

Submersible Sewage Pump Type ABS XFP 80C - 205G

SULZER

Robust, reliable, submersible pumps, with Premium Efficiency motors from 1.3 to 30.0 kW. For the pumping of wastewater and sewage from buildings and sites in private, commercial, industrial and municipal areas.

Features

- The water-pressure-tight, encapsulated, flood-proof motor and the pump section form a compact, robust, modular construction.
- NEMA Class A temperature rise.
- Premium Efficiency motors in accordance with IEC 60034-30 level IE3 with testing in accordance with IEC60034-2-1.
- Continuously rated motor in submerged and non-submerged applications.
- Double mechanical seals. SiC-SiC at the medium side; SiC-C (80C - 150E) and SiC-SiC (100G - 205G) at the motor. XFP 100G - 205G has an additional inner lipseal at the motor side. All seals are independent of rotation direction and resistant to temperature shock.
- Anti-wicking cable plug solution (80C - 150E), or water-pressure-sealed connection chamber (100G - 205G).
- Hydraulic options of Contrablock and Contrablock Plus impellers for high efficiency, or vortex impellers for maximum solids handling.
- Lubricated-for-life bearings with a calculated lifetime of minimum 50,000 hrs. (80C - 150E), and 100,000 hrs. (100G - 205G).
- Stainless steel shaft. Designed with high safety factor to prevent fatigue fracture.
- Temperature monitoring by thermal sensors (140 °C) in the stator windings.
- Seal monitoring by a moisture probe (DI) in the motor and seal chambers (80C - 150E), or motor chamber (100G - 205G), which signals an inspection alert if there is leakage at the shaft seals.
- Smooth outer design to reduce rag build-up.
- Stainless steel lifting hoop.
- DN 80, DN 100, DN 150 and DN 200 radial slot DIN flange discharge.
- Maximum allowable temperature of the medium for continuous operation is 40 °C.
- Maximum submergence depth of 20 m.
- Explosion-proof as standard, in accordance with international standard ATEX 2014/34/EU [II 2G Ex h db IIB T4 Gb].



Motor

Premium Efficiency IE3, three-phase, squirrel-cage motor; 400 V; 50 Hz; 2-pole (2900 r/min), 4-pole (1450) and 6-pole (980). Protection type IP68, with stator insulation Class H.

Start-up: 1.3 - 3.0 kW = direct on line (DOL)
4.0 - 30.0 kW and 3.0 kW 6-pole = star-delta (YΔ).

Service factor: 1.3

Motors with other operating voltages and frequencies are also available.

Identification Code: e.g. XFP 80C CB1.3 PE22/4-C-50

Hydraulics:

XFP Product range

8 Discharge outlet DN (cm)

0Hydraulic type

C Volute opening (dia. mm): C = 222, E = 265, G = 335

CB..... Impeller type: CB = Contrablock, VX = vortex

1 Number of impeller vanes

3 Impeller size

Motor:

