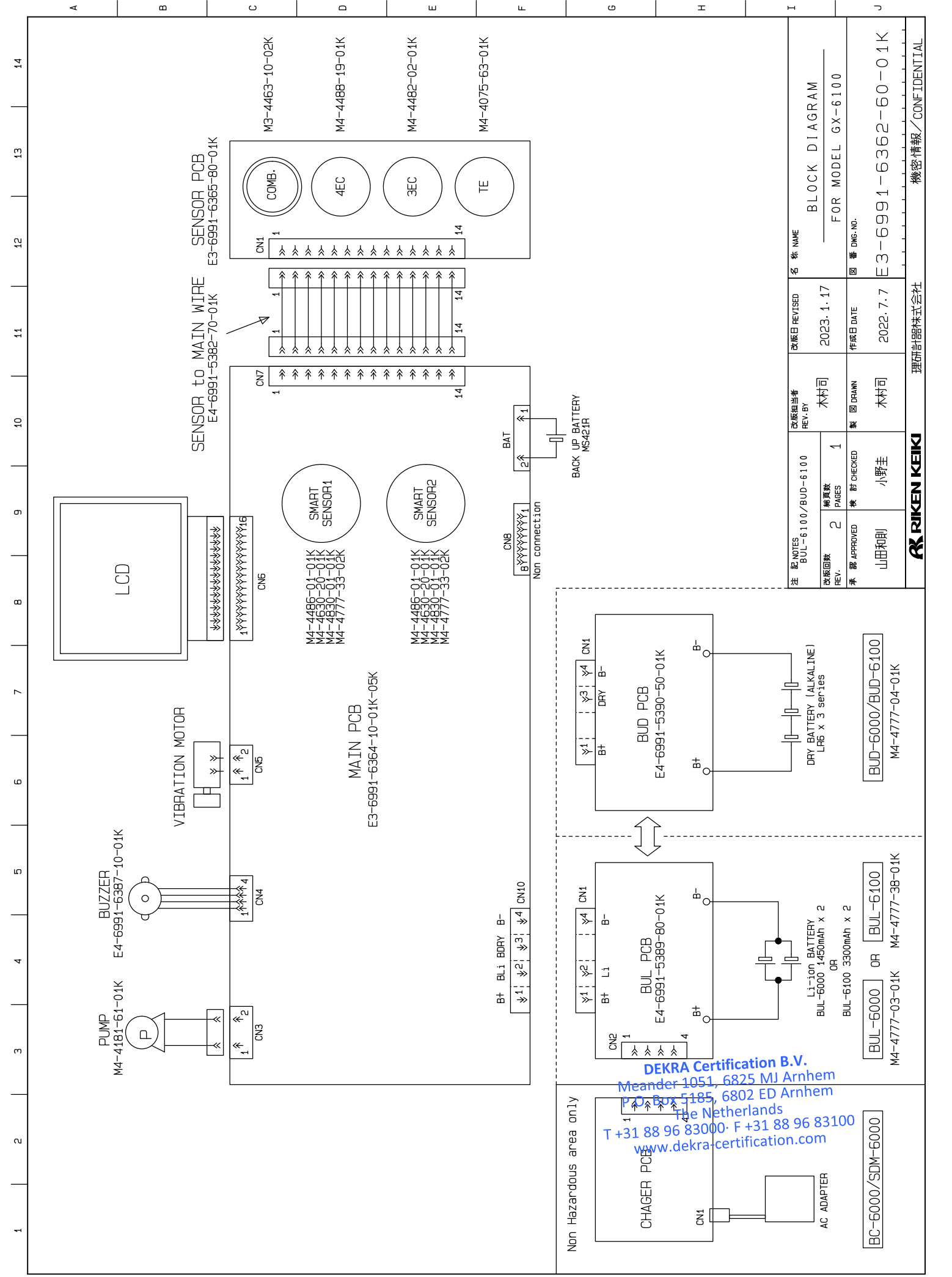
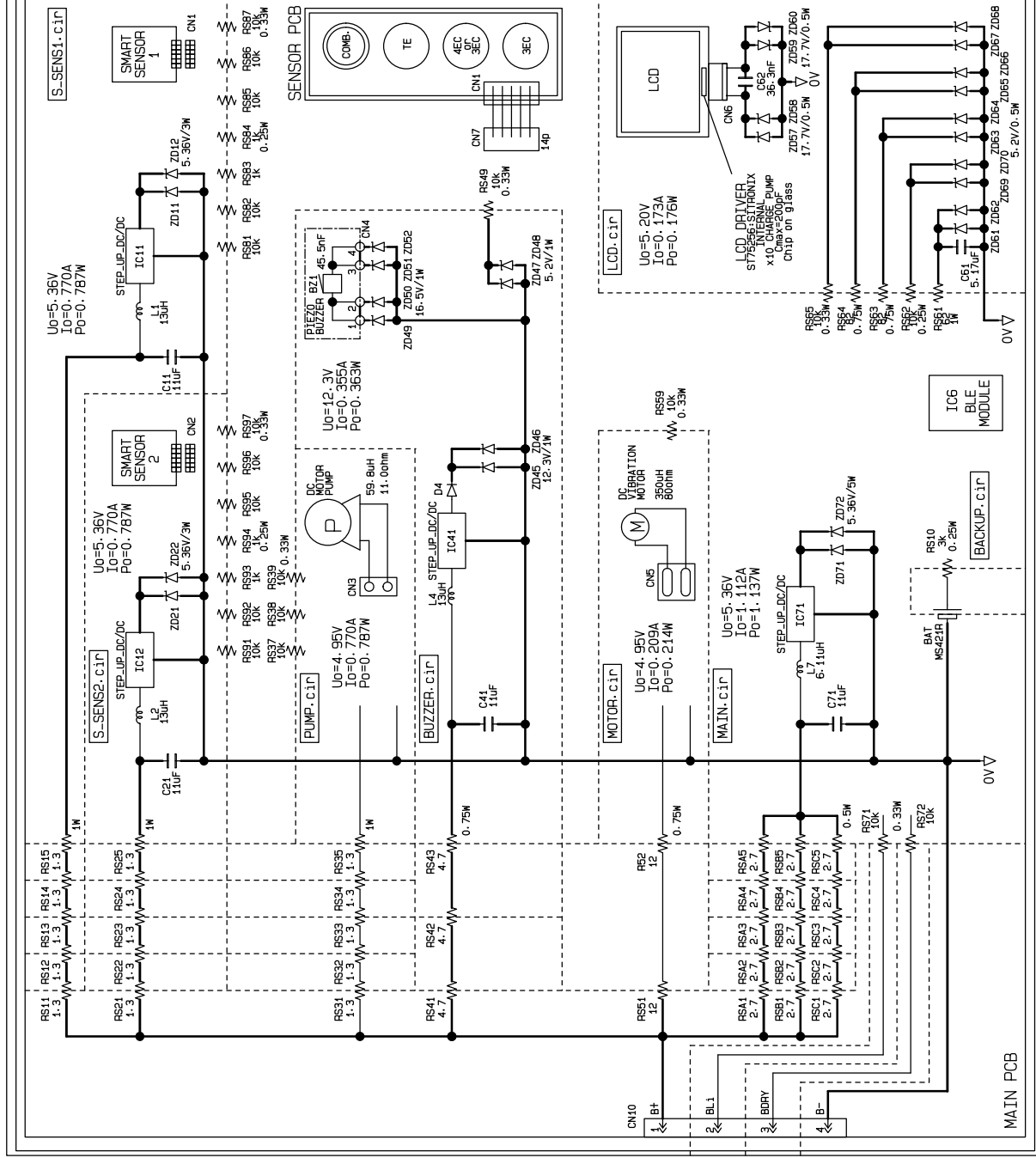
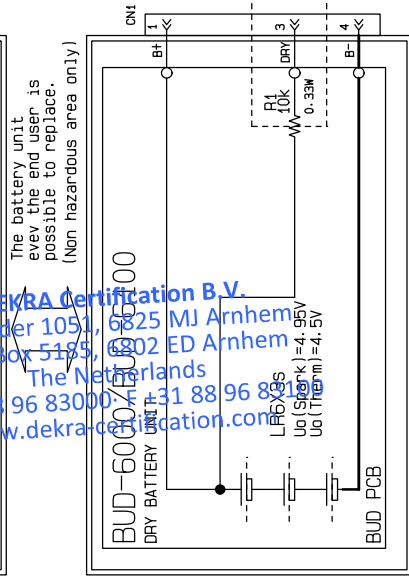
