet 13 DP PT100 -10/+90°C	Alarm thermostat	1			●	€159,00
904.010201	Alfanet 13 DP -10/+90°C	Alarm thermostat	1			●	€159,00
904.010018	Alfanet 15 -50/+50°C	Defrost thermo- meter	1	●	●	●	€159,00
904.010019	Alfanet 15 DP -10/+40°C	Defrost thermo- meter	1	●	●	●	€159,00



# Alfa 20 series

## Technical Specifications

<b>Type:</b>	<b>Supply:</b>
Alfa 20 series	230 Vac, 50/60 Hz
<b>Housing:</b>	(-10/+5%)
Black ABS pastic	<b>Operation:</b>
<b>Dimensions:</b>	By push buttons on the front
144 x 72 x 50 mm (hwd)	<b>Sensor:</b>
<b>Connections:</b>	SM 811 (PTC sensor; 1000 Ohm at 25°C)
Screw terminals	(not included)
<b>Front:</b>	<b>Relay:</b>
Polyester	SPDT contact
	250V/16A (C-NO), 8A (C-NC) not inductive
	<b>Accuracy:</b>
	± 0.5% of the range

The Alfa 20 series is a range of thermometers and thermostats suitable for panel mounting and wall mounting. For both options special brackets are available.

Two different ranges are available: -50/+150°C with a read-out per degree or -10/+90°C with a read-out per tenth of a degree.








With the push buttons on the front a possible sensor deviation can be corrected.

The Alfa 20 is supplied directly with 230 Vac. The required temperature sensor is a SM 811.

There are several different types available, own with their specific functions. In the diagram below there is an over view with the several types and their specific functions.

If the required function is not in the diagram, you can contact VDH Products for more information.

Article number	Product name	Description	Sensors	Control functions	Defrost	Alarm relay	Price
904.010127	Alfa 20 DP -10/+90°C	Thermometer	1				€152,00
904.010104	Alfanet 20 -50/+50°C	Thermometer	1				€183,00
904.010105	Alfanet 21 -50/+50°C	Thermostat	1	• •			€185,00
904.010111	Alfa 23 0/+100°C	Alarm thermostat	1			•	€157,00
904.010113	Alfa 23 -50/+50°C with buzzer	Alarm thermostat	1			•	€157,00
904.010130	Alfa 23 -50/+150°C with buzzer	Alarm thermostat	1			•	€157,00
904.010131	Alfa 23 DP -10/+90°C	Alarm thermostat	1			•	€157,00
904.010180	Alfa 23 DP -10/+90°C 120Vac	Alarm thermostat	1			•	€157,00
904.010184	Alfa 23 -50/+150°C 120Vac	Alarm thermostat	1			•	€157,00

Article number	Product name	Description	Sensors	Control functions	Defrost	Alarm relay	Price
				      			
904.010191	Alfa 23 DP -10/+90°C 12V	Alarm thermostat	1			●	€157,00
904.010192	Alfa 23 -50/+150°C 12Vac/dc	Alarm thermostat	1			●	€157,00
904.010197	Alfa 23 -50/+50°C 24Vac/dc	Alarm thermostat	1			●	€157,00
904.010106	Alfanet 23 -50/+50°C	Alarm thermostat	1			●	€185,00
904.010112	Alfanet 23 0/+100°C	Alarm thermostat	1			●	€185,00
904.010146	Alfanet 23 DP -10/+90°C with buzzer	Alarm thermostat	1			●	€185,00
904.010124	Alfa 25 DP -10/+40°C	Defrost thermostat	1	●	●	●	€157,00
904.010107	Alfanet 25 -50/+50°C	Defrost thermostat	1	●	●	●	€185,00
Surcharges Alfa 20 series							
904.000057	Stainless steel wall plate						€14,00
904.000076	Mounting brackets						€6,00



# Alfa 30 series

## Technical Specifications

<b>Type:</b>	<b>supply:</b>
Alfa 30 series	230 Vac, 50/60 Hz
<b>Housing:</b>	(-10/+5%)
Black ABS plastic	<b>Operation:</b>
<b>Dimensions:</b>	By push buttons on the front
35 x 77 x 71,5 mm (hwd)	<b>Sensor:</b>
<b>Connections:</b>	SM 811/ (PTC sensor; 1000 Ohm at 25°C) (not included)
Screw terminals	<b>Relay:</b>
<b>Front:</b>	SPDT contact
Polyester	250V/16A (C-NO), 8A (C-NC) not inductive
	<b>Accuracy:</b>
	± 0.5% of the range

The Alfa 30 is an universal range of thermometers and thermostats.








Two different ranges are available: -50/+150°C with a read-out per degree or -10/+90°C with a read-out per tenth of a degree.

With the push buttons on the front a possible sensor deviation can be corrected.








The Alfa 30 is supplied directly with 230 Vac. The required temperature sensor is a SM 811.

There are several different types available, own with their specific functions. In the diagram below there is an over view with the several types and their specific functions.

If the required function is not in the diagram, you can contact VDH Products for more information.

Article number	Product name	Description	Sensors	Control functions		Defrost			Alarm relay	Price	
											
904.010133	Alfa 30 24Vac/dc -50/+50°C	Thermometer	1								€104,00
904.010151	Alfa 30 DP -10/+90°C 24Vac/dc	Thermometer	1								€104,00
904.010034	Alfanet 30 -50/+50°C	Thermometer	1								€135,00
904.010035	Alfanet 30 -50/+150°C	Thermometer	1								€135,00
904.010049	Alfanet 30 DP -10/+40°C	Thermometer	1								€135,00
904.010086	Alfa 31 -50/+50°C 12Vac	Thermostat	1		●	●					€108,00
904.010095	Alfa 31 0/+100°C 24Vac/dc	Thermostat	1		●	●					€108,00
904.010096	Alfa 31 -50/+50°C 24Vac/dc	Thermostat	1		●	●					€108,00
904.010097	Alfa 31 DP -10/+40°C 24Vac/dc	Thermostat	1		●	●					€108,00
904.010135	Alfa 31 DP -10/+40°C 12Vac	Thermostat	1		●	●					€108,00
904.010164	Alfa 31 0/+120°C 12Vdc	Thermostat	1		●	●					€108,00
904.010172	Alfa 31 -50/+150°C	Thermostat	1		●	●					€108,00
904.010179	Alfa 31 PT100 0/+250°C	Thermostat	1		●	●					€108,00
904.010205	Alfa 31 -50/+150°C 24Vac/dc	Thermostat	1		●	●					€108,00
904.010247	Alfa 31 12Vac 0/+100°C	Thermostat	1		●	●					€108,00
904.010036	Alfanet 31 -50/+50°C	Thermostat	1		●	●					€137,00



Article number	Product name	Description	Sensors	Control functions		Defrost	Alarm relay	Price
						    		
904.010037	Alfanet 31 0/+100°C	Thermostat	1	•	•			€137,00
904.010188	Alfanet 31 DP -10/+90°C	Thermostat	1	•	•			€137,00
904.010039	Alfanet 33 -50/+50°C	Thermostat	1				•	€137,00
904.010103	Alfanet 33 Pt1000 0/+400°C	Alarm thermostat	1				•	€137,00
904.010169	Alfanet 33 Pt1000 -100/+50°C	Alarm thermostat	1				•	€137,00
904.010178	Alfanet 33 -50/+150°C	Alarm thermostat	1				•	€137,00
904.010199	Alfanet 33 DP -10/+90°C	Alarm thermostat	1				•	€137,00
904.010249	Alfanet 33 DP -10/+90°C 12Vac	Alarm thermostat	1				•	€137,00
904.010040	Alfanet 35 -50/+50°C	Defrost thermostat	1	•		•	•	€137,00
904.010052	Alfanet 35 DP -10/+40°C	Defrost thermostat	1	•		•	•	€137,00



# Alfa 50 series

## Technical Specifications

The Alfa 51 is a compact thermostat for rail mounting with a neutral zone.

The Alfa 51 has a default program with the function cooling/heating and a minimum/maximum alarm. The thermostat can also be programmed with the function two stage cooling and two stage heating.








The Alfa 51 has a range of -50/+50°C. Temperatures above -10°C can be read-out per 0,1°C

All settings can be done by the push buttons on the front. The internal settings like differential and sensor offset are sufficiently protected, so that they cannot be changed by accident.

The Alfa 51 is supplied directly with 230 Vac. The temperature sensor SM 811 is not included.

As an option a second temperature sensor can be connected, so that the temperature control can be based on the average of the two sensors.

<b>Type:</b>	<b>Function:</b>
Alfa 51 series	Cooling/heating or 2x cooling or 2x heating (internal programmable)
<b>Housing:</b>	)Minimum/maximum temperature alarm
Grey ABS plastic	
<b>Dimensions:</b>	
71 x 90 x 58 mm (wh)	
<b>Connection:</b>	<b>Operations:</b>
Screw terminals on the side	By push buttons on the front
<b>Front:</b>	<b>Sensor:</b>
Polyester	SM 811 (PTC sensor; 1000 Ohm at 25°C)
<b>Supply:</b>	(not included) Option for second sensor
230 Vac, 50/60 Hz (-10/+5%)	
	<b>Relay:</b>
	Cooling SPST contact 250V/5A (NO)
	Heating SPST contact 250V/5A (NO)
	alarm SPDT contact 250V/5A (NO/NC)
	(all relays one common, not inductive)
	<b>Accuracy:</b>
	± 0.5% of the range

Article number	Product name	Description	Sensors	Control functions	Defrost	0-10V Output	Alarm relay	Price
				 	    			
904.000500	Alfanet 51 -50/+50°C	3- stage thermostat	2	• •			•	€233,00
904.000723	Alfanet 51 0/+100°C	3- stage thermostat	2	• •			•	€233,00
904.000832	Alfanet 51 RTDN	3- stage thermostat	2	• •			•	€259,00
904.010248	Alfanet 51 PI 24Vdc 0/100°C	3- stage thermostat	1	• •			• •	€233,00
904.010250	Alfanet 51 PI 24Vdc -50/+50	3- stage thermostat	1	• •			• •	€233,00
904.010251	Alfanet 51 PI 230Vac 0/100°C	3- stage thermostat	1	• •			• •	€233,00
904.010252	Alfanet 51 PI -50/+50°C	3- stage thermostat	1	• •			• •	€233,00
904.000556	Alfanet 52 -50/+50°C	Dual thermostat	2	• •			•	€233,00
904.000733	Alfanet 55 RTDF	Cooling thermostat	2	•	• • • • •			€259,00



# Alfa 70 series

## Technical Specifications









The Alfa 70 is an extensive range of thermostats.

The Alfa 70 series has as range from -50/+50°C or 0/+100°C. Temperatures higher than -10°C can be read out per 0,1°C.

All settings can be made by the push buttons on the front. The internal settings like differentials and sensor offsets are protected so changing by accident will not be possible.

The Alfa 70 series have a supply voltage of 12 Vac.  
The required temperature sensor is a SM 811.

<b>Type:</b>	<b>Control:</b>
Alfa 70 series	Via push buttons on the front
<b>Housing:</b>	<b>Sensors:</b>
Black ABS plastic	SM 811/ (PTC sensor; 1000 Ohm at 25°C) (not included)
<b>Dimensions:</b>	<b>Relays:</b>
35 x 77 x 71,5 mm (hbd)	Cooling SPST contact 250V/5A (NO)
<b>Connections:</b>	Heating SPST contact 250V/5A (NO)
Screw terminals	alarm SPDT contact 250V/5A (NO/NC)
<b>Front:</b>	(One common, not inductive)
Polyester	<b>Accuracy:</b>
<b>Supply:</b>	± 0.5% of the range
12 Vac, 50/60 Hz (-10/+5%)	

Article number	Product name	Description	Sensors	Control functions	Defrost	0-10V Output	Alarm relay	Price
				 	     			
904.000627	Alfanet 70 AI input: 4/20mA	Universal display						€261,00
904.000679	Alfanet 70 (°C)	Universal display	1					€198,00
904.000812	Alfanet 70 AI input: 0/10Vdc	Universal display						€261,00
904.010217	Alfanet 70 Clock 12VAC/DC	Week clock						€212,00
904.000610	Alfanet 71 Remote	Universal display						€162,00
904.000873	Alfanet 71 AI 0-20/4-20mA 4dig	Universal display						€162,00

Article number	Product name	Description	Sensors	Control functions		Defrost	0-10V Output	Alarm relay	Price
				❄	🌊	❄	⚡	⚡	
904.000903	Alfanet 71 0/100°C	3-stage thermostat	2	•	•			•	€162,00
904.000933	Alfanet 71 VS 0/20°C (01)	3-stage thermostat	2	•	•			•	€162,00
904.010214	Alfanet 71 PI 0/+100°C	3-stage thermostat	1	•	•		•		€185,00
904.010227	Alfanet 71 -50/+50°C	3-stage thermostat	2	•	•			•	€162,00
904.010229	Alfanet 71 0/+100°C	3-stage thermostat	2	•	•			•	€162,00
904.010232	Alfanet 71 PI -50/+50°C	3-stage thermostat	1	•	•		•		€185,00
904.010240	Alfanet 71 RTDN	3-stage thermostat	2	•	•			•	€214,00
904.010265	Alfanet 72 12Vac	Dubble thermostat	2	•	•			•	€185,00
904.000565	Alfanet 73 12Vac	Alarm thermostat	1		•			•	€185,00
904.000613	Alfanet 75 Remote	Universal display							€185,00
904.010177	Alfanet 75 RTDF	Cooling thermostat	2	•		•	•	•	€185,00
904.010266	ALFANET 71 PI -10/+90°C min/ max 15Vdc	3-stage thermostat	1	•	•			•	€185,00



# Alfa 90 series

## Technical Specifications

The Alfabet 95 is a complete controller for cool/freeze installations.

The Alfabet 95 has the following functions

- room thermostat with digital read-out
- start delay for evaporator fan
- defrost clock to start the defrost on interval base or real-time base
- end-of-defrost thermostat with time limit
- off-cycle, electrical or hot-gas defrost
- possibility for defrost from two evapo-rators each with their own end-of- de frost sensor

The Alfabet 95 has a range of -50/+50°C. Temperatures above -10°C can be read-out per 0,1°C.

The Alfabet 95 is a compact control unit, which can be mounted in the door of a switch board. Using a connection cable the control unit is connected to the relay module, which is mounted inside the switch board. All incoming and outgoing cables, except the network can be connected to the I/O module.

All settings can be done by internal parameters.








The Alfabet 95 has a network connection for read-out and data logging on the Alfabet PC software.

The Alfabet 95 is supplied directly with 230Vac.

Other supply voltages are available on request.

One connection cable from 1 meter is included.

<u>Control unit:</u>	<u>Relay Module:</u>
<b>Type:</b> Alfa 95 serie	<b>Dimensions:</b> 80 x 70 x 85 mm (hbd) for DIN-rail mounting
<b>Housing:</b> Black ABS plastic	<b>Housing:</b> Black ABS plastic
<b>Dimensions:</b> 38 x 77 x 71,5 mm (hwd)	<b>Supply:</b> 230 Vac, 50/60 Hz (-10/+5%)
<b>Panel cut:</b> 28 x 70 mm (hb)	<b>Room sensor:</b> SM 811 (PTC sensor; 1000 Ohm atj 25°C)
<b>Front:</b> Polyester IP-65	<b>Defrost sensor:</b> SM 811 (PTC sensor; 1000 Ohm at 25°C)
<b>Range:</b> -50/+50°C (Read-out per 1°C)	<b>Relay compressor:</b> SPST contact 250V/16A (C-NO), (not inductive)
<b>Control:</b> Via push buttons on the front	<b>Relay defrost:</b> SPST contact 250V/8A (C-NO), (not inductive)
	<b>Relay fan:</b> SPST contact 250V/8A (C-NO), (not inductive)
	<b>Accuracy:</b> ± 0,5% of the range

Article number	Product name	Description	Sensors	Control functions	Defrost	Alarm relay	Price
				 	    		
904.000648	Alfabet 95 with Door Contact	Alarm thermostat	3	•	•••••	•	€275,00



# Alfa 700 series

The Alfa 700 series is a digital thermometer or thermostat in a complete wallmount housing.

The controllers from the Alfa 30, 40, 70 and 90 series can be build in.

There are several options among with: clear door, extra switch for o.a. ventilation, lighting, power relay or printing the company logo on the front.

The Alfa 700 series needs a power supply of 230Vac. On request other supply voltages can be delivered.

## Product name

## Price

Alfanet 700 series

On request

## Surcharges Alfa 700 & Alfanet 700 series

Door

€35,00

Additional switch

€15,00

Power relays 25A/250 Aac (2pk/1,5kw)

€25,00

Relais

€16,00

Extra big housing

On request



# Jumbo display

## Technical Specifications

The Jumbo Display is a digital 3-digit display with 10 cm large segments. The Jumbo Display is therefore useful as temperature display in large areas. The display is built in a plastic housing for wall mounting. A panel mounting version is also available. The polycarbonate front can be provided with your company logo or a special print. Cable input on the back or bottom side and simple mounting on the connection terminals.

The Jumbo Display has a Pt-100 temperature sensor input or an analogue input. The Jumbo Display is supplied with a temperature range of -10/+30°C with read-out per 0.1°C. Versions with other ranges are available on request.

<b>Type:</b>	<b>Supply:</b>
Jumbo Display	230 Vac, 50/60 Hz
<b>Housing:</b>	(-10/+5%)
Wall mounting	<b>Range:</b>
<b>Dimensions:</b>	-10/+30°C, read-out
404 x 346 x 112 mm	standard
(whd)	per 0,1°C, other
<b>Front:</b>	ranges only on request
polycarbonate, IP-44	available
<b>Connections:</b>	<b>Input:</b>
Cable input on the	Pt-100 3-wire
back or bottom side	according to DIN/IEC
on marked screw	751
terminals	0/+5 Vdc measuring
<b>Display:</b>	signal
digital 3-digit display	0/+10 Vdc measuring
with 10 cm	signal
large numbers	4-20mA measuring
	signal
	<b>Accuracy:</b>
	± 0.5% of the range

**Special versions**  
available on request

Article number	Productname	Price
905.000088	Jumbo display -10/30°C Pt-100	€687,00
905.000090	Jumbo display -30/30°C Pt-100	€687,00
905.000098	Jumbo display -40/40°C. Pt-100	€687,00
905.000099	Jumbo display -40/40°C 1-5V	€687,00
905.000100	Jumbo display -10/50°C 0-10V	€687,00





The ALFANET TEMPLOGGER has a maximum of 16 Pt1000 2-wire sensors; that can be connected to log temperatures. On any one ALFANETWORK (RS485) system, a maximum of 16 ALFANET TEMPLOGGERS can be used, (so a maximum of 16x16=256 sensors can be logged).

For each temperature sensor a minimum and a maximum alarm set point can be programmed, including a delay time for each alarm.  
The log-data can be shown on a PC with VASP or Alfanet.

# Templogger

## Technical Specifications

<b>Type:</b>	<b>Temp. sensors:</b>
Alfanet templogger	Pt1000, 2-wire (DIN/ IEC 751)
<b>Housing:</b>	<b>Communication:</b>
Grey plastic	ALFANET RS485 - Network
<b>Dimensions:</b>	<b>Network address:</b>
106 x 90 x 58 mm (whd)	110.125
<b>Supply:</b>	<b>Operation temp.:</b>
12 Vdc (Max. 45 mA)	-20 / +50°C
<b>Temp. Range:</b>	<b>Store temp.:</b>
-50,0 / +50,0°C per 0,1°C	-20 / +60°C
	<b>Humidity:</b>
	10 / 90% RH not condensing
	<b>Accuracy:</b>
	± 0,5% of the range

Article number	Product name	Price
901.000419	Alfanet Templogger -100/+50°C	€452,00
901.000447	Alfanet Templogger -50/+150°C	€452,00



# SM 800/808

## Technical Specifications

<b>Type:</b>	<b>Cable:</b>
SM 800	- Standard grey PVC
<b>Sensor:</b>	(max. 70°C)
Pt-100 3-wire	- Silicon cable (max.
according DIN/IEC 751	180°C)
<b>Range:</b>	- Teflon cable
-100/+250°C	(max.250°C)
<b>Dim. sensor:</b>	<b>Options:</b>
ø6 x 50 mm	- Shielded cable
<b>Material sensor:</b>	- Water tight
rvs 316	connection with
	schrink sleeve
	- 1/4 BSP connection
	- Pt-500
	- Pt 1000

Special models are  
often possible on  
request

The SM 800 range comprises a number of standard 3-wire Pt-100 temperature sensors according to DIN/IEC 751. The sensor is mounted in a stainless steel bulb of 6 x 65 mm. The sensors are supplied with a 2 meter cable. Other cable lengths are available on request.

**SM 800/2m:**  
Standard Pt-100 sensor with 2 meter grey PVC cable (max. 70°C), wires 3x 0,25 mm2.

**SM 800/2m WD:**  
As SM 800/2m, but with a waterproof seal between the sensor and the bulb with a shrink seal.

**SM 800S/2m:**  
As SM 800/2m, but with shielded cable.

**SM 800/2m SILICON:**  
As SM 800/2m, but with silicon cable (max. 180°C).

**SM 800/2m TEFLON:**  
As SM 800/2m, but with Teflon cable (max. 250°C).

**SM 800CN/2m:**  
As SM 800/2m, but with 1/4 BSP thread.

**SM 800LM/10 m:**  
Special sensor for quick temperature measurement in air. Delivered with 10 m PVC cable. The stainless steel bulb is perforated for good air flow.

Brass or stainless steel pockets with PG7 swivel can be supplied. Standard sizes 9 x 60 mm, with 1/2 BSP thread. The SM 800 range is also available with Pt-500 or Pt-1000 element. Standard 3-wire or non standard 4-wire Pt-100 can be supplied. The SM 800 is also manufactured as double Pt-100, where two temperature sensors are mounted in the same bulb.