PE Premium Efficiency

22 Motor power P_2 kW x 10

4 Number of poles

C Volute opening (dia. mm): C = 222, E = 265, G = 335

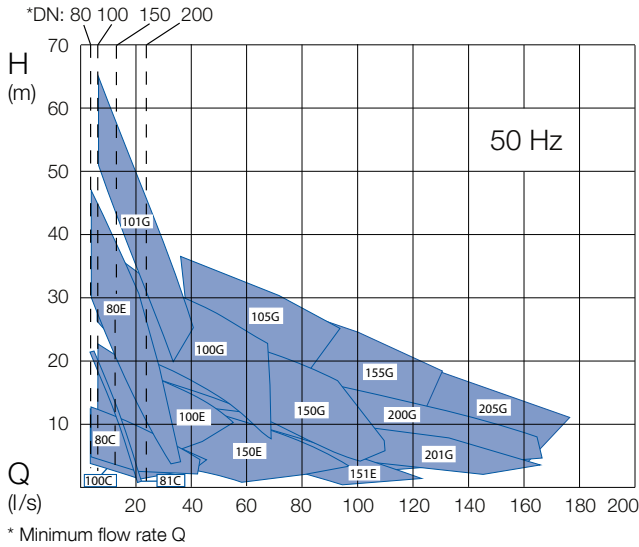
50 Frequency

Technical data

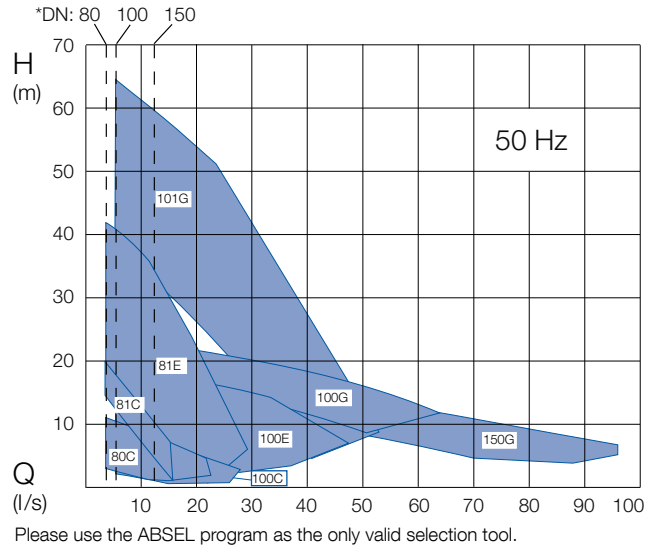
| XFP | Motor | Impeller size | Rated voltage (V) | Motor power* (kW) | | Rated current (A) | Speed (r/min) | Cable size | Weight** (kg) |
|----------|----------|---------------|-------------------|-------------------|----------------|-------------------|---------------|----------------|---------------|
| | | | | P ₁ | P ₂ | | | | |
| 80C-CB1 | PE 22/4 | 3, 4 | 400 3~ | 2.5 | 2.2 | 4.6 | 1450 | 7G1.5 | 110 / n.a. |
| | PE 29/4 | 2 | 400 3~ | 3.4 | 3.0 | 6.4 | 1450 | 7G1.5 | 110 / n.a. |
| | PE 13/6 | 1, 2, 4 | 400 3~ | 1.6 | 1.3 | 3.6 | 980 | 7G1.5 | 110 / n.a. |
| 80C-VX | PE 15/4 | 4, 5, 6, 7 | 400 3~ | 1.8 | 1.5 | 3.2 | 1450 | 7G1.5 | 100 / n.a. |
| | PE 22/4 | 2, 3, | 400 3~ | 2.5 | 2.2 | 4.6 | 1450 | 7G1.5 | 110 / n.a. |
| | PE 29/4 | 1 | 400 3~ | 3.4 | 3.0 | 6.4 | 1450 | 7G1.5 | 110 / n.a. |
| 80E-CB1 | PE 70/2 | 4 | 400 3~ | 7.7 | 7.0 | 13.5 | 2900 | 10G1.5 | 150 / n.a. |
| | PE 110/2 | 1, 2, 3 | 400 3~ | 12.1 | 11.0 | 20.1 | 2900 | 10G1.5 | 180 / n.a. |
| 81C-CB1 | PE 40/2 | 1 | 400 3~ | 4.5 | 4.0 | 7.4 | 2900 | 10G1.5 | 120 / n.a. |
| 81C-VX | PE 30/2 | 2 | 400 3~ | 3.4 | 3.0 | 5.6 | 2900 | 7G1.5 | 110 / n.a. |
| | PE 40/2 | 1, 2 | 400 3~ | 4.5 | 4.0 | 7.4 | 2900 | 10G1.5 | 120 / n.a. |
| 81E-VX | PE 55/2 | 5 | 400 3~ | 6.1 | 5.5 | 10.3 | 2900 | 10G1.5 | 140 / n.a. |
| | PE 70/2 | 4 | 400 3~ | 7.7 | 7.0 | 13.5 | 2900 | 10G1.5 | 140 / n.a. |
| | PE 110/2 | 2, 3 | 400 3~ | 12.1 | 11.0 | 20.1 | 2900 | 10G1.5 | 160 / n.a. |
| 100C-CB1 | PE 22/4 | 3, 4 | 400 3~ | 2.5 | 2.2 | 4.6 | 1450 | 7G1.5 | 110 / n.a. |
| | PE 29/4 | 2 | 400 3~ | 3.4 | 3.0 | 6.4 | 1450 | 7G1.5 | 110 / n.a. |
| | PE 13/6 | 1, 2, 4 | 400 3~ | 1.6 | 1.3 | 3.6 | 980 | 7G1.5 | 110 / n.a. |
| 100C-VX | PE 15/4 | 4, 5, 6 | 400 3~ | 1.8 | 1.5 | 3.2 | 1450 | 7G1.5 | 100 / n.a. |
| | PE 22/4 | 2, 3, | 400 3~ | 2.5 | 2.2 | 4.6 | 1450 | 7G1.5 | 110 / n.a. |
| | PE 29/4 | 1 | 400 3~ | 3.4 | 3.0 | 6.4 | 1450 | 7G1.5 | 110 / n.a. |
