



Pressure



Temperature



Level



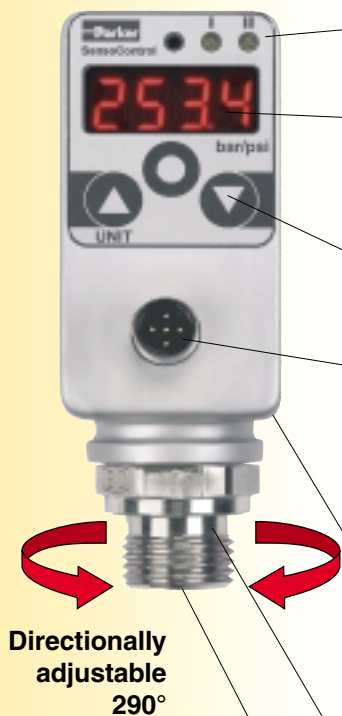
Level & Temperature



The Controller Family

PressureController SCPSD

With its compact integration of pressure switch, pressure sensor and display, the **PressureController** offers a perfect solution for monitoring and control of pressure in hydraulic and pneumatic systems, particularly series production.



Directionally adjustable
290°

Switch condition display

- ✓ Optical interface


Everything at a glance

- ✓ Angled display
- ✓ Large digital display
- ✓ PSI / bar / MPa

Easy to operate

- ✓ 3 large keys

Any connection you want

- ✓ 2 switch outputs
- ✓ Scalable analogue output
- ✓ 0..20 or 4..20mA
- ✓ M 12 plug
- ✓ DIN 43650 plug
- ✓ DESINA 

Robust

- ✓ Metallic housing
- ✓ Waterproof
- ✓ Highly interference resistant
- ✓ Vibration proof
- ✓ Shockproof