Article number	Product name	Description	Price
810.010001	SM 800/2M 3-Wire	PT100	€32,00
910.010095	SM 800/2M 3-Wire Teflon	PT100	€69,00
810.010050	SM 800/2M 3-Wire Siliconen	PT100	€51,00
810.010018	SM 800/5M 3-Wire	PT100	€37,00
910.010337	SM 800/5M 3-Wire Teflon	PT100	€107,00
910.010022	SM 800/5M 3-Wire Siliconen	PT100	€74,00

Article number	Product name	Description	Price
810.010020	SM 800/10M 3-Wire	PT100	€45,00
910.010421	SM 800/10M 3-Wire Teflon	PT100	€171,00
910.010292	SM 800/10M 3-Wire Silicone	PT100	€112,00
910.010052	SM 800/15M 3-Wire	PT100	€54,00
910.010531	SM 800/15M 3-Wire Teflon	PT100	€235,00
910.010442	SM 800/15M 3-Wire Silicone	PT100	€150,00
810.010087	SM 800/20M 3-Wire	PT100	€61,00
910.010841	SM 800/20M 3-Wire Teflon	PT100	€299,00
910.010112	SM 800/20M 3-Wire Silicone	PT100	€188,00
910.010058	SM 800/2M 4-Wire	PT100	€33,00
910.010202	SM 800/2M 4-Wire Silicone	PT100	€53,00
910.010320	SM 800/5M 4-Wire	PT100	€39,00
910.010408	SM 800/5M 4-Wire Silicone	PT100	€79,00
910.010171	SM 800/10M 4-Wire	PT100	€50,00
910.010753	SM 800/15M 4-Wire	PT100	€62,00
910.010206	SM 800/20M 4-Wire	PT100	€72,00
910.010854	SM 800/20M 4-Wire Silicone	PT100	€210,00
910.010063	SM 800/2M WD 4-Wire	PT100	€37,00
910.010768	SM 800/2M WD 4-Wire Silicone	PT100	€58,00
910.010189	SM 800/5M WD 4-Wire	PT100	€43,00
910.010250	SM 800/5M WD 4-Wire Silicone	PT100	€84,00
910.010207	SM 800/10M WD 4-Wire	PT100	€55,00
910.010846	SM 800/10M WD 4-Wire Silicone	PT100	€127,00
910.010510	SM 800/15M WD 4-Wire	PT100	€66,00
810.010003	SM 800S/2M Shielded 3-Wire	PT100	€38,00
910.010066	SM 800S/2M WD Shielded 3-Wire	PT100	€42,00
910.010133	SM 800S/5M Shielded 3-Wire	PT100	€45,00
910.010236	SM 800S/5M WD Shielded 3-Wire	PT100	€49,00
910.010029	SM 800S/10M Shielded 3-Wire	PT100	€55,00
910.010067	SM 800S/10M WD Shielded 3-Wire	PT100	€60,00
910.010046	SM 800S/15M Shielded 3-Wire	PT100	€66,00
910.010065	SM 800S/15M WD Shielded 3-Wire	PT100	€71,00
910.010082	SM 800S/20M Shielded 3-Wire	PT100	€77,00
910.010105	SM 800S/20M WD Shielded 3-Wire	PT100	€71,00

Article number	Product name	Description	Price
910.010047	SM 800CN/2M 1/4"BSP 3-Wire	PT100	€76,00
910.010042	SM 800SCN/2M 1/4"BSP Shielded 3-Wire	PT100	€81,00
910.010036	SM 800LM/2m Air 3-Wire	PT100	€81,00
910.010002	SM 800/2M WD 3-Wire	PT100	€36,00
910.010023	SM 800/5M WD 3-Wire	PT100	€41,00
910.010025	SM 800/10M WD 3-Wire	PT100	€49,00
910.010053	SM 800/15M WD 3-Wire	PT100	€57,00
910.010087	SM 800/20M WD 3-Wire	PT100	€65,00
910.010135	SM 808/2M NTC 10K 2-Wire	10K NTC	€32,00
910.010500	SM 808/5M NTC 10K 2-Wire	10K NTC	€37,00
910.010271	SM 808/2M WD NTC 10K 2-Wire	10K NTC	€36,00
810.070934	SM 808/5M WD NTC 10K 2-Wire	10K NTC	€41,00



# SM 8000

## Technical Specifications

The SM 8000 series consists of a series of standard 3-conductor Pt-1000 temperature transducer according to DIN/IEC 751. The sensor is molded into a stainless steel sleeve of ø6 x 50 mm. As standard the probes are supplied with 2 meter cable. Other cable lengths are available on request.

**SM 8000/2m**  
Standard Pt-1000 probe with 2 meter grey PVC cable (max. 70°C), conductors 3x 0,25 mm<sup>2</sup>.

**SM 8000/2m WD**  
As SM 8000/2m, but with a watertight seal between cable and sensor sleeve using heatshrink.

**SM 8000S/2m**  
As SM 8000/2m but with shielded cable.

**SM 8000/2m SILICONES**  
As SM 8000/2m but with silicone cord (max. 180°C).

**SM 8000/2m TEFLON**  
As SM 8000/2m, but with Teflon cord (max. 250°C).

**SM 8000CN/2m**  
As SM 8000/2m but with 1/4BSP external thread.

**SM 8000LM/10 m**  
Special probe for fast temperature in air. Standard delivered with 10 m PVC cable. supplied as standard. The stainless steel sleeve has holes for good air flow.

A brass or stainless steel immersion tube with M12 swivel can be supplied as an accessory. Standard dimensions ø9 x 60 mm, fitted with 1/2 BSP external thread. In addition to the standard 3-conductor, a 2-conductor or 4-conductor Pt-1000 or 4-conductor Pt-1000 can be supplied. Finally, the SM 8000 is also available as a dual Pt-1000 with two temperature probes mounted in the same are mounted in the same sleeve.

<b>Type:</b>	<b>Dimention sensor:</b>
SM 8000	ø6 x 50 mm
<b>Supply element:</b>	<b>Material sensor:</b>
Pt-1000 3-Wire	Stainless steel 316
<b>Accuracy:</b>	
DIN/IEC 751	
<b>Range:</b>	
-100/+250°C	

- Connection cable
- standard gray PVC (max. 70°C)
  - silicone cord (max. 180°C)
  - Teflon cable (max. 250°C)

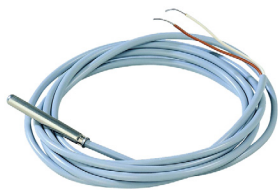
- Options
- screened cable
  - watertight sealing by means of shrink sleeve
  - 1/4 BSP male thread
  - 2-conductor Pt-1000
  - 4-conductor Pt-1000
  - Double Pt-1000

Special versions available upon request.

Article number	Product name	Description	Price
810.010201	SM 8000/2M 2-Wire	PT1000	€32,00
910.010490	SM 8000/5M 2-Wire	PT1000	€37,00
910.010491	SM 8000/10M 2-Wire	PT1000	€45,00
910.010492	SM 8000/15M 2-Wire	PT1000	€56,00
910.010493	SM 8000/20M 2-Wire	PT1000	€61,00
910.010708	SM 8000/2M WD 2-Wire	PT1000	€36,00
910.010198	SM 8000/2M Teflon 3-Wire	PT1000	€69,00
910.010501	SM 8000/2M Silicone 3-Wire	PT1000	€51,00
910.010790	SM 8000/5M WD 2-Wire	PT1000	€41,00
910.010216	SM 8000/5M WD Silicone 3-Wire	PT1000	€78,00
910.010791	SM 8000/10M WD 2-Wire	PT1000	€49,00
910.010738	SM 8000/10M Silicone 3-Wire	PT1000	€112,00
910.010368	SM 8000/10M WD Silicone 3-Wire	PT1000	€116,00
910.010330	SM 8000/15M WD 2-Wire	PT1000	€57,00
910.010222	SM 8000/15M Silicone 3-Wire	PT1000	€150,00
910.010808	SM 8000/15M WD Silicone 3-Wire	PT1000	€154,00
910.010343	SM 8000/20M WD 2-Wire	PT1000	€65,00
810.010365	SM 8000/2M 3-Wire	PT1000	€32,00
810.010188	SM 8000/5M 3-Wire	PT1000	€37,00
910.010129	SM 8000/10M 3-Wire	PT1000	€45,00
910.010015	SM 8000/15M 3-Wire	PT1000	€53,00
810.010343	SM 8000/20M 3-Wire	PT1000	€61,00
910.010365	SM 8000/2M WD 3-Wire	PT1000	€36,00
910.010188	SM 8000/5M WD 3-Wire	PT1000	€41,00
910.010221	SM 8000/10M WD 3-Wire	PT1000	€49,00
910.010561	SM 8000/15M WD 3-Wire	PT1000	€57,00
910.010343	SM 8000/20M WD 3-Wire	PT1000	€65,00
910.010381	SM 8000S/2M Shielded 3-Wire	PT1000	€38,00
910.010450	SM 8000S/2M WD Shielded 3-Wire	PT1000	€42,00
910.010554	SM 8000S/5M Shielded 3-Wire	PT1000	€45,00
910.010774	SM 8000S/5M WD Shielded 3-Wire	PT1000	€49,00
910.010567	SM 8000S/10M WD Shielded 2-Wire	PT1000	€55,00
910.010707	SM 8000S/15M Shielded 3-Wire	PT1000	€66,00

910.010769	SM 8000S/15M WD Shielded 3-Wire	PT1000	€71,00
910.010814	SM 8000S/20M WD Shielded 3-Wire	PT1000	€82,00





# SM 811

## Technical Specifications

<b>Type:</b>	<b>Cable:</b>
SM 811/2m	- Standard grey PVC
<b>Sensor:</b>	(max. 70°C)
PTC sensor, 2-wire,	- Silicon cable (max.
1000 Ohm/25°C	150°C)
<b>Range:</b>	<b>Options:</b>
-50/+150°C	Waterproof shrink seal
<b>Sizes of bulb:</b>	
Y 6 x 65 mm (hb)	
<b>Material Bulb:</b>	Special versions
Stainless steel 316	available on request

The SM 811 is a standard 2-wire PTC sensor of VDH Products. This chip sensor has a resistance of 1000Ω at 25°C. The sensor is mounted in a stainless steel bulb of Y6 x 65 mm, with a cable of 2 meters. Other cable lengths are available on request.

**SM 811/2m:**  
Standard PTC sensor with 2 meter grey PVC cable (max. 70°C), wire 2x 0,25 mm<sup>2</sup>.

**SM 811/2m WD:**  
As SM 811/2m, but with a waterproof seal between the sensor and bulb by shrink seal.

**SM 811/2m SILICON:**  
As SM 811/2m, but with silicon cable (max. 150°C).

**SM 812/2m:**  
As SM 811/2m, but now with a 2kΩ PTC chip sensor. This has a resistance of 2000Ω at 25°C.

A brass or stainless steel pocket with PG7 swivel can be supplied. Standard sizes Y9 x 60 mm, with 1/2 BSP thread.

Article number	Product name	Description	Price
810.010014	SM 811/2M 2-Wire	1K PTC	€13,00
910.020082	SM 811/2M Teflon 2-Wire	1K PTC	€52,00
910.020009	SM 811/2M Silicone 2-Wire	1K PTC	€33,00
910.020086	SM 811/2M WD Silicone 2-Wire	1K PTC	€38,00
810.020005	SM 811/5M 2-Wire	1K PTC	€18,00
910.020018	SM 811/5M Silicone 2-Wire	1K PTC	€56,00
910.020288	SM 811/5M WD Silicone 2-Wire	1K PTC	€60,00
810.020001	SM 811/10M 2-Wire	1K PTC	€26,00
910.020097	SM 811/10M Silicone 2-Wire	1K PTC	€94,00
810.020023	SM 811/15M 2-Wire	1K PTC	€34,00
910.020076	SM 811/15M Teflon 2-Wire	1K PTC	€217,00

Article number	Product name	Description	Price
910.020300	SM 811/15M Silicone 2-Wire	1K PTC	€132,00
810.020006	SM 811/20M 2-Wire	1K PTC	€42,00
910.020083	SM 811/20M Silicone 2-Wire	1K PTC	€170,00
910.020030	SM 811S/2M Shielded 2-Wire	1K PTC	€19,00
910.020063	SM 811S/10M Shielded 2-Wire	1K PTC	€36,00
910.020059	SM 811S/5M WD Shielded 2-Wire	1K PTC	€29,00
910.020014	SM 811S/5M Shielded 2-Wire	1K PTC	€25,00
910.020284	SM 811S/10M WD Shielded 2-Wire	1K PTC	€40,00
910.010177	SM 811S/15M WD Shielded 2-Wire	1K PTC	€51,00
910.020068	SM 811S/15M Shielded 2-Wire	1K PTC	€47,00
910.010406	SM 811S/20M Shielded 2-Wire	1K PTC	€58,00
910.010037	SM 811S/20M WD Shielded 2-Wire	1K PTC	€62,00
910.020013	SM 811/2M WD 2-Wire	1K PTC	€17,00
910.020008	SM 811/5M WD 2-Wire	1K PTC	€22,00
910.020010	SM 811/10M WD 2-Wire	1K PTC	€30,00
910.020002	SM 811/15M WD 2-Wire	1K PTC	€37,00
910.020035	SM 811/20M WD 2-Wire	1K PTC	€47,00



# SM 820

## Technical Specifications

<b>Type:</b>	<b>Materiaal:</b>
SM 820	Stainless steel 304
<b>Sensor:</b>	<b>Length:</b>
Pt-100-3-Wire according to DIN/IEC 751	155 mm
	<b>Cable:</b>
	- Silicon cable, 3-wire, 5 meter
	Special versions are available on request

The SM 820 is made solid and designed to measure temperature in e.g. frozen meat.

The sensor is made of stainless steel, very solid and heavy designed. The SM 820 has a smooth surface for an easy cleaning. The piercing part is conic, so that it is easy to release a frozen sensor.

The two side mounted grips are solid and used to put in and take out the sensor from the frozen product. If necessary a wooden hammer can be used.

The connection cable is made of smooth silicon cable, with remains flexible till -50°C. Standard length is 5 meters.

As sensing element a Pt-100 3-wire according to DIN/IEC 751 is used. This element is poured in to prevent damage as good as possible, also at rough use. Other models and/or cable length are available on request.

Article number	Product name	Description	Price
910.010024	SM 820/5M BK SIL L=155mm, 3-Wire Pt-100	Frozen meat probes	€ 258,00
910.030011	SM 820/5M SIL L=155mm, 3-Wire Pt-100 Impact head	Frozen meat probes	€ 258,00
910.010142	SM 820/10M BK SIL L=155mm, 3-Wire Pt-100	Frozen meat probes	€ 281,00
910.030030	SM 820/10M SIL L=155mm, 3-Wire Pt-100 Impact head	Frozen meat probes	€ 281,00
910.010564	SM 820/15M BK SIL L=155mm, 3-Wire Pt-100	Frozen meat probes	€ 334,00
910.010515	SM 820 BK Z.SNOER L=155mm, 3-Wire Pt-100	Frozen meat probes	€ 220,00
910.030017	SM 8200/2M BK SIL L=155mm, 2-Wire Pt-1000	Frozen meat probes	€ 235,00
910.030007	SM 8200/5M BK SIL L=155mm, 3-Wire Pt-1000	Frozen meat probes	€ 258,00
910.030012	SM 8200/5M SIL L=155mm, 3-Wire Pt-1000 Impact head	Frozen meat probes	€ 258,00
910.030013	SM 8200/10M SIL L=155mm, 3-Wire Pt-1000 Impact head	Frozen meat probes	€ 281,00
910.030005	SM 8200/15M SIL L=155mm, 3-Wire Pt-1000 Impact head	Frozen meat probes	€ 334,00



# SM 830

## Technical Specifications

The SM 830/8300 series are solid temperature sensors, which are available in various models.

The construction is made of stainless steel and available in various designs for almost every application. The sensors have a stainless steel connection head and a swivel for the cable input.

Sealing of the various models is at least IP-55 and on request a higher tightness is available. The sensors are available with various sensing elements, mostly a Pt-100 element or a Pt-1000 element.

As standard 3-wire system or if required a 4-wire system. The models with a Pt-100 element are the SM 830 series; the models with a Pt-1000 element are the SM 8300 range.

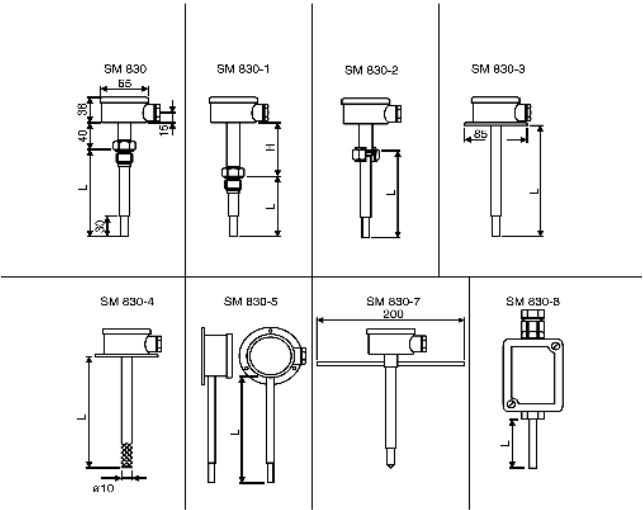
All sensors meet the DIN/IEC 751 norms. If required more accurate models are available.

**Models:**

- SM 830 = sensor with pocket,  
½ BSP, short neck state length L
- SM 830/1 = sensor with pocket,  
½ BSP, long neck state length H and L
- SM 830/2 = sensor with pocket,  
½ BSP, with turn able swivel, state length L
- SM 830/3 = channel sensor with flange, state  
length L
- SM 830/4 = channel sensor with flange, open model, state length L
- SM 830/5 = wall mounting sensor with flange, state length L
- SM 830/7 = piercing sensor for agriculture products, state length L
- SM 830/8 = sensor with terminal box, state length L

<b>Type:</b> SM 830 series	<b>Connection head:</b> ANSI 304
<b>Sensor:</b> Pt -100 3-wire	<b>Cable input:</b> PG9 swivel
<b>Accuracy:</b> DIN/IEC 751	<b>Protection:</b> IP-55
<b>Housing:</b> ANSI 316	<b>Models:</b> Various models (see drawings)

<b>Type:</b> SM 8300 series	<b>Connection head:</b> ANSI 304
<b>Sensor:</b> Pt -1000 3-wire	<b>Cable input:</b> PG9 swivel
<b>Accuracy:</b> DIN/IEC 751	<b>Protection:</b> IP-55
<b>Housing:</b> ANSI 316	



Article number	Product name	Description	Price
910.060005	SM 830 1/2" BSP L=100mm	Screw sensor	€119,00
910.060004	SM 830/1 1/2" BSP L=100 H=100mm	High temperature	€125,00
910.060009	SM 830/2 1/2" BSP WART. L=100mm	Screw sensor	€125,00
910.060013	SM 830/3 L=100mm ø8mm Stand.	Canal sensor	€111,00
910.060362	SM 830/4 L=200mm.	Air sensor	€125,00
910.010008	SM 830/5 L=100mm	Surface mount sensor	€111,00
910.010006	SM 830/7 L=500mm.	Puncture sensor	€119,00
910.010005	SM 830/7 L=1,5M	Puncture sensor	€135,00
910.010028	SM 830/8 L=100mm	Sensor with connection box	€102,00
910.060001	SM 8300 pt1000	Air sensor	€119,00
910.060035	SM 8300 1/2" BSP L=100mm pt1000	High temperture	€119,00
910.060376	SM 8300/3 L=300mm ø8mm pt1000	Canal sensor	€122,00
910.060194	SM 8300/5 L=100mm pt1000	Surface mount sensor	€111,00
910.060377	SM 8300/7 2-Wire L=200mm pt1000	Puncture sensor	€103,00
910.060379	SM 8300/7 2-Wire L=500mm pt1000	Puncture sensor	€119,00
910.060378	SM 8300/7 2-Wire L=800mm pt1000	Puncture sensor	€135,00
910.060382	SM 8300/7 3-Wire L=500mm pt1000	Puncture sensor	€119,00
910.060383	SM 8300/7 3-Wire L=600mm pt1000	Puncture sensor	€124,00
910.060055	SM 8300/7 3-Wire L=1000mm pt1000	Puncture sensor	€125,00



# SM 850/SM 8500

## Technical Specifications

The SM 850 is a temperature sensor for measurement in products. The sensor has a stainless steel insertion probe, which is equipped with a round tip.

The sensor is equipped with a black plastic grip with a 3-pole screw connector for connection with an optional silicone coiled lead.

The sensor is available in the following versions:

**SM 850:** Diameter of 6mm and equipped with a rounded tip to prevent product damage. The probe length is 170mm. A Pt-100 3-element is used as a sensor. applied according to DIN / IEC 751. The sensor is ideally suited for temperature measurement between, for example, fruit, pasta, etc.

**SM 8500:** This sensor is the same as the SM 850, but equipped with a Pt-1000 element instead of a Pt-100.

**SM 850/1:** Diameter of 4mm and equipped with a sharp tip for easy piercing into the product. The probe length is 150mm. A Pt-100 3-element is used as a sensor in accordance with DIN / IEC 751. The sensor is ideally suited for temperature measurement between, for example, fruit, pasta, etc.

**SM 8500/1:** This sensor is the same as the SM 850/1, but equipped with a Pt-1000 element instead of a Pt-100.

The sensors can optionally be supplied with the corresponding silicone coiled lead and connection box (type 502). The orange silicone coiled lead is 1.5m long (6m extended).

<b>Type:</b>	<b>Sensor element:</b>
SM 850 series	Pt-100 3-wire conform
<b>Proba length SM 850:</b>	DIN/IEC 751
Stainless steel 316, ø6 x 170mm, round tip	<b>Range:</b>
<b>Insert SM 850/1:</b>	-50/+50°C
Stainless steel 316, ø4 x 150mm, sharp tip	<b>Ambient temperature:</b>
<b>Grip:</b>	0/+40°C
Black plastic	Special versions in
<b>Connection:</b>	both design and/or
Via coiled lead to connection box 502	temperature sensor
	are often available on request.

Article number	Product name	Description	Price
810.040007	SM 850 L=170mm Pt-100	Puncture sensor blunt tip ø6 mm	€91,00
810.040006	SM 850/1 L=150 mm Pt-100	Puncture sensor sharp tip ø4 mm	€91,00
810.040010	SM 8500 L=170mm ø6mm Pt-1000	Puncture sensor blunt tip ø6 mm	€91,00
810.040026	SM 8500/1 L=150mm ø4mm Pt-1000	Puncture sensor sharp tip ø4 mm	€91,00
910.040017	SM 851 L= 170m ptc	Puncture sensor blunt tip ø6 mm	€91,00
810.040038	Curl cord Shielded. 2x 3-Connector		€ 56,00
910.100083	Connection box 502		€34,00



# SM 860

## Technical Specifications

<b>Type:</b>	The SM8600 is
SM 860 series	supplied with a Pt1000
<b>Proba length:</b>	element instead of a
Stainless steel 3054,	Pt-100 element.
ø8 x 400mm, round tip	
<b>Grip:</b>	Special versions in
Red plastic	both design and / or
<b>Sensor element:</b>	temperature sensor
Pt-100 3-wire conform	are often available on
DIN/IEC 751	request.
<b>Range:</b>	
0/+50°C	

The SM 860 is a temperature sensor for manual use, developed to measure the temperature of agricultural products such as potatoes, onions, flower bulbs, etc.

The stainless steel sensor has a length of 400 mm and a diameter of 8 mm. The grip is made of red plastic and has a PG-7 swivel.

The sensor is supplied with 5m PVC cable as standard (3x1mm<sup>2</sup>)

A Pt100, 3-wire according to DIN / IEC 751 is used as measuring sensor.

Article number	Product name	Price
910.060027	SM 860/5M L=400mm PT100	€125,00
910.060138	SM 8600/5M L=400mm PT1000	€125,00
910.060348	SM 860/5M L=600mm PT100	€137,00
910.060021	SM 860/10M L=400mm PT100	€125,00
910.060391	SM 860/10M L=1500mm PT100	€191,00



# TR 830

## Technical Specifications

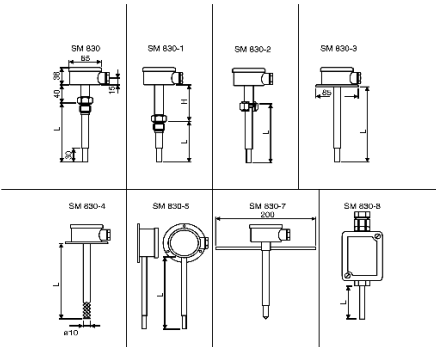
TR 830 range (4-20 mA transmitter built in)

The design and facilities of the TR-830 are similar to those of the SM 830 range, with the difference that a 4-20mA transmitter is built into the connector head of the TR-830.

The TR-830 is available in several temperature ranges, and also with different output signals. Minimum span is 25°C.

The sensors are available with a Pt-100 element or a Pt-1000 element. The model with the Pt-100 element is coded as type TR-830, and with the Pt-1000 as type TR-8300.

For further information please contact the sales department of VDH Products B.V.



<b>Type:</b>	<b>Connector head:</b>
TR 830 series	Stainless steel [rvs 304]
<b>Power supply:</b>	<b>Connection:</b>
8/35 Vdc	PG9 swivel
<b>Sensor:</b>	<b>Seal:</b>
Pt -100 3-wire	IP-55
<b>Accuracy:</b>	<b>Model:</b>
DIN/IEC 751	Various models available
<b>Housing:</b>	
Stainless steel [rvs 316]	

<b>Type:</b>	<b>Housing:</b>
TR 8300 series	Stainless steel [rvs 316]
<b>Power supply:</b>	<b>Connector head:</b>
8/35 Vdc	Stainless steel [rvs 304]
<b>Sensor:</b>	<b>Connection:</b>
Pt -1000 3-wire, in accordance with DIN 43760	PG9 swivel
<b>Accuracy:</b>	<b>Seal:</b>
DIN/IEC 751	IP-55
	<b>Model:</b>
	several models available

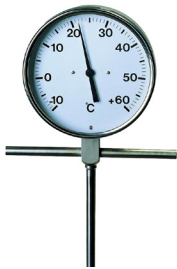
Special models (for both design and temperature sensor) are often available. Please contact our sales department for advice.

