

SUCO 0531 ELECTRONIC PRESSURE SWITCH

053125109B010
PNP output (High Side), NC, 0-25 Bar, NPT 1/4,
Deutsch DT04-3P



- One Switching Output
- Stainless Steel & Titanium Wetted Parts
- Silicon-On-Sapphire Technology
- Factory Set



PRODUCT DESCRIPTION

The SUCO 0541 is a compact, high-performance electronic pressure switch engineered with dual PNP outputs, both configured as normally closed. Encased in a durable hex-22 stainless-steel and titanium-wetted housing, it utilises Silicon-on-Sapphire (SoS) sensor technology to deliver precision and long-term stability, while offering high overpressure protection up to 4× the rated pressure. Available in pressure ranges spanning 0–10 bar to 0–600 bar, the 0541 switch supports switching currents up to 500 mA and responds rapidly under demanding conditions with pressure change rates reaching 5,000 bar/s. Factory-set switching points and hysteresis (0.2–99.8 % FS) ensure reliable performance, with a sealed welded design eliminating elastomer seals and meeting IP67 and industrial EMC standards.

The 0541 excels in harsh hydraulic and pneumatic environments, such as construction machinery, mobile hydraulic systems, off-road vehicles, and industrial automation, where compact size, durable construction, and reliable switching under dynamic pressures are essential. Its dual NC PNP outputs allow for redundant or staged switching logic in safety circuits or PLC-controlled systems, ideal for overpressure alarms, machine shutdowns, or interlock functions. The fast response time, high resistance to pressure peaks, and welded sensor design make it particularly suitable for vibration-heavy or wash-down settings. Furthermore, the availability of diverse process threads and electrical connectors ensures seamless integration into OEM systems requiring rugged, precise, and dependable pressure monitoring.

TECHNICAL DATA

GENERAL DATA

Adjustment range max	25 bar
Adjustment range min	0 bar
Electrical connection	Deutsch DT04-3P
Process connection	1/4 NPT
Function	Normally Closed
Output	PNP
Burst pressure	200 bar
Pressure max	100 bar

TEMPERATURE & MATERIALS DATA

Temperature of media from	-40 °C
Temperature of media to	125 °C
Temperature ambient from	-40 °C
Temperature ambient to	100 °C
Material of body	Stainless steel 1.4305
Material of wetted parts	Stainless steel 1.4305, Titanium

ADDITIONAL DATA

Supply voltage dc max	32 V DC
Supply voltage dc min	9.6 V DC
Pressure rise	≤ 5,000 bar/s
Switching time	< 2 ms
Switching point adjustment range	2 ... 100 % of the nominal pressure range Full Scale (FS), programmable at factory
Weight	80 g

SAFETY & APPROVALS

IP class	IP67, IP6K9K
Hysteresis	2..99.8% of nominal pressure range (full scale), programmable at factory
Shock resistance	500m / s²; 11 ms half sine wave; DIN EN 60068-2-27
Vibration resistance	20g; 4..2000 Hz sine wave, DIN EN 60068-2-6
EMC	EMC 2014/30/EU, EN 61000-6-2:2005, EN 61000-6-3:2007
Accuracy	±0.5 % of adjustment range (Full scale) at room temperature
Long term stability	±0.1 % of adjustment range (full scale) per year
Mechanical life expectancy	10,000,000 switching cycles at rise rates to 5,000 bar/s nominal pressure
Repeatability	±0.1 % full scale



Connection diagrams



Technical modifications and errors excepted.