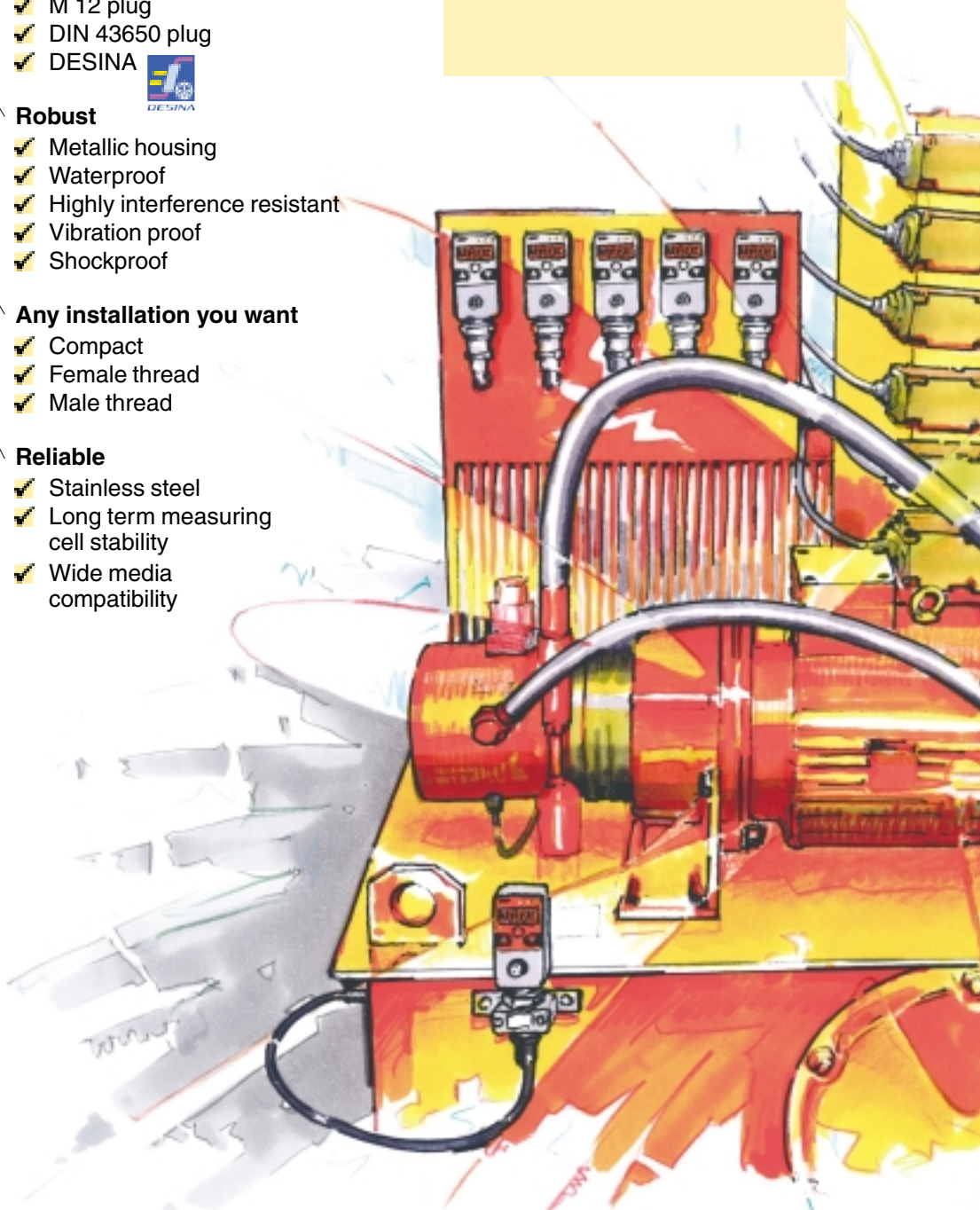
Any installation you want

- ✓ Compact
- ✓ Female thread
- ✓ Male thread

Reliable

- ✓ Stainless steel
- ✓ Long term measuring cell stability
- ✓ Wide media compatibility

- ✓ Various assembly choices
- ✓ Easy operation
- ✓ Rotatable
- ✓ Compact design
- ✓ Many versions
- ✓ High protection class
- ✓ Robust



LevelTempController SCLTSD

Now the **LevelTempController** makes it possible to set and display temperature and level separately on a common platform. It is in tank monitoring that the integration of level and temperature reveals its possibilities in such a unique way.

Twin-Concept

✓ 2 in 1

- ✓ One sensor
- ✓ One input bore
- ✓ Rotatable

Level

- ✓ Level display
- ✓ Settings menu-driven
- ✓ Switch output
- ✓ Analogue output

Temperature

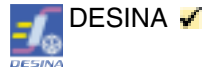
- ✓ Temperature display
- ✓ Settings menu-driven
- ✓ Switch output
- ✓ Analogue output

Everything in view

- Temperature ✓
- Level ✓

Any kind of connection

- M 12 plug ✓



Robust

- Metal housing ✓
- Waterproof ✓
- Highly interference resistant ✓
- Vibration proof ✓
- Shockproof ✓

Any kind of installation

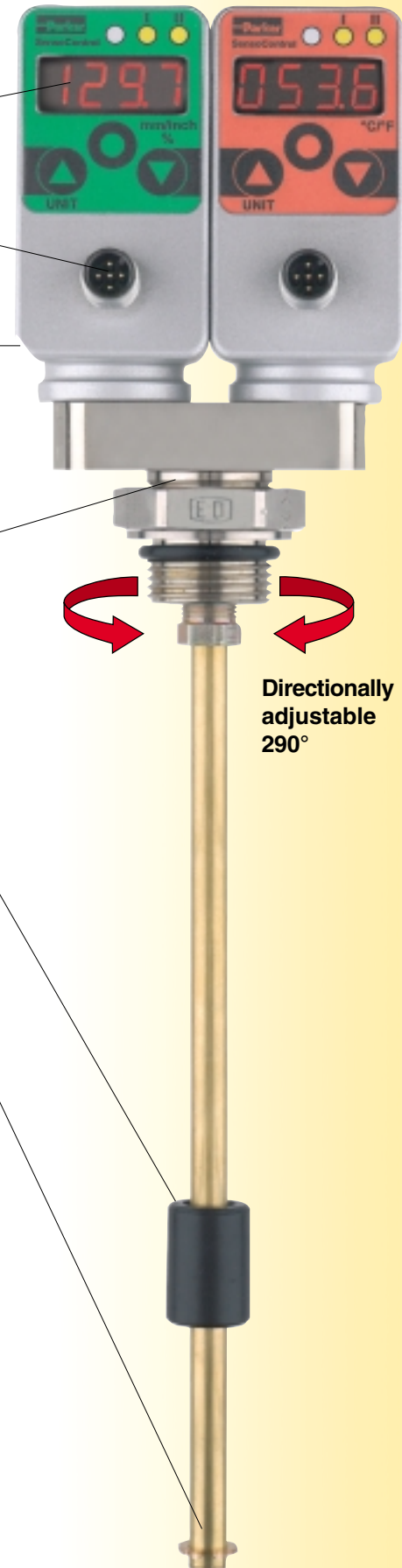
- One connection bore ✓
- Compact ✓
- Rotatable ✓
- G3/4" ✓
- Flange for DIN ✓