| 100E-CB1 | PE 40/4 | 5 | 400 3~ | 4.4 | 4.0 | 8.4 | 1450 | 10G1.5 | 160 / n.a. |
| | PE 60/4 | 3, 4 | 400 3~ | 6.7 | 6.0 | 13.6 | 1450 | 10G1.5 | 170 / n.a. |
| | PE 90/4 | 1, 2 | 400 3~ | 9.9 | 9.0 | 18.1 | 1450 | 10G1.5 | 190 / n.a. |
| 100E-VX | PE 40/4 | 4, 5, 6 | 400 3~ | 4.4 | 4.0 | 8.4 | 1450 | 10G1.5 | 140 / n.a. |
| | PE 60/4 | 2, 3, 4 | 400 3~ | 6.7 | 6.0 | 13.6 | 1450 | 10G1.5 | 150 / n.a. |
| | PE 90/4 | 1, 2, 3 | 400 3~ | 9.9 | 9.0 | 18.1 | 1450 | 10G1.5 | 170 / n.a. |
| 100G-CB1 | PE 110/4 | 5 | 400 3~ | 12.0 | 11.0 | 23.4 | 1450 | 10G1.5 | 340 / 380 |
| | PE 140/4 | 4 | 400 3~ | 15.2 | 14.0 | 27.8 | 1450 | 10G2.5 | 340 / 380 |
| | PE 160/4 | 3 | 400 3~ | 17.4 | 16.0 | 33.1 | 1450 | 2 x 4G4+2x0.75 | 360 / 400 |
| | PE 185/4 | 1, 2 | 400 3~ | 20.0 | 18.5 | 36.9 | 1450 | 2 x 4G4+2x0.75 | 360 / 400 |
| | PE 220/4 | 1 | 400 3~ | 23.7 | 22.0 | 42.5 | 1450 | 2 x 4G4+2x0.75 | 370 / 420 |
| 100G-VX | PE 110/4 | 4 | 400 3~ | 12.0 | 11.0 | 23.4 | 1450 | 10G1.5 | 330 / 370 |
| | PE 140/4 | 3 | 400 3~ | 15.2 | 14.0 | 27.8 | 1450 | 10G2.5 | 330 / 370 |
| | PE 160/4 | 2 | 400 3~ | 17.4 | 16.0 | 33.1 | 1450 | 2 x 4G4+2x0.75 | 350 / 390 |
| | PE 185/4 | 1 | 400 3~ | 20.0 | 18.5 | 36.9 | 1450 | 2 x 4G4+2x0.75 | 350 / 390 |
| 101G-CB1 | PE 150/2 | 2, 3 | 400 3~ | 16.0 | 15.0 | 27.5 | 2900 | 10G2.5 | 320 / 360 |
| | PE 185/2 | 1 | 400 3~ | 20.0 | 18.5 | 33.7 | 2900 | 2 x 4G4+2x0.75 | 320 / 360 |
| | PE 250/2 | 1 | 400 3~ | 26.9 | 25.0 | 44.0 | 2900 | 2 x 4G4+2x0.75 | 340 / 380 |
| 101G-VX | PE 150/2 | 6, 7 | 400 3~ | 16.0 | 15.0 | 27.5 | 2900 | 10G2.5 | 330 / 370 |
| | PE 185/2 | 4, 5, 6, 7 | 400 3~ | 20.0 | 18.5 | 33.7 | 2900 | 2 x 4G4+2x0.75 | 330 / 370 |
| | PE 250/2 | 1, 2, 3, 4, 5 | 400 3~ | 26.9 | 25.0 | 44.0 | 2900 | 2 x 4G4+2x0.75 | 350 / 390 |
| 105G-CB2 | PE 220/4 | 3, 4 | 400 3~ | 23.7 | 22 | 42.5 | 1450 | 2 x 4G4+2x0.75 | 410 / 450 |
| | PE 300/4 | 1, 2, 3 | 400 3~ | 32.1 | 30 | 58.5 | 1450 | 2 x 4G4+2x0.75 | 440 / 490 |
| 150E-CB1 | PE 40/4 | 5, 6 | 400 3~ | 4.4 | 4.0 | 8.4 | 1450 | 10G1.5 | 170 / n.a. |
| | PE 60/4 | 3, 4, 5 | 400 3~ | 6.7 | 6.0 | 13.6 | 1450 | 10G1.5 | 170 / n.a. |
| | PE 90/4 | 1, 2, 3 | 400 3~ | 9.9 | 9.0 | 18.1 | 1450 | 10G1.5 | 190 / n.a. |
