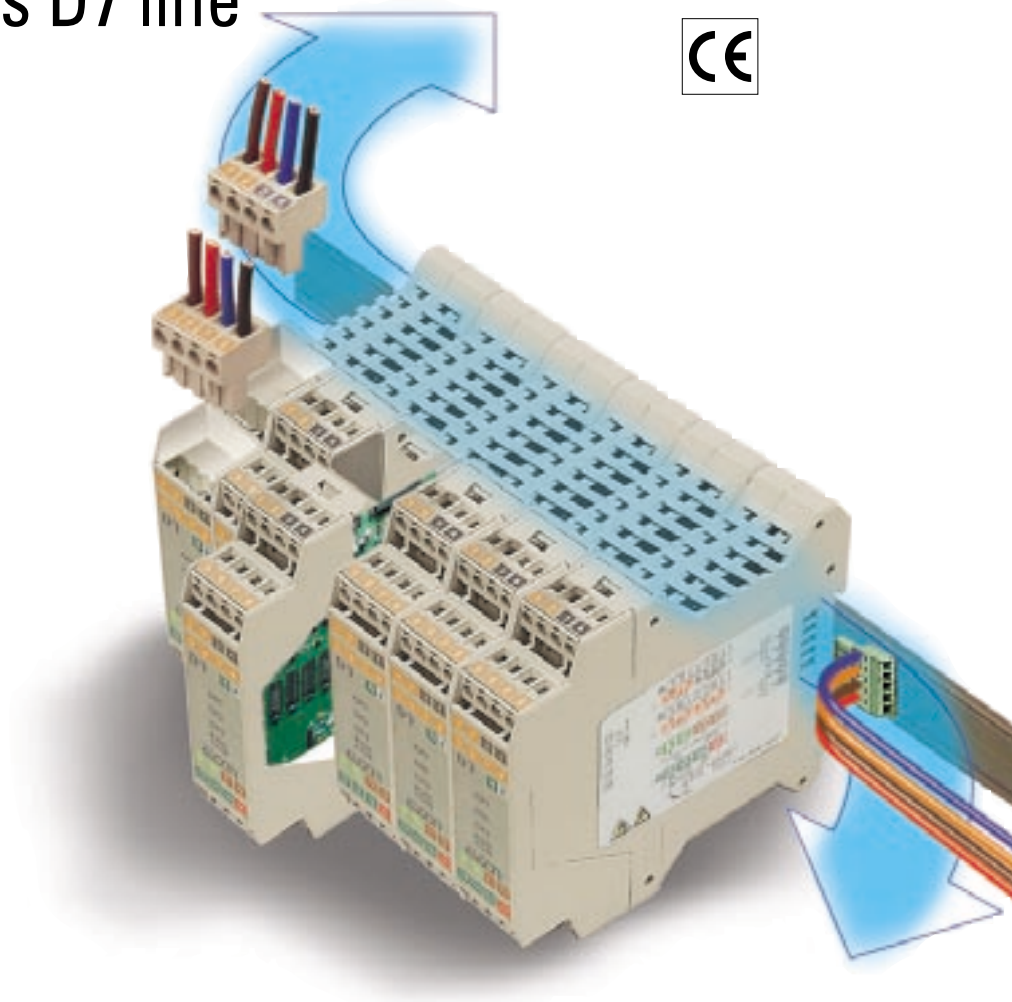
S E R I E S

DIN rail mounting data acquisition, isolation, trasmitter module deltadue® series D7 line



Much more than a transmitter

The deltadue® series include a powerful DIN rail mounting data acquistition module also capable to operate as a trasmitter, threshold and isolation unit.
The D7 line can satisfy a wide range of applications requiring local control integrated with PC and PLC systems.
The features of the line include:

- Common bus for power supply and serial communications
- Totally withdrawable
- Easy replacement without switching off the power supply,
- Digital imput to activate the measure hold function
- Input/output/isolation
- Three thresholds available on the serial communications two of them can be addressed to the two relay outputs
- Full integration with the deltadue® series data acquisition and control modules
- Easy and simplified installation and maintenance