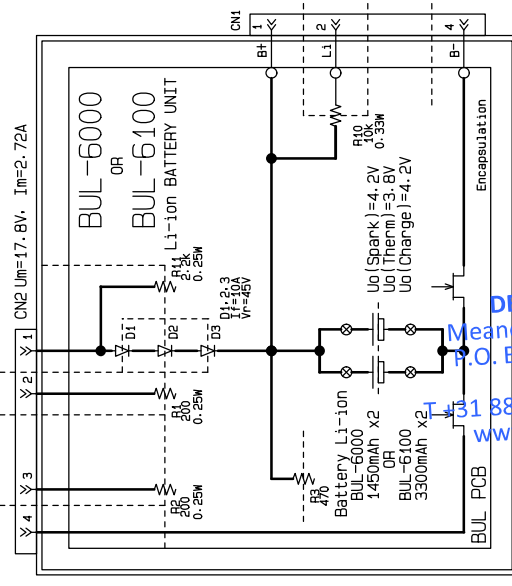
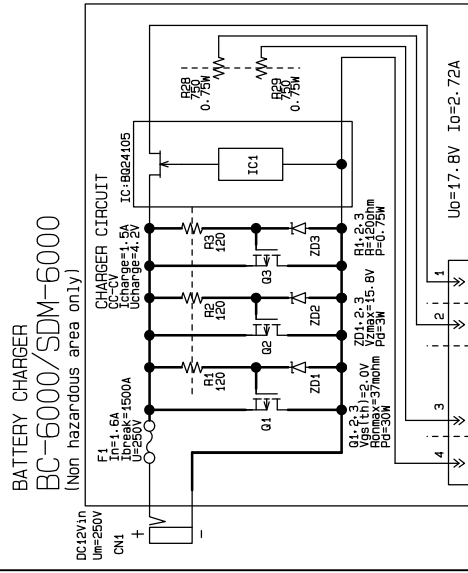