| | PE 30/6 | 1, 2, 3, 4 | 400 3~ | 3.5 | 3.0 | 6.4 | 980 | 10G1.5 | 170 / n.a. |
| 150G-CB1 | PE 110/4 | 5 | 400 3~ | 12.0 | 11.0 | 23.4 | 1450 | 10G1.5 | 340 / 390 |
| | PE 140/4 | 4 | 400 3~ | 15.2 | 14.0 | 27.8 | 1450 | 10G2.5 | 340 / 390 |
| | PE 160/4 | 3 | 400 3~ | 17.4 | 16.0 | 33.1 | 1450 | 2 x 4G4+2x0.75 | 370 / 410 |
| | PE 185/4 | 2 | 400 3~ | 20.0 | 18.5 | 36.9 | 1450 | 2 x 4G4+2x0.75 | 370 / 410 |
| | PE 220/4 | 1 | 400 3~ | 23.7 | 22.0 | 42.5 | 1450 | 2 x 4G4+2x0.75 | 380 / 430 |
| 150G-VX | PE 110/4 | 4 | 400 3~ | 12.0 | 11.0 | 23.4 | 1450 | 10G1.5 | 330 / 380 |
| | PE 140/4 | 3 | 400 3~ | 15.2 | 14.0 | 27.8 | 1450 | 10G2.5 | 330 / 380 |
| | PE 160/4 | 2 | 400 3~ | 17.4 | 16.0 | 33.1 | 1450 | 2 x 4G4+2x0.75 | 360 / 400 |
| | PE 185/4 | 1, 2 | 400 3~ | 20.0 | 18.5 | 36.9 | 1450 | 2 x 4G4+2x0.75 | 360 / 400 |
| 151E-CB2 | PE 49/4 | 5 | 400 3~ | 5.5 | 4.9 | 10.2 | 1450 | 10G1.5 | 180 / n.a. |
| | PE 60/4 | 4 | 400 3~ | 6.7 | 6.0 | 13.6 | 1450 | 10G1.5 | 180 / n.a. |
| | PE 90/4 | 2, 4 | 400 3~ | 9.9 | 9.0 | 18.1 | 1450 | 10G1.5 | 200 / n.a. |
| 155G-CB2 | PE 220/4 | 3, 4 | 400 3~ | 23.7 | 22 | 42.5 | 1450 | 2 x 4G4+2x0.75 | 410 / 450 |
| | PE 300/4 | 1, 2, 3 | 400 3~ | 32.1 | 30 | 58.5 | 1450 | 2 x 4G4+2x0.75 | 440 / 490 |
| 200G-CB1 | PE 110/4 | 5 | 400 3~ | 12.0 | 11.0 | 23.4 | 1450 | 10G1.5 | 380 / 420 |
| | PE 140/4 | 4 | 400 3~ | 15.2 | 14.0 | 27.8 | 1450 | 10G2.5 | 380 / 420 |
| | PE 160/4 | 3 | 400 3~ | 17.4 | 16.0 | 33.1 | 1450 | 2 x 4G4+2x0.75 | 400 / 450 |
| | PE 185/4 | 2 | 400 3~ | 20.0 | 18.5 | 36.9 | 1450 | 2 x 4G4+2x0.75 | 400 / 450 |
| | PE 220/4 | 1 | 400 3~ | 23.7 | 22.0 | 42.5 | 1450 | 2 x 4G4+2x0.75 | 410 / 470 |
| | PE 90/6 | 1, 2, 3 | 400 3~ | 10.1 | 9.0 | 20.9 | 980 | 10G1.5 | 380 / 430 |
| 201G-CB2 | PE 90/6 | 5, 6 | 400 3~ | 10.1 | 9.0 | 20.9 | 980 | 10G1.5 | 380 / 430 |
| | PE 110/6 | 3 | 400 3~ | 12.2 | 11.0 | 23.8 | 980 | 10G1.5 | 380 / 430 |
| | PE 140/6 | 1 | 400 3~ | 15.4 | 14.0 | 29.4 | 980 | 10G2.5 | 400 / 440 |
| 205G-CB2 | PE 220/4 | 3, 4 | 400 3~ | 23.7 | 22 | 42.5 | 1450 | 2 x 4G4+2x0.75 | 430 / 480 |
| | PE 300/4 | 1, 2, 3 | 400 3~ | 32.1 | 30 | 58.5 | 1450 | 2 x 4G4+2x0.75 | 460 / 510 |