Article number	Product name	Description	Price
910.060156	TR 830 1/2" BSP 100mm 0/+100°C Pt-100	Screw sensor	€292,00
910.060157	TR 830 1/2" BSP 100mm -40/+60°C Pt-100		€292,00
910.060189	TR 830 1/2 BSP 100mm -40/+160°C Pt-100		€292,00
910.060203	TR 830 1/2" BSP 100mm -50/+150° Pt-100		€292,00
910.060289	TR 830 1/2" BSP 100mm -50/+50°C Pt-100		€292,00
910.060281	TR 830/1 1/2" BSP 100mm -50/+50 Pt-100	High temperature	€298,00
910.060201	TR 830/5 100mm -30/+60°C 4/20 Pt-100	Surface mounted sensor	€282,00
910.060202	TR 830/5 100mm -10/+40°C 4/20 Pt-100		€282,00
910.060256	TR 830/5 100mm -10/+30°C 4/20 Pt-100		€282,00
910.060284	TR 830/5 100mm -40/+40°C 4/20 Pt-100		€282,00
910.060317	TR 830/5 100mm 0/+100°C 4/20 Pt-100		€282,00



# Sensor additional prices

Article number	Product name	Description	Price
Surcharges temperature sensor cables			
	PVC cable	3-wire (br/wi/gr), 0.25 mm2, ø5 mm per meter	€2,00
	PVC cable shielded	3-wire (br/wi/gr), 0.25 mm2, ø5 mm per meter	€3,00
	PVC cable	4-wire (br/wi/gr/ye), 0.25 mm2, ø7 mm per meter	€3,00
	PVC cable shielded	4-wire (br/wi/gr/ye), 0.25 mm2, ø7 mm per meter	€4,00
	Silicone cable	3-wire (rd/wi/wi), 0.25 mm2 per meter	€8,00
	Teflon cable	3-wire (wi/rd/rd), 0.25 mm2 per meter	€14,00
Surcharges temperature sensors			
	Waterproof		€4,00
	Pt-100 1/2 DIN	Class A	€6,00
	Pt-100 1/3 DIN		€13,00
	2x Pt-100	Dubble Pt-100 sensor	€22,00
	Pt-100 4-wire		€6,00
	SM 830/8300 series extra price per 100 mm		€6,00
910.100003	Stainless steel 1/2" BSP 60mm ø9		€36,00
910.100004	Brass Messing 1/2" BSP L=60mm ø9		€30,00



# PSC 160

## Technical Specifications

<b>Type:</b>	<b>Dial:</b>
PSC160	Aluminium, white with black print
<b>Housing:</b>	<b>Measuring system:</b>
Completely stainless steel 304 with a waterproof bayonet catch	Organic fluid expansion in a wrapped bourdon tube, without using a transmission system
<b>Diameter:</b>	<b>Sensor:</b>
100 mm for the PSC100	Stainless steel 304, 1000 x ø12 mm, provided with a sharp point. Other length on request available
160 mm for the PSC160	
<b>Range:</b>	<b>Accuracy:</b>
-10/+60°C or 0/+100°C, other ranges available on request	± 2% of the range

The PSC 160 produce thermometers are fully made out of stainless steel and designed for temperature measurement for agriculture products like potatoes, grains, etc.

The construction is very solid and stable. The instrument is provided with two hand grips, which are mounted under the housing to a massive stainless steel block. Due to this construction no forces are transferred to the housing during the piercing of the products.

The sensor has a sharp point, which makes the piercing easier.

As measuring element a direct drive bourdon tube is used, without any parts subject to wear. This construction is well protected against stocks.

Next to the model is a housing of 160 mm, also a PC100 thermometer is available with a housing of 100 mm.

As standard the thermometer is supplied with a sensor length of 1 meter. Other lengths are available upon request.

Finally the dial can be provided with your company logo.

Article number	Product name	Description		Price
911.000265	PSC100 -10/+60°C. L=1M	Product thermometer, ø100 mm	L=1000 mm	€161,00
911.000180	PSC100 0/+100°C. L=1M		L=1000 mm	€161,00
	PSC100		L=1500 mm	€177,00
	PSC100		L=2000 mm	€193,00
911.000007	PSC160 -10/+60°C. L=1M	Product thermometer, ø160 mm	L=1000 mm	€170,00
911.000237	PSC160 0/+100°C. L=1M		L=1000 mm	€170,00
	PSC160		L=1500 mm	€185,00
	PSC160		L=2000 mm	€200,00



# TK085

## Technical Specifications

<b>Temperature:</b>	Also available with
By a screw driver on	temperature
the back correction of	compensation
the housing	<b>Sensor:</b>
<b>Capillary:</b>	Brass 70 x ø6,6 mm
Flexible black plastic	<b>Range:</b>
with copper core,	-50/+50°C per 1°C
standard length 1500	-50/0°C in blue
mm (max 15 meter)	0/+50°C in red
diameter 3,5 mm	<b>Accuracy:</b>
<b>Measuring:</b>	± 2% of the range
Organic fluid	
expansion in a	
wrapped bourdon	
tube, without using a	
transmission system.	

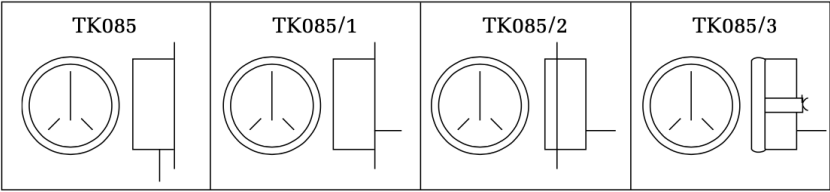
**TK085:**  
160 mm - housing of stainless steel, provided with a waterproof bayonet catch ø250 mm - housing of steel, black muffled, with a chrome ring, on request complete stainless steel with waterproof bayonet catch.

**TK085-1,2 & 3 :**  
Housing of stainless steel in one part with back flange, inner housing of aluminium.

This range of thermometers is specially designed for use on cold rooms and other refrigeration installations. The type TK085-1 has a unique timeless housing, of which the visible part is made of seamless polished stainless steel.

This makes it possible for the capillary connection to be mounted universally from the rear or the bottom of the housing. This construction is standard on size 63 and 100 mm.

The measuring element is a direct drive bourdon tube, without any parts subject to wear. The capillary is made of smooth plastic with a standard length of 1500 mm.



Article number	Product name	Description	Price
911.000002	TK085 63 -50/+50°C 1,5M KS	ø63 mm	€67,00
911.000001	TK085 100 -50/+50°C 1,5M KS	ø100 mm	€74,00
911.000003	TK085 160 -50/+50°C 1,5M KS	ø160 mm	€133,00
911.000251	TK085 250 -50/+50°C 1.5M KS	ø250 mm	€356,00
911.000006	TK085/1 63 -50/+50°C. 1,5M	ø63 mm	€67,00
911.000005	TK085/1 100 -50/+50°C. 1,5M	ø100 mm	€74,00
911.000004	TK085/1 160 -50/+50°C. 1,5M	ø160 mm	€133,00
911.000136	TK085/1 250 -50/+50°C 1.5M KS	ø250 mm	€356,00

Article number	Product name	Description	Price
911.000054	TK085/2 63 -50/+50°C 3M KS	ø63 mm	€78,00
911.000140	TK085/2 100 -50/+50°C 1,5M KS	ø100 mm	€86,00
911.000121	TK085/2 160 -50/+50°C. 1,5M	ø160 mm	€153,00
911.000590	TK085/2 250 -50/+50°C. 1,5M	ø250 mm	€378,00
911.000266	TK085/3 63 -50/+50°C.1,5M KS	ø63 mm	€166,00
911.000188	TK085/3 100 -50/+50°C. 1,5M	ø100 mm	€172,00
Surcharges TK085 series			
	Special range		€48,00
	Stainless steel sensor		€26,00
	Glycerin filling (house with bajonet)		€41,00
	Capillary per meter		€9,00
	Bi-metal compensation		€13,00
	Transport cooling design		€13,00

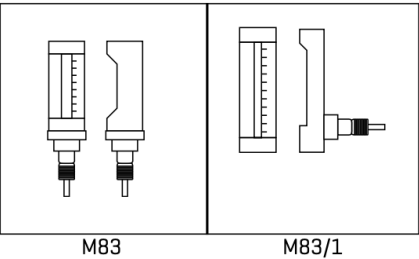


# M83

## Technical Specifications

<b>Type:</b>	<b>Connection:</b>
M83	1/2 BSP
<b>Housing:</b>	<b>Liquid charge:</b>
Gold coloured epoxy acc. to DIN 18185	Blue coloured till 160°C, mercury above 160°C
<b>Dimensions:</b>	<b>Ranges:</b>
150 mm	60/+40°C
<b>Bulb:</b>	0/+100°C
Brass, standard 50 x 10 mm	0/+200°C
<b>Available length:</b>	30/+50°C
40 mm, 63 mm 100 mm, 160 mm, 200 mm and 250mm	0/+120°C
	-10/+50°C
	0/+160°C
	<b>Accuracy:</b>
	± 2% of the range

**Models:**  
M83 - straight model, brass bulb  
M83/1 - square model, brass bulb  
M83S - straight model, steel bulb  
M83/1S - square model, steel bulb  
M83RVS - straight model, stainless steel bulb  
M83/1RVS - square model, stainless steel bulb



Product name	Description	Price
M83	Bottom connection	Brass €85,00
	L=50 mm, 1/2" BSP	Steel €93,00
		Rvs €148,00
M83/1	Back connection	Messing €100,00
	L=50 mm, 1/2" BSP	Steel €110,00
		Stainless steel €179,00
Loose glass thermometer	M83	€34,00
Loose glass thermometer	M83/1	€39,00



# B84

## Technical Specifications

The bi-metal thermometers are used where temperatures are measured on the spot. Due to their simple construction the bi-metal thermometers are low priced.

The accuracy of the B84 thermometers is ± 2,5% of the range. At large series the thermometers can be provided with company logo.

**B84** - The B84 is an air channel thermometer with back flange for screw mounting and has a brass bulb.

**B84/1** - The B84/1 is a bi-metal thermometer for industry. This thermometer is provided with a separate brass pocket with fix screw and has a ½ BSP rear connection.

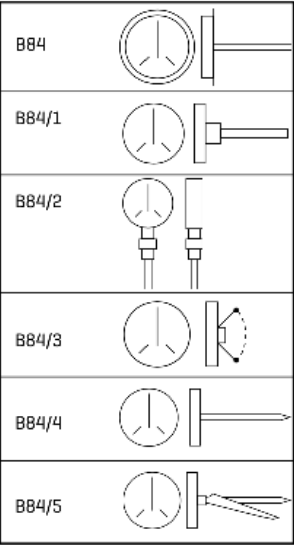
**B84/2** - The B84/2 is a similar to the B84/1, but with a bottom connection.

**B84/3** - Due to the pipe clamp, the B84/3 is suitable to measure the temperature on pipes.

**B84/4** - The meat thermometer B84/4 is fully made of stainless steel and provided with a sharp point. The diameter of the sensor is 6 mm.

**B84/5** - Finally the B84/5 is also made out of stainless steel and is equipped with a protection bracket. The sensor has a diameter of 4 mm and is also provided with a sharp point.

Type	: B84 air channel thermometer
Diameter	: 63 mm, 80 mm, 100 mm
Length	: 100 mm or multiple
Range	: 0/+120°C *)
Type	: B84/1 (back connection)
Diameter	: 63 mm, 80 mm, 100 mm
Length	: 45 mm, 63 mm, 100 mm, 200 mm, 300 mm etc.
Range	: 0/+120°C *)
Type	: B84/2 (Bottom connection)
Diameter	: 63 mm, 80 mm, 100 mm
Length	: 45 mm, 63 mm, 100 mm, 200 mm, 300 mm etc.
Range	: 0/+120°C *)
Type	: B84/3 Pipe clamp thermometer
Diameter	: 63 mm, 80 mm
Range	: 0/+120°C *)
Type	: B84/4 meat thermometer
Diameter	: 34 mm, 50 mm, 63 mm, 80 mm
Length	: 100 mm, 200 mm, 300 mm, 400mm,500 mm
Range	: 0/+120°C *)
Type	: B84/5 Meat thermometer with protection bracket
Diameter	: 34 mm, 50 mm, 63 mm, 80 mm
Range	: 100 mm, 200 mm
Length	: 0/+120°C *)
*) Available ranges:	
-20/+60°C 0/ +40°C 0/+200°C	
-30/+50°C 0/ +60°C 0/+250°C	
-40/+40°C 0/ +100°C 0/+300°C	
-15/+45°C 0/ +160°C 0/+400°C	



Product name	Description		Price
B84	Bi-metal channel thermometer	ø63 mm	€50,00
	L=100 mm, 0/+120°C	ø80 mm	€53,00
		ø100 mm	€56,00
B84/1	Bi-metal thermometer for closed systems	ø63 mm	€46,00
	L=45 mm, 0/+120°C	ø80 mm	€50,00
		ø100 mm	€55,00
B84/2	Bi-metal thermometer with brass sleeve	ø63 mm	€105,00
	L=45 mm, 0/+120°C	ø80 mm	€115,00
		ø100 mm	€125,00
B84/3	Bi-metaal pijp thermometer	ø63 mm	€27,00
B84/3	0/+120°C	ø80 mm	€32,00
B84/4	Bi-metaal thermometer ø63 mm	L=100 mm	€82,00
B84/4	Stainless steel sensor, rvs voeler, 0/+120°C	L=200 mm	€87,00
B84/5	Bi-metal thermometer, L=200 mm	ø33 mm	€93,00
B84/5	Insert thermometer, 0/+120°C	ø50 mm	€100,00
<b>Surcharges B84 serie</b>			
Other range than 0/+120°C			€25,00



The stainless steel thermometer, type 84, was developed to measure liquids and gases. It is intended for use in refineries, chemical plants, the food processing industry, water and sewage purification farms and in other applications where the medium does not affect the stainless steel.

These thermometers work on the basis of dynamic expansion in a closed system with a liquid filling. This measuring system has a direct transmission which means that wear and tear is minimal and the thermometer is guaranteed a long life.

The thermometer has a fixed stainless steel sensor which can be fitted with different couplings, including a sanitary or even an aseptic model. The thermometer type 84 is suitable for use outside.

If signals are required VDH Products can deliver a wide range of electric contacts (PLC contacts, for example) as extras.

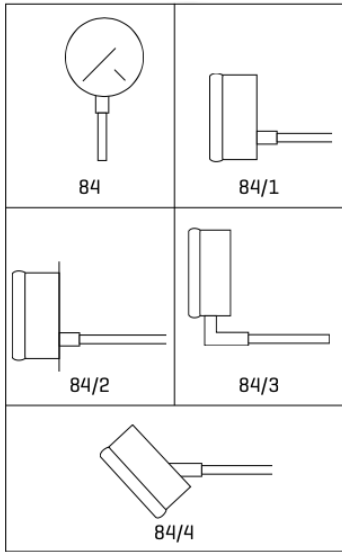
In addition to the extensive standard range other models can be supplied to fit the client's wishes.

Your company name and/or logo can be professionally applied to this stainless steel thermometer 84.

# 84

## Technical Specifications

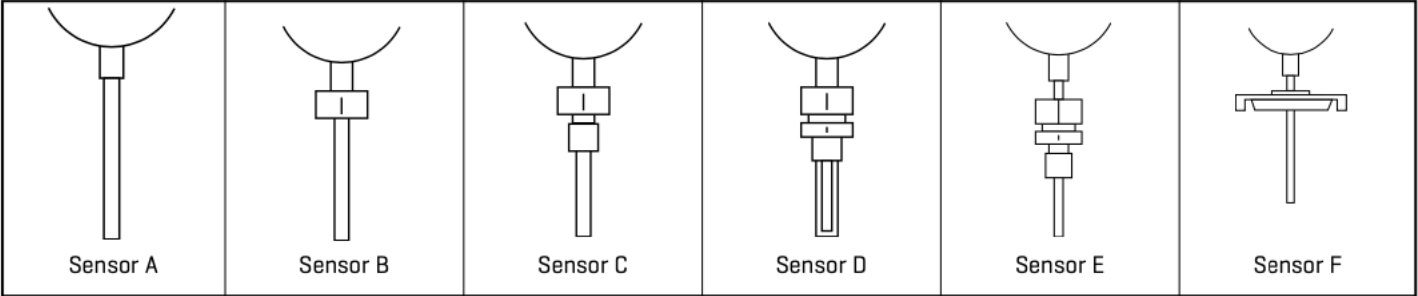
<b>Type:</b> 84, 84/1, 84/2, 84/3, 84/4	<b>Accuracy:</b> Casing diameter 63 mm: class 1,6 Casing diameter 100/160/250 mm: class 1,0
<b>Casing diameter:</b> 63 - 100 - 160 - 250 mm	<b>Environm. temp.:</b> -20 tot 60°C
<b>Housing:</b> Stainless steel 304	<b>Measuring ranges:</b> From -50 up to +160°C
<b>Seal:</b> Bayonet catch stainless steel 304, Rubber ring on broad sealing rim	<b>Optional</b> <b>Liquid filling:</b> Glycerine (only possible without contacts), isolating oil for contact- models
<b>Window:</b> Unbreakable macrolon	<b>Tag number:</b> On pointer, on stainless steel plate
<b>Measuring element:</b> Thermal spring, filled with organic liquid	<b>Pointer:</b> Pointer and maximum indicator with zero adjustment
<b>Connection:</b> Fixed sensor stainless steel 316 (see summary)	<b>Window:</b> Safety glass with imprint safety glass
<b>Dial:</b> white aluminium, pressure scale in black	<b>Connection:</b> Other connections on request
<b>Pointer:</b> Black aluminium	<b>Measuring range:</b> Dimensions other than "°C"
<b>Transmission-turning mechan.:</b> Brass, with nickel silver parts for the turning mechanism, this combination is wear-resistant and runs smoothly	<b>Logo:</b> On dial





Product name	Description		Price
84	Thermometer with bottom connection	ø63 mm	€167,00
84	Incl. sensor A L=100 mm	ø100 mm	€175,00
84		ø160 mm	€225,00
84		ø250 mm	€342,00
84/1	Thermometer with back connection	ø63 mm	€167,00
84/1	Incl. sensor A L=100 mm	ø100 mm	€175,00
84/1		ø160 mm	€226,00
84/1		ø250 mm	€342,00
84/2	Thermometer with rear connections	ø63 mm	€175,00
84/2	Back flange	ø100 mm	€189,00
84/2	Incl. sensor A L=100 mm	ø160 mm	€259,00
84/2		ø250 mm	€391,00
84/3	Thermometer with square bottom connection	ø63 mm	€175,00
84/3	Incl. sensor A L=100 mm	ø100 mm	€189,00
84/3		ø160 mm	€236,00
84/3		ø250 mm	€349,00
84/4	Thermometer with slanting bottom connection	ø63 mm	€175,00
84/4	Incl. sensor A L=100 mm	ø100 mm	€189,00
84/4		ø160 mm	€236,00
84/4		ø250 mm	€349,00
Surcharges			
Glycerin filling		ø63 mm	€19,00
Glycerin filling		ø100 mm	€28,00
Glycerin filling		ø160 mm	€35,00
Glycerin fillingGlycerine vulling		ø250 mm	€140,00
Sensor A	Without connection	Per 100 mm extra	€12,00
Sensor Connection B	Sensor for thermometer 84	1/2" BSP	€67,00
Sensor Connection B	Swivel	3/4" BSP	€76,00
Sensor Connection B		1" BSP	€81,00
Sensor Connection C	Sensor for thermometer 84	1/2" BSP	€76,00
Sensor Connection C	Fixed connection	3/4" BSP	€81,00
Sensor Connection C		1" BSP	€90,00
Sensor Connection C	Movable connection type C		€36,00
Sensor Connection D	sensor for thermometer 84	1/2" BSP	€127,00

Product name	Description		Price
Sensor Connection D	Sleeve with connection	3/4" BSP	€149,00
Sensor Connection D		1" BSP	€164,00
Sensor Connection E	Sensor for thermometer 84	1/2" BSP	€67,00
Sensor Connection E	Adjustable clamp connection	3/4" BSP	€81,00
Sensor Connection E		1" BSP	€164,00
Sensor Connection F	Sensor for thermometer 84	NW 25	€76,00
Sensor Connection F	DIN 11851 connection	NW 40	€76,00
Sensor Connection F		NW 50	€89,00





This nitrogen-filled industrial stainless steel thermometer, type 85, was specially developed to measure liquids and gases in the food processing industry and in other industrial applications where the measuring system must not harm the product. Because of these qualities these thermometers are often used in other industrial processes.

The thermometers work on the basis of dynamic expansion in a closed system with a nitrogen filling. This unique measuring system has a standard compensation for casing temperature, which makes the temperature measurement extremely accurate.

The thermometer has a fixed stainless steel sensor. This sensor can be fitted with a sanitary or even an aseptic coupling. The thermometer type 85 is suitable for use outside.

If signals are required VDH Products can deliver a wide range of electric contacts (PLC contacts, for example) as extras.

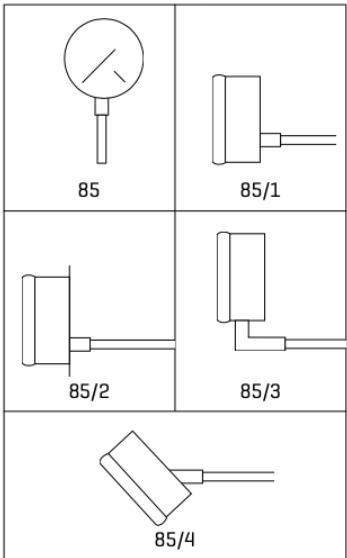
In addition to the extensive standard range other models can be supplied to fit the client's wishes.