DIN EN 17530-803-A <table border="1"> <thead> <tr> <th>Pin</th> <th>Assignment</th> </tr> </thead> <tbody> <tr><td>1</td><td>Ch1</td></tr> <tr><td>2</td><td>Ch2</td></tr> <tr><td>3</td><td>Ch3</td></tr> <tr><td>4</td><td>Ch4</td></tr> <tr><td>5</td><td>Ch5</td></tr> <tr><td>6</td><td>Ch6</td></tr> <tr><td>7</td><td>Ch7</td></tr> <tr><td>8</td><td>Ch8</td></tr> <tr><td>9</td><td>Ch9</td></tr> <tr><td>10</td><td>Ch10</td></tr> <tr><td>11</td><td>Ch11</td></tr> <tr><td>12</td><td>Ch12</td></tr> <tr><td>13</td><td>Ch13</td></tr> <tr><td>14</td><td>Ch14</td></tr> <tr><td>15</td><td>Ch15</td></tr> <tr><td>16</td><td>Ch16</td></tr> <tr><td>17</td><td>Ch17</td></tr> <tr><td>18</td><td>Ch18</td></tr> <tr><td>19</td><td>Ch19</td></tr> <tr><td>20</td><td>Ch20</td></tr> <tr><td>21</td><td>Ch21</td></tr> <tr><td>22</td><td>Ch22</td></tr> <tr><td>23</td><td>Ch23</td></tr> <tr><td>24</td><td>Ch24</td></tr> <tr><td>25</td><td>Ch25</td></tr> <tr><td>26</td><td>Ch26</td></tr> <tr><td>27</td><td>Ch27</td></tr> <tr><td>28</td><td>Ch28</td></tr> <tr><td>29</td><td>Ch29</td></tr> <tr><td>30</td><td>Ch30</td></tr> <tr><td>31</td><td>Ch31</td></tr> <tr><td>32</td><td>Ch32</td></tr> <tr><td>33</td><td>Ch33</td></tr> <tr><td>34</td><td>Ch34</td></tr> <tr><td>35</td><td>Ch35</td></tr> <tr><td>36</td><td>Ch36</td></tr> <tr><td>37</td><td>Ch37</td></tr> <tr><td>38</td><td>Ch38</td></tr> <tr><td>39</td><td>Ch39</td></tr> <tr><td>40</td><td>Ch40</td></tr> <tr><td>41</td><td>Ch41</td></tr> <tr><td>42</td><td>Ch42</td></tr> <tr><td>43</td><td>Ch43</td></tr> <tr><td>44</td><td>Ch44</td></tr> <tr><td>45</td><td>Ch45</td></tr> <tr><td>46</td><td>Ch46</td></tr> <tr><td>47</td><td>Ch47</td></tr> <tr><td>48</td><td>Ch48</td></tr> <tr><td>49</td><td>Ch49</td></tr> <tr><td>50</td><td>Ch50</td></tr> <tr><td>51</td><td>Ch51</td></tr> <tr><td>52</td><td>Ch52</td></tr> <tr><td>53</td><td>Ch53</td></tr> <tr><td>54</td><td>Ch54</td></tr> <tr><td>55</td><td>Ch55</td></tr> <tr><td>56</td><td>Ch56</td></tr> <tr><td>57</td><td>Ch57</td></tr> <tr><td>58</td><td>Ch58</td></tr> <tr><td>59</td><td>Ch59</td></tr> <tr><td>60</td><td>Ch60</td></tr> <tr><td>61</td><td>Ch61</td></tr> <tr><td>62</td><td>Ch62</td></tr> <tr><td>63</td><td>Ch63</td></tr> <tr><td>64</td><td>Ch64</td></tr> <tr><td>65</td><td>Ch65</td></tr> <tr><td>66</td><td>Ch66</td></tr> <tr><td>67</td><td>Ch67</td></tr> <tr><td>68</td><td>Ch68</td></tr> <tr><td>69</td><td>Ch69</td></tr> <tr><td>70</td><td>Ch70</td></tr> <tr><td>71</td><td>Ch71</td></tr> <tr><td>72</td><td>Ch72</td></tr> <tr><td>73</td><td>Ch73</td></tr> <tr><td>74</td><td>Ch74</td></tr> <tr><td>75</td><td>Ch75</td></tr> <tr><td>76</td><td>Ch76</td></tr> <tr><td>77</td><td>Ch77</td></tr> <tr><td>78</td><td>Ch78</td></tr> <tr><td>79</td><td>Ch79</td></tr> <tr><td>80</td><td>Ch80</td></tr> <tr><td>81</td><td>Ch81</td></tr> <tr><td>82</td><td>Ch82</td></tr> <tr><td>83</td><td>Ch83</td></tr> <tr><td>84</td><td>Ch84</td></tr> <tr><td>85</td><td>Ch85</td></tr> <tr><td>86</td><td>Ch86</td></tr> <tr><td>87</td><td>Ch87</td></tr> <tr><td>88</td><td>Ch88</td></tr> <tr><td>89</td><td>Ch89</td></tr> <tr><td>90</td><td>Ch90</td></tr> <tr><td>91</td><td>Ch91</td></tr> <tr><td>92</td><td>Ch92</td></tr> <tr><td>93</td><td>Ch93</td></tr> <tr><td>94</td><td>Ch94</td></tr> <tr><td>95</td><td>Ch95</td></tr> <tr><td>96</td><td>Ch96</td></tr> <tr><td>97</td><td>Ch97</td></tr> <tr><td>98</td><td>Ch98</td></tr> <tr><td>99</td><td>Ch99</td></tr> <tr><td>100</td><td>Ch100</td></tr> </tbody> </table> <p>ISO 1 • 62 / 76 mm • Ø 20 mm Order number: 001 * Without copper cable: 0 = 0 mm, with copper cable: 1 = 75 mm</p>	Pin	Assignment	1	Ch1	2	Ch2	3	Ch3	4	Ch4	5	Ch5	6	Ch6	7	Ch7	8	Ch8	9	Ch9	10	Ch10	11	Ch11	12	Ch12	13	Ch13	14	Ch14	15	Ch15	16	Ch16	17	Ch17	18	Ch18	19	Ch19	20	Ch20	21	Ch21	22	Ch22	23	Ch23	24	Ch24	25	Ch25	26	Ch26	27	Ch27	28	Ch28	29	Ch29	30	Ch30	31	Ch31	32	Ch32	33	Ch33	34	Ch34	35	Ch35	36	Ch36	37	Ch37	38	Ch38	39	Ch39	40	Ch40	41	Ch41	42	Ch42	43	Ch43	44	Ch44	45	Ch45	46	Ch46	47	Ch47	48	Ch48	49	Ch49	50	Ch50	51	Ch51	52	Ch52	53	Ch53	54	Ch54	55	Ch55	56	Ch56	57	Ch57	58	Ch58	59	Ch59	60	Ch60	61	Ch61	62	Ch62	63	Ch63	64	Ch64	65	Ch65	66	Ch66	67	Ch67	68	Ch68	69	Ch69	70	Ch70	71	Ch71	72	Ch72	73	Ch73	74	Ch74	75	Ch75	76	Ch76	77	Ch77	78	Ch78	79	Ch79	80	Ch80	81	Ch81	82	Ch82	83	Ch83	84	Ch84	85	Ch85	86	Ch86	87	Ch87	88	Ch88	89	Ch89	90	Ch90	91	Ch91	92	Ch92	93	Ch93	94	Ch94	95	Ch95	96	Ch96	97	Ch97	98	Ch98	99	Ch99	100	Ch100	M 12 - DIN EN 61076-2-101-A <table border="1"> <thead> <tr> <th>Pin</th> <th>Assignment</th> </tr> </thead> <tbody> <tr><td>1</td><td>Ch1</td></tr> <tr><td>2</td><td>Ch2</td></tr> <tr><td>3</td><td>Ch3</td></tr> <tr><td>4</td><td>Ch4</td></tr> <tr><td>5</td><td>Ch5</td></tr> <tr><td>6</td><td>Ch6</td></tr> <tr><td>7</td><td>Ch7</td></tr> <tr><td>8</td><td>Ch8</td></tr> <tr><td>9</td><td>Ch9</td></tr> <tr><td>10</td><td>Ch10</td></tr> <tr><td>11</td><td>Ch11</td></tr> <tr><td>12</td><td>Ch12</td></tr> <tr><td>13</td><td>Ch13</td></tr> <tr><td>14</td><td>Ch14</td></tr> <tr><td>15</td><td>Ch15</td></tr> <tr><td>16</td><td>Ch16</td></tr> <tr><td>17</td><td>Ch17</td></tr> <tr><td>18</td><td>Ch18</td></tr> <tr><td>19</td><td>Ch19</td></tr> <tr><td>20</td><td>Ch20</td></tr> <tr><td>21</td><td>Ch21</td></tr> <tr><td>22</td><td>Ch22</td></tr> <tr><td>23</td><td>Ch23</td></tr> <tr><td>24</td><td>Ch24</td></tr> <tr><td>25</td><td>Ch25</td></tr> <tr><td>26</td><td>Ch26</td></tr> <tr><td>27</td><td>Ch27</td></tr> <tr><td>28</td><td>Ch28</td></tr> <tr><td>29</td><td>Ch29</td></tr> <tr><td>30</td><td>Ch30</td></tr> <tr><td>31</td><td>Ch31</td></tr> <tr><td>32</td><td>Ch32</td></tr> <tr><td>33</td><td>Ch33</td></tr> <tr><td>34</td><td>Ch34</td></tr> <tr><td>35</td><td>Ch35</td></tr> <tr><td>36</td><td>Ch36</td></tr> <tr><td>37</td><td>Ch37</td></tr> <tr><td>38</td><td>Ch38</td></tr> <tr><td>39</td><td>Ch39</td></tr> <tr><td>40</td><td>Ch40</td></tr> <tr><td>41</td><td>Ch41</td></tr> <tr><td>42</td><td>Ch42</td></tr> <tr><td>43</td><td>Ch43</td></tr> <tr><td>44</td><td>Ch44</td></tr> <tr><td>45</td><td>Ch45</td></tr> <tr><td>46</td><td>Ch46</td></tr> <tr><td>47</td><td>Ch47</td></tr> <tr><td>48</td><td>Ch48</td></tr> <tr><td>49</td><td>Ch49</td></tr> <tr><td>50</td><td>Ch50</td></tr> <tr><td>51</td><td>Ch51</td></tr> <tr><td>52</td><td>Ch52</td></tr> </tbody></table>	Pin	Assignment	1	Ch1	2	Ch2	3	Ch3	4	Ch4	5	Ch5	6	Ch6	7	Ch7	8	Ch8	9	Ch9	10	Ch10	11	Ch11	12	Ch12	13	Ch13	14	Ch14	15	Ch15	16	Ch16	17	Ch17	18	Ch18	19	Ch19	20	Ch20	21	Ch21	22	Ch22	23	Ch23	24	Ch24	25	Ch25	26	Ch26	27	Ch27	28	Ch28	29	Ch29	30	Ch30	31	Ch31	32	Ch32	33	Ch33	34	Ch34	35	Ch35	36	Ch36	37	Ch37	38	Ch38	39	Ch39	40	Ch40	41	Ch41	42	Ch42	43	Ch43	44	Ch44	45	Ch45	46	Ch46	47	Ch47	48	Ch48	49	Ch49	50	Ch50	51	Ch51	52	Ch52
Pin	Assignment																																																																																																																																																																																																																																																																																																																				
1	Ch1																																																																																																																																																																																																																																																																																																																				
2	Ch2																																																																																																																																																																																																																																																																																																																				
3	Ch3																																																																																																																																																																																																																																																																																																																				
4	Ch4																																																																																																																																																																																																																																																																																																																				
5	Ch5																																																																																																																																																																																																																																																																																																																				
6	Ch6																																																																																																																																																																																																																																																																																																																				
7	Ch7																																																																																																																																																																																																																																																																																																																				
8	Ch8																																																																																																																																																																																																																																																																																																																				
9	Ch9																																																																																																																																																																																																																																																																																																																				
10	Ch10																																																																																																																																																																																																																																																																																																																				
11	Ch11																																																																																																																																																																																																																																																																																																																				
12	Ch12																																																																																																																																																																																																																																																																																																																				
13	Ch13																																																																																																																																																																																																																																																																																																																				