* P₁ = power at mains. P₂ = power at motor shaft. **Without / with cooling jacket; includes 10 m cable. Data for alternative voltages available on request.

Performance fields with Contrablock impeller



Performance fields with vortex impeller



Standard and options

| Description | Standard | Option |
|----------------------------------|---|--|
| Mains voltage | 400 V 3~ | 230, 500, 695 V * |
| Voltage tolerance | ± 10% | - |
| Motor efficiency | Premium Eff. IE3 | - |
| Insulation class | H | - |
| Start-up | Direct on line (DOL), star-delta (YΔ) | - |
| Approvals | Ex / ATEX | - |
| Mechanical seal (at medium side) | SiC-SiC-NBR | SiC-SiC-Viton |
| Mechanical seal (at motor side) | SiC-C-NBR (80C - 150E), SiC-SiC-NBR (100G - 205G) | - |
| O-rings (external seals) | NBR | Viton (not available for cable entry seal) |
| Cables | H07RN8-F | EMC |
| Cable length (m) | 10 | 20, 30, 40, 50 |
| Protective coating | 2k Epoxy 120 µm | 2k Epoxy 400 µm |
| Preparation for lifting hoist | Lifting hoop | - |
| Cooling | Self-cooling (80C - 150E); by the medium (100G - 205G) | Closed cooling (100G - 205G) |
| Installation | Wet-well | Dry well or transportable |

* Selected motors only. Contact Sulzer for details.

Monitoring

| Description | | Standard | Option |
|-------------------------------|--|----------|--------|
| Motor (temperature) | Bi-metallic switch in windings | ● | - |
| | PTC thermistor in windings | - | ●** |
| Seals (leakage) | Moisture sensor (DI) in motor and seal chambers (80C - 150E) | ● | - |
| | Moisture sensor (DI) in motor chamber (100G - 205G) | ● | - |

Temperature and leakage relays are required. See accessories table.

** Must be selected when pump is operated via VFD.

Materials

| Description | Material | Option |
|---------------|-----------------------------------|--|
| Motor housing | Cast iron EN-GJL-250 | - |
| Volute | Cast iron EN-GJL-250 | Ceramic coated EN-GJL-250*** |
| Impeller | Cast iron EN-GJL-250 | Stainless steel 1.4470 (AISI 329)***, Flame hardened or ceramic coated EN-GJL-250*** |
| Bottom plate | Cast iron EN-GJL-250 | Stainless steel 1.4470 (AISI 329)***, Flame hardened or ceramic coated EN-GJL-250*** |
| Motor shaft | Stainless steel 1.4021 (AISI 420) | - |
| Lifting hoop | Stainless steel 1.4401 (AISI 316) | - |
| Fasteners | Stainless steel 1.4401 (AISI 316) | - |