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<table><tr><td></td><td></td><td>DRAWING NAME</td><td>DRAWING No.</td><td>REV</td><td>DATE</td></tr><tr><td></td><td>01</td><td>BLOCK DIAGRAM FOR MODEL GX-6100</td><td>E3-6991-6362-60-01K</td><td>2</td><td>2023.1.17</td></tr><tr><td></td><td>02</td><td>DIAGRAM FOR I.S. KEEP FOR MODEL GX-6100</td><td>E3-6991-6352-70-01K</td><td>2</td><td>2023.1.17</td></tr><tr><td></td><td>03</td><td>OUTER STRUCTURE GX-6100</td><td>M3-4777-33-01K</td><td>1</td><td>2023.1.20</td></tr><tr><td></td><td>04</td><td>MAIN UNIT GX-6100</td><td>M2-4777-33-01K</td><td>3</td><td>2024.1.25</td></tr><tr><td></td><td>05</td><td>SCHEMATIC MAIN PCB FOR MODEL GX-6100</td><td>E3-6991-6364-10-01K</td><td>0</td><td>2022.7.7</td></tr><tr><td></td><td>06</td><td>SCHEMATIC MAIN PCB FOR MODEL GX-6100</td><td>E3-6991-6364-10-02K</td><td>1</td><td>2022.9.26</td></tr><tr><td></td><td>07</td><td>SCHEMATIC MAIN PCB FOR MODEL GX-6100</td><td>E3-6991-6364-10-03K</td><td>0</td><td>2022.7.7</td></tr><tr><td></td><td>08</td><td>SCHEMATIC MAIN PCB FOR MODEL GX-6100</td><td>E3-6991-6364-10-04K</td><td>0</td><td>2022.7.7</td></tr><tr><td></td><td>09</td><td>SCHEMATIC MAIN PCB FOR MODEL GX-6100</td><td>E3-6991-6364-10-05K</td><td>0</td><td>2022.7.7</td></tr><tr><td></td><td>10</td><td>PARTS LIST OF MAIN PCB FOR MODEL GX-6100</td><td>PLT-6991-6364-10 (1/4)</td><td>0</td><td>2022.7.7</td></tr><tr><td></td><td>11</td><td>PARTS LIST OF MAIN PCB FOR MODEL GX-6100</td><td>PLT-6991-6364-10 (2/4)</td><td>1</td><td>2022.9.26</td></tr><tr><td></td><td>12</td><td>PARTS LIST OF MAIN PCB FOR MODEL GX-6100</td><td>PLT-6991-6364-10 (3/4)</td><td>0</td><td>2022.7.7</td></tr><tr><td></td><td>13</td><td>PARTS LIST OF MAIN PCB FOR MODEL GX-6100</td><td>PLT-6991-6364-10 (4/4)</td><td>0</td><td>2022.7.7</td></tr><tr><td></td><td>14</td><td>MAIN PCB FOR MODEL GX-6100</td><td>E3-6991-6364-10-01A</td><td>0</td><td>2022.7.7</td></tr><tr><td></td><td>15</td><td>MAIN PCB FOR MODEL GX-6100</td><td>E3-6991-6364-10-02A</td><td>0</td><td>2022.7.7</td></tr><tr><td></td><td>16</td><td>SCHEMATIC SENSOR PCB FOR MODEL GX-6100</td><td>E3-6991-6365-80-01K</td><td>0</td><td>2022.7.7</td></tr><tr><td></td><td>17</td><td>PARTS LIST OF SENSOR PCB FOR MODEL GX-6100</td><td>PLT-6991-6365-80 (1/1)</td><td>0</td><td>2022.7.7</td></tr><tr><td></td><td>18</td><td>SENSOR PCB FOR MODEL GX-6100</td><td>E3-6991-6365-80-01A</td><td>0</td><td>2022.7.7</td></tr><tr><td></td><td>19</td><td>SENSOR to MAIN WIRE FOR MODEL GX-6000</td><td>E4-6991-5382-70-01K</td><td>0</td><td>2014.7.14</td></tr><tr><td></td><td>20</td><td>PUMP RP-12</td><td>M4-4181-61-01K</td><td>3</td><td>2013.1.29</td></tr><tr><td></td><td>21</td><td>BUZZER</td><td>E4-6991-6387-10-01K</td><td>0</td><td>2022.9.26</td></tr><tr><td></td><td>22</td><td>COMBUSTIBLE GAS SENSOR NCR-6309</td><td>M3-4463-10-02K</td><td>7</td><td>2022.6.16</td></tr><tr><td></td><td>23</td><td>4EC SENSOR TYPE-ESR</td><td>M4-4488-19-01K</td><td>2</td><td>2018.3.29</td></tr><tr><td></td><td>24</td><td>3EC SENSOR TYPE-ESR</td><td>M4-4482-02-01K</td><td>2</td><td>2018.3.29</td></tr><tr><td></td><td>25</td><td>SMART SENSOR Type-ESS</td><td>M4-4486-01-01K</td><td>0</td><td>2014.7.30</td></tr><tr><td></td><td>26</td><td>TOXIC GAS SENSOR</td><td>M4-4084-30-08K</td><td>0</td><td>2014.7.30</td></tr><tr><td></td><td>27</td><td>ESS SENSOR PCB</td><td>E3-6991-5384-10-01K</td><td>0</td><td>2014.7.14</td></tr><tr><td></td><td>28</td><td>SMART SENSOR Type-DES</td><td>M4-4630-20-01K</td><td>0</td><td>2014.7.24</td></tr><tr><td></td><td>29</td><td>DES SENSOR PCB</td><td>E3-6991-5385-90-01K</td><td>1</td><td>2015.5.25</td></tr><tr><td></td><td>30</td><td>DES DIGITAL PCB</td><td>E3-6991-5386-60-01K</td><td>1</td><td>2015.2.24</td></tr></table>									DRAWING NAME	DRAWING No.	REV	DATE		01	BLOCK DIAGRAM FOR MODEL GX-6100	E3-6991-6362-60-01K	2	2023.1.17		02	DIAGRAM FOR I.S. KEEP FOR MODEL GX-6100	E3-6991-6352-70-01K	2	2023.1.17		03	OUTER STRUCTURE GX-6100	M3-4777-33-01K	1	2023.1.20		04	MAIN UNIT GX-6100	M2-4777-33-01K	3	2024.1.25		05	SCHEMATIC MAIN PCB FOR MODEL GX-6100	E3-6991-6364-10-01K	0	2022.7.7		06	SCHEMATIC MAIN PCB FOR MODEL GX-6100	E3-6991-6364-10-02K	1	2022.9.26		07	SCHEMATIC MAIN PCB FOR MODEL GX-6100	E3-6991-6364-10-03K	0	2022.7.7		08	SCHEMATIC MAIN PCB FOR MODEL GX-6100	E3-6991-6364-10-04K	0	2022.7.7		09	SCHEMATIC MAIN PCB FOR MODEL GX-6100	E3-6991-6364-10-05K	0	2022.7.7		10	PARTS LIST OF MAIN PCB FOR MODEL GX-6100	PLT-6991-6364-10 (1/4)	0	2022.7.7		11	PARTS LIST OF MAIN PCB FOR MODEL GX-6100	PLT-6991-6364-10 (2/4)	1	2022.9.26		12	PARTS LIST OF MAIN PCB FOR MODEL GX-6100	PLT-6991-6364-10 (3/4)	0	2022.7.7		13	PARTS LIST OF MAIN PCB FOR MODEL GX-6100	PLT-6991-6364-10 (4/4)	0	2022.7.7		14	MAIN PCB FOR MODEL GX-6100	E3-6991-6364-10-01A	0	2022.7.7		15	MAIN PCB FOR MODEL GX-6100	E3-6991-6364-10-02A	0	2022.7.7		16	SCHEMATIC SENSOR PCB FOR MODEL GX-6100	E3-6991-6365-80-01K	0	2022.7.7		17	PARTS LIST OF SENSOR PCB FOR MODEL GX-6100	PLT-6991-6365-80 (1/1)	0	2022.7.7		18	SENSOR PCB FOR MODEL GX-6100	E3-6991-6365-80-01A	0	2022.7.7		19	SENSOR to MAIN WIRE FOR MODEL GX-6000	E4-6991-5382-70-01K	0	2014.7.14		20	PUMP RP-12	M4-4181-61-01K	3	2013.1.29		21	BUZZER	E4-6991-6387-10-01K	0	2022.9.26		22	COMBUSTIBLE GAS SENSOR NCR-6309	M3-4463-10-02K	7	2022.6.16		23	4EC SENSOR TYPE-ESR	M4-4488-19-01K	2	2018.3.29		24	3EC SENSOR TYPE-ESR	M4-4482-02-01K	2	2018.3.29		25	SMART SENSOR Type-ESS	M4-4486-01-01K	0	2014.7.30		26	TOXIC GAS SENSOR	M4-4084-30-08K	0	2014.7.30		27	ESS SENSOR PCB	E3-6991-5384-10-01K	0	2014.7.14		28	SMART SENSOR Type-DES	M4-4630-20-01K	0	2014.7.24		29	DES SENSOR PCB	E3-6991-5385-90-01K	1	2015.5.25		30	DES DIGITAL PCB	E3-6991-5386-60-01K	1	2015.2.24	<table><tr><td></td><td></td><td>DRAWING NAME</td><td>DRAWING No.</td><td>REV</td><td>DATE</td></tr><tr><td></td><td>31</td><td>T- 3/4 BPA LAMP OL-8270BPA</td><td>E4-6991-5129-60-01K</td><td>0</td><td>2012.2.24</td></tr><tr><td></td><td>32</td><td>SMART SENSOR Type-PIS</td><td>M4-4830-01-01K</td><td>1</td><td>2015.3.25</td></tr><tr><td></td><td>33</td><td>PIS SENSOR PCB</td><td>E4-6991-5387-30-01K</td><td>2</td><td>2015.3.25</td></tr><tr><td></td><td>34</td><td>PIS DIGITAL PCB</td><td>E3-6991-5388-10-01K</td><td>1</td><td>2015.3.25</td></tr><tr><td></td><td>35</td><td>BUL-6000</td><td>M3-4777-03-01K</td><td>0</td><td>2014.7.28</td></tr><tr><td></td><td>36</td><td>BUL PCB</td><td>E3-6991-5389-80-01K</td><td>1</td><td>2014.9.5</td></tr><tr><td></td><td>37</td><td>BUD-6000 / BUD-6100</td><td>M3-4777-04-01K</td><td>2</td><td>2023.1.20</td></tr><tr><td></td><td>38</td><td>BUD PCB</td><td>E4-6991-5390-50-01K</td><td>1</td><td>2014.9.5</td></tr><tr><td></td><td>39</td><td>DIAGRAM FOR I.S. KEEP FOR MODEL BC-6000 / SDM-6000</td><td>E4-6991-5395-80-01K</td><td>1</td><td>2014.9.5</td></tr><tr><td>*</td><td>40</td><td>LABEL</td><td>M4-4777-33-07K</td><td>3</td><td>2024.6.13</td></tr><tr><td></td><td>41</td><td>LABEL BC-6000 / SDM-6000</td><td>M4-4777-01-02K</td><td>0</td><td>2014.7.28</td></tr><tr><td></td><td>42</td><td>SCHEMATIC CHARGER PCB FOR MODEL BC-6000</td><td>E3-6991-5255-80-01K</td><td>0</td><td>2014.12.16</td></tr><tr><td></td><td>43</td><td>CHARGER PCB FOR MODEL