Your company name and/or logo can be professionally applied to this

# 85

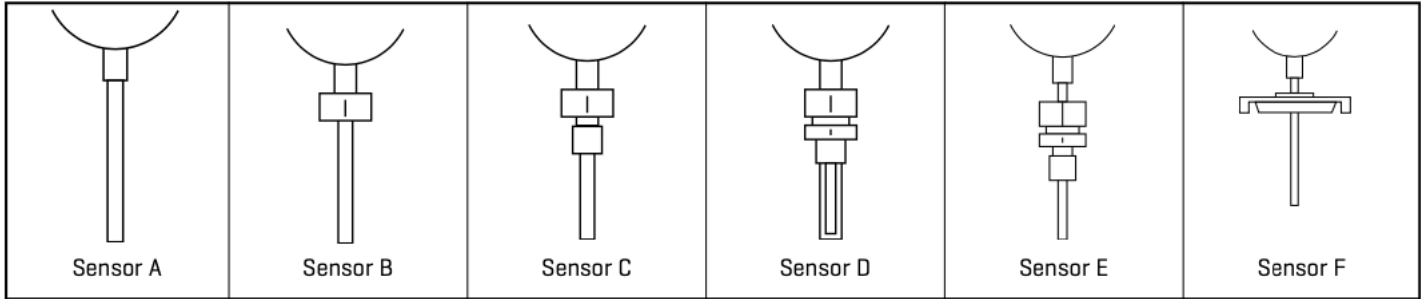
## Technical Specifications

<b>Type:</b> 85, 85/1, 85/2, 85/3, 85/4	<b>Accuracy:</b> Casing diameter 63 mm: class 1,6 casing diameter 100/160/250 mm: class 1,0
<b>Casing diameter:</b> 63 - 100 - 160 - 250 mm	<b>Environm. temp.:</b> -20 tot 60°C
<b>Housing:</b> Stainless steel 304	<b>Measuring ranges:</b> From -100 up to +650°C
<b>Seal:</b> Bayonet catch stainless steel 304, rubber ring on broad sealing rim	<b>Optional</b>
<b>Window:</b> Unbreakable macrolon	<b>Liquid filling:</b> Glycerine (only possible without contacts), isolating oil for contact models
<b>Measuring elem.:</b> Thermal spring, filled with compressed nitrogen	<b>Tag number:</b> On pointer, stainless steel plate
<b>Adjustability:</b> Zero point adjustment by means of screw on the top of the thermometer for corrections from +/-6%	<b>Pointer:</b> Pointer and maximum indicator with zero adjustment
<b>Connection:</b> Fixed stainless steel 316 sensor (see summary)	<b>Window:</b> Safety glass with imprint safety glass
<b>Diale:</b> White aluminium, black pressure scale	<b>Connection:</b> Several standard models, see outlines of other models on request
<b>Pointer:</b> Black aluminium	<b>Measuring range:</b> Other dimensions than °C
<b>Transmission-turning mechan.:</b> Brass, with nickel silver parts for the turning mechanism; this combination is wear resistant and runs smoothly	<b>Logo:</b> On dial



Product name	Description		Price
85	Thermometer with bottom connection	ø63 mm	€235,00
85	Incl. sensor A L=100 mm	ø100 mm	€239,00
85		ø160 mm	€293,00
85		ø250 mm	€404,00
85/1	Thermometer with back connection	ø63 mm	€233,00
85/1	Incl. sensor A L=100 mm	ø100 mm	€239,00
85/1		ø160 mm	€293,00
85/1		ø250 mm	€404,00
85/2	Thermometer with back connection	ø63 mm	€239,00
85/2	Back flange	ø100 mm	€257,00
85/2	Incl. sensor A L=100 mm	ø160 mm	€327,00
85/2		ø250 mm	€454,00
85/3	Thermometer with square bottom connection	ø63 mm	€239,00
85/3	Incl. sensor A L=100 mm	ø100 mm	€257,00
85/3		ø160 mm	€299,00
85/3		ø250 mm	€456,00
85/4	Thermometer with slanting bottom connection	ø63 mm	€239,00
85/4	Incl. sensor A L=100 mm	ø100 mm	€254,00
85/4		ø160 mm	€298,00
85/4		ø250 mm	€454,00
Sensor A	Without connection	Per 100 mm extra	€12,00
Sensor Connection B	Sensor for thermometer 85	1/2" BSP	€67,00
Sensor Connection B	Swivel	3/4" BSP	€76,00
Sensor Connection B		1" BSP	€81,00
Sensor Connection C	Sensor for thermometer 85	1/2" BSP	€74,00
Sensor Connection C	Fixed connection	3/4" BSP	€81,00
Sensor Connection C		1" BSP	€89,00
Sensor Connection C	Movable conneciton type C		€35,00
Sensor Connection D	Sensor for thermometer 85	1/2" BSP	€127,00
Sensor Connection D	Sleeve with connection	3/4" BSP	€149,00
Sensor Connection D		1" BSP	€165,00
Sensor Connection E	Sensor for thermometer 85	1/2" BSP	€67,00
Sensor Connection E	Adjustable clamp connection	3/4" BSP	€81,00
Sensor Connection E		1" BSP	€165,00

Product name	Description		Price
Sensor Aansluiting F	Sensor for thermometer 85	NW 25	€74,00
Sensor Aansluiting F	Sensor for thermometer 85	NW 25	€74,00
Sensor Aansluiting F	Sensor for thermometer 85	NW 50	€89,00





The stainless steel thermometer, type 184, was developed to measure liquids and gases. It is intended for use in refineries, chemical plants, the food processing industry, water and sewage purification farms and in other applications where the medium does not affect the stainless steel sensor.

These thermometers work on the basis of dynamic expansion in a closed system with a liquid filling. The measuring system has a direct transmission which means that wear and tear is minimal and a long life guaranteed.

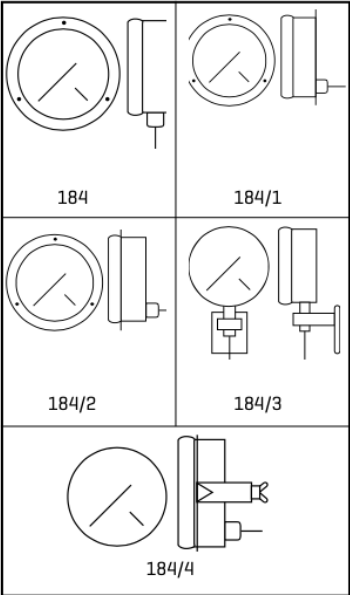
The thermometer 184 has a synthetic capillary as standard. A copper-clad or stainless steel capillary is also possible. The sensor is made of stainless steel and can be fitted with different couplings, including a sanitary or even an aseptic model.

The thermometer type 84 is suitable for use outside.

If signals are required VDH Products can deliver a wide range of electric contacts (PLC contacts, for example) as extras.

In addition to the extensive standard range other models can be supplied to fit the client's wishes.

Your company name and/or logo can be professionally applied to this stainless steel thermometer 184.



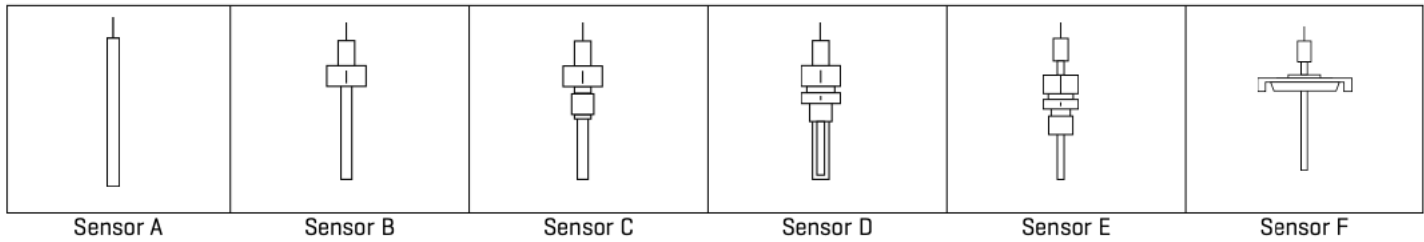
# 184

## Technical Specifications

<b>Type:</b> 184, 184/1, 184/2, 184/3, 184/4	<b>Accuracy:</b> ø 63 mm: 1,6% ø 100/160/250 mm: 1,0%
<b>Casing diameter:</b> 63 - 100 - 160 - 250 mm	<b>Environm. temp.:</b> -20 tot 60°C
<b>Housing:</b> Stainless steel 304	<b>Measuring ranges:</b> From -50 up to +120°C
<b>Seal:</b> Bayonet catch stainless steel 304, rubber ring on broad sealing rim	<b>Optional</b> <b>Capillary:</b> Coper-clad coper capillary or stainless steel capillary with or without protection tube
<b>Window:</b> Unbreakable macrolon	<b>Liquid filling:</b> Glycerine (only possible without contacts), isolating oil for contact models
<b>Measuring elem.:</b> Thermal spring, filled with organic liquid	<b>Contacts:</b> See page “electric contact arrangements”
<b>Capillary:</b> Capillary (state required length), Synthetic material, maximum capillary length: 20 metres at envoirment temperature of 20°C	<b>Tag number:</b> On pointer, stainless steel plate
<b>Connection:</b> Stainless steel 316 sensor, various alternatives	<b>Pointer:</b> Pointer and maximum indicator with zero adjustment
<b>Dial:</b> White aluminium, black pressure scale	<b>Window:</b> Safety glass with imprint safety glass
<b>Pointer:</b> Black aluminium	<b>Connection:</b> Other connections on request
<b>Transmission- turning mechanism:</b> Brass, with nickel silver parts. This combination is wear- resistantand runs smoothly	<b>Measuring range:</b> Dimensions other than °C
	<b>Logo:</b> On dial

Product name	Description		Price
184	Thermometer with back connection	ø63 mm	€176,00
184	Back flange	ø100 mm	€182,00
184	Incl. sensor A	ø160 mm	€235,00
184	Excl. capillary	ø250 mm	€389,00
184/1	Thermometer with back connection	ø63 mm	€176,00
184/1	Back flange	ø100 mm	€183,00
184/1	Incl. sensor A	ø160 mm	€235,00
184/1	Excl. capillary	ø250 mm	€389,00
184/2	Thermometer with back connection	ø63 mm	€176,00
184/2	Front flange	ø100 mm	€182,00
184/2	Incl. sensor A	ø160 mm	€235,00
184/2	Excl. capillary	ø250 mm	€389,00
184/3	Thermometer with square back connection	ø63 mm	€233,00
184/3	Wall mounting plate	ø100 mm	€249,00
184/3	Incl. sensor A	ø160 mm	€293,00
184/3	Excl. capillary	ø250 mm	€442,00
184/4	Thermometer with back connection	ø63 mm	€182,00
184/4	Panel mounting bracket	ø100 mm	€187,00
184/4	Incl. sensor A	ø160 mm	€260,00
184/4	Excl. capillary	ø250 mm	€406,00
Sensor A	Without connection	per 100 mm extra	€12,00
Sensor B	Sensor for thermometer 184	1/2" BSP	€67,00
Sensor B	Swivel	3/4" BSP	€76,00
Sensor B		1" BSP	€81,00
Sensor C	Sensor for thermometer 184	1/2" BSP	€76,00
Sensor C	Fixed connection	3/4" BSP	€81,00
Sensor C		1" BSP	€92,00
Sensor C	Movable connection type C		€36,00
Sensor D	Sensor for thermometer 184	1/2" BSP	€133,00
Sensor D	Sleeve with connection	3/4" BSP	€151,00
Sensor D		1" BSP	€166,00
Sensor E	Sensor for thermometer 184	1/2" BSP	€67,00
Sensor E	Adjustable clamp connection	3/4" BSP	€81,00
Sensor E		1" BSP	€166,00
Sensor F	Sensor for thermometer 184	NW 25	€76,00

Product name	Description		Price
Sensor F	DIN 11851 clutch	NW 40	€76,00
Sensor F		NW 50	€91,00
Surcharges			
Stainless steel capillary		2,5 mm per meter	€18,00
Stainless steel protection tube		Per meter	€21,00
Flexible plastic capillary		3,5 mm per meter	€14,00
Flexible copper capillary		Per meter	€17,00







This nitrogen-filled industrial stainless steel thermometer, type 185, was specially developed to measure liquids and gases in the food processing industry and in other industrial applications where the filling of the measuring system must not harm the product. Because of these qualities these thermometers are often used in other industrial processes.

The thermometers work on the basis of dynamic expansion in a closed system with a nitrogen filling. This unique measuring system has a standard compensation for casing temperature, which makes the temperature measurement extremely accurate.

The type 185 thermometer is supplied with a stainless steel capillary and a stainless steel sensor. The sensors can be fitted with a sanitary or even an aseptic coupling.

The thermometer type 185 is suitable for use outside.

If signals are required VDH Products can deliver a wide range of electric contacts (PLC contacts, for example) as extras.

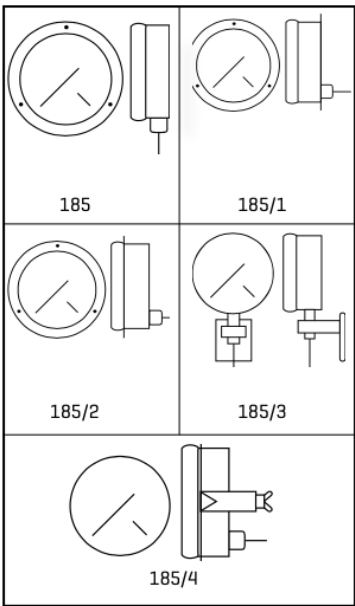
In addition to the extensive standard range other models can be supplied to fit the client's wishes.

Your company name and/or logo can be professionally applied to this stainless steel thermometer 185.

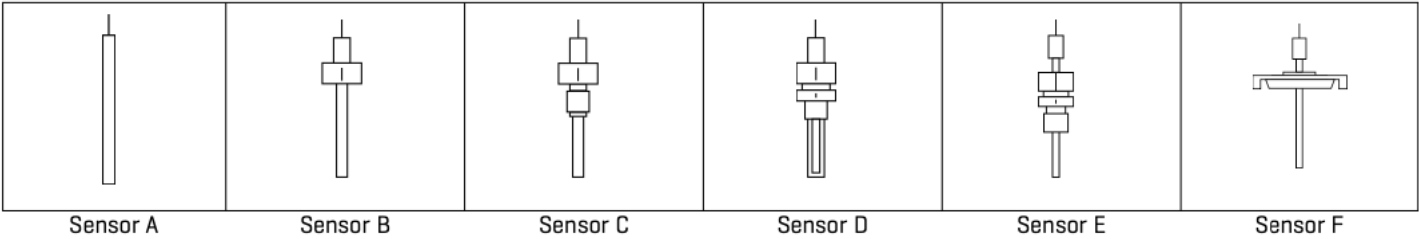
# 185

## Technical Specifications

<b>Type:</b> 185, 185/1, 185/2, 185/3, 185/4	<b>Transmission- turning mechan.:</b> Brass, with nickel silver parts; this combination is wear-resistant and runs smoothly
<b>Casing diameter:</b> 63 - 100 - 160 - 250 mm	<b>Accuracy:</b> Casing diameter 63 mm: class 1,66, Casing diameter 100/160/250 mm: class 1,0
<b>Housing:</b> Stainless steel 304	<b>Environment temperature:</b> -20 tot 60°C
<b>Sealing:</b> Bayonet catch stainless steel 304, rubber ring on broad sealing rim	<b>Measuring ranges:</b> From -50 up to +650°C
<b>Window:</b> Unbreakable macrolon	<b>Optional</b>
<b>Measuring elem.:</b> Thermal spring, filled with compressed nitrogen	<b>Liquid filling:</b> Glycerine (only possible without contacts), isolating oil for contact models
<b>Adjustability:</b> Zero point adjustment by means of screw on the top of the thermometer for corrections from +/-6%	<b>Tag number:</b> On pointer, on stainless steel plate
<b>Capillary:</b> Stainless steel capillary (state required length). Stainless steel protection tube if desired; maximum capillary length: 20m, at 20°C environment temperature.	<b>Pointer:</b> Pointer and maximum indicator with zero adjustment
<b>Connection:</b> Stainless steel sensor 316 (see summary)	<b>Window:</b> Safety glass with imprint safety glass
<b>Dial:</b> White aluminium, black pressure scale	<b>Connection:</b> Diverse standard models, see outlines of other models on request
<b>Pointer:</b> Black aluminium	<b>Measuring range:</b> Dimensions other than °C
	<b>Logo:</b> On dial



Product name	Description	Price
185	Thermometer with bottom connection and back flange ø63 mm	€237,00
185	Incl. sensor A ø100 mm	€247,00
185	Excl. capillary ø160 mm	€299,00
185	ø250 mm	€454,00
185/1	Thermometer with rear connection and rear flange ø63 mm	€237,00
185/1	Incl. sensor A ø100 mm	€248,00
185/1	Excl. capillary ø160 mm	€300,00
185/1	ø250 mm	€454,00
185/2	Thermometer with rear connection and front flange ø63 mm	€237,00
185/2	Incl. sensor A ø100 mm	€248,00
185/2	Excl. capillary ø160 mm	€299,00
185/2	ø250 mm	€454,00
185/3	Thermometer with square bottom ø63 mm	€293,00
185/3	Connection moutage flange ø100 mm	€309,00
185/3	Incl. sensor A ø160 mm	€356,00
185/3	Excl. capillary ø250 mm	€509,00
185/4	Thermometer with rear connection and panel mounting bracket ø63 mm	€249,00
185/4	Incl. sensor A ø100 mm	€256,00
185/4	Excl. capillary ø160 mm	€323,00
185/4	ø250 mm	€482,00



# Pressure

→ Pressostats

→ Pressure sensors

→ Pressure gauges



# Alfanet 77

## Technical Specifications

The Alfa 77 is a compact three stage pressostat for panel mounting with a neutral zone.

The Alfa 77 has a default program with the function pressure increase/ decrease and a minimum/ maximum alarm. The thermostat can also be programmed with the function: two stage pressure increase or two stage pressure decrease.

The Alfa 77 has a range of -1/+99 Bar with a read-out per 0,1 Bar. To the Alfa 77, pressure sensors from the PX range can be connected.

The Alfa 77 offers the option to show the temperature belonging to the pressure. Therefore a large number of refrigerants can be selected.

All settings are made by the push buttons on the front. The internal settings like differential and sensor offset are sufficiently protected, so that they can't be changed by accident.

The Alfa 77 is supplied with 12 Vac. A separate transformer can be supplied. A clear user manual is enclosed.

<b>Type:</b>	<b>Function:</b>
Alfa 77	Pressure increase/ decrease or 2x increase/ 2x decrease (internal programmable)
<b>Housing:</b>	<b>Operations:</b>
Black ABS plastic	By push buttons on the front
<b>Dimensions:</b>	<b>Input:</b>
35 x 77 x 71,5 mm (hwd)	0/+1 Vdc for sensors from the PX range
<b>Panel saving:</b>	<b>Relay:</b>
28 x 70 mm (hw)	Pressure increase SPST contact 250V/5A (NO)
<b>Connections:</b>	Pressure decrease SPST contact 250V/5A (NO)
Screw terminals on the back	Alarm SPDT contact 250V/5A (NO/NC) (all relays one common, non inductive)
<b>Front:</b>	<b>Accuracy:</b>
Polyester IP-54	± 0.5% of the range
<b>Range:</b>	
-1/+99 Bar, read-out per 0,1 Bar	
<b>Supply:</b>	
12 Vac, 50/60 Hz (-10%/+5%)	

Article number	Product name	Sensors	0-10V Output	Price
904.000730	Alfa 77-PI MIN/MAX 24VAC/DC	1	●	€195,00
904.000950	Alfa 77-PI/2 Pa 24Vac/dc	1	●	€195,00
904.000544	Alfanet 77 BAR 0-5Vdc input	1		€226,00
904.000667	Alfanet 77 mmWK tbv PX25	1	●	€226,00
904.010213	Alfanet 77 PI BAR 24Vac/dc	1	●	€226,00
904.000842	Alfanet 77 BAR 4/20mA input	1		€226,00



# PX 25-4

## Technical Specifications

The PX 25-4 is a very accurate electronic differential pressure sensor. This sensor can be used to measure low pressure with a high sensitivity and accuracy.

The sensor is equipped with two tube connections from 4 mm. The sensor has no moving parts for a high reliability. The PX 25-4 is equipped with a zero adjustment.

The sensor is build into a small plastic encloser with a low weight. Mounting is very easily.

The PX 25-4 needs a supply voltage between 12-30Vdc.  
The sensor can be delivered in two different types. The difference between both types is the range. Both types can be adjusted for different ranges with the means of dials-witches.

Type 1 can be adjusted for the ranges:

- 0 .. 125 Pa
- 0 .. 250 Pa
- 0 .. 500 Pa

Type 2 can be adjusted for the ranges:

- 0 .. 1250 Pa
- 0 .. 2500 Pa
- 0 .. 5000 Pa
- 0 .. 7500 Pa

The PX 25-4 has an output from 4-20mA..

Type:	Pressure range:
PX 25-4 series	Type 1: 0..125 Pa
Housing:	0..250 Pa
Plastic	0..500 Pa
Dimensions:	Type 2: 0..1250 Pa
138 x 33 x 62 mm	0..2500 Pa
(hwd)	0..5000 Pa
Air conn.:	0..7500 Pa
1/8" tube	Output:
Supply:	4/20 mA 50 - 350 Ohm
12 .. 30 Vdc	Max. pressure:
Elec. conn:	100 kPa
Removable connector	Accuracy:
with screw connectors.	Type 1:
(Wire: 0,2..2,5mm2)	3% of the measuring
Operating temp:	+/- 0,5% of the range
0/+60°C	Type 2:
	< 1,5% of the range
	Offset stability:
	Type 1: <0,1 Pa / year
	Type 2: 8 Pa / year

Article number	Product name	Price
910.080165	PX 25-4 Type1 0..0,5/1/2"WC	€293,00
910.080166	PX 25-4 Type2 0..5/10/20/30"WC	€293,00



The PX77/3 is a robust electronic pressure sensor.

The sensor is resistant against pressure peaks, vibration-proof, shockproof and insensitive to temperature shocks.

Parts and casing with contact to measuring material is made of CrNiCuNb 17-4. This is resistant to most of the cooling gasses used into the refrigerations industries.

The measuring is equipped with a special steel membrane.

Possible uses are:

- refrigeration industry
- pneumatics
- hydraulics
- process control
- water technology

The pressure sensor can be delivered with in a few standard ranges with a 1/4" Flare connection. Other ranges and connections are available on request.

The sensor is electronically calibrated which means that the sensor combines a great accuracy to a long term stability.

# PX 77/3

## Technical Specifications

<b>Type:</b>	<b>Standard range:</b>
PX 77/3	-1/+9 Bar
<b>Housing:</b>	-1/+24 Bar
Stainless steel	0/+10 Bar
<b>Measuring elem:</b>	0/+25 Bar
CrNiCuNb 17-4	Other ranges can be supplied on request
<b>Dimensions:</b>	<b>Output:</b>
22 x 73 mm	4/+20 mA
<b>Process conn.:</b>	<b>Overloading:</b>
1/4" Flare	Twice the sensor range
<b>Supply:</b>	<b>Cracking pressure:</b>
12 to 32 Vdc	Three times the sensor range
<b>Connection:</b>	<b>Total error:</b>
4-pin DIN plug	-40..-12°C 3,0% typ.
<b>Sealing:</b>	2,0%
IP 65, RH max. 95%	-20..+85°C 1,0% typ.
<b>Temp. range:</b>	0,7%
-40/+125°C	+85..+100°C 2,5% typ.
	1,5%
	<b>Weight:</b>
	90 g

Special models can be supplied on request

Article number	Product name	Price
390.000500	PX 77/3 -1/+9 BAR 1/4FL 4/20mA	€244,00
390.000501	PX 77/3 0/+10 BAR 1/4FL 4/20mA	€244,00
390.000502	PX 77/3 0/+25 BAR 1/4FL 4/20mA	€244,00
390.000503	PX 77/3 -1/+24BAR 1/4FL 4/20mA	€244,00



# 74

## Technical Specifications

The gauge is build in a stainless steel housing and is filled with glycerin for reliable operation and long life. The seal between the plastic window and the housing prevents leakage by means of a bayonet catch with a rubber ring.

A connection nipple is fixed to the housing in a unique way making external connection screws unnecessary. This gives an extra protection against leakage caused by vibrations.

Pressure changes that can occur due to temperature differences of the glycerin are automatically compensated by the special bellows.

A safety blow plug is located on top of the unit holding.

As measuring element of phosphor, bronze is encased in an elastic bourdon tube, soldered to a large brass junction.

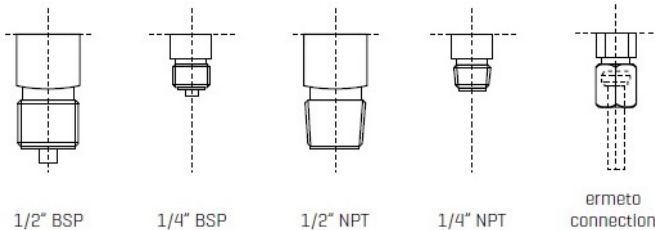
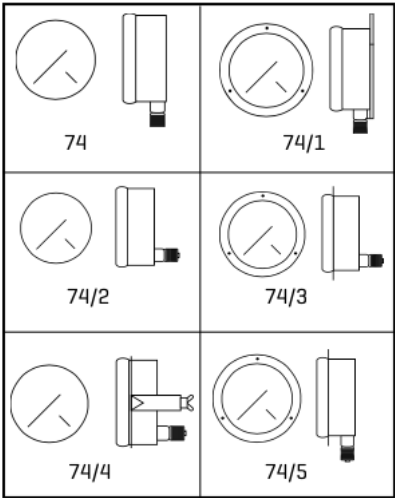
The measuring element is thermally and mechanically protected. This allows an over pressure of 25% of the range.