14	Ch14																																																																																																																																																																																																																																																																																																																				
15	Ch15																																																																																																																																																																																																																																																																																																																				
16	Ch16																																																																																																																																																																																																																																																																																																																				
17	Ch17																																																																																																																																																																																																																																																																																																																				
18	Ch18																																																																																																																																																																																																																																																																																																																				
19	Ch19																																																																																																																																																																																																																																																																																																																				
20	Ch20																																																																																																																																																																																																																																																																																																																				
21	Ch21																																																																																																																																																																																																																																																																																																																				
22	Ch22																																																																																																																																																																																																																																																																																																																				
23	Ch23																																																																																																																																																																																																																																																																																																																				
24	Ch24																																																																																																																																																																																																																																																																																																																				
25	Ch25																																																																																																																																																																																																																																																																																																																				
26	Ch26																																																																																																																																																																																																																																																																																																																				
27	Ch27																																																																																																																																																																																																																																																																																																																				
28	Ch28																																																																																																																																																																																																																																																																																																																				
29	Ch29																																																																																																																																																																																																																																																																																																																				
30	Ch30																																																																																																																																																																																																																																																																																																																				
31	Ch31																																																																																																																																																																																																																																																																																																																				
32	Ch32																																																																																																																																																																																																																																																																																																																				
33	Ch33																																																																																																																																																																																																																																																																																																																				
34	Ch34																																																																																																																																																																																																																																																																																																																				
35	Ch35																																																																																																																																																																																																																																																																																																																				
36	Ch36																																																																																																																																																																																																																																																																																																																				
37	Ch37																																																																																																																																																																																																																																																																																																																				
38	Ch38																																																																																																																																																																																																																																																																																																																				
39	Ch39																																																																																																																																																																																																																																																																																																																				
40	Ch40																																																																																																																																																																																																																																																																																																																				
41	Ch41																																																																																																																																																																																																																																																																																																																				
42	Ch42																																																																																																																																																																																																																																																																																																																				
43	Ch43																																																																																																																																																																																																																																																																																																																				
44	Ch44																																																																																																																																																																																																																																																																																																																				
45	Ch45																																																																																																																																																																																																																																																																																																																				
46	Ch46																																																																																																																																																																																																																																																																																																																				
47	Ch47																																																																																																																																																																																																																																																																																																																				
48	Ch48																																																																																																																																																																																																																																																																																																																				
