DIGITAL PRESSURE SWITCH

The digital pressure switch allows both the transmission of electrical pressure signals and the instant display of pressure. Two digital outputs, which can be set according to the two pressure values reached, are available. An analogue output of a voltage proportional to the pressure reading is also available. The values are clearly displayed on a LED video and different parameters can be entered from the keypad. Hysteresis can be adjusted and the unit of measurement for pressure can be modified. Two models are available:

Series **600**, characterised by G1/8" female pneumatic ports, one at the bottom and one at the back (pressure switch supplied with bottom port covered with a removable plug); one-colour LED; pre-wired cable.

Series **640**, characterised by R1/8" male pneumatic ports (taper thread) and M5 female thread inside on the rear side; two-colour LED displays that can be programmed depending on the pressure signal; cable with connector. It is available in analog and IO-Link versions.

A kit of accessories is provided for fixing to the top or wall, or to a panel.

| TECHNICAL DATA		SERIES 600	SERIES 640	SERIES 640 IO-Link
Fieldbus		-		IO-Link version 1.1
Working pressure range		-1 to 10 bar / -0.1 to 1 MPa		
Maximum admissible pressure		15 bar / 1.5 MPa		
Readable resolution		0.01 bar / 0.001 MPa / 0.01 kg/cm^2 / 0.1 psi		
Power supply	VDC	12 to 24 ± 10%, max ripple 10%		24, Ripple (P-P) ≤10%
Current consumption	mA	≤ 55	≤ 40	≤35 (no load)
Outputs		-	-	**OUT 1**: IO-Link (C/Q Line) or PNP or NPN configurable
				OUT 2: Analogue or PNP or NPN configurable
Digital outputs		**PNP**: Number of outputs: 2 Max current: 80 mA Max voltage: 24 VDC Residual voltage: ≤ 1V (at 80 mA)	**PNP**: Number of outputs: 2 Max current: 125 mA Max voltage: 24 VDC Residual voltage: ≤ 1.5V (at 125 mA)	**PNP**: Open collector output Max current: 150 mA Max voltage: 24 VDC Residual voltage: ≤ 1V **NPN**: Open collector output Max current: 150 mA Max voltage: 30 VDC Residual voltage: ≤ 1V
Analogue output		1/5V ± 2.5% (0 bar - 1V; 10 bar - 5V; it doesn't read the vacum) Linearity ≤ 1% full scale Output impedance: about 1 kΩ		1/5V, 0/10V, 4/20 mA configurable Linearity ± 1.5% full scale 1/5V - 0/10V (impedance 1 kΩ), 4/20 mA (impedance 500 Ω)
Digital output repeatability		≤ ± 0.2% full scale ± 1 digits		
Hysteresis		Adjustable or fixed at 3 digits for operation within a pressure range		
Actuation response time	ms	≤ 2.5		
Interference suppression selectable at	ms	24, 192, 768	25, 100, 250, 500, 1000, 1500	
Short-circuit protection at the outputs		Yes		
LED 7 segment display		3 ½ digit display		
Display colours		red	red/green	
Display accuracy		±2% full scale ±1 digit, ambient temperature 25° ±3°C		
Indicators		green LED (output 1), red LED (output 2)	orange LED (output 1 and output 2)	Green or Red LED configurable
Thermal characteristic		≤ ±2% full scale of the calibration pressure (at 25°C), in the temperature range 0 - 50°C		
Compressed air ports		2 G1/8" female thread	1 R1/8" male taper thread (M5 female inside)	
Power cable		2 m, with five 0.15 mm^2 wires, oil-resistant		
		pre-wired cable, not removable	removable connector	
Communication speed	Kbps	-		38.4 (COM2)
Vendor ID / Device ID		-		1046 (hex 0x0416) / 72 (hex 0x000048)
Minimum cycle time	ms	-		3
Process data length		-		2 byte di Input (2 bit BCD;14 bit PDV)
Weight	g	105, including 2 m cable	86, including 2 m cable	
AMBIENT CONDITIONS				
Fluid		Filtered and unlubricated air, inert non-corrosive and non-explosive gas		
Degree of protection		IP 40 - IP65 (with accessory protection assembled)		IP 40
Temperature range	°C	0 to 50		
Storage temperature	°C	-20 to +60, but without condensate or ice	-10 to +60, but without condensate or ice	
Ambient humidity		35 to 85% relative humidity; no condensate		
Insulation voltage		1000 VAC for one minute between casing and cable		
Resistance of Insulation		Min. 50 MΩ minimo (at 500 VDC between casing and cable)		
Vibration admitted		1.5 mm amplitude or 10G with scanning every minute from 10 to 55 Hz at 10 Hz, for 2 hours in each direction x, y and z		
Impact		980 m/s^2 (100 g), 3 times in each direction x, y and z	100 m/s^2 (10 g), 3 times in each direction x, y and z	