Level

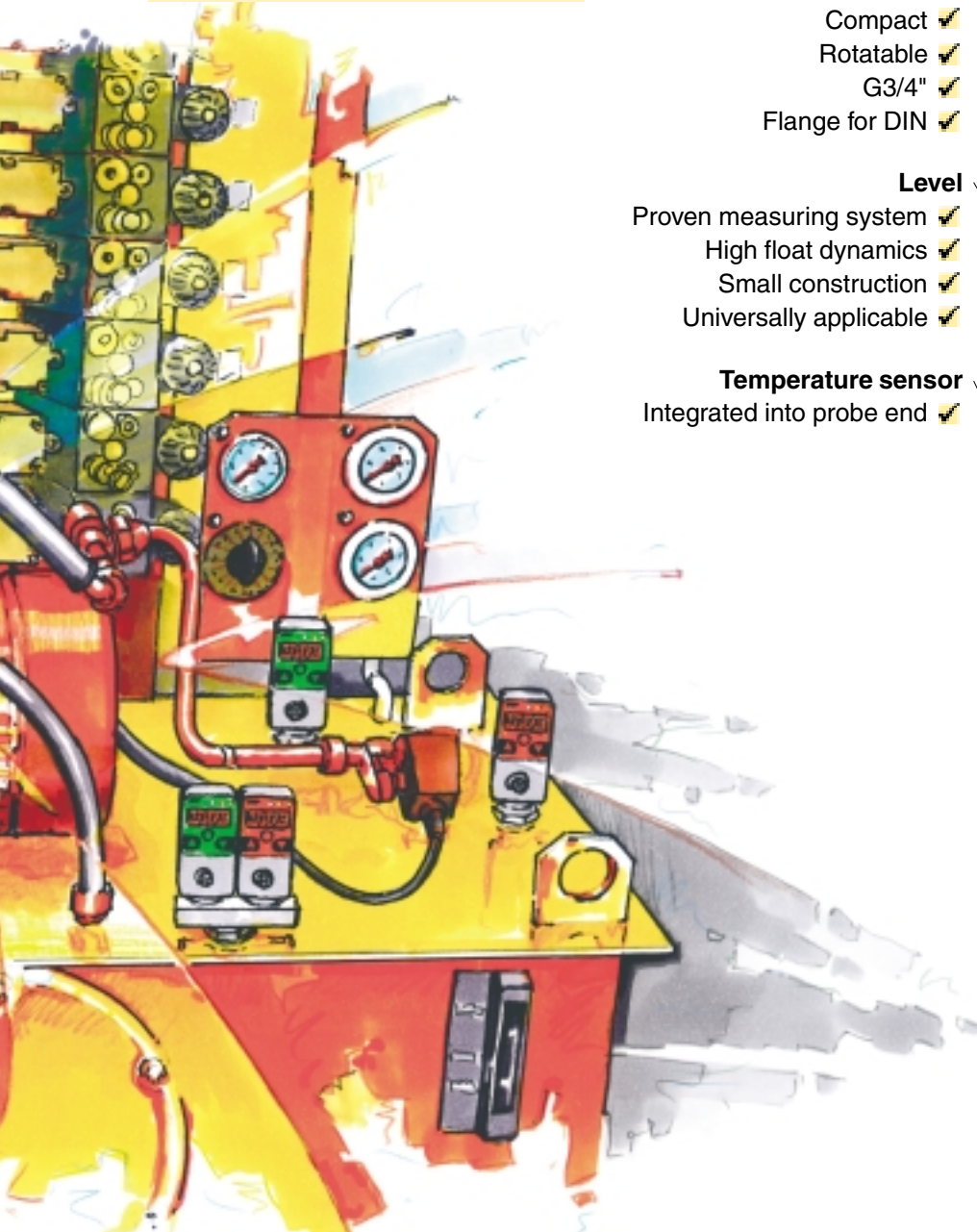
- Proven measuring system ✓
- High float dynamics ✓
- Small construction ✓
- Universally applicable ✓