49	Ch49																																																																																																																																																																																																																																																																																																																				
50	Ch50																																																																																																																																																																																																																																																																																																																				
51	Ch51																																																																																																																																																																																																																																																																																																																				
52	Ch52																																																																																																																																																																																																																																																																																																																				
53	Ch53																																																																																																																																																																																																																																																																																																																				
54	Ch54																																																																																																																																																																																																																																																																																																																				
55	Ch55																																																																																																																																																																																																																																																																																																																				
56	Ch56																																																																																																																																																																																																																																																																																																																				
57	Ch57																																																																																																																																																																																																																																																																																																																				
58	Ch58																																																																																																																																																																																																																																																																																																																				
59	Ch59																																																																																																																																																																																																																																																																																																																				
60	Ch60																																																																																																																																																																																																																																																																																																																				
61	Ch61																																																																																																																																																																																																																																																																																																																				
62	Ch62																																																																																																																																																																																																																																																																																																																				
63	Ch63																																																																																																																																																																																																																																																																																																																				
64	Ch64																																																																																																																																																																																																																																																																																																																				
65	Ch65																																																																																																																																																																																																																																																																																																																				
66	Ch66																																																																																																																																																																																																																																																																																																																				
67	Ch67																																																																																																																																																																																																																																																																																																																				
68	Ch68																																																																																																																																																																																																																																																																																																																				
69	Ch69																																																																																																																																																																																																																																																																																																																				
70	Ch70																																																																																																																																																																																																																																																																																																																				
71	Ch71																																																																																																																																																																																																																																																																																																																				
72	Ch72																																																																																																																																																																																																																																																																																																																				
73	Ch73																																																																																																																																																																																																																																																																																																																				
74	Ch74																																																																																																																																																																																																																																																																																																																				
75	Ch75																																																																																																																																																																																																																																																																																																																				
76	Ch76																																																																																																																																																																																																																																																																																																																				
77	Ch77																																																																																																																																																																																																																																																																																																																				
78	Ch78																																																																																																																																																																																																																																																																																																																				
79	Ch79																																																																																																																																																																																																																																																																																																																				
80	Ch80																																																																																																																																																																																																																																																																																																																				
81	Ch81																																																																																																																																																																																																																																																																																																																				
82	Ch82																																																																																																																																																																																																																																																																																																																				
83	Ch83																																																																																																																																																																																																																																																																																																																				
