

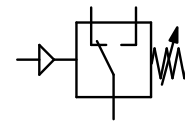
# PRESSURE SWITCHES

|                            | DESCRIPTION             | PRESSURE RANGE |           |           | CONNECTION                             | SERIES      | PAGE         |
|----------------------------|-------------------------|----------------|-----------|-----------|----------------------------------------|-------------|--------------|
|                            |                         | bar            |           |           | thread                                 |             |              |
| <b>PRESSURE</b>            | many variations         | 0,1            | ... 1     | / 200     | G $\frac{1}{8}$ m u. G $\frac{1}{4}$ m | DS16...DS18 | <b>12.02</b> |
|                            | low pressure, handwheel | 0.005          | ... 0.02  | / 12      | G $\frac{1}{8}$ m u. G $\frac{1}{4}$ m | DSP         | <b>12.03</b> |
|                            | low pressure, plastic   | 0.003          | ... 0.03  | / 7       | $\frac{1}{8}$ "NPTm                    | F4200       | <b>12.04</b> |
|                            | small hysteresis        | 0.014          | ... 0.14  | / 7       | $\frac{1}{8}$ "NPTm                    | F4300       | <b>12.05</b> |
| <b>VACUUM</b>              | mit Handrad             | -0.005         | ... -0.02 | / -0,7    | G $\frac{1}{8}$ m a. G $\frac{1}{4}$ a | DSP-V       | <b>12.03</b> |
|                            | Kunststoff              | -0.001         | ... -0.01 | / -1      | $\frac{1}{8}$ "NPTm                    | F4200-X     | <b>12.04</b> |
|                            | auch flanschbar         | -0.007         | ... -0.17 | / -1      | $\frac{1}{8}$ "NPTm                    | F4300-X     | <b>12.05</b> |
| <b>DIFFERENTIAL PRESS.</b> | with handwheel          | 5              | ... 20    | / 50 mbar | nipple                                 | DSP-W       | <b>12.03</b> |
| <b>ATEX</b>                | gas, EXII 2G Ex ia T4   | 0.005          | ... 0.02  | / 12      | G $\frac{1}{8}$ m a. G $\frac{1}{4}$ m | DSP-EX      | <b>12.03</b> |
| <b>PNEUM. SIGNAL</b>       | pressure                | 0.07           | ... 0.35  | / 7       | $\frac{1}{8}$ "NPTm                    | PP700/PP701 | <b>12.06</b> |
|                            | vacuum                  | -0.03          | ... 0.17  | / -0,85   | $\frac{1}{8}$ "NPTm                    | VP700/VP701 | <b>12.06</b> |
| <b>STAINLESS STEEL</b>     | many options            | 0.3            | ... 1.5   | / 200     | G $\frac{1}{4}$ m                      | DS18        | <b>12.02</b> |
|                            | low pressure, handwheel | 0.005          | ... 0.02  | / 12      | G $\frac{1}{8}$ m a. G $\frac{1}{4}$ m | DSP         | <b>12.03</b> |



12

|                             |                                                                                                                                               |                                                              |                       |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|-----------------------|
| <b>Description</b>          | The pressure switch closes or opens an electrical contact when the desired pressure is reached. If it falls below, the contact will be reset. |                                                              |                       |
| <b>Media</b>                | compressed air, non-corrosive gases or liquids                                                                                                |                                                              |                       |
| <b>Overpressure</b>         | see chart for max. static pressure, dynamic pressures are 50% lower                                                                           |                                                              |                       |
| <b>Switch contact</b>       | DS16: NO contact, optionally NC contact                                                                                                       | DS17/18: SPDT switch                                         |                       |
| <b>Contact load</b>         | DS16: 2 A at 42 V DC,                                                                                                                         | DS17: 4 A at 42 V DC,                                        | DS18: 4 A at 250 V AC |
| <b>Electrical connector</b> | DS16: screw terminal,                                                                                                                         | DS17/18: spade terminal 6.3 x 0.8 mm, optionally also for 16 |                       |
| <b>Hysteresis</b>           | DS16: 5...20%,                                                                                                                                | DS17/18: adjustable to 10...30% by factory                   |                       |
| <b>Life cycle</b>           | 10 <sup>6</sup> switching cycles at < 50 bar                                                                                                  | <b>Switching frequency</b>                                   | max. 200 cycles/min   |
| <b>Vibration resistance</b> | 10 g at 5...200 Hz                                                                                                                            | <b>Shock resistance</b>                                      | 30 g                  |
| <b>Certifications</b>       | IP 00, with coupling socket IP 65                                                                                                             | <b>Mounting position</b>                                     | any                   |
| <b>Protection class</b>     | IP 00, with coupling socket IP 65                                                                                                             |                                                              |                       |
| <b>Temperature range</b>    | -30 °C to 100 °C / -22 °F to 212 °F for NBR/Buna-N, -30 °C to 120 °C / -22 °F to 248 °F for EPDM, -5 °C to 120 °C / 23 °F to 248 °F for FKM   |                                                              |                       |
| <b>Material</b>             | Body: steel, optionally stainless steel at DS18<br>Elastomer: NBR/Buna-N, optionally EPDM or FKM                                              |                                                              |                       |