Temperature sensor

- Integrated into probe end ✓

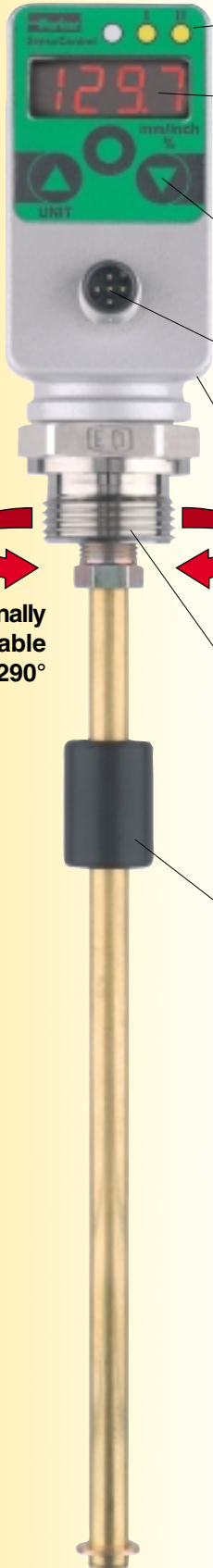


Directionally adjustable 290°



LevelController SCLSD

With its measuring system well-established in hydraulics, the **LevelController** offers the best solution for monitoring tank levels. With its menu-driven setting of the level switching point, a wide variety of applications can be comfortably accommodated. Percentage display can be dialled in so that levels are uniformly represented for the operator independently of the tank design.



Directionally adjustable
290°

PC-Programming

- ✓ Optical interface


Everything in view

- ✓ Angled display
- ✓ Large digit display
- ✓ mm / inch / %
- ✓ High & Low display
- ✓ Switch status display

Easy to operate

- ✓ 3 large buttons

Any kind of connection

- ✓ 2 switch outputs
- ✓ scaleable analogue output
- ✓ 0..20 or 4..20mA
- ✓ M 12 plug
- ✓ DESINA 

Robust

- ✓ Metal housing
- ✓ Waterproof
- ✓ Highly interference resistant
- ✓ Vibration proof
- ✓ Shockproof

Any kind of installation

- ✓ Compact
- ✓ Rotatable
- ✓ G3/4"
- ✓ Flange for DIN

Proven measuring system

- ✓ High float dynamics
- ✓ Small design
- ✓ Universally applicable

- ✓ Tried and tested float measuring system

- ✓ Rotatable

- ✓ Level display in mm/inch %

- ✓ High & Low display

- ✓ Analogue output

- ✓ Switch outputs

TemperatureController SCTSD

The great strengths of the **TemperatureController's** performance are especially apparent in tank monitoring:

- exact temperature monitoring
- easily adjustable limiting values (e.g. alarm / cooling)
- any way of mounting

The adjustable temperature level sensor can be connected by means of a cable or direct. So the **Controller** can be installed anywhere and the temperature will always be easy to see, even in demanding installation conditions.

- ✓ Always easy to see
- ✓ Easy setting
- ✓ Rotatable
- ✓ Robust

Temperature sensor

- ✓ Level adjustable
- ✓ Broad media toleration
- ✓ Immersion tube

Installation choices

- ✓ Direct on sensor separately on control panel
- ✓ Rigid connection to Controller by cable to Controller