At ranges below 600 mBar a low pressure spring box is used. In that case the pressure gauge is supplied dry (without glycerin).

The pressure gauge can be supplied in several sizes and configurations, like ½ BSP or ½ NPT.

As standard a dial according to EN 837 is mounted, but on request other dials are also available like a BAR/PSI dial.

<b>Type:</b>	<b>Dial:</b>
74	White aluminium, pressure scale in black according to EN 837
<b>Housing:</b>	<b>Connection:</b>
ANSI 304	Brass, 1/4 BSP or 1/2 BSP, other connections possible
<b>Sizes:</b>	<b>Transmission:</b>
According to DIN 16064	Brass with new silver turn parts. This combination is wear and shock mechanism resistant.
<b>Sealing:</b>	<b>Range:</b>
Banyonet catch, rubber ring on broad profile	According to DIN up to 60 Bar
<b>Window:</b>	<b>Accuracy:</b>
Unbreakable macrolon	ø63 mm DIN class 1,6 ø100 mm DIN class 1.0 ø160 mm DIN class 1.0
<b>Measuring:</b>	<b>Options:</b>
Phosphor bronze soldered element with tin/silver alloy thermally and mechanically protected	Low pressure spring box for ranges <600 mBar stainless steel transmission
	<b>System:</b>
	Tag number on housing or dial dampening screw



Product name	Description		Price
74	Brass measuring system, glycerine filled	ø63 mm	€73
74	Stainless steel housing	ø100 mm	€101
74	Rear connection	ø160 mm	€151
74		ø250 mm	€427
74/1	Brass measuring system, glycerine filled	ø63 mm	€86
74/1	Stainless steel housing	ø100 mm	€113
74/1	Bottom connection with back flange	ø160 mm	€171
74/1		ø250 mm	€483
74/2	Brass measuring system, glycerine filled	ø63 mm	€80
74/2	Stainless steel housing	ø100 mm	€107
74/2	Rear connection	ø160 mm	€159
74/2		ø250 mm	€450
74/3	Brass measuring system, glycerine filled	ø63 mm	€92
74/3	Stainless steel housing	ø100 mm	€122
74/3	Bottom connection with back flange	ø160 mm	€182
74/3		ø250 mm	€516
74/4	Brass measuring system, glycerine filled	ø63 mm	€94
74/4	Stainless steel housing	ø100 mm	€123
74/4	Rear connection with mounting bracket	ø160 mm	€188
74/5	Brass measuring system, glycerine filled	ø63 mm	€84
74/5	Stainless steel housing	ø100 mm	€111
74/5	Bottom connection with front flange	ø160 mm	€170
74/5		ø250 mm	€483





# 75

## Technical Specifications

The model is a glycerin filled pressure gauge with stainless steel measuring system, suitable for applications in the process industry.

The gauge has a stainless steel housing and is filled with glycerin for reliable operation and long life. The seal between the plastic window and the housing prevents leakage by means of a bayonet catch with sealing ring.

A connection nipple is fixed to the housing in a unique way making external connection screws unnecessary. This gives extra protection against leakage caused by vibrations.

Surges that can occur due to temperature differences of the glycerin are automatically compensated by the special bellows.

A safety blow plug is fitted on the top of the gauge to guard against explosions.

The measuring element is of stainless steel contained in a bourdon tube argon arc welded to a large stainless steel junction.

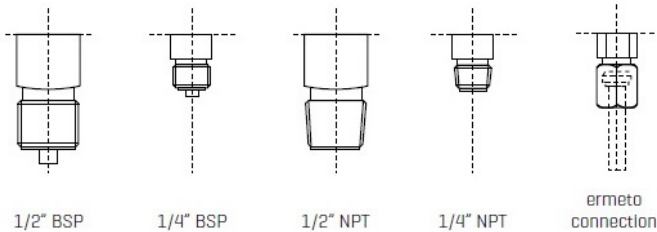
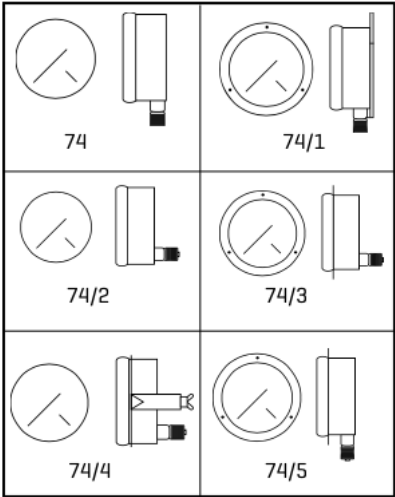
The measuring element is thermally and mechanically underrated allowing 25% out of range safety margin.

At ranges below 600 mBar a low pressure spring box is used. In that case the pressure gauge is supplied dry (without glycerin).

The pressure gauge can be supplied in several sizes and configurations, like ½ BSP or ½ NPT.

As standard a dial according to EN 837 is mounted, but on request other dials are also available like a BAR/PSI dial. Often the dial is provided with your company logo.

<b>Type:</b>	<b>Connection:</b>
74	ANSI 316, 1/2 BSP, other connections possible
<b>Housing:</b>	
ANSI 304	
<b>Sizes:</b>	<b>Transmission:</b>
DIN 16064	Brass with new silver moving parts. This combination is wear and shock mechanism resistant.
<b>Sealing:</b>	
Bayonet catch, rubber ring on broad profile	
<b>Window:</b>	<b>Range:</b>
Unbreakable macrolon	According to DIN up to 1000 Bar
<b>Measuring:</b>	<b>Accuracy:</b>
ANSI 316 argon arc element homogeneous welded alloy thermally and mechanically protected	ø63 mm DIN class 1,6 ø100 mm DIN class 1.0 ø160 mm DIN class 1.0
<b>Dial:</b>	<b>Options:</b>
White aluminium, pressure scale in black according to EN 837	Low pressure spring box for ranges <600 mBar stainless steel transmission
	<b>System:</b>
	Tag number on housing or dial dampening screw



Product name	Description		Price
75	Stainless steel measuring system, glycerine filled	ø63 mm	€109
75	Stainless steel housing	ø100 mm	€129
75	Rear connection	ø160 mm	€193
75		ø250 mm	€531
75/1	Stainless steel measuring system, glycerine filled	ø63 mm	€126
75/1	Stainless steel housing	ø100 mm	€138
75/1	Bottom connection with back flange	ø160 mm	€223
75/1		ø250 mm	€599
75/2	Stainless steel measuring system, glycerine filled	ø63 mm	€116
75/2	Stainless steel housing	ø100 mm	€129
75/2	Rear connection	ø160 mm	€207
75/2		ø250 mm	€527
75/3	Stainless steel measuring system, glycerine filled	ø63 mm	€126
75/3	Stainless steel housing	ø100 mm	€138
75/3	Rear connection with front flange	ø160 mm	€227
75/3		ø250 mm	€564
75/4	Stainless steel measuring system, glycerine filled	ø63 mm	€131
75/4	Stainless steel housing	ø100 mm	€141
75/4	Rear connection with mounting bracket	ø160 mm	€233
75/5	Stainless steel measuring system, glycerine filled	ø63 mm	€126
75/5	Stainless steel housing	ø100 mm	€138
75/5	Bottom connection with front flange	ø160 mm	€220
75/5		ø250 mm	€597

Product name	Description	Price
<b>Surcharges 74 &amp; 75 manometers</b>		
Preparation for rear flange		€8,00
Loose back flange	ø63 mm	€14,00
Loose back flange	ø100 mm	€16,00
Loose back flange	ø160 mm	€23,00
Loose back flange	ø250 mm	€53,00
Safety glass	ø63 mm	€13,00
Safety glass	ø100 mm	€13,00
Safety glass	ø160 mm	€16,00
Safety glass	ø250 mm	€86,00
Special range		€47,00
Special connection		€28,00
Center rear connection		€77,00
Low pressure system	(ranges < 0.6 Bar)	€35,00
Stainless steel transmission system		€22,00
Damping screw brass		€14,00
Capillary damping		€17,00
Identification number on dial		€8,00
Identification number on stainless steel plate		€9,00
Pointer with zero position		€13,00
Max pointer with zero counting		€18,00
Calibration certificate		€87,00
<b>Reduced prices 74 manometers</b>		
Pressure gauge ø63 mm without glycerin		€3,00
Pressure gauge ø100 mm without glycerin		€4,00
Pressure gauge ø160 mm without glycerin		€7,00
Pressure gauge ø250 mm without glycerin		€15,00
<b>Surcharges 75 manometers</b>		
Screw spring (reach > 60 Bar)		€33,00
Stainless steel welded connection		€13,00
Monel screw for ø63 mm and ø100 mm		€29,00
Damping screw stainless steel		€17,00
DIN class 0.6, ø160 mm, ranges up to 60 Bar		€77,00
DIN class 0.6, ø160 mm, ranges above 60 BarDIN		€108,00



The A75 pressure gauge is designed for pressure measurement on ammonia systems and other natural refrigerants.

The gauge has a stainless steel housing and is filled with glycerine for reliable operation and long life. The seal between the plastic window and the housing prevents leakage by means of a bayonet catch with sealing ring.

A connection nipple is fixed to the housing in a unique way making external connection screws unnecessary. This gives extra protection against leakage caused by vibration.

Surges that can occur due to temperature differences of the glycerine are automatically compensated for by the special bellows. A safety blow plug is fitted to the top of the gauge to guard against explosions.

The measuring element is of stainless steel contemned in a bourdon tube argon arc welded to a large stainless steel junction.

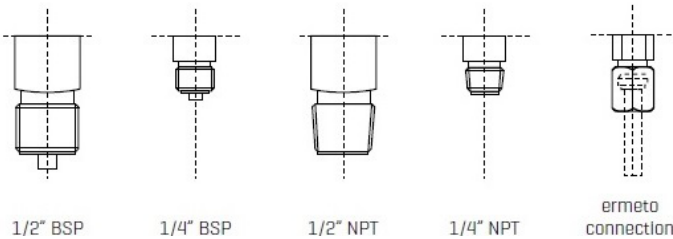
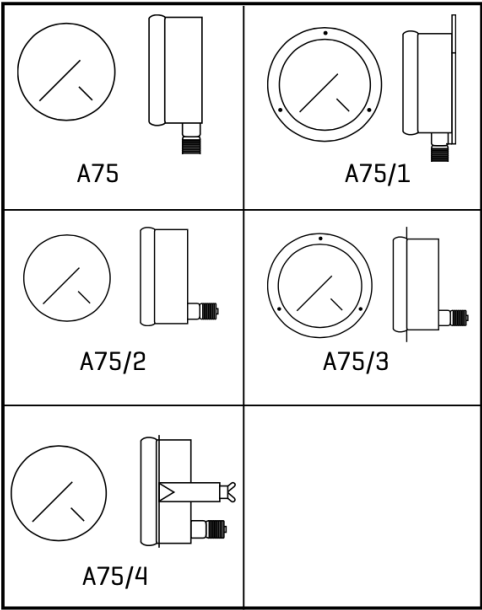
The measuring element is thermally and mechanically underrated allowing a 25% out of range safety margin.

The gauge can be delivered in several sizes and formats with a choice of connection sizes and couplings.

# A75

## Technical Specifications

<b>Type:</b>	<b>Connection:</b>
A75	ANSI 316, standard
<b>Housing:</b>	1/2 BSP,
ANSI 304	<b>Transmission:</b>
<b>Dimensions:</b>	Brass with new
DIN 16064	silver mechanism
<b>Sealing:</b>	moving parts, This
Bayonet catch, rubber	combination is wear
ringon broad profile	resistant and moves
<b>Window:</b>	without shocks.
Unbreakable macrolon	<b>Range:</b>
<b>Measuring elem.:</b>	Suction -1/+12 Bar
ANSI 316 argonarc	Discharge -1/+30 Bar
homogeneous welded	Oil -1/+12 Bar
Alloy	Other ranges available
<b>Dial:</b>	<b>Accuracy:</b>
White aluminium,	ø63 mm class 1,6
pressure scale in	ø100 mm class 1,0
black, standard	ø160 mm class 1,0
temperature scale R717	
red.	



Product name	Description		Price
A75	Ammonia pressure gauge	ø63 mm	€107
A75	Bottom connection	ø80 mm	€179
A75		ø100 mm	€112
A75		ø160 mm	€197
A75/1	Ammonia pressure gauge	ø63 mm	€118
A75/1	Bottom connection with back flange	ø80 mm	€202
A75/1		ø100 mm	€130
A75/1		ø160 mm	€218
A75/2	Ammonia pressure gauge	ø63 mm	€112
A75/2	Rear connection	ø80 mm	€193
A75/2		ø100 mm	€123
A75/2		ø160 mm	€203
A75/3	Ammonia pressure gauge	ø63 mm	€124
A75/3	Rear connection with front flange	ø80 mm	€213
A75/3		ø100 mm	€137
A75/3		ø160 mm	€226
A75/4	Ammonia pressure gauge	ø63 mm	€129
A75/4	Rear connection with mounting bracket	ø80 mm	€218
A75/4		ø100 mm	€139
A75/4		ø160 mm	€232



The R75 pressure gauge has been developed for pressure measurements on freon compressors.

The gauge is built in a stainless steel housing and filled with glycerine which ensures reliable long lasting instrument. The sealing between the plastic window and the housing prevents leaking by a bayonet catch with a rubber ring.

The connection nipple is fixed in a unique way to the housing, making connection screws unnecessary. This gives an extra protection against leakage caused by vibration.

Pressure changes that can occur with temperature differences of the glycerine are automatically compensated by a special bellows.

A safety blow plug is located on top of the unit holding.

As measuring element of phosphor bronze is encased in an elastic bourdon tube, soldered to a large brass junction.

The measuring element is thermally and mechanically protected.

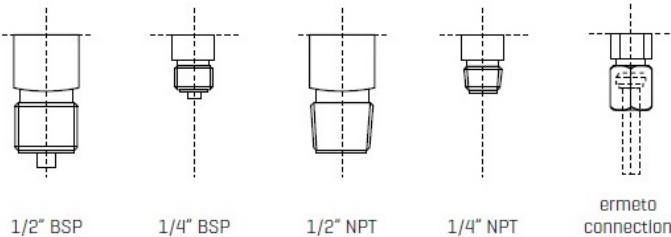
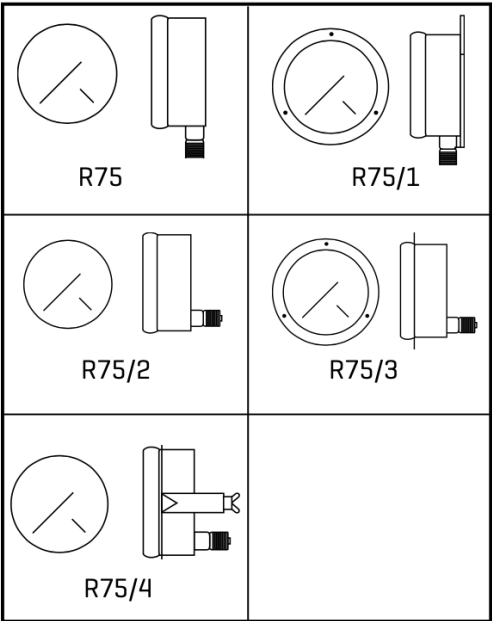
The gauge can be supplied in several sizes and configurations. The R75 can be supplied with several connections, including solder connections.

Various temperature scales are available, like R404, R134a etc. are also available. The dial can also be provided with company logo.

# R75

## Technical Specifications

<b>Type:</b>	<b>Connection:</b>
R75	Brass, standard 1/2
<b>Housing:</b>	BSP or 7/16 SAE of
ANSI 304	1/4 solder, other
<b>Dimensions:</b>	connections possible.
DIN 16064	<b>Transmission:</b>
<b>Sealing:</b>	Brass with new silver
Bayonet catch, rubber	turn mechanism parts.
ring on broad profile	This combination
<b>Window:</b>	is wear and shock
Unbreakable macrolon	resistant.
<b>Measuring elem.:</b>	<b>Range:</b>
Phosphor broze	Suction -1/+12 Bar
soldered with tin/silver,	Press -1/+30 Bar
alloy thermally and	Oil -1/+12 Bar
mechanically protected	Other ranges available
<b>Dial:</b>	<b>Accuracy:</b>
White aluminium.	Ø63 mm class 1,6
Pressure scale in	Ø100 mm class 1,0
black, standard	Ø160 mm class 1,0
temperature scale	
R22 in green. Other	
temperature scales are	
available at not extra	
price.	



Product name	Description		Price
R75	Freon pressure gauge	ø63 mm	€73
R75	Bottom connection	ø80 mm	€147
R75		ø100 mm	€100
R75		ø160 mm	€149
R75/1	Freon pressure gauge	ø63 mm	€87
R75/1	Bottom connection with back flange	ø80 mm	€168
R75/1		ø100 mm	€114
R75/1		ø160 mm	€171
R75/2	Freon pressure gauge	ø63 mm	€82
R75/2	Rear connection	ø80 mm	€153
R75/2		ø100 mm	€103
R75/2		ø160 mm	€159
R75/3	Freon pressure gauge	ø63 mm	€93
R75/3	Rear connection with front flange	ø80 mm	€179
R75/3		ø100 mm	€121
R75/3		ø160 mm	€181
R75/4	Freon pressure gauge	ø63 mm	€94
R75/4	Rear connection with mounting bracket	ø80 mm	€181
R75/4		ø100 mm	€122
R75/4		ø160 mm	€187
Surcharges A75 & R75 manometers			
Prepared for rear flange			€8,00
Special temperature scale per range			Op aanvraag
Loose rear flange		ø63 mm	€14,00
Loose back flange		ø100 mm	€16,00
Loose rear flange		ø160 mm	€23,00
Special Range			€46,00
Solder connection			€10,00
Connection other than 1/4" BSP (ø63 mm) 1/2" BSP (ø100 mm) or 7/16 UNF			€27,00
Ermeto		ø6 mm steel	€10,00
Overpressure protection up to 20 Bar (discharge pressure)			€18,00
Damping screw			€14,00
Reduced prices A75 & R75 pressure gauges			
Manometer ø63 mm & ø80 mm without glycerine			€3,00
Manometer ø100 mm without glycerine			€4,00
Manometer ø160 mm without glycerine			€7,00



# DA75

## Technical Specifications

<b>Type:</b>	<b>Dial:</b>
DA75	White aluminium.
<b>Housing:</b>	Pressure scale in black, temperature scale R717 in red.
ANSI 304	
<b>Dimensions:</b>	<b>Connection:</b>
DIN 16064	Stainless steel 303, standard 1/2BSP, other connections possible.
<b>Sealing:</b>	<b>Transmission:</b>
Bayonet catch, rubber ring on broad profile	Brass with new silver turn mechanism parts.
<b>Window:</b>	<b>Measuring:</b>
Unbreakable macrolon	Stainless steel
	316 argon arc homegeny welded.
	Alloy terminally and mechanically protected
	<b>Range:</b>
	Suction -1/+12 Bar discharge -1/+30 Bar
	<b>Accuracy:</b>
	DIN class 1,6

The DA75 has been developed to measure pressure on ammonia installations. The unit is unique in a way that the suction as well as the pressure can be read-out on the same gauge simultaneously.

The gauge is built in a stainless steel housing and filled with glycerine, which ensures long lasting reliable operation of the pressure gauge. The seal between the plastic window and the housing prevents leakage by a bayonet catch with a rubber ring.

Surges in pressure that can occur with temperature differences of the glycerine are automatically compensated by a special bellows. A safety blow off valve is fitted on top to guard against explosion.

As measuring element an elastic stainless steel bourdon tube is used, welded to a large stainless steel junction.

The DA75 is only available in a size of 100 mm. As an option a back flange can be supplied. The gauge is delivered with 1/2 BSP connections, other connections are available on request.

A R717 temperature scale is standard on the unit and this dial can also be provided with company logos.

Product name	Description		Price
DA75	Suction/pressure ammonia manometer	ø100 mm	€248
DA75/1	Suction/Pressure Ammonia Manometer with back flange	ø100 mm	€267





The DR75 has been developed to measure pressure on freon installations. The unit is unique in that the suction as well as the pressure can be read-out on the same gauge simultaneously.

The gauge is built in a stainless steel housing and filled with glycerine, which ensures long lasting reliable operation of the pressure gauge. The seal between the plastic window and the housing prevents leakage by a bayonet catch with a rubber ring.

Surges in pressure that can occur with temperature differences of the glycerine are automatically compensated by a special bellows. A safety blow off valve is fitted on top to guard against explosion. A prosper bronze element in an elastic bourdon tube is used, soldered to a large brass junction.

The DR75 is only available in size 100 mm. As an option a back flange can be supplied. The gauge can be delivered with several connections, including solder connections.

A R22 temperature scale is standard on the unit and this dial can also be provided with company logos.

# DR75

## Technical Specifications

<b>Type:</b>	<b>Dial:</b>
DR75	White aluminium,
<b>Housing:</b>	Pressure scale in
ANSI 304	black, standard
<b>Dimensions:</b>	temerature scale R22
DIN 16064	in green
<b>Sealing:</b>	<b>Connection:</b>
Bayonet catch, rubber	Brass, standard
ring on broad profile	1/2 BSP or 7/16 SAE
<b>Window:</b>	or 1/4 solder, other
Unbreakable macrolon	connections possible.
<b>Measuring elem.:</b>	<b>Transmission:</b>
Phosphor bronze	Brass with new silver
soldered with tin/silver.	turn mechanism parts.
Alloy thermally and	This combination
mechanically protected	is wear and shock
	resistant.
	<b>Range:</b>
	Suction -1/+12 Bar
	Discharge -1/+30 Bar
	<b>Accuracy:</b>
	DIN class 1,6

Product name	Description	Price
DR75	Suction/pressure freon manometer      ø100 mm	€220
DR75/1	Suction/Pressure Freon Manometer with back flange      ø100 mm	€238



# A376

## Technical Specifications

The gauge A376 is developed to measure the differential pressure on ammonia installations. The gauge is provided with a dial, which indicates the static pressure and a rotating dial, on which the differential pressure can be read.

The gauge is build in a stainless steel housing and filled with glycerine which ensures a reliable long lasting instrument. The sealing between the plastic window and the housing prevents leakage by a bayonet catch with a rubber ring.

Pressure changes that can occur with temperature differences of the glycerine are automatically compensated by the special bellows. A safety blow plug is located on top of the unit holding.

The measuring elements are of stainless steel contemned in a bourdon tube argon arc welded to a large stainless steel junction.

The A 376 is only supplied in size ø100 mm. As an option a back flange is available. The gauge is supplied with a ½ BSP connection, other connections available on request.

The A 376 has a range of -1/+12 Bar with a differential pressure of 0/+6 Bar. On request other ranges are available.

As standard a R717 temperature dial is mounted. The dial can be provided with company logo.

<b>Type:</b>	<b>Dial:</b>
A376	White aluminium
<b>Housing:</b>	pressure scale in
ANSI 304	black, standard
<b>Dimensions:</b>	temperature scale
DIN 16064	R717 in red.
<b>Sealing:</b>	<b>Connection:</b>
Bayonet catch, rubber	ANSI 303, standard
ring on broad profile	1/2BSP, Other
<b>Window:</b>	connections possible
Unbreakable macrolon	<b>Transmission:</b>
<b>Measuring:</b>	Brass with new silver
ANSI 316 argon	turn mechanism parts.
arc elements	This combination
homogeneous welded	is wear and shock
Alloy	resistant
	<b>Range:</b>
	-1/+12 Bar
	differential pressure
	0/+6 Bar
	<b>Accuracy:</b>
	DIN class 1,0

Product name	Description		Price
A376	Ammonia differential pressure manometer	ø100 mm	€310
A376/1	Ammonia differential pressure gauge with back flange	ø100 mm	€329
R376	Freon differential pressure manometer	ø100 mm	€276
R376/1	Freon differential pressure gauge with back flange	ø100 mm	€291



This industrial stainless steel membrane pressure gauge, type 275, was developed to measure liquids that are viscous, turbid, crystallizing or corrosive, for example. They are for use in refineries, chemical plants, the food processing industry, water and sewage treatment plants and in applications with caustic and corrosive fluids.