BC-6000</td><td>E3-6991-5255-80-01A</td><td>1</td><td>2023.3.8</td></tr><tr><td></td><td>44</td><td>SCHEMATIC CHARGER PCB FOR MODEL SDM-6000</td><td>E3-6991-5445-60-01K</td><td>1</td><td>2015.3.5</td></tr><tr><td></td><td>45</td><td>CHARGER PCB FOR MODEL SDM-6000</td><td>E3-6991-5445-60-01A</td><td>2</td><td>2015.6.12</td></tr><tr><td></td><td>46</td><td>SMART SENSOR Type-OSS</td><td>M4-4080-01-01K</td><td>0</td><td>2015.2.24</td></tr><tr><td></td><td>47</td><td>OSS SENSOR PCB</td><td>E4-6991-5457-00-01K</td><td>0</td><td>2015.2.24</td></tr><tr><td></td><td>48</td><td>OSS DIGITAL PCB</td><td>E3-6991-5458-70-01K</td><td>0</td><td>2015.2.24</td></tr><tr><td></td><td>49</td><td>OXYGEN SENSOR</td><td>M4-4080-01-02K</td><td>0</td><td>2015.2.24</td></tr><tr><td></td><td>50</td><td>BC-6000</td><td>M3-4777-02-01K</td><td>1</td><td>2015.3.27</td></tr><tr><td></td><td>51</td><td>SDM-6000</td><td>M3-4395-23-01K</td><td>1</td><td>2015.3.27</td></tr><tr><td></td><td>52</td><td>SMART SENSOR Type-SHS</td><td>M4-4777-33-02K</td><td>0</td><td>2022.7.28</td></tr><tr><td></td><td>53</td><td>COMBUSTIBLE GAS SENSOR SH-8661</td><td>M3-4086-61-01K</td><td>0</td><td>2015.2.3</td></tr><tr><td></td><td>54</td><td>SHS DIGITAL PCB</td><td>E3-6991-6366-50-01A</td><td>0</td><td>2022.7.7</td></tr><tr><td></td><td>55</td><td>COMBUSTIBLE GAS SENSOR TE-7561</td><td>M4-4075-63-01K</td><td>0</td><td>2011.3.1</td></tr><tr><td></td><td>56</td><td>BUL-6100</td><td>M3-4777-38-01K</td><td>0</td><td>2023.1.20</td></tr><tr><td></td><td>57</td><td>EXPLOSION PROOF STRUCTUR GX-6100</td><td>M4-4777-33-06K</td><td>0</td><td>2024.1.22</td></tr><tr><td>*</td><td>58</td><td>Safety info</td><td>-</td><td>14</td><td>2024.6.13</td></tr></table>									DRAWING NAME	DRAWING No.	REV	DATE		31	T- 3/4 BPA LAMP OL-8270BPA	E4-6991-5129-60-01K	0	2012.2.24		32	SMART SENSOR Type-PIS	M4-4830-01-01K	1	2015.3.25		33	PIS SENSOR PCB	E4-6991-5387-30-01K	2	2015.3.25		34	PIS DIGITAL PCB	E3-6991-5388-10-01K	1	2015.3.25		35	BUL-6000	M3-4777-03-01K	0	2014.7.28		36	BUL PCB	E3-6991-5389-80-01K	1	2014.9.5		37	BUD-6000 / BUD-6100	M3-4777-04-01K	2	2023.1.20		38	BUD PCB	E4-6991-5390-50-01K	1	2014.9.5		39	DIAGRAM FOR I.S. KEEP FOR MODEL BC-6000 / SDM-6000	E4-6991-5395-80-01K	1	2014.9.5	*	40	LABEL	M4-4777-33-07K	3	2024.6.13		41	LABEL BC-6000 / SDM-6000	M4-4777-01-02K	0	2014.7.28		42	SCHEMATIC CHARGER PCB FOR MODEL BC-6000	E3-6991-5255-80-01K	0	2014.12.16		43	CHARGER PCB FOR MODEL BC-6000	E3-6991-5255-80-01A	1	2023.3.8		44	SCHEMATIC CHARGER PCB FOR MODEL SDM-6000	E3-6991-5445-60-01K	1	2015.3.5		45	CHARGER PCB FOR MODEL SDM-6000	E3-6991-5445-60-01A	2	2015.6.12		46	SMART SENSOR Type-OSS	M4-4080-01-01K	0	2015.2.24		47	OSS SENSOR PCB	E4-6991-5457-00-01K	0	2015.2.24		48	OSS DIGITAL PCB	E3-6991-5458-70-01K	0	2015.2.24		49	OXYGEN SENSOR	M4-4080-01-02K	0	2015.2.24		50	BC-6000	M3-4777-02-01K	1	2015.3.27		51	SDM-6000	M3-4395-23-01K	1	2015.3.27		52	SMART SENSOR Type-SHS	M4-4777-33-02K	0	2022.7.28		53	COMBUSTIBLE GAS SENSOR SH-8661	M3-4086-61-01K	0	2015.2.3		54	SHS DIGITAL PCB	E3-6991-6366-50-01A	0	2022.7.7		55	COMBUSTIBLE GAS SENSOR TE-7561	M4-4075-63-01K	0	2011.3.1		56	BUL-6100	M3-4777-38-01K	0	2023.1.20		57	EXPLOSION PROOF STRUCTUR GX-6100	M4-4777-33-06K	0	2024.1.22	*	58	Safety info	-	14	2024.6.13
		DRAWING NAME	DRAWING No.	REV	DATE																																																																																																																																																																																																																																																																																																																																																																																
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	03	OUTER STRUCTURE GX-6100	M3-4777-33-01K	1	2023.1.20																																																																																																																																																																																																																																																																																																																																																																																
	04	MAIN UNIT GX-6100	M2-4777-33-01K	3	2024.1.25																																																																																																																																																																																																																																																																																																																																																																																
	05	SCHEMATIC MAIN PCB FOR MODEL GX-6100	E3-6991-6364-10-01K	0	2022.7.7																																																																																																																																																																																																																																																																																																																																																																																
	06	SCHEMATIC MAIN PCB FOR MODEL GX-6100	E3-6991-6364-10-02K	1	2022.9.26																																																																																																																																																																																																																																																																																																																																																																																
	07	SCHEMATIC MAIN PCB FOR MODEL GX-6100	E3-6991-6364-10-03K	0	2022.7.7																																																																																																																																																																																																																																																																																																																																																																																
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	10	PARTS LIST OF MAIN PCB FOR MODEL GX-6100	PLT-6991-6364-10 (1/4)	0	2022.7.7																																																																																																																																																																																																																																																																																																																																																																																
	11	PARTS LIST OF MAIN PCB FOR MODEL GX-6100	PLT-6991-6364-10 (2/4)	1	2022.9.26																																																																																																																																																																																																																																																																																																																																																																																
	12	PARTS LIST OF MAIN PCB FOR MODEL GX-6100	PLT-6991-6364-10 (3/4)	0	2022.7.7																																																																																																																																																																																																																																																																																																																																																																																