0,1 ... 1/200 bar

| Pressure transmission by | Overpressure protection < bar | Measuring tolerance ± bar | Measurement range bar | Order number |
|--------------------------|-------------------------------|---------------------------|-----------------------|--------------|
|--------------------------|-------------------------------|---------------------------|-----------------------|--------------|

## Pressure switch G<sup>1</sup>/<sub>4</sub>m, NO 42V

|           |     |     | steel, NBR/Buna-N, without protective cap | DS16   |
|-----------|-----|-----|-------------------------------------------|--------|
| diaphragm | 300 | 0.2 | 0.1 ... 1.0                               | DS16-A |
|           |     | 0.5 | 1.0 ... 10                                | DS16-B |
|           |     | 1.0 | 10 ... 20                                 | DS16-C |
|           |     | 2.0 | 20 ... 50                                 | DS16-D |
| piston    | 600 | 5.0 | 50 ... 150                                | DS16-E |

## Pressure switch G<sup>1</sup>/<sub>4</sub>m, SPDT 42V

|           |     |     | steel, NBR/Buna-N, with coupling socket | DS17   |
|-----------|-----|-----|-----------------------------------------|--------|
| diaphragm | 100 | 0.2 | 0.3 ... 1.5                             | DS17-A |
|           | 100 | 0.5 | 1.0 ... 10                              | DS17-B |
|           | 300 | 1.0 | 1.0 ... 10                              | DS17-C |
|           | 300 | 3.0 | 10 ... 50                               | DS17-D |
|           | 300 | 5.0 | 10 ... 100                              | DS17-E |
| piston    | 600 | 5.0 | 50 ... 200                              | DS17-H |

## Pressure switch G<sup>1</sup>/<sub>4</sub>m, SPDT 250V

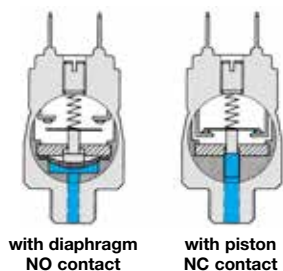
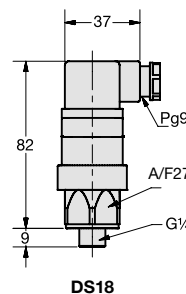
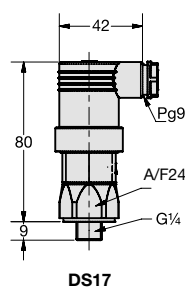
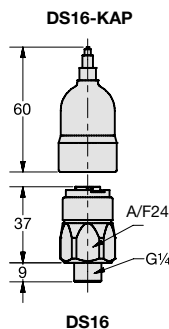
|           |     |     | steel, NBR/Buna-N, with coupling socket | DS18   |
|-----------|-----|-----|-----------------------------------------|--------|
| diaphragm | 100 | 0.2 | 0.3 ... 1.5                             | DS18-A |
|           | 300 | 1.0 | 1.0 ... 10                              | DS18-C |
|           | 300 | 3.0 | 10 ... 50                               | DS18-D |
|           | 300 | 5.0 | 10 ... 100                              | DS18-E |
| piston    | 600 | 5.0 | 50 ... 200                              | DS18-H |