E

ISO 9001 Certified

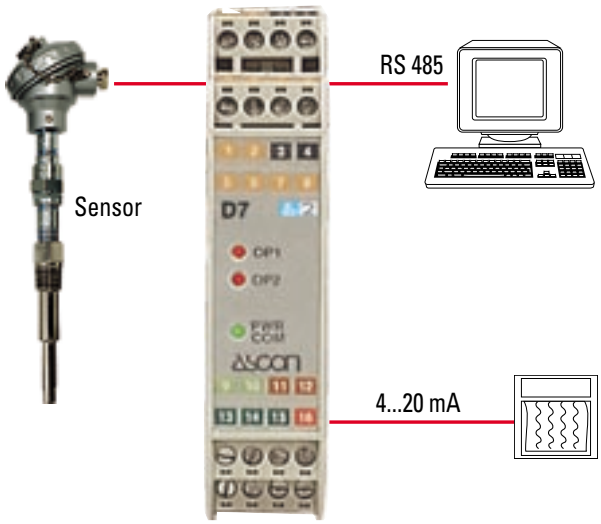
Advantages and peculiarities

Keeping costs low

- Modular construction and compact dimensions
- Quick mounting on DIN rail
- Possibility of prewiring
- Common bus for power supply and serial communications

High integration

- Mounting on the machine or real panel
- Remote/centralised control
- RS485/CanBus
- Communications interface



Can be used as a simple digital **interface**, if provided with the optional 0/4...20 mA output can be used as a **transmitter** or as an **isolator** of analogic signals.

Universal input ...

Can be connected to any type of sensor (including infrared) or to 0/4...20mA or 50 mV linear signals, also with custom linearization. Moreover it is provided with an auxiliary power supply for external transmitter and digital input for the measure hold.

...an isolated output ...

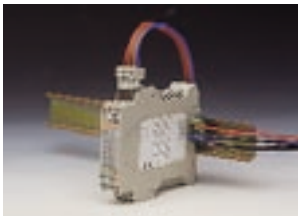
The 0/4...20 mA output is galvanically isolated: 500V~/min, the resolution is 12 bit with a 0.1% accuracy

...and alarm thresholds

The 2 optional relay outputs can be used as alarm thresholds with latching, blocking, and sensor break functions.

Wiring error reduction

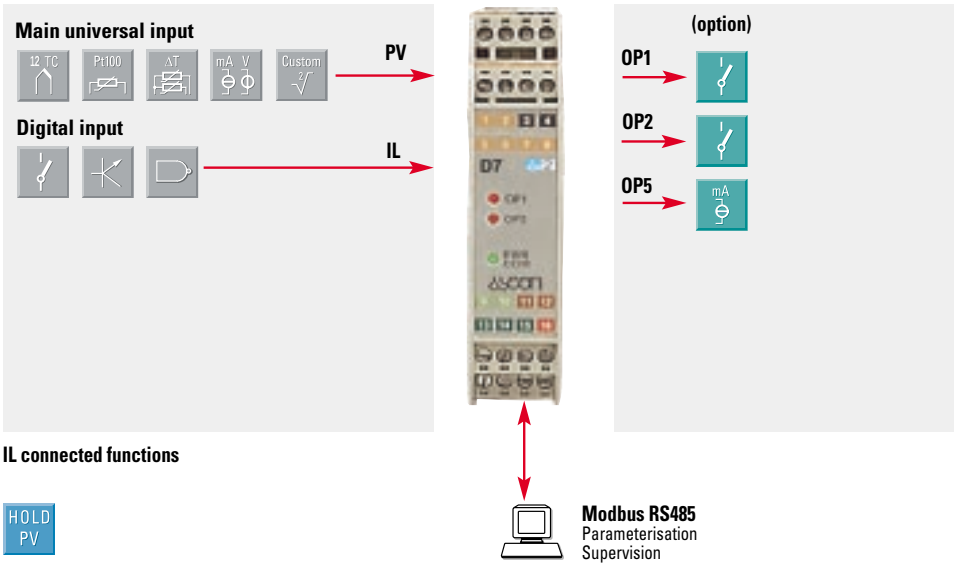
- Polarised plugs
- Coloured Terminal identification



Easy maintenance

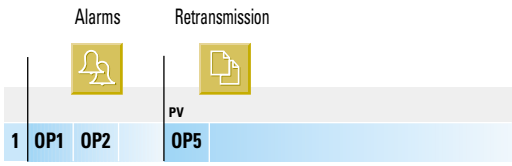
- Withdrawable
- Easy replacement without switching off the power supply