The pressure gauge can be liquid-filled making it particularly suitable for applications with continuous pressure fluctuations such as are found in pumping, hydraulic, ship and other similar installations.

The standard stainless steel pressure gauge 275 has stainless steel 316 flanges and membrane. Should the liquid be too corrosive for the stainless steel 316 then the flange and membrane can be coated with Teflon.

The 275 pressure gauge comes with a 1/2BSP thread as standard. Other thread connections can be supplied, according to the client's specifications.

The company name and/or logo can be professionally applied to the stainless steel pressure gauge 275.

# 275

## Technical Specifications

<b>Type:</b>	<b>Mediumtemp.:</b>
275	Dry model: Max, 100°C
<b>Casing diameter:</b>	<b>Glycerine filled:</b>
100 - 160 mm	Max. 70°C
<b>Housing:</b>	<b>Measuring ranges:</b>
Stainless steel 304	Vacuum: -1 to 0 bar
<b>Dimensions:</b>	<b>Compound:</b>
According to EN 837	-1 to 0,6/1,5/3/5/9 bar
<b>Sealing:</b>	<b>Pressure:</b>
Bayonet catch	0 to
stainless steel 304,	0,6/1,6/2,5/4/6/10/16/
rubber ring on broad	25 bar
sealing rim	<b>Optional:</b>
<b>Window:</b>	<b>Liquid filling:</b> glycerine
Unbreakable	(only possible without
macrolon	contacts), Isolating oil
<b>Measuring element:</b>	for contact models
Depending on the	<b>Contacts:</b>
model, the membrane	See page "electric
is of stainless steel	contact arrange-
316 or with stainless	ments"
steel 316 protective	<b>Tag number:</b>
foil	On pointer, on stain-
<b>Flanges:</b>	less steel plate
Stainless steel 316,	<b>Pointer:</b>
diameter 100 mm	Pointer and maximum
<b>Connection:</b>	indicator with zero
1/2" BSP, stainless	adjustment
steel 316, bore 13 mm	<b>Window:</b>
<b>Dial:</b>	Laminated safety
White aluminium,	glass with imprint
pressure scale in black	safety glass
according to EN 837	<b>Coating:</b>
<b>Pointer:</b>	Teflon coating on
Black aluminium	request
<b>Transm. mechan.:</b>	<b>Connection:</b>
Stainless steel 304	Other than 1/2" BSP,
<b>Accuracy:</b>	on request
Class 1,6	<b>Measuring range:</b>
<b>Environm. temp.:</b>	Dimensions other than
-20 to 60°C	"bar"
	<b>Logo:</b>
	Op dial

Product name	Description	Price
275	Membrane pressure gauge ø100 mm	€331
275	1/2" BSP, boring ø13 mm ø160 mm	€403
Surcharges type 275		
Glycerine filling ø100 mm	Glycerine vulling ø100 mm	€25,00
Glycerine filling ø160 mm	Glycerine vulling ø160 mm	€31,00
Calibration Certificate		€87,00

# 275/1

## Technical Specifications



This industrial stainless steel membrane pressure gauge, type 275/1, was developed to measure liquids that are relatively viscous, cloudy, crystallizing or corrosive, for example. It is for use in refineries, chemical plants, the food processing industry, water and sewage treatment plants and in applications with caustic and corrosive fluids.

The pressure gauge can be liquid-filled making it particularly suitable for applications with continuous pressure fluctuations such as are found in pumping, hydraulic, ship and similar installations.

The standard stainless steel 275/1 pressure gauge has a fixed flange connection, 50 mm bore with six M8 bolt holes.

Other flange models can be delivered on request according to the client's specifications.

<b>Type:</b> 275/1	<b>Glycerine filled:</b> Max. 70°C
<b>Casing diameter:</b> 100 - 160 mm	<b>Measuring ranges:</b> Vacuum: -1 to 0 bar
<b>Housing:</b> Stainless steel 304	<b>Compound:</b> -1 to 0,6/1,5/3/5/9 bar
<b>Dimensions:</b> In accordance with EN 837	<b>Pressure:</b> 0 to 0,6/1,0/ 1,6/2,5/4/6/10/16/ 25 bar
<b>Sealing:</b> Bayonet catch stainless steel 304, rubber ring on broad sealing rim	<b>Optional</b> <b>Liquid filling:</b> Glycerine (only possible without contacts), isolating oil for contact models
<b>Window:</b> Unbreakable macrolon	<b>Contacts:</b> See page "electric contact arrange- ments"
<b>Measuring element:</b> Membrane of stainless steel 316	<b>Tag number:</b> On pointer, on stain- less steel plate
<b>Flanges:</b> Stainless steel 316, diameter 100 mm	<b>Pointer:</b> Pointer and maximum indicator with zero adjustment
<b>Connection:</b> Fixed flange stainless steel 316, bore 50 mm, 6 bolt M8 holes	<b>Window:</b> Laminated safety glass with imprint safety glass
<b>Dial:</b> White aluminium, pressure scale in black in accordance with EN 837	<b>Connection:</b> Other flange models on request
<b>Pointer:</b> Black aluminium	<b>Process conn.:</b> Teflon coating on request
<b>Transm. mechan.:</b> Stainless steel 304	<b>Measuring range:</b> Other dimensions than "bar"
<b>Accuracy:</b> Class 1,6	<b>Logo:</b> On pointer
<b>Environm.temp.:</b> -20 to 60°C	
<b>Mediumtemp.:</b> Dry model: Max, 100°C	

Product name	Description	Price
275/1	Membrane pressure gauge      ø100 mm	€331
275/1	ø160 mm	€403
Surcharges type 275		
Glycerine filling ø100 mm		€25,00
Glycerine filling ø160 mm		€31,00
Teflon coating flens type 275/1		€137,00
Calibration Certificate		€87,00



This industrial stainless steel membrane pressure gauge, type 275/3, is developed for measuring of liquids which are per example relative viscous, troubled, crystallized or corrosive. Examples are refineries, chemical industries, food industries, water environment installations (sewer- and water treatment installations) and in application with aggressive liquids.

The pressure gauge can be filled with liquid, which means it is very suitable for applications with continuous pressure fluctuations like pump-, hydraulic-, ships- and other such installations.

This solid pressure gauge is available in three different stainless steel 316 flange models, namely the: NW 25, NW 40 and the NW 50. The used membrane is also made of stainless steel 316. Because of this construction, the medium only makes contact with stainless steel 316.

# 275/3

## Technical Specifications

<b>Type:</b>	<b>Mediumtemp.:</b>
275/3	Dry model: Max, 100°C
<b>Casing diameter:</b>	<b>Glycerine filled:</b>
100 - 160 mm	Max. 70°C
<b>Housing:</b>	<b>Measuring ranges:</b>
Stainless steel 304	Vacuum: -1 to 0 bar
<b>Dimensions:</b>	<b>Compound:</b>
In accordance with EN 837	-1 to 0,6/1,5/3/5/9 bar
<b>Sealing:</b>	<b>Pressure:</b>
Bayonet catch	0 to 0,6/1,0/
stainless steel 304,	1,6/2,5/4/6/10/16/ 25
rubber ring on broad	bar
sealing rim	<b>Optional</b>
<b>Window:</b>	<b>Liquid filling:</b>
Unbreakable macrolon	Glycerine (only
<b>Measuring element:</b>	possible without
Membrane of stainless	contacts), Isolating oil
steel 316	for contact models
<b>Flanges:</b>	<b>Contacts:</b>
Stainless steel 316,	See page “electric
<b>Connection:</b>	contact arrange-
NW25: 1 Inch: DIN	ments”
2576 (4 bolt holes M12)	<b>Tag number:</b>
NW40: 1.5 Inch: DIN	On pointer, on stain-
2632 / 2633 / 2634	less steel plate
NW50: 2 Inch: (4 bolt	<b>Pointer:</b>
holes M16)	Pointer and maximum
<b>Dial:</b>	indicator with zero
White aluminium,	adjustment
pressure scale in black	<b>Window:</b>
in accordance with	Laminated safety glass
EN 837	with imprint safety
<b>Pointer:</b>	glass
Black aluminium	<b>Connection:</b>
<b>Transm. mechan.:</b>	Other flange models
Stainless steel 304	on request
<b>Accuracy:</b>	<b>Process conn.:</b>
Class 1,6	Teflon coating on
<b>Environm.temp.:</b>	request
-20 to 60°C	<b>Measuring range:</b>
	Other dimensions than
	“bar”
	<b>Logo:</b>
	On pointer

Product name	Description	Price
275/3	Membrane pressure gauge ø100 mm	€451
275/3	NW50 pitch 125 or NW40 pitch 110 ø160 mm	€514
Surcharges type 275		
Glycerine filling ø100 mm		€25,00
Glycerine filling Glycerine ø160 mm		€31,00
Teflon coating flens type 275/3		€169,00
Calibration Certificate		€87,00
Hydraulic system type 275/3		€123,00





The sanitary stainless steel membrane pressure gauge, type 275/4, has been developed for measuring pressure in sanitary processes. Examples are the dairy industry, food and beverage industry, pharmacy and the like.

Standard the pressure gauge is supplied with a dairy coupling according to DIN 11851. A diaphragm is placed in the tip in a professional way.

Optionally the sanitary pressure gauge is also available with DIN 11864 couplings.

During the development of the pressure gauge the strict requirements for sanitary applications have been fully taken into account. For example, the tip and swivel are made of stainless steel 316.

The pressure gauge can be filled with liquid, making it extremely suitable for applications with constant pressure fluctuations, such as pump, CIP and all other similar installations.

The 275/4 stainless steel pressure gauge is available in various DIN 11851/11864 couplings and different connection types (e.g. 9 h).

# 275/4

## Technical Specifications

<b>Type:</b> 275/3	<b>Mediumtemp.:</b> 0 to 40°C
<b>Casing diameter:</b> 100 - 160 mm (250 mm on request)	<b>Measuring ranges:</b> Vacuum: -1 to 0 bar
<b>Housing:</b> Stainless steel 304	<b>Compound:</b> -1 to 0,6/1,5/3/5/9 bar
<b>Dimensions:</b> In accordance with EN 837	<b>Pressure:</b> 0 to 0,6/1,0/ 1,6/2,5/4/6/10/16/ 25 bar. Range depends on connections.
<b>Sealing:</b> Bayonet catch stainless steel 304, rubber ring on broad sealing rim	<b>Optional</b> Coupling according to DIN 11864
<b>Window:</b> Unbreakable macrolon	<b>Liquid filling:</b> Glycerine (only possible without contacts), isolating oil for contact models
<b>Measuring element:</b> Membrane of stainless steel 316	<b>Contacts:</b> See page "electric contact arrangements"
<b>Flanges:</b> Stainless steel 316,	<b>Tag number:</b> On pointer, on stainless steel plate
<b>Connection:</b> 1",1,5",2,0" or 2,5" coupling according DIN 11851, swivel and point piece stainless steel 316	<b>Pointer:</b> Pointer and maximum indicator with zero adjustment
<b>Dial:</b> White aluminium, pressure scale in black in accordance with EN 837	<b>Window:</b> Laminated safety glass with imprint safety glass
<b>Pointer:</b> Black aluminium	<b>Connection:</b> Other flange models on request
<b>Transm. mechan.:</b> Brass with new silver	<b>Process conn.:</b> Teflon coating on request
<b>Accuracy:</b> Class 1,0	<b>Measuring range:</b> Other dimensions than "bar"
<b>Environm.temp.:</b> -20 to 60°C	<b>Logo:</b> On pointer

Product name	Description	Price
275/4	Sanitary membrane pressure gauge ø100/1,5	€416
275/4	ø100/2,0	€426
275/4	ø160/1,5	€467
275/4	ø160/2,0	€498
Surcharges type 275		
Glycerine filling ø100 mm		€25,00
Glycerine filling ø160 mm		€31,00
Calibration Certificate		€87,00



The sanitary stainless steel membrane pressure gauge, type 275/8, was developed to measure pressure in sanitary processes. Practical examples are the pharmaceutical industry, the dairy industry, the food and drink industry and similar applications.

The pressure gauge is delivered with a clamp-on coupling in accordance with ISO 2852 as standard. A membrane is professionally placed in the coupling.

The pressure gauge can be liquid-filled, which makes it extremely suitable for applications with continuous pressure fluctuations, such as pump, CIP and similar installations

The stainless steel pressure gauge 275/8 is available with different ISO 2852 couplings and connection forms (9 hour, for example).

Different neck lengths are available for higher medium temperatures.

# 275/8

## Technical Specifications

<b>Type:</b> 275/3	<b>Measuring ranges:</b> Vacuum: -1 to 0 bar
<b>Casing diameter:</b> 100 - 160 mm	<b>Compound:</b> -1 to 0.6/1.5/3/5/9 bar
<b>Housing:</b> Stainless steel 304	<b>Pressure:</b> 0 to
<b>Dimensions:</b> In accordance with EN 837	0.6/1.0/1.6/2.5/4/6/10/ 16/25 bar. Pressure ranges depend on the connections
<b>Sealing:</b> Bayonet catch stainless steel 304, rubber ring on broad sealing rim	<b>Optional</b> <b>Construction form:</b> 3 and 9 hours, rear connection or capillary connection
<b>Window:</b> Unbreakable macrolon	<b>Liquid filling:</b> Glycerine (only possible without contacts), isolating oil for contact models
<b>Measuring element:</b> Membrane stainless steel 316	<b>Contacts:</b> See page “electric contact arrange- ments”
<b>Connections:</b> 1.5 or 2 clamp on, in accordance with ISO 2852, of stainless steel	<b>Tag number:</b> On pointer, on stain- less steel plate
<b>Construction form:</b> Connection underneath (6 hour)	<b>Pointer:</b> Pointer and maximum indicator with zero adjustment
<b>Dial:</b> White aluminium, pressure scale in black in accordance with EN 837	<b>Window:</b> Safety glass with imprint safety glass
<b>Pointer:</b> Black aluminium	<b>Connection:</b> On request
<b>Transm. mechan.:</b> Brass with nickel silver, a durable combination	<b>Measuring range:</b> Other dimensions than “bar”
<b>Accuracy:</b> Class 1,0	<b>Logo:</b> On dial
<b>Environm.temp.:</b> -20 to 60°C	
<b>Mediumtemp.:</b> 0 to 40°C	

Product name	Description	Price
275/8	ø100 mm	€424
275/8	ø160 mm	€470
Surcharges type 275		
Glycerine filling ø100 mm		€25,00
Glycerine filling ø160 mm		€31,00
Calibration Certificate		€87,00



The stainless steel sanitary pressure gauge, type 275/10, was developed to measure pressure in sanitary processes. It is intended for use in the dairy industry, food, drink and pharmaceutical and other similar industries.

The pressure gauge comes with a coupling in accordance with SMS 1145 as standard.

The strict requirements for hygienic applications were fully taken into account in the development of this pressure gauge. The tip and swivel, for example, are made of stainless steel 316.

The pressure gauge can be liquid-filled making it particularly suitable for applications with continuous pressure fluctuations such as are found in pumping, CIP and other similar applications.

If signals are required VDH Products can deliver a wide range of electric contacts (PLC contacts, for example) as extras

# 275/10

## Technical Specifications

<b>Type:</b> 275/10	<b>Accuracy:</b> Class 1,0
<b>Casing diameter:</b> 100 - 160 mm (250 mm on request)	<b>Environm.temp.:</b> -20 to 60°C
<b>Housing:</b> Stainless steel 304	<b>Mediumtemp.:</b> 0 to 40°C
<b>Dimensions:</b> In accordance with EN 837	<b>Measuring ranges:</b> Vacuum: -1 to 0 bar
<b>Sealing:</b> Bayonet catch stainless steel 304, rubber ring on broad sealing rim	<b>Compound:</b> -1 to 0.6/1.5/3/5/9 bar
<b>Window:</b> Unbreakable macrolon	<b>Pressure:</b> 0 to 0.6/1.0/1.6/2.5/4/6/10/16/25 bar. Pressure ranges are dependent on the connections
<b>Measuring element:</b> Membrane of stainless steel 316	<b>Optional</b>
<b>Connections:</b> 1,1.5,2.0 or 2.5 coupling in accordance with SMS 1145, swivel and tip made of stainless steel 316	<b>Construction form:</b> 3 and 9 hours, rear connection or capillary connection
<b>Construction form:</b> Connection underneath	<b>Liquid filling:</b> Glycerine (only possible without contacts), isolating oil for contact models
<b>Dial:</b> White aluminium, pressure scale in black in accordance with EN 837	<b>Contacts:</b> See page “electric contact arrangements”
<b>Pointer:</b> Black aluminium	<b>Tag number:</b> On pointer, on stainless steel plate
<b>Transm. mechan.:</b> Brass with nickel silver	<b>Pointer:</b> Pointer and maximum indicator with zero adjustment
	<b>Window:</b> Safety glass
	<b>Connection:</b> On request

Product name	Description	Price
275/10	ø100 mm	On request
275/10	ø160 mm	On request
Surcharges type 275		
Glycerine filling ø100 mm		€25,00
Glycerine filling ø160 mm		€31,00
Calibration Certificate		€87,00



# 375 and 375/1

## Technical Specifications

The pressure gauge types 375 and 375/1 are differential pressure gauges based on the Bourdon tube measuring system. Both pressures (+ and -) have their own Bourdon tube. The difference in result between both measuring systems is the differential pressure, which is indicated by one pointer.

For a good calibration a ratio of maximum 1:5 of the static pressure should be observed.

On request the pressure gauges can be provided with a relatively high overload capacity, depending on the differential pressure range.

The pressure gauges 375 and 375/1 can be liquid-filled, making them suitable for continual pressure fluctuations.

These pressure gauges are delivered with stainless steel 316 measuring elements and 1/2BSP thread connections as standard. Model 375 has a connection underneath and 375/1 has a rear connection.

In addition to the extensive standard range other models are available at the client's request.

<b>Type:</b> 375 and 373/1	<b>Accuracy:</b> Class 1,6
<b>Casing diameter:</b> 63 - 100 - 160 mm	<b>Environm.temp.:</b> -20 to 60°C
<b>Housing:</b> Stainless steel 304	<b>Mediumtemp.:</b> 0 to 70°C
<b>Dimensions:</b> In accordance with EN 837	<b>Measuring:</b> Ratio 1:5 between ranges (static) differential pressure and static pressure, max.
<b>Sealing:</b> Bayonet catch stainless steel 304, rubber ring on broad sealing rim	<b>Static pressure:</b> 100 bar
<b>Window:</b> Unbreakable macrolon	<b>Optional</b>
<b>Measuring element:</b> Stainless steel 316, argon arc homogenously welded, spring is thermally and mechanically aged	<b>Liquid filling:</b> Glycerine (only possible without contacts), isolating oil for contact models
<b>Connection:</b> 63 mm: 1/4 BSP, stainless steel 316 375: connection underneath 375/1: connection at rear	<b>Contacts:</b> See page "electric contact arrange- ments"
<b>Max. ratio:</b> 1:5 with regard to the static ratio	<b>Mounting flanges:</b> Front and back flange, flush mount kit
<b>Dial:</b> White aluminium, pressure scale in black in accordance with EN 837	<b>Tag number:</b> On pointer, on stain- less steel plate
<b>Pointer:</b> Black aluminium	<b>Pointer:</b> Pointer and maximum indicator with zero adjustment
<b>Transm. mechan.:</b> Brass with nickel silver, a durable combination	<b>Window:</b> Safety glass with imprint safety glass
	<b>Connection:</b> Special thread connec- tion on request
	<b>Measuring range:</b> Other dimensions than "bar"
	<b>Logo:</b> On dial

Product name	Description	Price
375	ø63 mm	€374
375	ø100 mm	€497
375	ø160 mm	€609
375/1	ø63 mm	€374
375/1	ø100 mm	€497
375/1	ø160 mm	€609





The pressure gauge type 375/3 is a differential pressure gauge based on the Bourdon tube measuring system. Both pressures (+ and -) have their own Bourdon tube. Each Bourdon tube (pressure) has its own pointer. The difference between both pointers is the differential pressure. The + side has a red pointer and the - side a black. The advantage of this is that you can read the pressure of both the + and the - sides.

The pressure gauge 375/3 can be liquid-filled, making it suitable for continual pressure fluctuations.

This differential pressure gauge is available in two models. Type 375/3S has a stainless steel Bourdon tube measuring element and a ½BSP stainless steel connection. In type 375/3B the measuring element is of phosphor bronze and the connection is ½BSP brass.

# 375/3

## Technical Specifications

<b>Type:</b> 375/3	<b>Accuracy:</b> Class 1,0
<b>Casing diameter:</b> 100 - 160 mm	<b>Environm.temp.:</b> -20 to 60°C
<b>Housing:</b> Stainless steel 304	<b>Mediumtemp.:</b> 0 to 70°C
<b>Dimensions:</b> In accordance with EN 837	<b>Measuring ranges:</b> All pressures from 0.6 up to and including (static) 100 bar
<b>Sealing:</b> Bayonet catch stainless steel 304, rubber ring on broad sealing rim	<b>Optional</b> <b>Liquid filling:</b> Glycerine (only possible without contacts), isolating oil for contact models
<b>Window:</b> Unbreakable macrolon	<b>Contacts:</b> See page “electric contact arrange- ments”
<b>Measuring element:</b> 375/3S stainless steel 316, argon arc homogenously welded, spring is thermally and mechanically aged. 375/3B phosphor bronze soldered with tin/ silver, alloy is thermally and mechanically aged	<b>Transm. mechan.:</b> Stainless steel 304
<b>Connection:</b> 375/3S: 1/2 BSP, stainless steel 316. 375/3B: 1/2 BSP, brass	<b>Mounting flanges:</b> Front and rear flange, flush mount kit
<b>Dial:</b> White aluminium, pressure scale in black in accordance with EN 837	<b>Tag number:</b> On pointer, on stain- less steel plate
<b>Pointer:</b> Black aluminium	<b>Pointer:</b> Pointer and maximum indicator with zero adjustment
<b>Transm. turning.:</b> Brass with nickel silver mechanism parts, a durable combination	<b>Window:</b> Safety glass with imprint safety glass
	<b>Connection:</b> Special thread connec- tion on request
	<b>Measuring range:</b> Other dimensions than "bar"
	<b>Logo:</b> On dial

Product name	Description	Price
375/3	2 pointers, stainless steel measuring system ø100 mm	€307
375/3	ø160 mm	€401
375/3	2 hands, brass measuring system ø100 mm	€199
375/3	ø160 mm	€307

Product name	Description	Price
Surcharges type 375		
Front flange	ø100 mm	€16,00
Front flange	ø160 mm	€23,00
Back flange	ø100 mm	€16,00
Back flange	ø160 mm	€23,00
Built-in set		€16,00

# Humidity

→ [Hygrostats](#)

→ [Humidity sensors](#)



# Alfanet 29

## Technical Specifications

The Alfa 29 is a compact hygrostat for wall mounting or panel mounting. The clear display indicates the actual humidity and the status of the humidifying and dehumidifying.

The range from the Alfa 29 is 0/+100 %RH with a read-out per percent.



All settings can be done by internal parameters.

The Alfanet 29 has a network connection for read-out and data logging on the Alfanet PC software. The Alfa 29 does not have this network connection.

The Alfa 29 is supplied directly with 230Vac. Other supply voltages are possible on request.