	13	PARTS LIST OF MAIN PCB FOR MODEL GX-6100	PLT-6991-6364-10 (4/4)	0	2022.7.7																																																																																																																																																																																																																																																																																																																																																																																
	14	MAIN PCB FOR MODEL GX-6100	E3-6991-6364-10-01A	0	2022.7.7																																																																																																																																																																																																																																																																																																																																																																																
	15	MAIN PCB FOR MODEL GX-6100	E3-6991-6364-10-02A	0	2022.7.7																																																																																																																																																																																																																																																																																																																																																																																
	16	SCHEMATIC SENSOR PCB FOR MODEL GX-6100	E3-6991-6365-80-01K	0	2022.7.7																																																																																																																																																																																																																																																																																																																																																																																
	17	PARTS LIST OF SENSOR PCB FOR MODEL GX-6100	PLT-6991-6365-80 (1/1)	0	2022.7.7																																																																																																																																																																																																																																																																																																																																																																																
	18	SENSOR PCB FOR MODEL GX-6100	E3-6991-6365-80-01A	0	2022.7.7																																																																																																																																																																																																																																																																																																																																																																																
	19	SENSOR to MAIN WIRE FOR MODEL GX-6000	E4-6991-5382-70-01K	0	2014.7.14																																																																																																																																																																																																																																																																																																																																																																																
	20	PUMP RP-12	M4-4181-61-01K	3	2013.1.29																																																																																																																																																																																																																																																																																																																																																																																
	21	BUZZER	E4-6991-6387-10-01K	0	2022.9.26																																																																																																																																																																																																																																																																																																																																																																																
	22	COMBUSTIBLE GAS SENSOR NCR-6309	M3-4463-10-02K	7	2022.6.16																																																																																																																																																																																																																																																																																																																																																																																
	23	4EC SENSOR TYPE-ESR	M4-4488-19-01K	2	2018.3.29																																																																																																																																																																																																																																																																																																																																																																																
	24	3EC SENSOR TYPE-ESR	M4-4482-02-01K	2	2018.3.29																																																																																																																																																																																																																																																																																																																																																																																
	25	SMART SENSOR Type-ESS	M4-4486-01-01K	0	2014.7.30																																																																																																																																																																																																																																																																																																																																																																																
	26	TOXIC GAS SENSOR	M4-4084-30-08K	0	2014.7.30																																																																																																																																																																																																																																																																																																																																																																																
	27	ESS SENSOR PCB	E3-6991-5384-10-01K	0	2014.7.14																																																																																																																																																																																																																																																																																																																																																																																
	28	SMART SENSOR Type-DES	M4-4630-20-01K	0	2014.7.24																																																																																																																																																																																																																																																																																																																																																																																
	29	DES SENSOR PCB	E3-6991-5385-90-01K	1	2015.5.25																																																																																																																																																																																																																																																																																																																																																																																