Switch condition display

Optical interface ✓

Everything at a glance

Angled display ✓
Large-figure temperature display ✓
C°/ °F ✓

Easy to operate

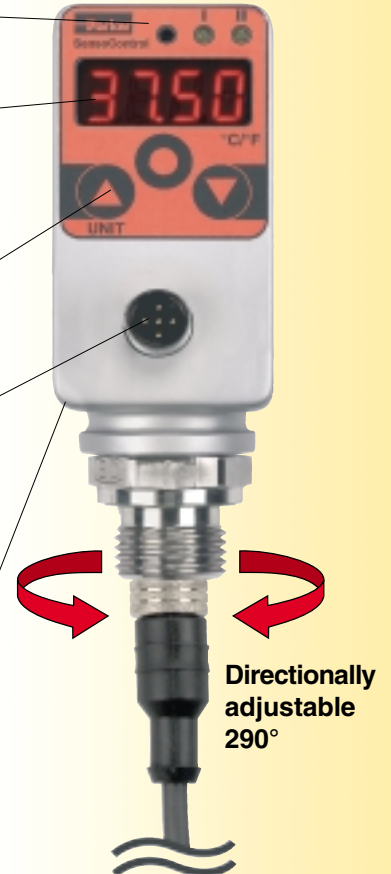
3 large keys ✓

Any connection you want

2 switch outputs ✓
4 limiting values ✓
Analogue temperature signal ✓
0..20 or 4..20mA ✓
M 12 plug ✓
DIN 43650 plug ✓
DESINA ✓

Robust

Metallic housing ✓
Waterproof ✓
Highly interference resistant ✓
Vibration proof ✓
Shockproof ✓



Directionally adjustable 290°

Any kind of installation you want

- ✓ Compact
- ✓ Male thread

Temperature sensor SCTT-10-XXX-07

- ✓ Stainless steel
- ✓ Wide media compatibility
- ✓ Various lengths

Adjustable for height

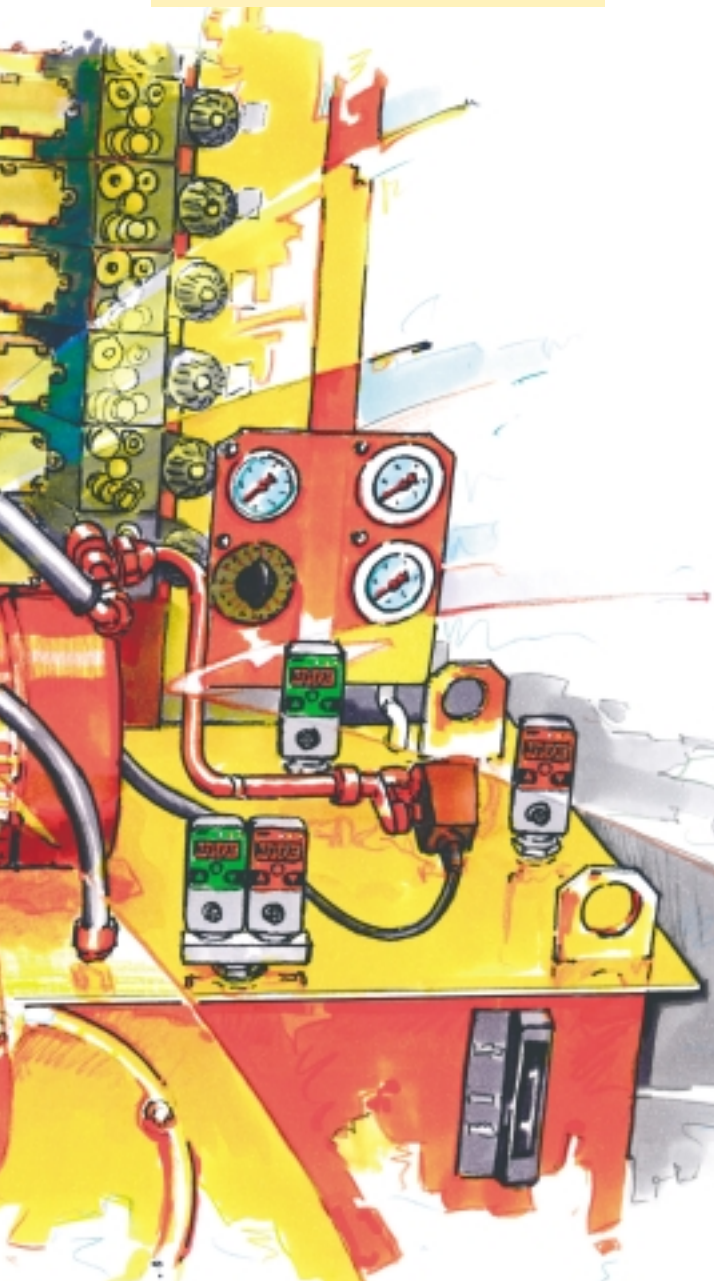
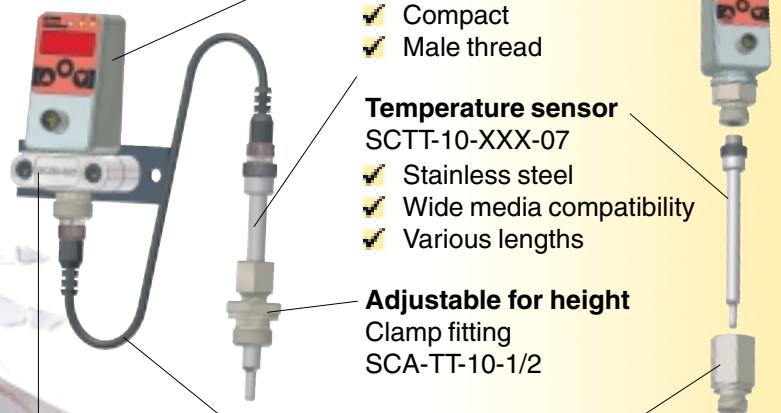
Clamp fitting SCA-TT-10-1/2