## Special options, add the appropriate letter

|                        |                                                            |          |            |
|------------------------|------------------------------------------------------------|----------|------------|
| EPDM elastomer         |                                                            |          | DS1.-.E    |
| FKM elastomer          |                                                            |          | DS1.-.V    |
| free of oil and grease | suitable for oxygen, max. 10 bar                           |          | DS1.-.L    |
| NC contact             | instead of normally open contact                           | for DS16 | DS1.-.1    |
| spade terminal         | 6.3 x 0.8 mm, galvanised                                   | for DS16 | DS1.-.T    |
| 600 bar overpressure   | maximum                                                    | for DS16 | DS16-.U    |
| gold contact           | max. 24 V AC/DC, 50 mA                                     | for DS17 | DS17-.G    |
| 250 V                  | max. voltage                                               | for DS17 | DS17-.W    |
| stainless steel body   | 0.5...5/200 bar                                            | for DS18 | DS18-.S    |
| factory-set pressure   | pressure indication falling pressure VF .. rising pressure |          | DS1.-.VS.. |

## Accessories, enclosed

|                |                |          |          |
|----------------|----------------|----------|----------|
| protection cap | straight, IP65 | for DS16 | DS16-KAP |
|----------------|----------------|----------|----------|



\* Product group

PDF CAD  
www.aircom.net



Order example:  
DS16-A

|                             |                                                                                                                                                                                                                                         |                             |                          |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|--------------------------|
| <b>Description</b>          | Adjustable pressure switch for monitoring pressure, vacuum and differential pressure. From the 6 bar device on two turns of the adjusting knob are necessary for the whole adjustment range, so the scale on the knob is inappropriate. |                             |                          |
| <b>Media</b>                | compressed air, non-corrosive gases or liquids                                                                                                                                                                                          | <b>Overpressure</b>         | see chart                |
| <b>Switch contact</b>       | SPDT switch with silver contact, optionally gold contact                                                                                                                                                                                | <b>Hysteresis</b>           | see chart                |
| <b>Contact load</b>         | 2 A at 24 V DC, 6 A at 250 V AC                                                                                                                                                                                                         | <b>Vibration resistance</b> | 20 g                     |
| <b>Electrical connector</b> | AMP spade terminal, 6.3 x 8 mm, according to DIN 46244                                                                                                                                                                                  | <b>Switching time</b>       | 30 ms                    |
| <b>Life cycle</b>           | 10 <sup>6</sup> switching cycles                                                                                                                                                                                                        | <b>Protection class</b>     | IP 65 w/ coupling socket |
| <b>Certifications</b>       | VDI, TÜV design test, optionally Atex                                                                                                                                                                                                   |                             |                          |
| <b>Mounting position</b>    | any                                                                                                                                                                                                                                     |                             |                          |
| <b>Temperature range</b>    | -20 °C to 85 °C / -4 °F to 185 °F for NBR/Buna-N, EPDM and polyamide, up to 130 °C / 266 °F for FKM                                                                                                                                     |                             |                          |
| <b>Material</b>             | Body: Zytel, a high-quality polyamide<br>Elastomer: NBR/Buna-N, optionally EPDM, FKM or special FKM (saturated steam-resistant)<br>Pressure connection: brass, at DSP-W polyamide, optionally stainless steel or PVDF                   |                             |                          |

| Dimensions | Overpressure protection | hysteresis max. | Measurement range | Order number |
|------------|-------------------------|-----------------|-------------------|--------------|
| B Ø        | < bar                   | mbar / bar      | mbar / bar        |              |
| mm mm      |                         |                 |                   |              |