	30	DES DIGITAL PCB	E3-6991-5386-60-01K	1	2015.2.24																																																																																																																																																																																																																																																																																																																																																																																
		DRAWING NAME	DRAWING No.	REV	DATE																																																																																																																																																																																																																																																																																																																																																																																
	31	T- 3/4 BPA LAMP OL-8270BPA	E4-6991-5129-60-01K	0	2012.2.24																																																																																																																																																																																																																																																																																																																																																																																
	32	SMART SENSOR Type-PIS	M4-4830-01-01K	1	2015.3.25																																																																																																																																																																																																																																																																																																																																																																																
	33	PIS SENSOR PCB	E4-6991-5387-30-01K	2	2015.3.25																																																																																																																																																																																																																																																																																																																																																																																
	34	PIS DIGITAL PCB	E3-6991-5388-10-01K	1	2015.3.25																																																																																																																																																																																																																																																																																																																																																																																
	35	BUL-6000	M3-4777-03-01K	0	2014.7.28																																																																																																																																																																																																																																																																																																																																																																																
	36	BUL PCB	E3-6991-5389-80-01K	1	2014.9.5																																																																																																																																																																																																																																																																																																																																																																																
	37	BUD-6000 / BUD-6100	M3-4777-04-01K	2	2023.1.20																																																																																																																																																																																																																																																																																																																																																																																
	38	BUD PCB	E4-6991-5390-50-01K	1	2014.9.5																																																																																																																																																																																																																																																																																																																																																																																
	39	DIAGRAM FOR I.S. KEEP FOR MODEL BC-6000 / SDM-6000	E4-6991-5395-80-01K	1	2014.9.5																																																																																																																																																																																																																																																																																																																																																																																
*	40	LABEL	M4-4777-33-07K	3	2024.6.13																																																																																																																																																																																																																																																																																																																																																																																
	41	LABEL BC-6000 / SDM-6000	M4-4777-01-02K	0	2014.7.28																																																																																																																																																																																																																																																																																																																																																																																
	42	SCHEMATIC CHARGER PCB FOR MODEL BC-6000	E3-6991-5255-80-01K	0	2014.12.16																																																																																																																																																																																																																																																																																																																																																																																
	43	CHARGER PCB FOR MODEL BC-6000	E3-6991-5255-80-01A	1	2023.3.8																																																																																																																																																																																																																																																																																																																																																																																
	44	SCHEMATIC CHARGER PCB FOR MODEL SDM-6000	E3-6991-5445-60-01K	1	2015.3.5																																																																																																																																																																																																																																																																																																																																																																																
	45	CHARGER PCB FOR MODEL SDM-6000	E3-6991-5445-60-01A	2	2015.6.12																																																																																																																																																																																																																																																																																																																																																																																
