



PRESSURE SENSORS

Aggressive media, Hydraulics, Water.

ATEX Eex ia (SIL 2) Rated



PROXIMITY SENSORS

Inductive, Capacitive, Analogue
InfraRed Photocells, Light Curtains



INDUSTRIAL SENSOR SOLUTIONS



ENCODERS

ROTARY & LINEAR

VALVE INDICATION

ROTARY and LINEAR Indication
ATEX-Eex d/Eex ia (ExploLabs Approved)
Aggressive environments - NAMUR mount



Switches
International

16 Staal Street, Kya Sand, Randburg, 2162, Gauteng

P O Box 2051, Northriding, 2162 Tel: +27-11-462-4253, Fax: +27-11-462-4310

E-mail: francois@switches.co.za, Web: www.switches.co.za

Description

The i-TORK and EURswitch valve indicators operate in the most demanding plant conditions, and carry a variety of International hazardous area classifications. These units are available with various sensor options, and all conform to NAMUR mounting requirements.

Features

- Treated Aluminium / Resin / Stainless Steel
- Explosion proof/ Intrinsically Safe / Flameproof
- Various sensors/switches
- Rugged design
- International approval certificates

ATEX



ITS-100



ITS-300

i-TORK		EUROswitch	
Model	Description	Model	Description
ITS-100	Valve Ind, Gen.Purpose, 2x Mechanical SW,	ES-3021	Magnetic, M18x80, Exd, 80°C
ITS-110	Valve Ind, Gen, Purpose, 2x Inductive SW,	ES-3022	Magnetic, M18x80, Exd, 125°C
		ES-3122	Magnetic, M18x80, I.S, 125°C
ITS-111	Valve Ind, Ex (ia)-Zone 0, 2x NAMUR Switch	ES-5021	Magnetic, 5/8"x92, Exd, 80°C
		ES-5022	Magnetic, 5/8"x92, Exd, 125°C
ITS-300	Valve Ind, Exd-Zone 1, 2x Mechanical Switch	ES-5122	Magnetic, 5/8"x92, I.S, 125°C
		MA-4S	Magnet, M10 x 16mm
ITS-311	Valve Ind, Ex(ia)-Zone 0, 2x NAMUR Switch	M-VIP	Valve Ind, Mech. SW
		M-VIP-PNP	Valve Ind, Proxy SW
ITS-31M	Valve Ind, Exd-Zone 1, 2x Magnetic Switch	TB-103W	Valve Ind, Exd, Mech.SW
		TB-113W	Valve Ind, GP, Mech.SW



ES-3022/ES-5022



M-VIP

GO SWITCH

LEVERLESS PROXIMITY-LIMIT SWITCH

PROXIMITY SENSORS FOR HARSH ENVIRONMENTS AND TOUGH APPLICATIONS

Description

GO SWITCHES provide reliable, durable position sensing in the most demanding plant conditions. These units outperform other types of sensors in hot, dirty, wet, abusive, corrosive, and explosive environments.

Features

- No exposed moving parts to fail
- Global approval Certificates
- Consumes no power to operate
- Can be wired Series or Parallel
- All Metal housing
- Ultra durable construction
- Contacts sealed from environment
- High Amp rating