SERIES 600

DIMENSIONS AND ORDERING CODES
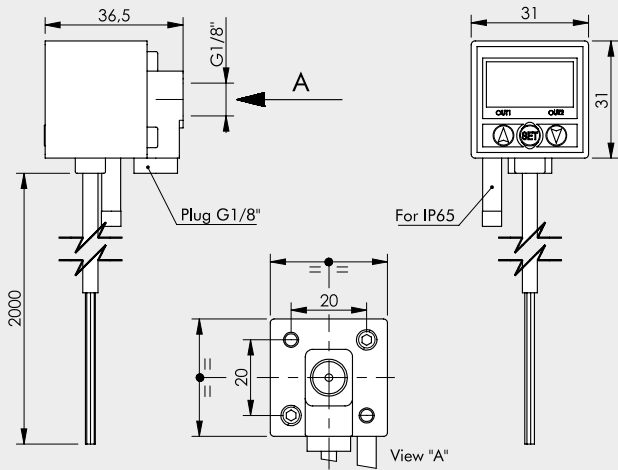
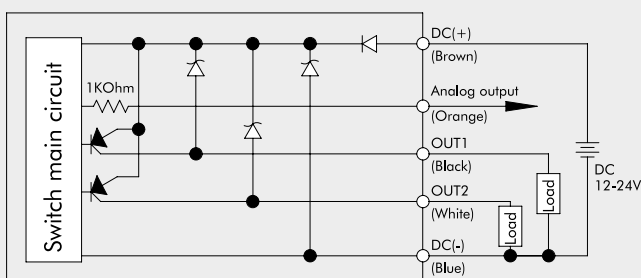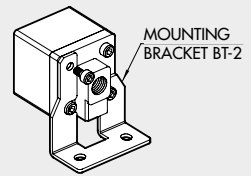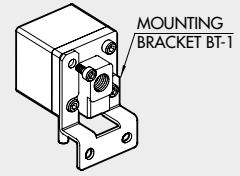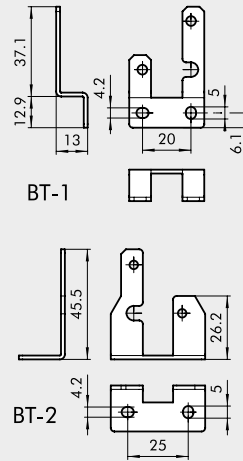| Code	Description
9000600	Digital pressure switch series 600

USER INTERFACE
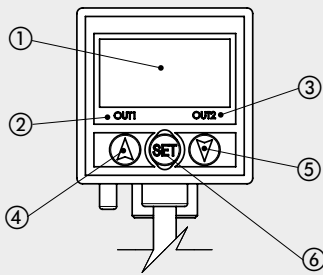
① 3 ½ digit display, red: showing the pressure reading, all setting information, and the error code
② Digital output 1: green LED
③ Digital output 2: red LED
④ Button: modifies the value of the selected parameter
⑤ Button: modifies the value of the selected parameter
⑥ Setting button: selects the parameter to modify

WIRING DIAGRAM

PNP output

Switch main circuit
1KOhm
DC(+) (Brown)
Analog output (Orange)
OUT1 (Black)
OUT2 (White)
DC(-) (Blue)
DC 12-24V
Load
Load

FIXING BRACKET KIT

BT-1
MOUNTING BRACKET BT-1

BT-2
MOUNTING BRACKET BT-2

Code	Description
9000601	Kit of fixing brackets for digital pressure switches series 600

N.B.: Each kit contains a bracket for fixing on the back and one for fixing at the bottom.