| Pressure switch G <sup>1</sup> / <sub>4</sub> male, for low pressure |    |     |              | wetted sections: brass and NBR/Buna-N, scale toleranz 10% | DSP-D   |
|----------------------------------------------------------------------|----|-----|--------------|-----------------------------------------------------------|---------|
| 68                                                                   | 45 | 0.5 | 3 mbar       | 5 ... 20 mbar                                             | DSP-DB2 |
|                                                                      |    | 0.5 | 5 mbar       | 10 ... 50 mbar                                            | DSP-DB5 |
|                                                                      |    | 0.5 | 10 mbar      | 25 ... 100 mbar                                           | DSP-DC1 |
|                                                                      |    | 1.0 | 20 mbar      | 50 ... 250 mbar                                           | DSP-DC2 |
|                                                                      |    | 1.0 | 50 mbar      | 100 ... 500 mbar                                          | DSP-DC5 |
|                                                                      |    | 10  | 150 mbar     | 0.25 ... 1.0 bar                                          | DSP-D01 |
|                                                                      |    | 10  | 250 mbar     | 0.5 ... 1.5 bar                                           | DSP-D02 |
|                                                                      |    | 10  | 500 mbar     | 1 ... 3.0 bar                                             | DSP-D03 |
|                                                                      |    | 25  | 0.5 / 2 bar* | 1 ... 6.0 bar                                             | DSP-D06 |
|                                                                      |    | 25  | 0.5 / 2 bar* | 4 ... 9.0 bar                                             | DSP-D09 |
|                                                                      |    | 25  | 0.5 / 2 bar* | 7 ... 12 bar                                              | DSP-D12 |

| Pressure switch G <sup>1</sup> / <sub>4</sub> male |    |     |         | wetted sections: brass and NBR/Buna-N, scale toleranz 10% | DSP-V   |
|----------------------------------------------------|----|-----|---------|-----------------------------------------------------------|---------|
| 68                                                 | 45 | 0.5 | 3 mbar  | -5 ... -20 mbar                                           | DSP-V02 |
|                                                    |    | 0.5 | 5 mbar  | -10 ... -50 mbar                                          | DSP-V05 |
|                                                    |    | 0.5 | 10 mbar | -25 ... -100 mbar                                         | DSP-V10 |
|                                                    |    | 0.5 | 20 mbar | -50 ... -125 mbar                                         | DSP-V12 |
|                                                    |    | 1.0 | 25 mbar | -75 ... -200 mbar                                         | DSP-V20 |
|                                                    |    | 1.0 | 30 mbar | -100 ... -300 mbar                                        | DSP-V30 |
|                                                    |    | 1.0 | 75 mbar | -200 ... -500 mbar                                        | DSP-V50 |
|                                                    |    | 1.0 | 75 mbar | -300 ... -700 mbar                                        | DSP-V70 |

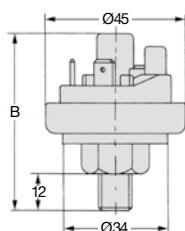
| Differential press. switch, nipple Ø 6.5 |    |     |        | wetted sections: polyamide and NBR/Buna-N, scale toleranz 10% | DSP-W   |
|------------------------------------------|----|-----|--------|---------------------------------------------------------------|---------|
| 77                                       | 45 | 0.1 | 3 mbar | 5 ... 20 mbar                                                 | DSP-W20 |
|                                          |    | 0.1 | 5 mbar | 10 ... 50 mbar                                                | DSP-W50 |

## Special options, add the appropriate letter

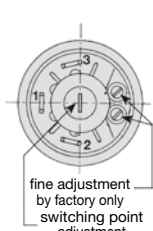
|                                        |                                                   |                 |           |
|----------------------------------------|---------------------------------------------------|-----------------|-----------|
| <b>factory-set pressure</b>            |                                                   |                 | DSQ-...   |
| <b>G<sup>1</sup>/<sub>8</sub> male</b> | pressure port thread,                             | (not for DSP-W) | DS-...1   |
| <b>stainless steel port</b>            | pressure port thread, 1.4401,                     | (not for DSP-W) | DS-...S   |
| <b>FKM elastomer</b>                   | max. 130 °C / 266 °F                              |                 | DS-...V   |
| <b>EPDM elastomer</b>                  |                                                   |                 | DS-...E   |
| <b>increased overpressure</b>          | max. 4 bar for pressure measurement range < 1 bar |                 | DS-...U   |
| <b>gold contact</b>                    | max. 24 V AC, 100 mA                              |                 | DS-...G   |
| <b>Ex-i-Atex</b>                       | II 1/2G Ex ia IIB T4 and II 1/2G Ex ia IIC T4     |                 | DS-...EX  |
| <b>Ex-ii-Atex</b>                      | II 1/2G Ex ia IIB T4 and II 1/2G Ex ia IIC T4     |                 | DS-...SEX |