Model	Contacts	Sensing Range	Outlet	Enclosure	Approvals	Wiring
Example 11-	1	2	1	1	0	-00
11- 115mm x 38mm sq.	1- SPDT	0-6mm end sensing (81 only)	1- Behing sensing	1- Brass (Lacquer)	0-Zone 2/Gen.Purp	00-Terminal Block (11 & 21 only)
21- 100mm x 38mm sq.	2- DPDT	1- 10mm side sensing (11 & 21- only)	2- Left of sensing	2-Stainless Steel	2-High.Temp 180°C	A2-900mm wire
81- 110mm x 38mm sq.	3- Latching SPDT	2- 14mm side sensing (11- only)	3- Right of sensing	3-Epoxy Brass	4-CSA : Zone 1	A4-3,6m wire
	5- DBDM (2 circuits)	7- 6mm side sensing (11 & 21- only)	4- Sensing side	4-Epoxy Stainless	6-CSA : Zone 2	B2-900mm Cable
	6- Latching (DMDB)		5- Bottom exit		8-UL Gen. Purpose	B4-3,6m Cable
73- 16mm Ø x 92	1- SPDT	3- 2,5mm End (Standard)	5- Bottom of enclosure	2- 303 S/S (140 Bar)	2- High Temp (205°C)	DBA-Micro Plug
74- 16mm Ø x 70	2- DPDT (7G & 7H only)	4- 1,8mm End sensing		3- 303 S/S (340 Bar)	3- UL (Zone 1)	F3-1,8m Teflon
7G- 21 Ø x 100		5- 1,5mm End sensing		4- 303 S/S (700 Bar)	6- CSA (Zone 2)	
7LG- 21 Ø x 121		6- 1mm End sensing		6- 316 S/S (140 Bar)	8- UL Gen.Purpose	
					T- ATEX (Zone 1)	
AMP3	Ceramic magnet in NYLON housing : 21x 65x 14mm (Use with 10-Series, 20-Series, 70-Series & 80-Series GO Switch)					
AMS4	Ceramic magnet in STAINLESS STEEL housing : 37x 32x 25mm (Use with 10-Series, 20-Series, 70-Series & 80-Series GO Switch)					
AMC5	Ceramic magnet in STAINLESS STEEL housing : 75x 75x 25mm (Use with 10-Series, 20-Series & 80-Series GO Switch only)					



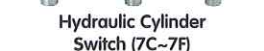
73-Series



11 Series



7LR-Series (led)



Hydraulic Cylinder Switch (7C-7F)



ELTRA Position sensing units are available in Incremental, Absolute, Explosion proof, Magnetic, **Linear versions**. These systems are available in various field-BUS options, and a variety of cable/plug terminations to suit all applications. Rotary encoder options include shafted, blind-hollow, and hollow-shaft. All units feature A & B Channels, with optional Z.

Features

- Industrial & Rugged construction
- Incremental / Absolute / Linear
- Motor feedback encoders
- High resolution / High speed option 10,000 rpm
- EXPRESS manufacturing** for breakdowns (5 DAY - additional fee would apply)

EL/EH	63	A	1000	Z	5/28	P	6	X	6	S	R	• Special
Incremental Encoder												16Z (M12 Socket)
Body: Ø											Orientation R - Radial A - Axial	
Flange type										Termination P - Cable (1,5m) M - Military Plug S - M12 Plug		
Resolution EL: 1-10,000 EH: 40-1024									RPM 3 - 3000rpm 6 - 6000rpm			
Zero pulse S - without Z - with zero								Protection X - IP54 S - IP66				
Supply EL: 5-28Vdc EH: 5V or 8-24V							Shaft / Bore 8 - 8mm 9 - 9mm 10 - 10mm					
Output N - NPN C - NPN Open Collector P - PUSH PULL L - LINE DRIVER (TTL)												



BLIND HOLLOW-SHAFT



SHAFT-TYPE



LINEAR TRANSDUCERS / POTENTIOMETERS



ELECTRIC MOTOR FLANGE-ENCODER



PROFI-BUS

PRESSURE MEASUREMENT

PRESSURE TRANSMITTERS, TRANSDUCERS AND DIGITAL GAUGES

Description

BD Pressure sensors have built a reputation for Pressure Measurement which incorporates all four types of sensor modules, i.e. CAPACITIVE, Stainless, ceramic, and silicon. BD have solutions for all applications, from 0,1mbar up to 2200bar, with optional Ex ia IIC/Atex certification. BUS communication includes HART or FieldBus. Sensors are available in either Gauge or absolute type. Digital Pressure Gauges (Baroli) have also made strong inroads in the market, and are available in up to 600bar inputs. **HYDROSTATIC level sensors** provide accurate level indication. BD Sensors offer **PVC** pressure ports for aggressive media.