PANEL FIXING KIT

PA-1
PA-2
PANEL ADAPTER PA-1
PANEL ADAPTER PA-2
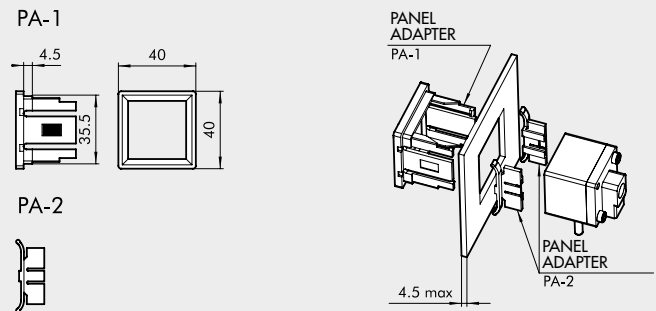
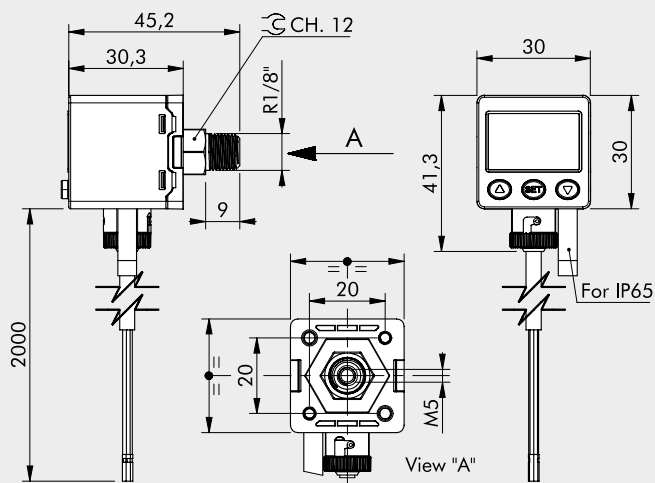| Code	Description
9000602	Kit for panel fixing for the digital pressure switch series 600

PANEL FIXING KIT WITH PROTECTION

FPC-1
PA-1
PA-2
FRONT PROTECTIVE LID
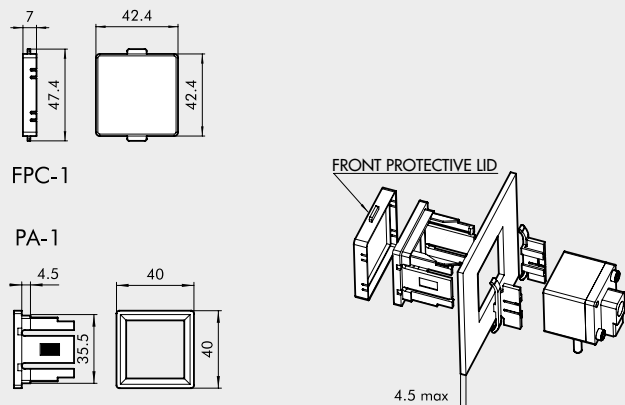
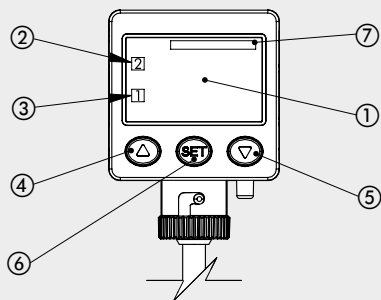| Code	Description
9000603	Kit for panel fixing with protection for the digital pressure switch series 600

SERIES 640

DIMENSIONS AND ORDERING CODES

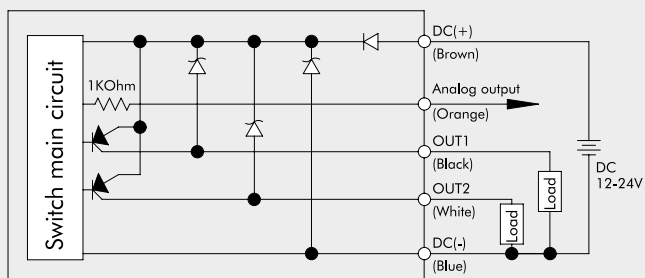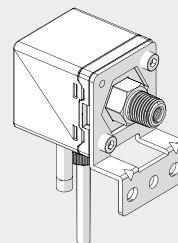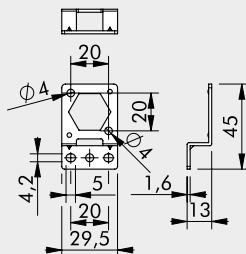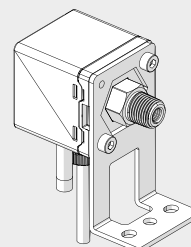| Code	Description
9000640	Digital pressure switch series 640