84	Ch84																																																																																																																																																																																																																																																																																																																				
85	Ch85																																																																																																																																																																																																																																																																																																																				
86	Ch86																																																																																																																																																																																																																																																																																																																				
87	Ch87																																																																																																																																																																																																																																																																																																																				
88	Ch88																																																																																																																																																																																																																																																																																																																				
89	Ch89																																																																																																																																																																																																																																																																																																																				
90	Ch90																																																																																																																																																																																																																																																																																																																				
91	Ch91																																																																																																																																																																																																																																																																																																																				
92	Ch92																																																																																																																																																																																																																																																																																																																				
93	Ch93																																																																																																																																																																																																																																																																																																																				
94	Ch94																																																																																																																																																																																																																																																																																																																				
95	Ch95																																																																																																																																																																																																																																																																																																																				
96	Ch96																																																																																																																																																																																																																																																																																																																				
97	Ch97																																																																																																																																																																																																																																																																																																																				
98	Ch98																																																																																																																																																																																																																																																																																																																				
99	Ch99																																																																																																																																																																																																																																																																																																																				
100	Ch100																																																																																																																																																																																																																																																																																																																				
Pin	Assignment																																																																																																																																																																																																																																																																																																																				
1	Ch1																																																																																																																																																																																																																																																																																																																				
2	Ch2																																																																																																																																																																																																																																																																																																																				
3	Ch3																																																																																																																																																																																																																																																																																																																				
4	Ch4																																																																																																																																																																																																																																																																																																																				
5	Ch5																																																																																																																																																																																																																																																																																																																				
6	Ch6																																																																																																																																																																																																																																																																																																																				
7	Ch7																																																																																																																																																																																																																																																																																																																				
8	Ch8																																																																																																																																																																																																																																																																																																																				
9	Ch9																																																																																																																																																																																																																																																																																																																				
10	Ch10																																																																																																																																																																																																																																																																																																																				
11	Ch11																																																																																																																																																																																																																																																																																																																				
12	Ch12																																																																																																																																																																																																																																																																																																																				
13	Ch13																																																																																																																																																																																																																																																																																																																				
14	Ch14																																																																																																																																																																																																																																																																																																																				
15	Ch15																																																																																																																																																																																																																																																																																																																				
16	Ch16																																																																																																																																																																																																																																																																																																																				
17	Ch17																																																																																																																																																																																																																																																																																																																				