## Accessories, enclosed

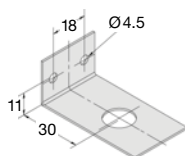
|                         |                                         |                                   |                |
|-------------------------|-----------------------------------------|-----------------------------------|----------------|
| <b>mounting bracket</b> | made of steel, including nut            | for G <sup>1</sup> / <sub>4</sub> | <b>BW14-01</b> |
| <b>protection cap</b>   | angular, cable feedthrough Ø 5 mm       | IP44                              | <b>DS-KAP4</b> |
|                         | angular, high-strength cable gland Pg 9 | IP54                              | <b>DS-KAP5</b> |
|                         |                                         | IP65                              | <b>DS-KAP6</b> |



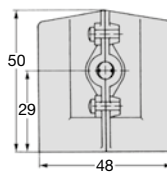
DSP/ DSQ



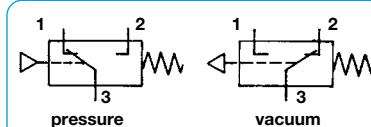
top view DS.



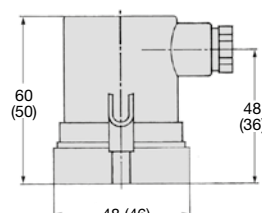
BW14-01



DS-KAP4



pin configuration



DS-KAP5 (-KAP6)

\* 0.5 bar at the beginning, 2 bar at the end of the pressure range

\* Product group

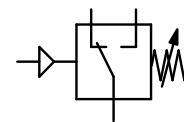
PDF CAD  
www.aircom.net



Order example  
DSP-DB2



|                             |                                                                                                                                                                                                                                                                                                |                                                            |  |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|--|
| <b>Description</b>          | Pressure and vacuum switch with electrical outlet signal and low hysteresis. The microswitch satisfies UL and CSA regulations. Polysulphone of the body approved by National Sanitation Foundation. The switch also complies with FDA regulations and is suitable for water and food products. |                                                            |  |
| <b>Media</b>                | compressed air, non-corrosive gases or liquids                                                                                                                                                                                                                                                 |                                                            |  |
| <b>Switch contact</b>       | micro SPDT switch, covered by plastic cap                                                                                                                                                                                                                                                      |                                                            |  |
| <b>Contact load</b>         | 3 A or 4 A at 230 V AC, see chart                                                                                                                                                                                                                                                              |                                                            |  |
| <b>Electrical connector</b> | 0.110" (2.8 mm) quick connector for Molex/ETC connector                                                                                                                                                                                                                                        |                                                            |  |
| <b>Repeatability</b>        | ± 2% FS                                                                                                                                                                                                                                                                                        |                                                            |  |
| <b>Certifications</b>       | CSA-certified and UL-listed                                                                                                                                                                                                                                                                    |                                                            |  |
| <b>Switching time</b>       | 25 ms                                                                                                                                                                                                                                                                                          |                                                            |  |
| <b>Mounting position</b>    | any                                                                                                                                                                                                                                                                                            |                                                            |  |
| <b>Temperature range</b>    | 4 °C to 66 °C / 40 °F to 150 °F                                                                                                                                                                                                                                                                |                                                            |  |
| <b>Material</b>             | Body: polysulphone                                                                                                                                                                                                                                                                             | Spring: stainless steel                                    |  |
|                             | Diaphragm: polyurethane                                                                                                                                                                                                                                                                        | Media non-contact parts: nylon, carbon fibre nylon, acetal |  |



14 ... 140 mbar / 7 bar  
-7 ... -170 mbar / -1 bar

Switches



12

| Description | Contact load | Hysteresis typical | Hysteresis max. | Over-pressure max. bar | Measurement range bar | Order number |
|-------------|--------------|--------------------|-----------------|------------------------|-----------------------|--------------|
|             | max. A       | mbar               | mbar            | max. bar               | bar                   |              |