DMP331 / 333-	PRESSURE TRANSDUCERS							
110-	Pressure Type	Gauge - 110			Absolute - 111			
4002-	Input (bar)- DMP331 (low)	0,100 (1000)	0,600 (6000)	1,0 (1001)	2,5 (2501)	6,0 (6001)	10 (1002)	40 (4002)
	Input (bar)- DMP333 (hi)	60	100	160	200	250	400	600
1-	Output	1- 4~20mA (2 wre)	2- 0~20mA (3wre)		3- 0~10V (3wre)		E- I/S 4~20mA	
3-	Accuracy	3- 0,35% (Press. >0,4bar)		5- 0,5% (Press. <0,4bar)		2- 0,25% (Press. >0,4bar)		1- 0,1% (>0,16bar)
100-	Electrical Termination	100- Male/ Female plug	200- Binder series (5pin) plug		400- Cable gland+cable		M00- M12 Socket	
100-	Mechanical	100- G½" DIN3852		200- G½" EN837		300- G ¼" DIN3852		F00- G½" Flush sensor
1	Seals	1- FKM			3- EPDM			

SIL 2 RATED



PRESSURE TRANSDUCERS



PRESSURE INDICATORS



PRESSURE TRANSMITTERS



HYDROSTATIC LEVEL SENSOR



PVC SENSOR (AGGRESSIVE MEDIA)



PROCESS TRANSMITTERS



CHANGE-OVER SWITCHES

ROTARY CAM SWITCHES AND DIN RAIL TERMINALS

Description

AP change-over switch range includes control switches, lockable mains-isolators, spring-return, multi-position switches, motor-control, and volt & ammeter switches. The product range also includes DIN rail terminals, and terminal blocks. These units are manufactured to the highest European standards (TUV, CE, and CSA certificates), and they are capable of meeting large demands at very competitive prices. We are able to supply customers with custom face (escutcheon) plates for individual applications.

OFF/ON (function)		ON/ON (function)		ON/OFF/ ON Change-Over		POWER SWITCH (Mains Switch)
20A	A201A-2 Pole A202 -3 Pole A202A-4 Pole	20A	A208 -2 Pole A209 -3 Pole A210 -4 Pole	20A	C038 -2 Pole C039 -3 Pole C040 -4 Pole	PS-23 (20 Amp) PS-34 (32 Amp) PS-64 (63 Amp)
32A	A301A-2 Pole A302 -3 Pole A302A-4 Pole	32A	A308 -2 Pole A309 -3 Pole A310 -4 Pole	32A	A318 -2 Pole A319 -3 Pole A320 -4 Pole	TERMINALS (DIN Rail type)
63A	A601A-2 Pole A602 -3 Pole A602A-4 Pole	63A	A608 -2 Pole A609 -3 Pole A610 -4 Pole	63A	A618 -2 Pole A619 -3 Pole A620 -4 Pole	ATB-4 (4mm) ATB-6 (6mm) ATB-10 (10mm) ATB-16 (16mm)
100A	A107 -4 Pole	100A	A107 -4 Pole	100A	A109 -2 Pole A111 -4 Pole	TERMINAL BLOCKS
FUSE HOLDERS		FS-301 (chassis mount) FS-630 (screw cap)				TB-30A/4Pole TB-60A/4Pole TB-60A/6Pole



TÜVRheinland®
Precisely Right.



SPEED SENSORS

MAGNETIC SPEED TRANSDUCERS / SWITCHES

Description

Magnetic speed sensors generate analogue (AC Volts) or digital (on/off) signals from the passing of teeth on a geared wheel. The closer the gap, the higher the voltage generated. The frequency generated is proportional to the RPM of the rotating gear wheel. Options include: regular or blind tip, high-temperature units, wires or Military plug termination.