Connection adaptor

SCA-TT-10-SD

Cable SCK-410-03-45-45

Tube clamp SCSD-S27



The Controller Family

PressureController SCPSD



General technical data

Electrical connection	
Supply voltage	15..30VDC nominal 24VDC protection class 3
Electrical connection	M12x1; 4-pole.; 5-pole.; with gold-plated contacts equipment plug DIN43650 4-pole.
Short circuit-proof	yes
Incorrect polarity protection	yes
Overload protection	yes
Power consumption	< 100mA

Housing	
Material	Directionally adjustable up to 290° Zinc pressure die casting Z 410; painted
Foil material	Polyester
Display	4 position, 7 segment; red, figure height 9mm
Type of protection	IP67 EN60529 (with DIN43650 plug IP 65)

Ambient conditions	
Ambient temperature range	-20°C to +85°C
Storage temperature range	-40°C to +100°C
EM tolerance	Interference emission to EN 50081-1 Interference resistance to EN 61000-6-2
Vibration resistance	20g 10...500Hz IEC60068-2-6*
Shock resistance	50g 11ms IEC60068-2-29*

* not valid for DIN43650 version

Outputs	
Switch outputs	2 Mosfet high side switches (PNP)
Contact functions	Closer/opener, window, hysteresis Function freely adjustable Supply voltage - 1.5VDC
Switch voltage	1A; with two switched outputs 0.5 A per switch
Switch current max.	2.4 A per switch
Short circuit current	0/4..20mA, programmable, freely scaleable
Analogue output	RL ≤ (supply voltage - 8 V) / 20mA (≤ 500 Ω)

* higher switch current available on request

Accessories

Cable		SCK-400 - XX - X X	
Cable length	2m	02	
	5m	05	
	10m	10	
Plug connect	straight	4	
	angled 90°	5	
	M12	5	
	DIN 43650 *	6	

* only in angled version

PC programmer kit	SCSD-PRG-KIT
Fixing clamps	SCSD-S27

Technical data

Input dimensions		Low pressure		High pressure					
Measuring range	bar	-1..4	-1..10	-1..16	0..60	0..100	0..250	0..400	0..600
Overload pressure	bar	10	20	40	120	200	500	800	1200
Burst pressure	bar	12	25	50	550	800	1200	1700	2200
Measuring element		ceramic			thin film				
Switching cycles		≥ 100 Mio.							
Connecting thread		G1/4 (BSPP); ED-soft seal NBR* (DIN 3852 T2, Form X); ED(DIN3852 T11, Form E)							
Tightening torque		35Nm							
Media-contacting parts		Low pressure: stainless steel 1.4404; ceramic AL ₂ O ₃ ; NBR High pressure: stainless steel 1.4404; 1.4542							
Medium temperature range		-20°C to +85°C							
Weight		approx. 300g							

* other seal materials (FPM, EPDM etc...) on request

Output dimensions	
Accuracy	± 0.5 % FS typ. ± 1 % FS max.
Temperature drift	± 0.02 % FS/°K typ. (at -20...85°C) ± 0.03 % FS/°K max.
Long-term stability	± 0.2 % FS/a
Repeatability	± 0.25% FS
Switching point accuracy	± 0.5 % FS typ. ± 1 % FS max.
Display accuracy	± 0.5 % FS typ. ± 1 Digit ± 1 % FS max. ± 1 Digit