Resources



IL connected functions

Outputs (option)



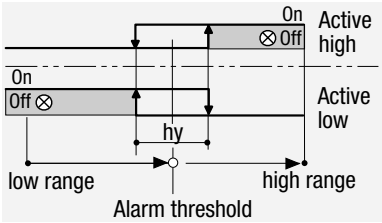
Technical data

Features at env. 25°C	Description			
Total configurability	By means of the configuration tool it is possible to select: - type of input - type of output - functionality of the alarms			
PV input	Common characteristics	A/D converter with resolution of 50.000 points Update measurement time: 0.2 sec Sampling time: 0.5 sec Input bias: - 60…+ 60 digit Input filter: 1…30 sec. OFF = 0		
	Accuracy	0.25% ± 1 digit (for temperature sensor) 0.1% ± 1 digit (for mA e mV)		Between 100…240V~ the error is minimal
	Resistance thermometer (for ΔT: R1+R2 must be <320Ω)	Pt100Ω at 0°C (IEC 751) °C/°F selectable	2 or 3 wires connection Burnout (with any combination)	Line: 20Ω max (3 wire) Input drift: 0.35°C/10°C Env. Temp. <0.35°C/10Ω Wire Res.
	Thermocouple	L,J,T,K,S,R,B,N,E W3,W5 (IEC 584) °C/°F selectable	Internal cold junction compensation with NTC Error 1°C/20°C ±0,5°C ± 0.5°C Burnout	Line 150Ω max. Input drift: <2µV/1°C Env. Temp. <5µV/10Ω Wire Res.
	DC input (current)	0/4…20mA, 2.5Ω ext. shunt Rj >10MΩ	Burnout. Engineering units, decimal point position configurable low range: -999…9999 high range: -999…9999 (min range of 100 digits)	Input drift: <0.1% / 20°C Env. Temp. <5µV/10Ω R. Wire Res.
	DC input (voltage)	10...50mV, 0-50mV Rj >10MΩ		
Digital input	The closure of external contact produces any of the following action:		measure hold	
Operating mode	Data acquisition, isolator, transmitter with 1, 2 o 3 alarms (the 3rd one only by serial comm.s)			
OP1-OP2 Outputs (Opt.)	SPST Relay N.O., 2A/250V~ for resistive load Too meet the double isolation requirements OP1 and OP2 must have the same load voltage			
OP5 Analogue oputput (option)	PV retransmission	Galvanic isolation: 500V~ /1 min Resolution: 12 bit Accuracy: 0.1%		In current: 0/4…20mA, 750Ω /15V max
AL1- AL2 - AL3 alarms	Hysteresys	0.1…10.0%		
	Action	Active high Action low	Action Type	Absolute threshold, whole range
		Special functions	Sensor break Acknowledge (latching), activation inhibit (blocking)	
Serial Comm.s	RS485 isolated, Modbus/Jbus protocol, 1200, 2400, 4800, 9600 bit/sec, two wires			
Auxiliary Supply	+24V– ± 20% 30mA max - for external transmitter supply			
Operational Safety	Measure input	Detection of out of range short circuit or sensor break with automatic activation of the safety strategies		
	Parameters Outputs lock	Parameter and configuration data are stored in a non volatile memory for an unlimited time		
General characteristics	Power supply (PTC protected)	24V~ (-15% +25%) 50/60Hz and 24V-(dc voltage) (-15%+25%)		Power consumption 3W max
	Safety	EN61010-1 (IEC1010-1), installation class 2 (2500V), pollution class 2, **instrument class II**		
	Electromagnetic compatibility	Compliance to the CE standards		
	Protection	Terminal strip IP20		
	Dimensions	Pitch: 22.5 mm - deph: 114.5 mm with: 53		

Alarms

Three thresholds available on the serial communications, two of them can be addressed to the two relay outputs. Each alarm can be configured to be active high or low:

A - Function

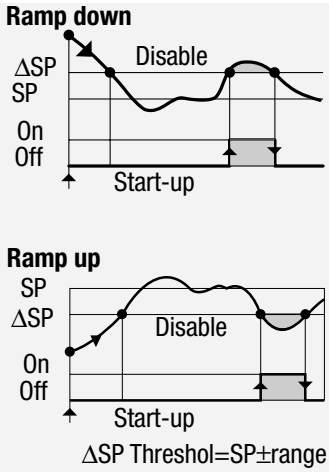


B - Functionality of the alarm acknowledge

Alarm acknowledge function

The alarm is memorized and available on the serial communications and/or on one of the output relays. By serial communications the alarm can be acknowledged. If the alarm disappears before the acknowledgment action the alarm status is maintained.