*** Selected models only. Contact Sulzer for details.

Accessories

| | Description | Size | XFP | Part no. | |
|---|--|--------------------------------|--------------------------------|--------------|-----------|
| Fixed installation - wet well with Sulzer Automatic Coupling System | Pedestal* (cast iron EN-GJL-250) 90° cast bend (single guide rail) - DIN flange connection | DN 80 | 80C - 81E | 62320649 | |
| | | DN 100 | 100C - 105G | 62320652 | |
| | 90° cast bend (single guide rail) - plug/clamp connection | DN 100 (high-head) | 101G | | DPR31211F |
| | | DN 150 | 150E - 155G | | 62320655 |
| | | DN 200 | 200G (4-pole) | | DPT91211F |
| | | DN 200 | 200G (6-pole) | | 62320658 |
| | | DN 200 | 201G & 205G | | 62320658 |
| | 90° cast bend (twin guide rail) - DIN flange connection | DN 80 (pipe Ø90 mm) | 80C - 81E | | 62320650 |
| | | DN 100 (pipe Ø109 mm) | 100C - 105G | | 62320653 |
| | | DN 100 high head (Ø109 mm) | 101G | | DPR31211F |
| | | DN 100 (pipe Ø115 mm) | 100C - 105G | | 62320654 |
| | 90° cast bend (twin guide rail) - DIN flange connection | DN 150 (pipe Ø160 mm) | 150E - 155G | | 62320656 |
| | | DN 80 | 80C - 81E | | 62325025 |
| | | DN 100 | 100C - 105G | | 62325026 |
| DN 150 | | 150E - 155G | | 62325027 | |
| Pedestal bracket fasteners single guide rail version (galvanised steel) | DN 200 | 200G - 205G | | 62325028 | |
| | | | 80C - 81E | 62610632 | |
| single guide rail version (stainless steel) | | | 100C - 105G | 62610633 | |
| | | | 150E - 155G | 62610635 | |
| | | | 200G - 205G | 62610883 | |
| twin guide rail version (galvanised steel) | | | 80C - 81E | 62610899 | |
| | | | 100C - 105G | 62610637 | |
| | | | 150E - 155G | 62610639 | |
| | | | 200G - 205G | 62610862 | |
| Pedestal base anchor bolts single and twin guide rail (galvanised steel) | | | 80C - 81E | 62615053 | |
| | | | 100C - 105G | 62615054 | |
| | | | 150E - 155G | 62615055 | |
| | | | 200G - 205G | 62615056 | |
| Chain Kits (stainless steel) including shackle Working load limit (WLL) 320 kg | 1.6 m | 3.0 m | See pump weights for selection | 62610775 | |
| | | | | 62610784 | |
| | | | | 62610785 | |
| | | | | 310101395001 | |
| | 4.0 m | 3.0 m | See pump weights for selection | 310101236003 | |
| | | | | 310101236004 | |
| | | | | 310101236006 | |
| | | | | 310101236007 | |
| | 6.0 m | 4.0 m | See pump weights for selection | 310101236013 | |
| | | | | 310101236014 | |
| | | | | 310101236016 | |
| | | | | 310101236017 | |
| 7.0 m | 6.0 m | See pump weights for selection | 310101236033 | | |
| | | | 310101236034 | | |
| | | | 310101236036 | | |
| | | | 310101236037 | | |
| Fixed installation - dry well, (horizontal) | Pump Support Kit (EN-GJL-250) head and volute supports with fixing bolts and vibration damper | | 80C, 81C. | 61825023 | |
| | | | 80C, 81C, 100C. | 61825033** | |
| | | | 80E. | 61825029 | |
| | | | 81E. | 61825038 | |
| | | | 100C. | 61825024 | |
| | | | 100E. | 61825030 | |
| | | | 150E, 151E. | 61825031 | |
| | | | 101G. | 61825036*** | |
| | | | 100G - 205G. | 61825037 | |
| | | (vertical) | Ground Support Stand | | 80C, 81C. |
| | | | | 80E & 81E. | 61355020 |
| | | 100C. | | 61355015 | |
| | 100E. | 61355021 | | | |
| | 150E, 151E. | 61355022 | | | |
| | 101G. | 61355024*** | | | |
| | 100G - 205G. | 61355023 | | | |
| Adapter kit (required with support stand) | | | 80C. | 62665347*** | |
| | | | 100C. | 62665348*** | |
| Transportable | Skirtbase | | 80C, 81C, 100C. | 61355016 | |
| | | | 80E & 81E. | 61355017 | |
| | | | 100E. | 61355018 | |
| | | | 150E, 151E. | 61355019 | |
| | | | 101G. | 61355026*** | |
| | | | 100G - 205G | 61355025 | |
| General | Cathodic Protection (zinc anodes) | | 80C - 205G | 13905000 | |
| | Leakage Relay Type ABS CA 461 | 110 - 230 VAC | 80C - 205G | 16907010 | |
| | | 18 - 36 VDC, SELV | | 16907011 | |
| Temperature and Leakage Relay Type ABS CA 462 | 110 - 230 VAC | 80C - 205G | 16907006 | | |
| | 18 - 36 VDC, SELV | | 16907007 | | |

*Guide rail not included **Vortex version of pumps (VX) *** Contrablock version of pump (CB)