WIRES	Thread length	MIL. SOCKET
6251000	1" / 25mm	625100
6252000	2" / 50mm	625200
6253000	3" / 75mm	625300
6254500	4,5" / 115mm	625450
6255000	5" / 127mm	625500
6256000	6" / 152mm	625600
DIGITAL (ON/OFF)	STTN-625335-PNP	
HALL-EFFECT	HE625200	
BI-DIRECTION (Hall Effect)	625300-DC-H-DD	
MILITARY PLUG	10SL-4S	



LAYHER

PRESSURE SWITCHES

Description

Layher Manometric switches are designed to be used in any liquid, or gaseous medium. They are created from galvanised special steel, or brass, or aluminium. Each unit is infinitely adjustable within its pressure range. Ranges vary from low to medium-high, and with various contact types. These units are available in small quantities, as well as large batch orders. Silver-plated contacts provide accurate switching of the contacts.

MODEL	PRESSURE	CONTACTS	FITTING
214-002	0,3 ~ 2 Bar	N/ Open	1/8" Male
214-010	1 ~ 10 Bar	N/ Open	1/8" Male
400-070	10 ~ 70 Bar	N/ Open	1/4" Male
410-350	100~350 Bar	N/ Open	1/4" Male
602-400	50~ 400 Bar	N/O + N/C	1/4" Female



PROXIMITY SWITCHES

INDUCTIVE & CAPACITIVE PROXIMITY SENSORS

Description

These autocontrol sensors comprise of a wide range, including: inductive sensors, **photoelectric**, capacitive, metal face, light curtains, and are manufactured to european specifications. They are available with cable, or plug terminations. LED light.

Specifications

- Fully sealed IP67/IP68
- EMC immune > 10V/m + EFT > 1KV
- Short circuit & overload protection
- Double insulated for safety / moisture
- Metal housings**
- AC & DC supply



DC - INDUCTIVE PROXIMITY SENSORS	
2 - WIRE	Specifications
P4C2B1204C02A2	Brass body, 4mm Sensing, M12 x 50mm, Flush - N/open, PNP
P4C2B1808C02A2	Brass body, 8mm Sensing, M18 x 50mm, Flush - N/open, PNP
3 - WIRE	
P1C2B1204P03A2	Brass body, 4mm Sensing, M12 x 50mm, Flush - N/open, PNP
P1C2B1208P03A2	Brass body, 8mm Sensing, M12 x 50mm, Non-Flush, N/open
P1C2B1808P03A2	Brass body, 8mm Sensing, M18 x 55mm, Flush, N/open, PNP
P1C2B1816P03A2	Brass body, 16mm Sensing, M18 x 55mm, Non-Flush, N/open
P1C2B3015P03A2	Brass body, 15mm Sensing, M30 x 55mm, Flush, N/open, PNP
P1C2B3025P03A2	Brass body, 25mm Sensing, M30 x 55mm, Flush, N/open, PNP
ANALOGUE	
P5C1B1812G13A2	Brass body, 1~12mm Sensing, M18 x 55mm, Flush, 4~20mA
METAL FACE	
P1C2F1210P03A2	Full Stainless body, 10mm Sensing, M12 x 50mm, Flush, N/open
P1C2F1816P03S2	Full Stainless body, 16mm Sensing, M18 x 40mm, Flush, N/open
P1C2F3025P03S2	Full Stainless body, 25mm Sensing, M30x 40mm, Flush, N/open
DC/AC - I/R PHOTOCCELL SENSORS	
I/R PHOTOCCELL	Specifications
F1CDP120200P514A2	Plastic body, 200mm Sensing, M12 x 50mm, Diffuse, PNP
F1CDP180500P514A2	Brass body, 500mm Sensing, M18 x 80mm, Diffuse, PNP