## Pressure / vacuum switch, low hysteresis

pressure port 1/8" NPT male, w. covering cap, SPDT switch

F4300

|                 |   |     |     |    |                  |             |
|-----------------|---|-----|-----|----|------------------|-------------|
| pressure switch | 3 | 7   | 14  | 2  | 0.014 ... 0.14   | F4300- 2PT  |
|                 | 4 | 14  | 24  | 2  | 0.035 ... 0.35   | F4300- 5PT  |
|                 | 4 | 30  | 41  | 3  | 0.035 ... 1.0    | F4300- 15PT |
|                 | 4 | 40  | 70  | 4  | 0.035 ... 2.1    | F4300- 30PT |
|                 | 4 | 100 | 170 | 8  | 0.035 ... 4.2    | F4300- 60PT |
|                 | 4 | 140 | 240 | 8  | 0.070 ... 7.0    | F4300-100PT |
| vacuum switch   | 4 | 10  | 20  | -1 | -0.007 ... -0.17 | F4300-X 5PT |
|                 | 4 | 20  | 34  | -1 | -0.015 ... -0.34 | F4300-X10PT |
|                 | 4 | 34  | 50  | -1 | -0.050 ... -1.00 | F4300-X30PT |



F4300-...PT



F4300-...FM



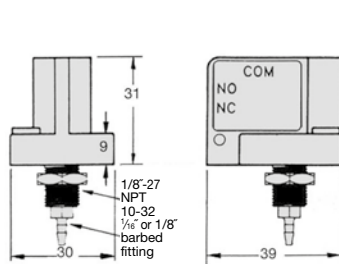
F4300-...PM



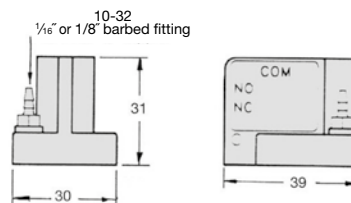
F4300-...MM

## Special options, add or change the appropriate letter

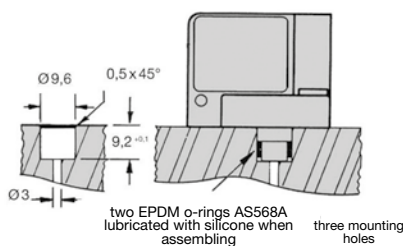
|                         |                                               |                     |
|-------------------------|-----------------------------------------------|---------------------|
| flush mounting          | barbed fitting made of nylon, Ø 1/16", Ø 2 mm | F4300-...FM         |
| panel mounting          | barbed fitting made of nylon, Ø 1/16", Ø 2 mm | F4300-...PM         |
| manifold mounting       |                                               | F4300-...MM         |
| barbed fittings         | for FM and PM, made of nylon, Ø 1/16", Ø 2 mm | F4300-...B80 Stand. |
|                         | nylon, Ø 1/16", Ø 4 mm                        | F4300-...B85        |
|                         | polysulphone, Ø 1/16", Ø 2 mm                 | F4300-...P80        |
|                         | polysulphone, Ø 1/8", Ø 4 mm                  | F4300-...P85        |
| gold contact            | 0.1 A at 125 V AC                             | F4300-...1B         |
| factory-set switchpoint | ± 5%, indicate on order                       | F4300-...X          |
| free of oil and grease  | specially cleaned, suitable for oxygen        | F4300-...L          |



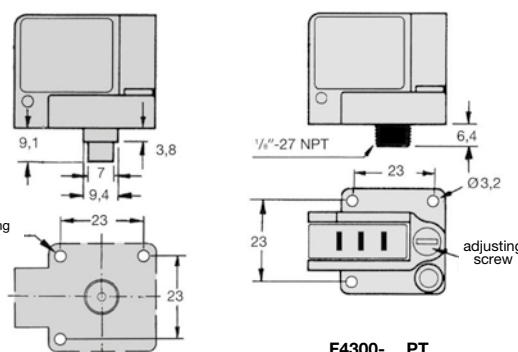
F4300-...PM



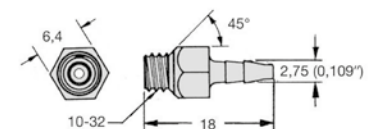
F4300-...FM



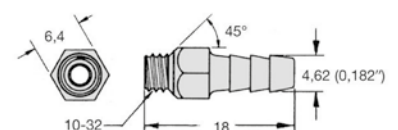
F4300-...MM



F4300-...PT



B80 / P80



B85 / P85

\* Product group

PDF CAD  
www.aircom.net



Order example:  
F4300-2PT