USER INTERFACE

① 3 ½ digit display, green and red: it displays the unit of measurement, the pressure value read, all setting information, the error code.
② Digital output 1: orange LED
③ Digital output 2: orange LED
④ Button: modifies the value of the selected parameter
⑤ Button: modifies the value of the selected parameter
⑥ Setting button: selects the parameter to modify
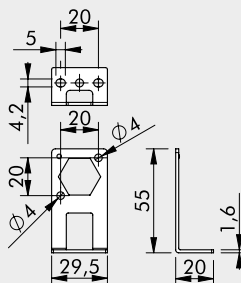⑦ Unit of measurement selected

WIRING DIAGRAM

PNP output

DC(+) (Brown)
Analog output (Orange)
OUT1 (Black)
OUT2 (White)
DC(-) (Blue)
Switch main circuit
1KOhm
DC 12-24V
Load
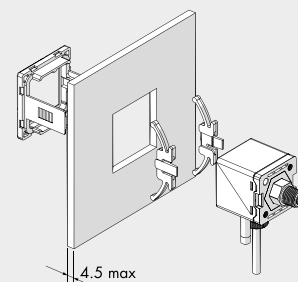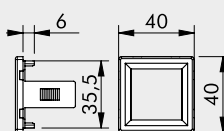Load

PARALLEL FIXING BRACKET KIT

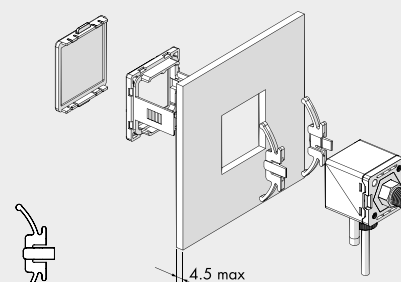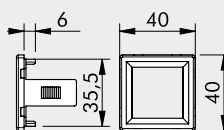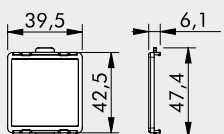| Code	Description
9000641	Parallel fixing bracket kit for digital pressure switch series 640

90° FIXING BRACKET KIT

Code	Description
9000644	90° fixing bracket kit for digital pressure switch series 640

PANEL FIXING KIT

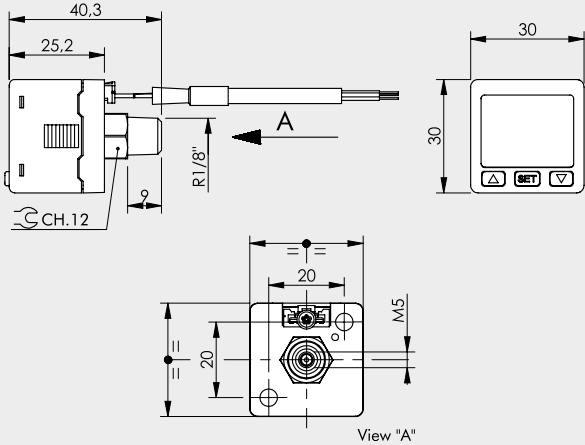| Code	Description
9000642	Kit for panel fixing for the digital pressure switch series 640

PANEL FIXING KIT WITH PROTECTION

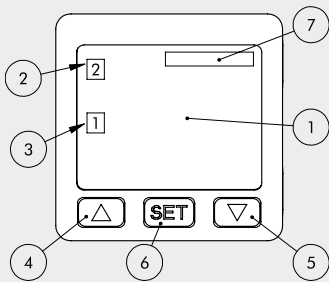| Code	Description
9000643	Kit for panel fixing with protection for the digital pressure switch series 640

SERIES 640 IO-Link

DIMENSIONS AND ORDERING CODES

40,3
25,2
30
30
R1/8"
9
CH.12
A
View "A"
20
20
M5

Code	Description
9000640L	Digital pressure switch series 640 IO-Link

USER INTERFACE

① 3 ½ digit display, green and red: it displays the unit of measurement, the pressure value read, all setting information, the error code.
② Digital output 1: orange LED
③ Digital output 2: orange LED
④ Button: modifies the value of the selected parameter
⑤ Button: modifies the value of the selected parameter
⑥ Setting button: selects the parameter to modify
⑦ Unit of measurement selected