	46	SMART SENSOR Type-OSS	M4-4080-01-01K	0	2015.2.24																																																																																																																																																																																																																																																																																																																																																																																
	47	OSS SENSOR PCB	E4-6991-5457-00-01K	0	2015.2.24																																																																																																																																																																																																																																																																																																																																																																																
	48	OSS DIGITAL PCB	E3-6991-5458-70-01K	0	2015.2.24																																																																																																																																																																																																																																																																																																																																																																																
	49	OXYGEN SENSOR	M4-4080-01-02K	0	2015.2.24																																																																																																																																																																																																																																																																																																																																																																																
	50	BC-6000	M3-4777-02-01K	1	2015.3.27																																																																																																																																																																																																																																																																																																																																																																																
	51	SDM-6000	M3-4395-23-01K	1	2015.3.27																																																																																																																																																																																																																																																																																																																																																																																
	52	SMART SENSOR Type-SHS	M4-4777-33-02K	0	2022.7.28																																																																																																																																																																																																																																																																																																																																																																																
	53	COMBUSTIBLE GAS SENSOR SH-8661	M3-4086-61-01K	0	2015.2.3																																																																																																																																																																																																																																																																																																																																																																																
	54	SHS DIGITAL PCB	E3-6991-6366-50-01A	0	2022.7.7																																																																																																																																																																																																																																																																																																																																																																																
	55	COMBUSTIBLE GAS SENSOR TE-7561	M4-4075-63-01K	0	2011.3.1																																																																																																																																																																																																																																																																																																																																																																																
	56	BUL-6100	M3-4777-38-01K	0	2023.1.20																																																																																																																																																																																																																																																																																																																																																																																
	57	EXPLOSION PROOF STRUCTUR GX-6100	M4-4777-33-06K	0	2024.1.22																																																																																																																																																																																																																																																																																																																																																																																
*	58	Safety info	-	14	2024.6.13																																																																																																																																																																																																																																																																																																																																																																																
<table><tr><td colspan="2">注 記 NOTES</td><td>改版担当者 REV. BY</td><td>改版日 REVISED</td><td colspan="2">名 称 NAME</td></tr><tr><td colspan="2">40,58</td><td>REV. BY</td><td></td><td colspan="2">INDEX</td></tr><tr><td>改版回数 REV.</td><td>10</td><td>総頁数 PAGES</td><td>1</td><td>古 館 優 作</td><td>2024.6.13</td></tr><tr><td>承認 APPROVED</td><td>検 討 CHECKED</td><td>製 図 DRAWN</td><td>作 成 日 DATE</td><td colspan="2">図 番 DWG. NO.</td></tr><tr><td>山田和則</td><td>小野圭</td><td>木村司</td><td>2024.6.10</td><td colspan="2">E 3 - 6 9 9 1 - 5 4 7 0 - 7 0 - 0 2 K</td></tr><tr><td colspan="4">DEKRA Certification B.V. Meander 1051, 6820 MJ Arnhem P.O. Box 5185, 6802 FD Arnhem</td><td colspan="2">理研計器株式会社</td></tr><tr><td colspan="4">RIKEN KEIKI</td><td colspan="2">機密情報 / CONFIDENTIAL</td></tr></table>							注 記 NOTES		改版担当者 REV. BY	改版日 REVISED	名 称 NAME		40,58		REV. BY		INDEX		改版回数 REV.	10	総頁数 PAGES	1	古 館 優 作	2024.6.13	承認 APPROVED	検 討 CHECKED	製 図 DRAWN	作 成 日 DATE	図 番 DWG. NO.		山田和則	小野圭	木村司	2024.6.10	E 3 - 6 9 9 1 - 5 4 7 0 - 7 0 - 0 2 K		DEKRA Certification B.V. Meander 1051, 6820 MJ Arnhem P.O. Box 5185, 6802 FD Arnhem				理研計器株式会社		RIKEN KEIKI				機密情報 / CONFIDENTIAL																																																																																																																																																																																																																																																																																																																																						
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注 記 NOTES		改版担当者 REV. BY		改版日 REVISED		名称 NAME	
BUL-6100/BUD-6100		木村司		2023.1.17		BLOCK DIAGRAM	
改版回数 REV.		総頁数 PAGES		作成日 DATE		FOR MODEL GX-6100	
2		1		2022.7.7		図番 DWG. NO.	
承認 APPROVED		校 討 CHECKED		製 図 DRAWN		E3-6991-6362-60-01K	
山田和則		小野圭		木村司		機密情報 / CONFIDENTIAL	