Humidity sensors from the LC 95, RH 95 or RH 980 series can be connected.

<b>Type:</b>	<b>Supply:</b>
Alfa 29	24 Vac/dc
<b>Housing:</b>	<b>Function:</b>
Black ABS plastic	Humidify or dehumidify
<b>Dimensions:</b>	<b>Operations:</b>
144 x 67 x 50 mm (hwd)	By push buttons on the front
<b>Connection:</b>	<b>Input:</b>
By means of swivels on screw terminals	0/+1 Vdc for sensors from the RH range
<b>Front:</b>	<b>Relay:</b>
Polyester IP-54	SPDT contact
<b>Range:</b>	250V/16A (C-NO), 8A (C-NC) (non inductive)
0/+100% RH, read-out per 1% RH	<b>Accuracy:</b>
	± 0.5% of the range

Article number	Product name	Sensors	Control functions	Price
			 	
904.010204	Alfa 29 24Vac/dc 0/100%RH	1	• •	€167,00
Surcharges				
904.000057	Stainless steel wall plate			€14,00
904.000076	Mounting brackets			€6,00



# Alfanet 39

## Technical Specifications

The Alfa 39 is a compact hygrostat for panel mounting.  
The clear display indicates the actual humidity and the status of the humidifying and dehumidifying.

The range from the Alfa 39 is 0/+100 %RH with a read-out per percent.



All settings can be done by internal parameters.

The Alfanet 39 has a network connection for read-out and data logging on the Alfanet PC software. The Alfa 39 does not have this network connection.

The Alfa 39 is supplied directly with 230Vac. Other supply voltages are possible on request.

Humidity sensors from the LC 95, RH 95 or RH 980 series can be connected. The humidity sensors need to be supplied by an external supply.

<b>Type:</b>	<b>Supply:</b>
Alfa 39	12 Vac, 50/60 Hz
<b>Housing:</b>	(-10%/+5%)
Black ABS plastic	<b>Function:</b>
<b>Dimensions:</b>	Humidify or dehumidify
35 x 77 x 71,5 mm (hwd)	<b>Operations:</b>
<b>Connection:</b>	By push buttons on the front
Screw terminals on the side	<b>Input:</b>
<b>Front:</b>	0/+1 Vdc for sensors from the RH range
Polyester IP-54	<b>Relay:</b>
<b>Range:</b>	SPDT contact
0/+100% RH, read-out per 1% RH	250V/16A (C-NO), 8A (C-NC) (non inductive)
	<b>Accuracy:</b>
	± 0.5% of the range

Article number	Product name	Sensors	Control functions	Price
			 	
904.010065	Alfa 39 0/100%RH	1	• •	€137,00



# Alfanet 59

## Technical Specifications

The Alfa 59 is a compact three stage hygrostat for rail mounting with a neutral zone.



The Alfa 59 has a default program with the function humidify/dehumidify and a minimum/ maximum alarm. The thermostat can also be programmed with the function: two stage humidify increase or two stage dehumidify.

The Alfa 59 has a range of 0/+100% RH with a read-out per 1% RH. Humidity sensors from the LC 95, RH 95 or RH 980 series can be connected.

All settings can be done by the push buttons on the front. The internal settings like differential and sensor offset are sufficiently protected, so that they can't be changed by accident.

The Alfa 59 is supplied with 230 Vac. A clear user manual is enclosed.

<b>Type:</b>	<b>Function:</b>
Alfa 59	Humidify/dehumidify
<b>Housing:</b>	or 3x humidify/3x
Grey ABS plastic	dehumidify (internal
<b>Dimensions:</b>	programmable)
71 x 90 x 58 mm (wlh)	Minimum/maximum
<b>Connection:</b>	alarm
Screw terminals on	<b>Operations:</b>
the side	By push buttons on
<b>Front:</b>	the front
Polyester	<b>Input:</b>
<b>Range:</b>	0/+1 Vdc for sensors
0/+100% RH, read-out	from the RH range
per 1% RH	<b>Relay:</b>
<b>Supply:</b>	Dehumidify SPST
230 Vac, 50/60 Hz	contact 250V/5A (NO)
(-10%/+5%)	Humidify SPST contact
	250V/5A (NO)
	Alarm SPDT contact
	250V/5A (NO/NC) (all
	relays one common,
	non inductive)
	<b>Accuracy:</b>
	± 0.5% of the range

Article number	Product name	Sensors	Control functions	Alarm relay	Price
			 		
904.000548	Alfanet 59	1	• •	•	€258,00



# Alfanet 79

## Technical Specifications

The Alfa 79 is a compact three stage hygostat for panel mounting with a neutral zone.

The Alfa 79 has a default program with the function humidify/ dehumidify and a minimum/ maximum alarm. The thermostat can also be programmed with the function: two stage humidify increase or two stage dehumidify.

The Alfa 79 has a range of 0/+100% RH with a read-out per 1% RH. Humidity sensors from the LC 95, RH 95 or RH 980 series can be connected.

All settings can be done by the push buttons on the front. The internal settings like differential and sensor offset are sufficiently protected, so that they can't be changed by accident.

The Alfa 79 is supplied with 12 Vac. A separate transformer can be supplied. A clear user manual is enclosed.

<b>Type:</b>	<b>Function:</b>
Alfa 79	Humidify/dehumidify
<b>Housing:</b>	or 3x humidify/3x
Black ABS plastic	dehumidify (internal
<b>Dimensions:</b>	programmable)
35 x 77 x 71,5 mm	Minimum/maximum
(hwd)	alarm
<b>Connection:</b>	<b>Operations:</b>
Screw terminals on	By push buttons on
the side	the front
<b>Front:</b>	<b>Input:</b>
Polyester IP-54	0/+1 Vdc for sensors
<b>Range:</b>	from the RH range
0/+100% RH, read-out	<b>Relay:</b>
per 1% RH	Dehumidify SPST
<b>Supply:</b>	contact 250V/5A (NO)
12 Vac, 50/60 Hz	Humidify SPST contact
(-10%/+5%)	250V/5A (NO)
	Alarm SPDT contact
	250V/5A (NO/NC) (all
	relays one common,
	non inductive)
	<b>Accuracy:</b>
	± 0.5% of the range

Article number	Product name	Sensors	Control functions	0-10V	Alarm relay	Price
			☺ ☹			
904.000731	Alfanet 79 PI	1	• •	1	•	€214,00
904.010246	Alfanet 79	1	• •		•	€214,00



# LC 95/3

## Technical Specifications

The LC 95 is a electronic relative humidity sensor mounted in a universal plastic housing with a fixed connection cable of 4 metres in length. Perforations in the housing ensure sufficient air flow. The working range of the sensor is between 15 and 95% RH at temperatures between 0/+50°C. The electronic components are protected by a special lacquer to prevent damage by moisture.

<b>Type:</b> LC 95/3	<b>Sensor element:</b> Capacitive humidity sensor
<b>Housing:</b> Grey plastic housing with vent holes	<b>Output:</b> 0/+1 Vdc (0/+100% RH), Rb min 1 MΩ
<b>Dimensions:</b> 50 x 42 x 38 mm (hwd) mounting holes Y 4 mm, at 60 mm	<b>Range:</b> 15-95% RH at 0/+50°C
<b>Connection:</b> Via 4 meter fixed cable, 3x 0,25 mm <sup>2</sup>	<b>Accuracy:</b> 30 - 80% RH ± 3% 20 - 90% RH ± 5%
<b>Supply:</b> 10-24 Vdc (0/+10%)	<b>Temp. coefficient:</b> ± 0,5% /°C
	<b>Store temp.:</b> -25/+85°C

### Article number

### Product name

### Price

910.050189	LC 95-3/2M 10/24Vdc, 0/1Vdc	€131,00
910.050180	LC 95-3/4M 10/24Vdc, 0/1Vdc	€131,00





# RH 95

## Technical Specifications

The RH 95-2 is an electronic relative humidity sensor for many applications in the cooling and climate control industry.

The sensor is mounted in a stainless steel housing with a grommet for the cable input on the bottom as well as the back side. The housing is perforated to ensure sufficient air flow for ventilation.

The operational range of the sensor is between 15 and 95% RH at temperatures between 0/+60°C. The sensor is equipped with temperature compensation. The RH sensor is also available with a built in temperature sensor as the RH 95T-2.

The electronic components are protected with a special varnish to prevent damage by moisture.

<b>Type:</b>	<b>Temp. sensor:</b>
RH 95	2-wire Pt-100
<b>Housing:</b>	according to DIN
Stainless steel	43760
housing 35 x Y 80 mm,	<b>Output:</b>
mounting flange Y	0/+1 Vdc (0/+100%
110 mm	RH), Rb min 1 MΩ
<b>Connection:</b>	<b>Accuracy:</b>
Via grommet on side	30 - 80% RH ± 3%
or back	20 - 90% RH ± 5%
<b>Supply:</b>	<b>Temp. coefficient:</b>
10-24 Vdc (0/+10%)	± 0,5% /°C for the RH
<b>Range:</b>	95 and RH 95/T
10-95% RH at 0/+60°C	<b>RH 95T:</b>
	RH sensor with Pt-100
	<b>RH 95T-2 PTC:</b>
	RH sensor with PTC-1K

Article number	Product name	Price
910.050067	RH 95-2 10/24Vdc 0/+1Vdc UIT	€232,00
910.050044	RH 95/T-2 PT1000	€265,00
910.050068	RH 95/T-2 PT100	€265,00
910.050103	RH 95/T-2 PTC (PTC-ELEMENT)	€265,00



The RH 980 is a modern electronic relative humidity sensor for different applications in cooling and climate technology. With the use of an advanced sensor it can be used up to 100% rh (not condensing).

The sensor has a watertight housing (IP-54) of a modern industrial design. Cable input is on the topside by means of cable glands.

The sensor works in areas between 0 and 100%rh (not condensing) at temperatures between -20/+60°C.

The RH 980 sensor can also be supplied with a built-in Pt-100 temperature sensor (model number RH 980/T).

The sensor can be supplied for different supply voltages. The RH 980 is available with different current and voltage outputs for the RH and temperature signals.

In case of failure the sensor element can be replaced in a very easy way without disassembling the complete sensor.

# RH 980

## Technical Specifications

<b>Type:</b>	<b>Output:</b>
RH 980	0-1 Vdc, 0-5 Vdc, 0-10 Vdc (Rb min. 10k Ohm)
<b>Housing:</b>	0-20 mA, 4-20 mA (Rb max 500 Ohm)
Black ABS plastic	
<b>Dimensions:</b>	<b>Accuracy:</b>
144 x 72 x 50 mm (hwd)	0 - 100% RH ± 5%
<b>Connection:</b>	20 - 90% RH ± 3%
By means of cable glands on screw terminals	<b>Temperature sensor</b>
<b>Front:</b>	<b>Sensor:</b>
Polycarbonate IP-54	3-Wire Pt-100
<b>Supply:</b>	<b>Range:</b>
230 Vac, 50/60 Hz (-10/+5%)	-20/+60°C
115 Vac, 50/60 Hz (-10/+5%)	<b>Output:</b>
48 Vac, 50/60 Hz (-10/+5%)	0-1 Vdc, 0-5 Vdc, 0-10 Vdc (Rb min. 10k Ohm)
24 Vac, 50/60 Hz (-10/+5%)	Pt-100 direct (3-wire system)
15-35 Vdc	<b>Accuracy:</b>
<b>Max. power:</b>	± 5% of the range
3VA humidity sensor	<b>Model variations:</b>
<b>Range:</b>	<b>RH 980:</b>
0-100% RH at -20/+60°C (Not condensing)	RH sensor for wall mounting
	<b>RH 980/T:</b>
	RH sensor for wall mounting with temperature sensor

Article number	Product name	Price
910.050161	RH 980 12/35Vdc 0/1Vdc	€540,00
910.050163	RH 980 15/35Vdc 4/20mA	€540,00
910.050167	RH 980 230Vac 0/1Vdc	€540,00
910.050169	RH 980 230Vac 0/10Vdc	€540,00
910.050170	RH 980 15/35Vdc 0/10Vdc	€540,00
910.050173	RH 980 230Vac 4/20mA	€540,00
910.050188	RH 980 HDPE 0/1Vdc	€928,00
910.050153	RH 980T 230Vac 2x4/20mA	€585,00
910.050155	RH 980T 15/35Vdc 2x4/20mA	€585,00
910.050162	RH 980T 12/35Vdc 0/1Vdc, Pt100	€585,00
910.050164	RH 980T 12/35Vdc 2x0/1Vdc	€585,00
910.050166	RH 980T 12/35Vdc 0/1Vdc Pt1000	€585,00
910.050174	RH 980T 230Vac 0/1Vdc, Pt100	€585,00
910.050176	RH 980T HDPE 0/1Vdc Pt100	€952,00
910.050181	RH 980T 12/35Vdc 2x0/10Vdc	€585,00
910.050172	RH 980TK 15/35Vdc 0-10V Pt100	€585,00
910.050179	RH 980TK 15/35V 2x4/20mA	€585,00
910.050168	RH 980K 15/35Vdc 4/20mA L=100	€540,00
910.050171	RH 980K 12/35Vdc 0/1Vdc L=100	€540,00
910.050182	RH 980K 15/35Vdc 0/10Vdc L=100	€540,00
910.050183	RH 980K 230Vac 0/+10Vdc L=100	€540,00

# Combinations

- Climate controller
- Compressor condensor controller
- Expansion valves controller
- Spray booth controller



# Klima 500 Topline

## Technical Specifications

The Klima 500 is a combination of a thermostat (Alfa 21 DP) and a hygrostat (Alfa 29) complete in one aluminum housing with plastic side panels.

The housing is suitable for wall mount (mounting bracket included).

The SM 811 temperature sensor and LC 95, RH 95 and RH 980 series humidity sensors can be connected to the Klima 500.

The temperature section contains a 1-stage thermostat with the function cooling or heating.

The humidity section contains 1-stage hygrostat with the function dehumidifying or humidifying.

<b>Type:</b> Klima 500 Topline	<b>1.2 thermostat section (left side):</b>
<b>Housing:</b> Aluminium housing with plastic side panels	<b>Range:</b> -10,0/+90,0°C read out per 0,1°C
<b>Mounting:</b> Wall mount	<b>Temp. sensor:</b> SM811 2-wired, temperature sensor (1K PTC) 1K@25°C
<b>Dimensions:</b> 244 x 185 x 74 mm (whd)	<b>Relay:</b> 1xSPDT relais Max. 250Vac/10A (cos phi = 1)
<b>Front:</b> Polycarbonate	<b>Function:</b> Cooling or heating (Parm. 15)
<b>Supply:</b> 230 Vac 50/60 Hz (Max. 5VA)	<b>1.3 Hygrostat section (right side):</b>
<b>Switch 0/1:</b> On/off switch (if present) with light indication.	<b>Range:</b> 0/+100% RH read out per 1% RH
<b>Communication:</b> RS485 (only with ALFA-NET) (2x Twisted-pair cable: A,B,Gnd, +12Vdc)	<b>Humidity sensor:</b> RH 95/2 3-wired, humidity sensor (1:0V,2:0-1V=0-100%RH, 3+12Vdc)
<b>Working temp:</b> -20/+50°C	<b>Relay:</b> 1xSPDT relay Max. 250Vac/10A (cos phi = 1)
<b>Store temp.:</b> -20/+60°C	<b>Function:</b> Dehumidifying or humidifying (Parm. 15)
<b>Working RH:</b> 10/90% RH non condensing	

Article number	Product name	Sensors	Control functions	Price
905.000097	Klima 500 Topline	1	<div>• • • •</div> <div>❄️ 🌊 🔊 💧</div>	€703,00



# MC3-SC

## Technical Specifications

<b>Type:</b>	<b>Supply:</b>
MC3-SC	12-15 Vdc (2A max)
<b>Housing:</b>	<b>Range:</b>
Monting plate with anodized aluminium housing	-1/+50 bar
<b>Dimensions:</b>	<b>Inputs:</b>
308 x 191 x 100 mm	5x Pt 1000 tem. sensor
<b>Front:</b>	2x analogue input
Anodized aluminium	16x digital input
<b>Connections:</b>	<b>Outputs:</b>
Connectors on pcb inside enclosure.	8x analogue output
	24x relays output
	(12 for MC3-SC2)
	RS485 output
	<b>Network:</b>
	1x ethernet for pc

The MC3-SC controller is based on the new MC3 hardware platform. The MC3-SC is a stepcontroller for controlling a maximum 8 compressors and 8 condensing fans, on base of the measured suction and discharge pressure and the adjusted setpoints.

There are two standard types available: The MC3-SC and the MC3-SC2 (for smaller installations). The choice between both types can be made by the required amount of in- and outputs.

The MC3-SC will be mounted on a DIN rail in a switch panel, from where all stages and variables of the cooling installation will be controlled.

Versatility and extensive control options are the unique points of the new MC3-SC. Of course this stepcontroller also has the well know reliability of the VDH controllers. The control comfort of the new MC3-SC is familiar and approved. This stepcontroller has a flexible interface which makes installation easy.

Configuring of the available in- and outputs is done by it's own web page and a short parameter list.

The MC3-SC is developed with the experience of many years in the cooling industry. Like all VDH control equipment this new stepcontrol is tested extensive with the TÜV certificate as result

The MC3-SC is developed in coöperation with compressor manufactures and end users. Because of this the controller is suitable for many different compressor types, including screw compressors with capacity slider.

For increasing or decreasing from capacity can be done by:

Suction control:

- On/off control
- With or without valve lifting (multi stage compressor)
- Frequently controlled or stepless controlled capacity slider

Discharge control:

- On/off control
- Frequently controlled (EC fans)

The MC3-SC2DC is special developed for a very efficient control of a monoflow installation just to reach an optimal efficiency.

The MC3-SC offers the following possibilities for controlling and adjusting the user parameters:

- External via VASP software for Windows
- Locally via a touchscreen control panel

Touchscreen control panel

Via a 7" touch screen control panel the pressure values of the suction and discharge sensors can be read out very easily.

Besides that the screen also shows actual status of the connected compressors and the condensing fans. Via a hidden menu the language and parameters settings can be changed. An error or alarm message is shown and can be confirmed if the error or alarm is solved.

The control panel can be mounted in the door of the switch panel and is connected to the MC3-SC with a network cable.

Article number	Product name	Price
907.100002	MC3-SC Step Control-3	On request
907.100007	MC3-SC Step Control-2	On request
907.100013	MC3-SC Step Control-2 DC	On request
907.100020	MC3-SC Step Control-3	On request
907.100022	MC3-SC Step Control-3 DC	On request
907.100036	MC3-SC Step Control-3 DC	On request
907.100049	MC3-SC Step Control-3 VC, Ammoniac (NH3) pump	On request
907.100057	MC3-SC Step Control-3 VC, Cascade 2-stage Propane/CO2	On request
907.100071	MC3-SC touchscreen 7"	On request



# Alfanet 88

## Technical Specifications

The ALFANET 88 is a control to operate electronic expansion valves.

Emission takes place by means of a modulating pulse/pause control or a 0/10 Vdc P(1) signal. Valves of various makes and types can be used for this.

Measured pressure, calculated temperature, measured temperature, temperature difference or emission percentage can be read in the display. The mode key enables you to select the readout you want to view.

This controller is also available with a solid state output.

<b>Type:</b>	ALFANET 88	<b>Sensors:</b>	SM 811 temperature-sensor PX 77/3 pressure sensor
<b>Housing:</b>	Grey plastic	<b>Communication:</b>	ALFANET RS485-Network
<b>Dimensions:</b>	106 x 90 x 58 mm (whd)	<b>Work temp.:</b>	-20 / +50°C
<b>Supply:</b>	12Vac/dc (Max. 45 mA)	<b>Store temp.:</b>	-20 / +60°C
<b>Range:</b>	-40,0 / +50,0°C per 0,1°C -1,0/+50,0 Bar per 0.1 Bar	<b>Air humidity:</b>	10 / 90% RH not condensing
		<b>Accuracy:</b>	± 0.5% of range

Article number	Product name	Price
904.000963	Alfanet 88 EVR SSR -40/+50°C	€478,00
904.000966	Alfanet 88 PID SSR -40/+50°C	€478,00





The Spraytronic II is a complete control for a spray booth and consists of a combination of a control panel (Spraytronic II BP) for wall mounting and a main circuit board (Spraytronic II HP) for DIN-rail mounting, connected by a 4-wire connecting cable. The Spraytronic II main board has inputs for two Pt1000 temperature sensors, a spray air detector and three digital inputs for external on/off, fire detection and emergency stop. Various LMS input and output modules can be connected to the main board for additional functionality. The following LMS

modules are available:

- LMS 4x Analogue out 0-10Vdc
- LMS 6x Digital in
- LMS 7x Relay

The control panel is equipped with two readout displays, where, among other things, the temperature, setpoints, times and alarms can be read. Various push buttons and status LEDs provide clear operating status indication and easy operation. During production, the adjustable parameters are provided with standard settings. These settings are programmed by the the installer in a programming mode to adapt the Spraytronic II to local conditions. adapted to the local conditions. A clear manual is supplied.

# Spraytronic

## Technical Specifications

<b>Type:</b>	<b>Supply:</b>
Spraytronic II	230 Vac, 50/60 Hz
<b>Housing:</b>	(-10/+5%)
Sheet steel painted silver gray	<b>Inputs:</b>
<b>Dimentions:</b>	2x Pt-100 3-conductor according to DIN/IEC 751
217 x 155 x 85 mm (brackets), panel cutout 208 x 146 mm (-0/+1mm)	Spray air detector
<b>Connections:</b>	Potential free input contact for External On/Off
On the back of plug-in bar screw terminals	Potential free input contact for after-cooling thermostat
<b>Front:</b>	<b>Relais:</b>
Polycarbonate with printing, IP-44	SPST relay contact
<b>Control:</b>	burner on/off
Via push buttons on the front	SPST relay contact supply fan
<b>Display:</b>	tor
4-digit temp. display	SPST relay contact exhaust fan
4-digit setpoint display	(these relays 250V/10A not inductive, with common)
4-digit dry time display	SPDT relay contact
4-digit operating hours display IP-44	burner high
LEDs for relay and input status	<b>Range:</b>
	low (250V/10A not inductive)
	0/+150°C, readout per 0.5°C
	analogue from 0/+10 Vdc (Rb min 10 KOhm)

Article number	Product name	Description	Price
909.000002	DS10 IRS SENSOR 3/8"BSPDS10		€202,00
904.010009	Alfa 1-IRS	Spray detector for rail mounting	€167,00
904.010081	Alfa 3-IRS	Spray detector for panel mounting	€154,00
901.000461	Spraytronic II control panel		€735,00
901.000460	LMS controle module Spraytronic II		€249,00
901.000214	LMS analoge output		€208,00
901.000451	LMS 6x Digital in I2C Module		€105,00
901.000443	LMS 7x Relais I2C-BUS		€219,00

Article number	Product name	Description	Price
904.000699	Alfa 72 SP/DR	-50+150°C	€189,00
904.010195	Alfanet 72 SP/DR	PI	€219,00
903.000776	MC 885 SDHL	-50/300°C 24Vac	€444,00
903.000777	MC 885 SDHL	-50/300°C 100-260V	€444,00

# Other

→ **Timers**

→ **Interfaces**

→ **Extension modules**

→ **Power supplies**



# Alfa 800 serie

## Technical Specifications

The Alfabet 800 series consists of various timers for panel mount.

The timer has a range from 0-999 seconds, minutes or hours.

Through the digital input contact the timer can be influenced external. Per example the timer can be started or stopped by closing the digital input.

The Alfa 800 series is supplied directly with 230Vac. Other supply voltages are available on request.