WIRING DIAGRAM

P
⑤ Brown (L+/+24V)
② Black
PNP
NPN
U
I
③ White
① Blue (L-/0V)
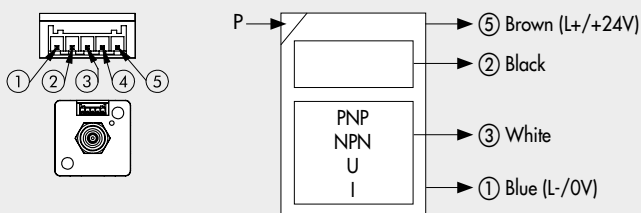
PIN	Color	Function
1	Blue	0V power supply
2	Black	Digital output OUT 1 or IO-Link (C/Q Line)
3	White	Digital output OUT 2 or analog output
		(1 to 5V, 0 to 10V, 4 to 20 mA)
4	Orange	Disconnect
5	Brown	+24VDC power supply

PARALLEL FIXING BRACKET KIT
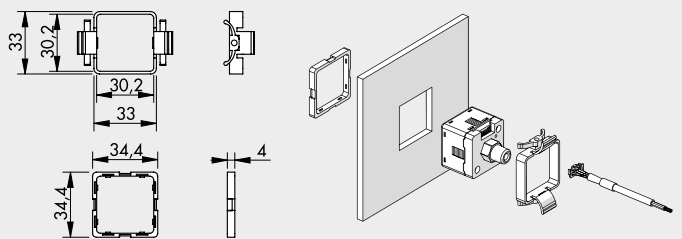
20
20
Ø4
Ø14
Ø4,2
5
2
20
29,5
13
45
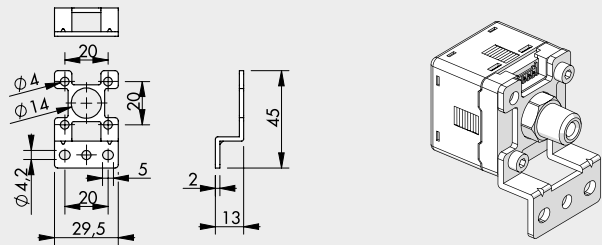
Code	Description
9000641L	Parallel fixing bracket kit for digital pressure switch series 640 IO-Link

90° FIXING BRACKET KIT

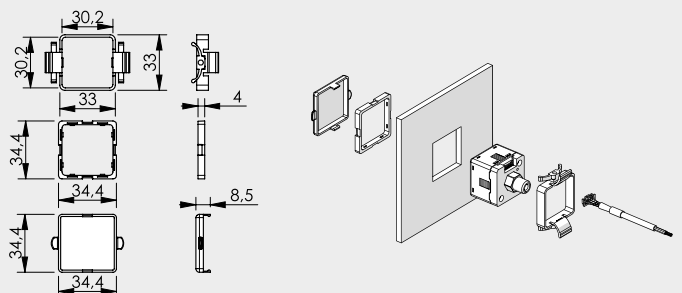20
20
5
Ø4,2
Ø4
20
Ø14
2
29,5
20
45
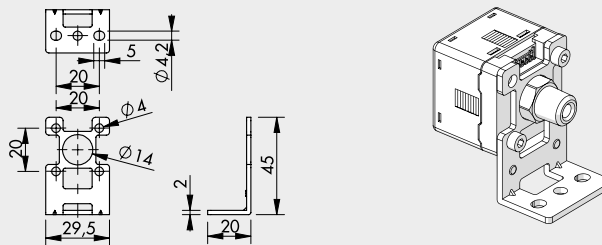
Code	Description
9000644L	90° fixing bracket kit for digital pressure switch series 640 IO-Link

PANEL FIXING KIT

33
30,2
30,2
33
34,4
34,4
4

Code	Description
9000642L	Kit for panel fixing for the digital pressure switch series 640 IO-Link

PANEL FIXING KIT WITH PROTECTION

30,2
30,2
33
33
34,4
34,4
4
34,4
34,4
8,5

Code	Description
9000643L	Kit for panel fixing with protection for the digital pressure switch series 640 IO-Link