



# Original Operating Instructions

Pump Monitoring by

Temperature Probe PT 100

05/2011

BA/EN-50001-Coversheet-03.doc

## 1. General

The surface temperature of the isolation shell can be monitored by means of a resistance thermometer PT 100. The following malfunctions can be detected:

- Operation against closed gate valve on the discharge side
- Operation with closed gate valve on the suction side
- Dry-running due to failure of having the pump filled before start-up
- Evaporation of the flush flow fluid
- Blocking of flow ports

## 2. Connection

The PT 100 is screwed into the connection provided in the flange of the intermediate lantern. (Fig. 1, part no. 620.1) During installation of the PT100 make sure that the pivot rests against the isolation shell.

Part no. 620.1 – PT 100

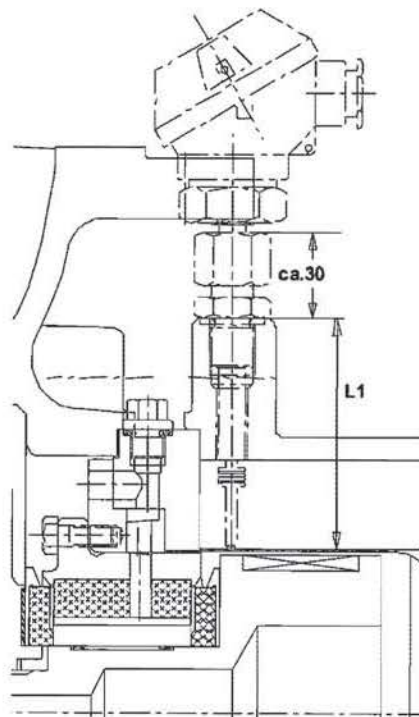


Fig. 1: Pump monitoring by installation of a PT 100 on the isolation shell

The immersion length L1 depends on the pump size:

The following information are valid for pump type SLM NV:

Nominal impeller diameter / Magnet drive size	PT 100 Nominal length	Immersion length L1
125-07S	110	78
125-09E	110	66
160-07S	110	100,5
160-09S	110	89
160-09E	110	89
160-13E	110	91
200-09S	160	111
200-09E	160	111
200-13S	110	91
200-13E	110	91
250-13E	160	121
250-16E	110	106
315-19E	160	114
400-25E	160	133
400-31E	160	151
500-31E	200	181

Information on other pump sizes and pump types available on request.

The PT 100 pivot comes with a metal bellows. This way it is granted that the pivot of the PT100 rests against the surface of the isolation shell.

**ATTENTION**

**In order not to damage the bellows and the pivot of the probe, cautiously insert the PT100 into the connection bore on the intermediate lantern until the pivot touches the isolation shell.**

When connecting the PT 100 to a measuring transducer make sure the operation instructions of the pertaining transducer are observed.

The measuring signal of the PT 100 can be processed by means of various monitoring installations (temperature controller, relay, etc.). When connecting the PT 100 measuring transducer to the monitoring unit used in the installation, please observe the operation instructions pertaining to said monitoring unit.

When the PT 100 is used in hazardous areas, appropriate measures are to be taken (use of approved components, Zener barriers, etc.).

	<p>LOAD DETECTOR M20 IP20;-20+50 C; 50-60HZ;3X380-500V ANALOGUE OUTPUT 0(4)-20MA</p> <p>- 1,000 pc. 26 P00092383 0,213 CURRENT TRANSFORMER CTM010 01-2471-10 PRIMARY NOMINAL CURRENT 10A</p> <p>- 1,000 pc. 27 P00092380 0,480 CURRENT TRANSFORMER ASK 541.4 PRIMARY NOMINAL CURRENT 250A SEKUNDAER NOMINAL CURRENT 5A;5VA;KL 1</p> <p>- 6,000 pc. 28 P00540674 11,400 STONE BOLT CM30X400 4.6/4.8 FORM C</p> <p>- 6,000 pc. 29 P00160697 1,260 HEXAGON NUT M30 5 GALVANIZED AND CHROMIZED.</p>
<p>CASE 6 OF 10</p> <p>1 case 2.580,000 kg 2.230,000 kg 275,00 x 125,00 x 152,00 cm</p>	<p>*Subject to Export license 40317036*</p> <p>- 1,000 pc. 4 P01179556 2.216,387 84137059 Customer Pos.: P-15002 B VCM reflux pump SLM NVO 125-100-315-19E08 J centrifugal pump with magnetic coupling Serialnumber SN0076439 (P-15002 B)</p> <p><b>loose parts</b></p> <div style="border: 1px solid red; padding: 5px;"> <p>- 1,000 pc. 24 P00893529 0,220 TEMPERATURE PROBE /040 3L. -40/+200°C PT100;NOMINAL LENGTH=160;G1/4;1.4571/STEEL FA.DITTMER; ME 1 X PT 100 OHM;J/HEAD</p> </div> <p>- 1,000 pc. 25 P00092381 0,520 LOAD DETECTOR M20 IP20;-20+50 C; 50-60HZ;3X380-500V ANALOGUE OUTPUT 0(4)-20MA</p> <p>- 1,000 pc. 26 P00092383 0,213 CURRENT TRANSFORMER CTM010 01-2471-10 PRIMARY NOMINAL CURRENT 10A</p> <p>- 1,000 pc. 27 P00092380 0,480 CURRENT TRANSFORMER ASK 541.4 PRIMARY NOMINAL CURRENT 250A SEKUNDAER NOMINAL CURRENT 5A;5VA;KL 1</p>