<b>Type:</b>	<b>Supply:</b>
ALfa 800	230 Vac 50/60 Hz
<b>Housing:</b>	(-10/+5%)
Black ABS plastic	<b>Function:</b>
<b>Dimensions:</b>	Timer functions
35 x 77 x 71,5 mm (whd)	<b>Settings:</b>
<b>Front:</b>	By three program keys
Polyester	<b>Outputs:</b>
<b>Connections:</b>	SPDT relay contact
Screw terminals	250V/16A (C-NO), 8A (C-NC) not inductive
	<b>Input:</b>
	Digital input

Article number	Product name	Description	Price
904.010047	Alfanet 801	Pulse/pause controller	€136,00
904.010048	Alfanet 802	Expiration timer	€136,00
904.010044	Alfanet 803	Delayed rising timer	€136,00
904.010059	Alfanet 804	ADS timer	€136,00



# MC3-IP Interface

## Technical Specifications

The MC3 IP-Interface is developed as an intelligent portal between the VASP system or Alfabet and the company network. The interface converts all data from the connected controllers to the VASP or Alfabet monitoring software.

The interface offers you the possibility to send an e-mail message in case an error occurs on one of the controllers in the network. The e-mail will be sent to all e-mail addresses which the customer has programmed into the interface.

The e-mail shows the notification which is generated by the connected controller.

The log data will be stored on a SD card and will be available for a long period of time.

Be aware that controllers which have their own memory should be connected to the pc on a regular base to avoid loss of data.

The pc program for read out the controllers is only available for computers with Microsoft Windows®.

The versions Windows 7, 8 and 10 are supported.

<b>Type:</b>	<b>Store temp.:</b>
MC3 IP Interface	-20 / +60°C
<b>Housing:</b>	<b>Humidity:</b>
Plastic wall mounting house	10 / +90% RH not condensing inputs and outputs
<b>Material:</b>	<b>Communication:</b>
ABS	RS 485 (9600 Baud)
<b>Dimensions:</b>	for the ALFANET (2x Twisted- pair shielded)
213 x 185 x 94 mm (whd)	Ethernet (10/100Mb) for communication to the network PC
<b>Connections:</b>	Software
Screw terminals	<b>PC Software:</b>
<b>Front:</b>	Minimaal V3.0.0 of hoger
Polycarbonate	<b>PC Software:</b>
<b>Supply:</b>	At least V3.0.0 Or higher
100-240 Vac; 50/60 Hz	
<b>Power cons.:</b>	
5 VA	
<b>Operation temp.:</b>	
-20 / +50°C	

Article number	Product name	Price
907.100006	MC3-IP Interface, Din-rail mounting	€721,00
907.100024	MC3-IP Interface, Wall mounting	€777,00



# MC3-EM module

## MC3-EM module

Certain MC2 and MC3 controllers can be equipped with an extension module (DIN mounting)

For example, a controller can be equipped with extra temperature sensor inputs or relay contacts.

For further information about the use of these extension modules, please contact the sales department of VDH Products BV.

Article number	Product name	Price
907.100032	MC3-EM [1Do12]	On request
907.100040	MC3-EM [1Di8Do6,1Di16]	On request
907.100044	MC3-EM [1Ao16]	Op aanvraag
907.100054	MC3-EM [1Do12, 1Rth16]	On request
907.100060	MC3-EM [1Di8Do6]	On request
907.100061	MC3-EM [4Di2+4Ui2+8Ulout]	On request
907.100062	MC3-EM [16xRth2]	On request
907.100064	MC3-EM [1Dio, 1U2+2I3+4Rth+8o]	On request
907.100070	MC3-EM [6Do8Di,3Ii2Ui7Rth]	On request



# LMS modules

## Technical Specifications

<b>Type:</b>	<b>Dimensions:</b>
LMS TRIAC 0-10V IN	71 x 90 x 58 mm (whd)
<b>Housing:</b>	
Grey plastic	

Article number	Product name	Price
901.000214	LMS analoge output	€208,00
901.000236	LMS D230-6 module	€121,00
901.000245	LMS triac module	€165,00
901.000272	LMS PT100 module	€323,00
901.000309	LMS 8x digital-in Alfabet	€347,00
901.000315	LMS RH/PT-100 module	€323,00
901.000399	LMS triac 0/10V in	€196,00
901.000416	LMS Module 6x0/20mA RS485	€256,00
901.000421	LMS Module 4x10K 2x0-10V	€256,00
901.000443	LMS 7x Relais I2C-BUS	€219,00
901.000446	LMS 4x 0/+10Vdc output Module	€221,00
901.000451	LMS 6x Digital in I2C Module	€105,00
901.000454	LMS PT-100 module	€323,00
901.000463	LMS MAT module 22,5mm	€210,00
901.000466	LMS RS485 Modbus Interf.2(8N2)	€282,00
901.000471	LMS 7X Relais-785-SC Module	€219,00
901.000477	LMS 4x Relais Module	€128,00
901.000478	LMS 7x Relais RS485 Module	€219,00
904.000947	LMS RS485 ModBus Interf.1(8N1)	€282,00
904.000965	LMS RS485 ModBus Interf.1(8E1)	€282,00



# Power supplies

There are several VDH controllers which require power supplies, such as a 12v or 24v power supply.  
 Below is a small selection from our range of power supplies we can supply.  
 If the desired power supply is not listed, please contact VDH Products.

Article number	Product name	Price
599.000040	Power supply Meanwell MDR 20-24	€39,00
599.000032	Power supply Meanwell MDR 20-12	€39,00
599.000060	Power supply Meanwell DR 15-24	€26,00
599.000092	Power supply Meanwell HDR 15-12	€26,00



# APPENDIX

# APPENDIX 1 Return form

## 1. Your data

Company name:

Contact person:

Address:

PC + Place:

Phone number:

E-mail:

Reference:

## 2. Article Retour

Article code	Quantity	Description

## 3. Reason of return (tick as applicable)

	Defect, transport damage
	Defect, guarantee request
	Calibration
	New, wrongly ordered customer
	New, wrongly delivered VDH
	Repair: Description:

Complete the form as completely as possible, save the file and mail it to [support@vdhproducts.com](mailto:support@vdhproducts.com)

# APPENDIX 1 Return form

## Shipment:

Please enclose a copy of this form with your return on the outside of the package.

If the article does not meet the return conditions, VDH Products BV can refuse the return shipment. In that case, the return shipment will be returned. Return shipments must always take place in consultation with the Service & Support department of VDH Products BV.

Pack the return items in an outer box to prevent damage during transport.

Problems with the shipment at or by the company that takes care of the shipment to us are at the risk of the customer. Always keep your shipping receipt!

For questions you can contact our service & support department via e-mail [support@vdhproducts.com](mailto:support@vdhproducts.com)

Return shipments must be sent carriage paid to:

VDH Products BV  
Return Department  
Produktieweg 1  
9301 ZS RODEN  
The Netherlands

# APPENDIX 2 General conditions



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GENERAL CONDITIONS

for the

SUPPLY OF MECHANICAL, ELECTRICAL AND ELECTRONIC PRODUCTS

Brussels, March 2012

## PREAMBLE

1. These General Conditions shall apply when the parties agree In Writing or otherwise thereto. Any modifications of or deviations from them must be agreed In Writing.

## DEFINITIONS

2. In these General Conditions the following terms shall have the meanings hereunder assigned to them:

- "Contract": the agreement In Writing between the parties concerning supply of the Product and all appendices, including agreed amendments and additions In Writing to the said documents;
- "Gross Negligence": an act or omission implying either a failure to pay due regard to serious consequences, which a conscientious contracting party would normally foresee as likely to ensue, or a deliberate disregard of the consequences of such an act or omission;
- "In Writing": communication by document signed by both parties or by letter, fax, electronic mail and by such other means as are agreed by the parties;
- "the Product": the object(s) to be supplied under the Contract, including software and documentation.

## PRODUCT INFORMATION

3. All information and data contained in general product documentation and price lists shall be binding only to the extent that they are by reference In Writing expressly included in the Contract.

## DRAWINGS AND TECHNICAL INFORMATION

4. All drawings and technical documents relating to the Product or its manufacture submitted by one party to the other, prior or subsequent to the formation of the Contract, shall remain the property of the submitting party.

Drawings, technical documents or other technical information received by one party shall not, without the consent of the other party, be used for any other purpose than that for which they were provided. They may not, without the consent of the submitting party, otherwise be used or copied, reproduced, transmitted or communicated to a third party.

5. The Supplier shall, not later than at the date of delivery, provide free of charge information and drawings which are necessary to permit the Purchaser to install, commission, operate and maintain the Product. Such Information and drawings shall be supplied in the number of copies agreed upon or at least one copy of each. The Supplier shall not be obliged to provide manufacturing drawings for the Product or for spare parts.

## ACCEPTANCE TESTS

6. Acceptance tests provided for in the Contract shall, unless otherwise agreed, be carried out at the place of manufacture during normal working hours.

If the Contract does not specify the technical requirements, the tests shall be carried out in accordance with general practice in the appropriate branch of industry concerned in the country of manufacture.

7. The Supplier shall notify the Purchaser In Writing of the acceptance tests in sufficient time to permit the Purchaser to be represented at the tests. If the Purchaser is not represented, the test report shall be sent to the Purchaser and shall be accepted as accurate.

8. If the acceptance tests show the Product not to be in accordance with the Contract, the Supplier shall without delay remedy any deficiencies in order to ensure that the Product complies with the Contract. New tests shall then be carried out at the Purchaser's request, unless the deficiency was insignificant.

9. The Supplier shall bear all costs for acceptance tests carried out at the place of manufacture. The Purchaser shall, however, bear all travelling and living expenses for his representatives in connection with such tests.

#### **DELIVERY. PASSING OF RISK**

10. Any agreed trade term shall be construed in accordance with the INCOTERMS® in force at the formation of the contract. If no trade term has been specifically agreed, the delivery shall be Free Carrier (FCA) at the place named by the Supplier.

If, in the case of delivery Free Carrier, the Supplier, at the request of the Purchaser, undertakes to send the Product to its destination, the risk will pass not later than when the Product is handed over to the first carrier.

Partial delivery shall not be permitted, unless otherwise agreed.

#### **TIME FOR DELIVERY. DELAY**

11. If the parties, instead of specifying the date for delivery, have specified a period of time within which delivery shall take place, such period shall start to run as soon as the Contract is entered into and all agreed pre-conditions to be fulfilled by the Purchaser have been satisfied, such as official formalities, payments due at the formation of the Contract and securities.

12. If the Supplier anticipates that he will not be able to deliver the Product at the time for delivery, he shall forth with notify the Purchaser thereof In Writing, stating the reason and, if possible, the time when delivery can be expected.

If the Supplier fails to give such notice, the Purchaser shall be entitled to compensation for any additional casts which he incurs and which he could have avoided had he received such notice.

13. If delay in delivery is caused by any of the circumstances mentioned in Clause 41, by an act or omission on the part of the Purchaser, including suspension under Clauses 21 and 44, or any other circumstances attributable to the Purchaser, the Supplier shall be entitled to extend the time for delivery by a period which is necessary having regard to all the circumstances of the case. This provision shall apply regardless of whether the reason for the delay occurs before or after the agreed time for delivery.

14. If the Product is not delivered at the time for delivery the Purchaser shall be entitled to liquidated damages from the date on which delivery should have taken place. The liquidated damages shall be payable at a rate of 0.5 per cent of the purchase price for each commenced week of delay.

The liquidated damages shall not exceed 7.5 per cent of the purchase price. If only part of the Product is delayed, the liquidated damages shall be calculated on that part of the purchase price which is attributable to such pad of the Product as cannot in consequence of the delay be used as intended by the parties. The liquidated damages shall become due at the Purchaser's demand In Writing but not before delivery has been completed or the Contract is terminated under Clause 15. The Purchaser shall forfeit his right to liquidated damages if he has not lodged a claim In Writing for such damages within six months after the time when delivery should have taken place.

15. If the delay in delivery is such that the Purchaser is entitled to maximum liquidated damages under Clause 14 and if the Product is still not delivered, the Purchaser may In Writing demand delivery within a final reasonable period which shall not be less than one week. If the Supplier does not deliver within such final period and this is not due to any circumstances which are attributable to the Purchaser, then the Purchaser may by notice In Writing to the Supplier terminate the Contract in respect of such part of the Product as cannot in consequence of the Supplier's failure to deliver be used as intended by the parties. If the Purchaser terminates the Contract he shall be entitled to compensation for the loss he suffers as a result of the Supplier's delay, including any consequential and indirect loss. The total compensation, including the liquidated damages which are payable under Clause 14, shall not exceed 15 per cent of that part of the purchase price which is attributable to the pad of the Product in respect of which the Contract is terminated. The Purchaser shall also have the right to terminate the Contract by notice In Writing to the Supplier if it is clear from the circumstances that there will occur a delay in delivery which, under Clause 14, would entitle the Purchaser to maximum liquidated damages. In case of termination for this reason, the Purchaser shall be entitled to maximum liquidated damages and compensation under the third paragraph of this Clause 15.

16. Liquidated damages under Clause 14 and termination of the Contract with limited compensation under Clause 15 shall be the only remedies available to the Purchaser in case of delay on the part of the Supplier. All ether claims against the Supplier based on such delay shall be excluded, except where the Supplier has been guilty of Gross Negligence.

17. If the Purchaser anticipates that he will be unable to accept delivery of the Product at the time for delivery, he shall forthwith notify the Supplier In Writing thereof, stating the reason and, if possible, the time when he will be able to accept delivery. If the Purchaser fails to accept delivery at the time for delivery, he shall nevertheless pay any part of the purchase price which becomes due at the time for delivery, as if delivery had taken place at the time for delivery. The Supplier shall arrange for storage of the Product at the risk and expense of the Purchaser. The Supplier shall also, if the Purchaser so requires, insure the Product at the Purchaser's expense.

18. Unless the Purchaser's failure to accept delivery is due to any such circumstance as mentioned in Clause 41, the Supplier may by notice In Writing require the Purchaser to accept delivery within a final reasonable period.

If, for any reason which is not attributable to the Supplier, the Purchaser fails to accept delivery within such period, the Supplier may by notice In Writing terminate the Contract in whole or in part. The Supplier shall then be entitled to compensation for the loss he suffers by reason of the Purchaser's default, including any consequential and indirect loss. The compensation shall not exceed that part of the purchase price which is attributable to that part of the Product in respect of which the Contract is terminated.

## **PAYMENT**

19. Payment shall be made within 30 days after the date of invoice.

Unless otherwise agreed, the purchase price shall be paid with one third at the formation of the Contract and one third when the Supplier notifies the Purchaser that the Product, or the essential part of it, is ready for delivery. The remaining part of the purchase price shall be paid when the entire Product is delivered.

20. Whatever the means of payment used, payment shall not be deemed to have been effected before the Supplier's account has been irrevocably credited for the amount due.

21. If the Purchaser fails to pay by the stipulated date, the Supplier shall be entitled to interest from the day on which payment was due and to compensation for recovery costs. The rate of interest shall be as agreed between the parties or otherwise 8 percentage points above the rate of the main refinancing facility of the European Central Bank. The compensation for recovery costs shall be 1 per cent of the amount for which interest for late payment becomes due. In case of late payment and in case the Purchaser fails to give an agreed security by the stipulated date the Supplier may, after having notified the Purchaser In Writing, suspend his performance of the Contract until he receives payment or, where appropriate, until the Purchaser gives the agreed security.

If the Purchaser has not paid the amount due within three months the Supplier shall be entitled to terminate the Contract by notice In Writing to the Purchaser and, in addition to the interest and compensation for recovery costs according to this Clause, to claim compensation for the loss he incurs. Such compensation shall not exceed the agreed purchase price.

## **RETENTION OF TITLE**

22. The Product shall remain the property of the Supplier until paid for in full to the extent that such retention of title is valid under the relevant law. The Purchaser shall at the request of the Supplier assist him in taking any measures necessary to protect the Supplier's title to the Product. The retention of title shall not affect the passing of risk under Clause 10.

## **LIABILITY FOR DEFECTS**

23. Pursuant to the provisions of Clauses 24-39, the Supplier shall remedy any defect or nonconformity (hereinafter termed defect(s)) resulting from faulty design, materials or workmanship.

24. The Supplier shall not be liable for defects arising out of materials provided or a design stipulated or specified by the Purchaser.

25. The Supplier shall only be liable for defects which appear under the conditions of operation provided for in the Contract and under proper use of the Product.

26. The Supplier shall not be liable for defects caused by circumstances, which arise after the risk has passed to the Purchaser, e.g. defects due to faulty maintenance, incorrect installation or faulty repair by the Purchaser or to alterations carried out without the Supplier's consent In Writing. The Supplier shall neither be liable for normal wear and tear nor for deterioration.

27. The Supplier's liability shall be limited to defects which appear within a period of one year from delivery. If the use of the Product exceeds that which is agreed, this period shall be reduced proportionately.

28. When a defect in a part of the Product has been remedied, the Supplier shall be liable for defects in the repaired or replaced part under the same terms and conditions as those applicable to the original Product for a period of one year. For the remaining parts of the Product the period mentioned in Clause 27 shall be extended only by a period equal to the period during which and to the extent that the Product could not be used as a result of the defect.

29. The Purchaser shall without undue delay notify the Supplier In Writing of any defect which appears. Such notice shall under no circumstances be given later than two weeks after the expiry of the period given in Clause

27 or the extended period(s) under Clause 28, where applicable. The notice shall contain a description of the defect. If the Purchaser fails to notify the Supplier In Writing of a defect within the time limits set forth in the first paragraph of this Clause, he shall lose his right to have the defect remedied. Where the defect is such that it may cause damage, the Purchaser shall immediately inform the Supplier in Writing. The Purchaser shall bear the risk of damage to the Product resulting from his failure so to notify. The Purchaser shall take reasonable measures to minimize damage and shall in that respect comply with instructions of the Supplier.

30. On receipt of the notice under Clause 29 the Supplier shall at his own cost remedy the defect without undue delay, as stipulated in Clauses 23-39. The time for remedial work shall be chosen in order not to interfere unnecessarily with the Purchaser's activities. Repair shall be carried out at the place where the Product is located unless the Supplier deems it more appropriate that the Product is sent to him or a destination specified by him.

If the defect can be remedied by replacement or repair of a defective part and if dismantling and re-installation of the part do not require special knowledge, the Supplier may demand that the defective part is sent to him or a destination specified by him. In such case the Supplier shall have fulfilled his obligations in respect of the defect when he delivers a duly repaired pad or a part in replacement to the Purchaser.

31. The Purchaser shall at his own expense provide access to the Product and arrange for any intervention in equipment other than the Product, to the extent that this is necessary to remedy the defect.

32. Unless otherwise agreed, necessary transport of the Product or parts thereof to and from the Supplier in connection with the remedying of defects for which the Supplier is liable shall be at the risk and expense of the Supplier. The Purchaser shall follow the Supplier's instructions regarding such transport.

33. Unless otherwise agreed, the Purchaser shall bear any additional costs which the Supplier incurs for remedying the defect caused by the Product being located in a place other than the destination stated at the formation of the Contract for the Supplier's delivery to the Purchaser or - if no destination has been stated - the place of delivery.

34. Defective parts which have been replaced shall be made available to the Supplier and shall be his property.

35. If the Purchaser has given such notice as mentioned in Clause 29 and no defect is found for which the Supplier is liable, the Supplier shall be entitled to compensation for the costs he incurs as a result of the notice.

36. If the Supplier does not fulfill his obligations under Clause 30, the Purchaser may by notice In Writing fix a final reasonable period for completion of the Supplier's obligations, which shall not be less than one week.

If the Supplier fails to fulfill his obligations within such final period, the Purchaser may himself undertake or employ a third party to undertake necessary repair work at the risk and expense of the Supplier. Where successful repair work has been undertaken by the Purchaser or a third party, reimbursement by the Supplier of reasonable costs incurred by the Purchaser shall be in full settlement of the Supplier's liabilities for the said defect.

37. Where the Product has not been successfully repaired, as stipulated under Clause (36,a) the Purchaser shall be entitled to a reduction of the purchase price in proportion to the reduced value of the Product, provided that under no circumstances shall such reduction exceed 15 per cent of the purchase price, or b) where the defect is so substantial as to significantly deprive the Purchaser of the benefit of the Contract as regards the Product or a substantial part of it, the Purchaser may terminate the Contract by notice In Writing to the Supplier in respect of such part of the Product as cannot in consequence of the defect be used as intended by the parties. The Purchaser shall then be entitled to compensation for his loss, costs and damages up to a maximum of 15 percent of that part of the purchase price which is attributable to the part of the Product in respect of which the Contract is terminated.

38. Notwithstanding the provisions of Clauses 23-37 the Supplier shall not be liable for defects in any part of the Product for more than one year from the end of the liability period referred to in Clause 27 or from the end of any other liability period agreed upon by the parties.

39. Save as stipulated in Clauses 23-38, the Supplier shall not be liable for defects. This applies to any loss the defect may cause including loss of production, loss of profit and other indirect loss. This limitation of the Supplier's liability shall not apply if he has been guilty of Gross Negligence.

#### **ALLOCATION OF LIABILITY FOR DAMAGE CAUSED BY THE PRODUCT**

40. The Supplier shall not be liable for any damage to property caused by the Product after it has been delivered and whilst it is in the possession of the Purchaser. Nor shall the Supplier be liable for any damage to products manufactured by the Purchaser or to products of which the Purchaser's products form a part.

If the Supplier incurs liability towards any third party for such damage to property as described in the preceding paragraph, the Purchaser shall indemnify, defend and hold the Supplier harmless.

If a claim for damage as described in this Clause is lodged by a third party against one of the parties, the latter party shall forthwith inform the other party thereof In Writing. The Supplier and the Purchaser shall be mutually obliged to let themselves be summoned to the court or arbitral tribunal examining claims for damages lodged against one of them on the basis of damage allegedly caused by the Product. The liability between the Supplier and the Purchaser shall however be settled in accordance with Clause 46. The limitation of the Supplier's liability in the first paragraph of this Clause shall not apply where the Supplier has been guilty of Gross Negligence.

**FORCE MAJEURE**

41. Either party shall be entitled to suspend performance of his obligations under the Contract to the extent that such performance is impeded or made unreasonably onerous by Force Majeure, meaning any of the following circumstances: industrial disputes and any other circumstance beyond the control of the parties such as fire, war, extensive military mobilization, insurrection, requisition, seizure, embargo, restrictions in the use of power, currency and export restrictions, epidemics, natural disasters, extreme natural events, terrorist acts and defects or delays in deliveries by sub-contractors caused by any such circumstance referred to in this Clause. A circumstance referred to in this Clause whether occurring prior to or after the formation of the Contract shall give a right to suspension only if its effect on the performance of the Contract could not be foreseen at the time of the formation of the Contract.

42. The party claiming to be affected by Force Majeure shall notify the other party In Writing without delay on the intervention and on the cessation of such circumstance. If a party fails to give such notice, the other party shall be entitled to compensation for any additional costs which he incurs and which he could have avoided had he received such notice. If Force Majeure prevents the Purchaser from fulfilling his obligations, he shall compensate the Supplier for expenses incurred in securing and protecting the Product.

43. Regardless of what might otherwise follow from these General Conditions, either party shall be entitled to terminate the Contract by notice In Writing to the other party if performance of the Contract is suspended under Clause 41 for more than six months.

**ANTICIPATED NON-PERFORMANCE**

44. Notwithstanding other provisions in these General Conditions regarding suspension, each party shall be entitled to suspend the performance of his obligations under the Contract, where it is clear from the circumstances that the other party is not going to perform his obligations. A party suspending his performance of the Contract shall forthwith notify the other party thereof In Writing.

**CONSEQUENTIAL LOSSES**

45. Save as otherwise stated in these General Conditions there shall be no liability for either party towards the other party for loss of production, loss of profit, loss of use, loss of contracts or for any other consequential or indirect loss whatsoever.

**DISPUTES AND APPLICABLE LAW**

46. All disputes arising out of or in connection with the Contract shall be finally settled under the Rules of Arbitration of the International Chamber of Commerce by one or more arbitrators appointed in accordance with the said Rules.

47. The Contract shall be governed by the substantive law of the Supplier's country.

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