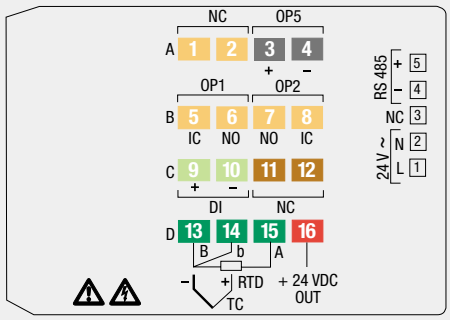
Start-up disabling



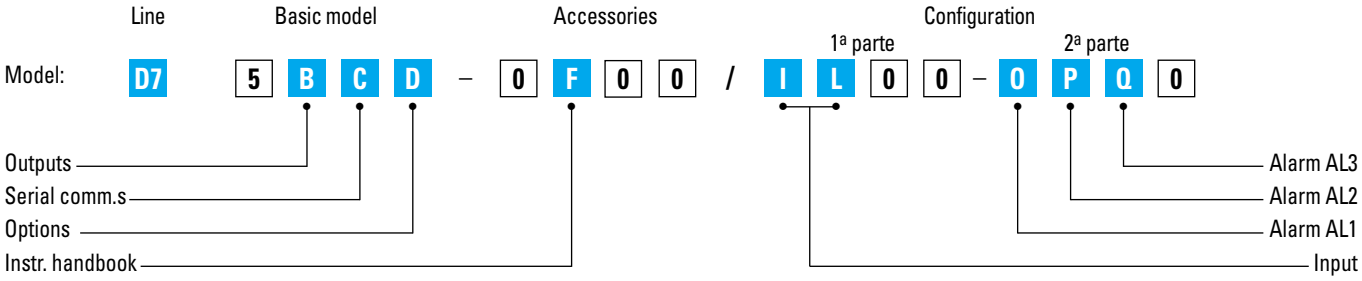
Digital input

The digital input is used to hold the measured value.

Electrical connections



Ordering codes



Outputs	OP1	OP2	B
	None		0
	Relay	Relay	1

Serial communications	C
CanBus	3
RS 485 Modbus/Jbus SLAVE	5

Options	D
None	0
OP5 Retransmission	5

Instruction handbook	F
Italian-English (std)	0
French-English	1
German-English	2
Spanish-English	3

If not differently specified the controller will be supplied with standard version
Model : D7 5050-0000

Inpt type	Range scale				I	L
TR Pt100 IEC751	-99.9…300.0	°C	-99.9…572.0	°F	0	0
TR Pt100 IEC751	-200…600	°C	-328…1112	°F	0	1
TC L Fe-Const DIN43710	0…600	°C	32…1112	°F	0	2
TC J Fe-Cu45% Ni IEC584	0…600	°C	32…1112	°F	0	3
TC T Cu-CuNi	-200 …400	°C	-328…752	°F	0	4
TC K Cromel -Alumel IEC584	0…1200	°C	32…2192	°F	0	5
TC S Pt10%Rh-Pt IEC584	0…1600	°C	32…2912	°F	0	6
TC R Pt13%Rh-Pt IEC584	0…1600	°C	32…2912	°F	0	7
TC B Pt30%Rh-Pt Pt6%Rh IEC584	0…1800	°C	32…3272	°F	0	8
TC N Nicrosil-Nisil IEC584	0…1200	°C	32…2192	°F	0	9
TC E Ni10%CR-CuNi IEC584	0…600	°C	32…1112	°F	1	0
TC NI-NiMo 18%	0…1100	°C	32…2012	°F	1	1
TC W3%Re-W25%Re	0…2000	°C	32…3632	°F	1	2
TC W5%Re-W26%Re	0…2000	°C	32…3632	°F	1	3
0…50mV linear	Engineering units				1	4
10…50mV linear	Engineering units				1	5
mV "Custom" scale	On request				1	6

AL1-AL2-AL3 type and function		O-P-Q
Disabled		0
Sensor break		1
Absolute	active high	2
	active low	3

Distributed by::