Response speed	
Switch output	≤ 10 ms
Analogue output	≤ 10 ms

Ordering codes

Pressure range	004	010	016	060	100	250	400	600
1 switch output, without analogue output	SCPSD- XXX -04- X 6							
DIN 43650 connector plug								
2 switch outputs, without analogue output	SCPSD- XXX -04- X 7							
M12 connector plug 4 pin								
1 switch output, with analogue output	SCPSD- XXX -14- X 7							
M12 connector plug 4 pin								
2 switch outputs, with analogue output	SCPSD- XXX -14- X 5							
M12 connector plug 5 pin								
Types								
1 = G1/4 BSPP external thread								
2 = G1/4 BSPP internal thread								

LevelTempController SCLTSD



LevelController SCLSD



TemperatureController SCTSD



Technical data

Input dimensions	
Sensor length	250mm 370mm 520mm
Setting range	40..210mm 40..330mm 40..480mm
Measuring element	Resistance reed chain with float
Connecting thread	G3/4 ; nickel-plated brass; ED-soft seal NBR*
Media-contacting parts	Brass, nickel-plated brass; NBR*
Medium temperature range	-20°C to +80°C
Media compatibility	Water, lubrication oil, hydraulic oil, acids, alkalis
Float	
Material	NBR
Dimensions	Ø 18mm, length 35mm
Protector tube	
Material	Brass
Dimensions	Ø 8mm
Working pressure	1bar

* other seal materials (FPM, EPDM etc...) on request

Output dimensions	
Switching point accuracy	± 1 % FS at 25°C
Display accuracy	± 1 % FS ± 1 Digit at 25°C
Response accuracy	≤ 700ms
Resolution	7.5 mm

Technical data

Input dimensions	
Display range	-50°C...+150°C -58°F...+302°F
Sensor input	PT1000
Sensor connection	M12x1; 4-pole
Weight	280g
Output dimensions	
Switching point accuracy	± 0.35 % FS at 25°C
Display accuracy	± 0.35 % FS ± 1 Digit at 25°C
Response speed	≤ 300ms
Accuracy	± 1 % FS

Temperature sensor	
Measuring element	PT1000 / DIN EN 60751, class B
Measuring range	-40...+125°C -40°F...257°F
Response time	T0.5 = 6sec / T0.9 = 25sec
Accuracy	± 0.3K + 0.005*t
Material	Stainless steel 1.4571
Nominal pressure	10 bar (max)
Media temperature	-40...+125°C
Ambient temperature	-25...+80°C (for the plug range)
Storage temperature	-25...+85°C

Media connection	
Direct mounting adaptor	1/2 BSPP (SCA-TT-10-SD)
Clamping fitting	1/2 BSPP (SCA-TT-10-1/2)

Ordering codes

Installation length	Ordering code
250 370 520 mm	SCLTSD- XXX -00-07
Level 2 switch outputs without analogue output M12 4 pin	SCLTSD- XXX -00-07
Temperature 2 switch outputs without analogue output M12 4 pin	
Level 1 switch outputs with analogue output M12 4 pin	SCLTSD- XXX -10-07
Temperature 1 switch outputs with analogue output M12 4 pin	

Ordering codes

Installation length	Ordering code
250 370 520 mm	SCLSD- XXX -00-07
2 switching outputs without analogue output M12 plug connector 4 pin	SCLSD- XXX -00-07
1 switching output with analogue output M12 plug connector 4 pin	

Ordering codes

1 switch output without analogue output DIN 43650 plug connection	SCTSD-150-00-06
2 switch outputs without analogue output M12 plug connection 4 pin	SCTSD-150-00-07
1 switch output with analogue output M12 plug connection 4 pin	SCTSD-150-10-07
2 switch outputs with analogue output M12 plug connection 5 pin	SCTSD-150-10-05
100 150 250 mm long	SCTT-10- XXX -07
Temperature sensor Immersion tube 1/2 BSPP	SCA-TT-10-XXX
Direct mounting Direct mounting adaptor (SCTSD-SCTT)	SCA-TT-10-SD
Control panel mounting Sensor cable 3m (SCTSD-SCTT)	SCK-410-03-45-45
Clamping fitting 1/2 BSPP	SCA-TT-10-1/2
Fixing clamp	SCSD-S27