18	Ch18																																																																																																																																																																																																																																																																																																																				
19	Ch19																																																																																																																																																																																																																																																																																																																				
20	Ch20																																																																																																																																																																																																																																																																																																																				
21	Ch21																																																																																																																																																																																																																																																																																																																				
22	Ch22																																																																																																																																																																																																																																																																																																																				
23	Ch23																																																																																																																																																																																																																																																																																																																				
24	Ch24																																																																																																																																																																																																																																																																																																																				
25	Ch25																																																																																																																																																																																																																																																																																																																				
26	Ch26																																																																																																																																																																																																																																																																																																																				
27	Ch27																																																																																																																																																																																																																																																																																																																				
28	Ch28																																																																																																																																																																																																																																																																																																																				
29	Ch29																																																																																																																																																																																																																																																																																																																				
30	Ch30																																																																																																																																																																																																																																																																																																																				
31	Ch31																																																																																																																																																																																																																																																																																																																				
32	Ch32																																																																																																																																																																																																																																																																																																																				
33	Ch33																																																																																																																																																																																																																																																																																																																				
34	Ch34																																																																																																																																																																																																																																																																																																																				
35	Ch35																																																																																																																																																																																																																																																																																																																				
36	Ch36																																																																																																																																																																																																																																																																																																																				
37	Ch37																																																																																																																																																																																																																																																																																																																				
38	Ch38																																																																																																																																																																																																																																																																																																																				
39	Ch39																																																																																																																																																																																																																																																																																																																				
40	Ch40																																																																																																																																																																																																																																																																																																																				
41	Ch41																																																																																																																																																																																																																																																																																																																				
42	Ch42																																																																																																																																																																																																																																																																																																																				
43	Ch43																																																																																																																																																																																																																																																																																																																				
44	Ch44																																																																																																																																																																																																																																																																																																																				
45	Ch45																																																																																																																																																																																																																																																																																																																				
46	Ch46																																																																																																																																																																																																																																																																																																																				
47	Ch47																																																																																																																																																																																																																																																																																																																				
48	Ch48																																																																																																																																																																																																																																																																																																																				
49	Ch49																																																																																																																																																																																																																																																																																																																				
50	Ch50																																																																																																																																																																																																																																																																																																																				
51	Ch51																																																																																																																																																																																																																																																																																																																				
52	Ch52																																																																																																																																																																																																																																																																																																																				