	<p>SLM GVOT 065-032-160/5-13E05 Multistage Centrifugal pump, barrel design, with magnetic coupling type Serialnumber SN0076432 (P-14007 A), SN0076433 (P-14007 B)</p> <p><b>loose parts</b></p> <table border="1" data-bbox="451 470 1390 625"> <tr> <td>-</td> <td>2,000 pc.</td> <td>7</td> <td>P00848374</td> <td>0,400</td> </tr> <tr> <td colspan="5">TEMPERATURE PROBE /040 3L. -40/+200°C PT100;NOMINAL LENGTH=110;G1/4;1.4571/STEEL FA.DITTMER; ME 1 X PT 100 OHM;J/HEAD</td> </tr> </table> <table border="1" data-bbox="594 630 1390 1129"> <tr> <td>-</td> <td>2,000 pc.</td> <td>8</td> <td>P00092381</td> <td>1,040</td> </tr> <tr> <td colspan="5">LOAD DETECTOR M20 IP20;-20+50 C; 50-60HZ;3X380-500V ANALOGUE OUTPUT 0(4)-20MA</td> </tr> <tr> <td>-</td> <td>2,000 pc.</td> <td>9</td> <td>P00966914</td> <td>1,060</td> </tr> <tr> <td colspan="5">CURRENT TRANSFORMER CTM100 01-1083-10 PRIMARY NOMINAL CURRENT100A</td> </tr> <tr> <td>-</td> <td>8,000 pc.</td> <td>10</td> <td>P00540666</td> <td>7,520</td> </tr> <tr> <td colspan="5">STONE BOLT CM24X320 4.6/4.8 FORM C</td> </tr> <tr> <td>-</td> <td>8,000 pc.</td> <td>11</td> <td>P00093237</td> <td>0,736</td> </tr> <tr> <td colspan="5">HEXAGON NUT M24 5 GALVANIZED AND CHROMIZED.</td> </tr> </table>	-	2,000 pc.	7	P00848374	0,400	TEMPERATURE PROBE /040 3L. -40/+200°C PT100;NOMINAL LENGTH=110;G1/4;1.4571/STEEL FA.DITTMER; ME 1 X PT 100 OHM;J/HEAD					-	2,000 pc.	8	P00092381	1,040	LOAD DETECTOR M20 IP20;-20+50 C; 50-60HZ;3X380-500V ANALOGUE OUTPUT 0(4)-20MA					-	2,000 pc.	9	P00966914	1,060	CURRENT TRANSFORMER CTM100 01-1083-10 PRIMARY NOMINAL CURRENT100A					-	8,000 pc.	10	P00540666	7,520	STONE BOLT CM24X320 4.6/4.8 FORM C					-	8,000 pc.	11	P00093237	0,736	HEXAGON NUT M24 5 GALVANIZED AND CHROMIZED.				
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<p>CASE 10 OF 10</p> <p>1 case 455,000 kg 325,000 kg 130,00 x 95,00 x 127,00 cm</p>	<p>*Subject to Export license 40317036*</p> <p><b>start up commissioning spares</b></p> <table border="1" data-bbox="594 1268 1390 1837"> <tr> <td>-</td> <td>6,000 pc.</td> <td>1</td> <td>P00989039</td> <td>0,684</td> </tr> <tr> <td colspan="5">84849000 GROOVED METAL GASKET J 225 D 239 S 3 1.4571/ PTFE Pos 400.1</td> </tr> <tr> <td>-</td> <td>2,000 pc.</td> <td>2</td> <td>P00989040</td> <td>0,280</td> </tr> <tr> <td colspan="5">84849000 GROOVED METAL GASKET J 275 D 289 S 3 1.4571 KAMMPROF.MIT PTFE-AUFLAGE BEIDSEITIG 0,5MM DICK;TYP B7A Pos 400.1</td> </tr> <tr> <td>-</td> <td>2,000 pc.</td> <td>3</td> <td>P00989433</td> <td>0,248</td> </tr> <tr> <td colspan="5">84849000 GROOVED METAL GASKET J330 D 344 S 4 1.4571/PTFE Pos 400.1</td> </tr> <tr> <td>-</td> <td>2,000 pc.</td> <td>4</td> <td>P01122241</td> <td>0,340</td> </tr> </table>	-	6,000 pc.	1	P00989039	0,684	84849000 GROOVED METAL GASKET J 225 D 239 S 3 1.4571/ PTFE Pos 400.1					-	2,000 pc.	2	P00989040	0,280	84849000 GROOVED METAL GASKET J 275 D 289 S 3 1.4571 KAMMPROF.MIT PTFE-AUFLAGE BEIDSEITIG 0,5MM DICK;TYP B7A Pos 400.1					-	2,000 pc.	3	P00989433	0,248	84849000 GROOVED METAL GASKET J330 D 344 S 4 1.4571/PTFE Pos 400.1					-	2,000 pc.	4	P01122241	0,340															
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