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注 記 NOTES BUL-6100/BUD-6100	改版担当者 REV. BY 木村 司		改版日 REVISED 2023. 1. 17
改版回数 REV.	2	総頁数 PAGES	1
承認 APPROVED 山田和則	検討 CHECKED 小野圭		製 図 DRAWN 小野圭
承認日 DATE 2022. 6. 28			理研言語株式会社

(MEMO)

1. - - - - marks means SEPARATE

2. ———— marks means INFALLIBLE CONNECTION

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

A B C D E F G H J

MAIN UNIT
M2-4777-33-01K

BATTERY UNIT
BUL-6000
M3-4777-03-01K
OR
BUD-6000/BUD-6100
M3-4777-04-01K
OR
BUL-6100
M3-4777-38-01K

VIEW A

21

19

6

17

14

14

LABEL D

201

70

A

LABEL A

56

31

11

△	REVISION H3	2023.12.0	伊藤園	訂正者
△	記事	年月日		

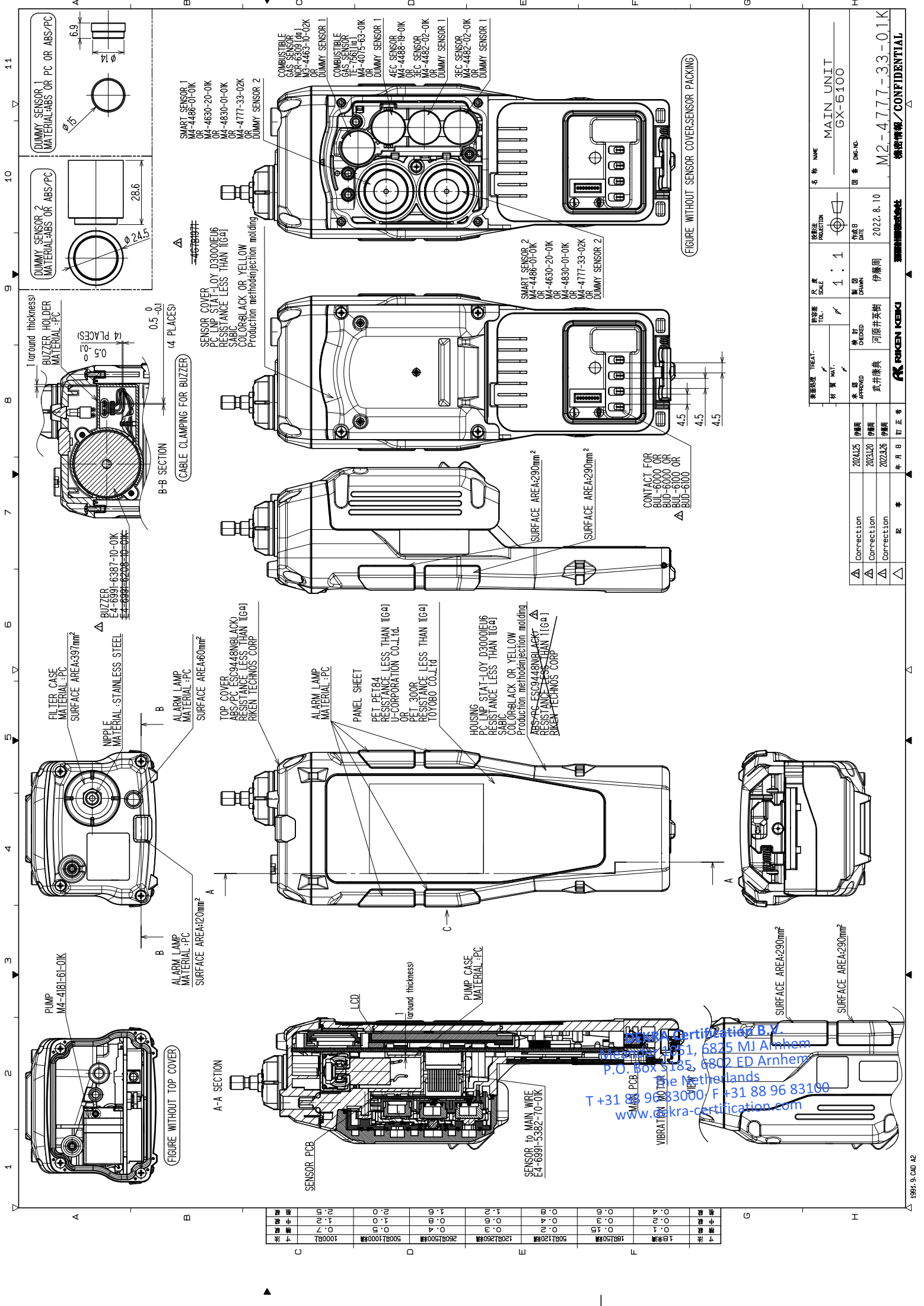
表面処理 TREAT.		許容差 TOL.	尺度 SCALE	投影法 PROJECTION	名称 NAME
材質 MAT.		✓	1 : 1	第一角 第一角	OUTER STRUCTURE
承認 APPROVED	検討 CHECKED	河原井英樹	製図 DRAWN	作成日 DATE	GX-6100
武井康典			伊藤園	2022.7.28	
			図番 DWG. NO.		
			M3-4777-33-01K		
			機密情報 / CONFIDENTIAL		

PROTECTION GRADE: MORE THAN IP 20

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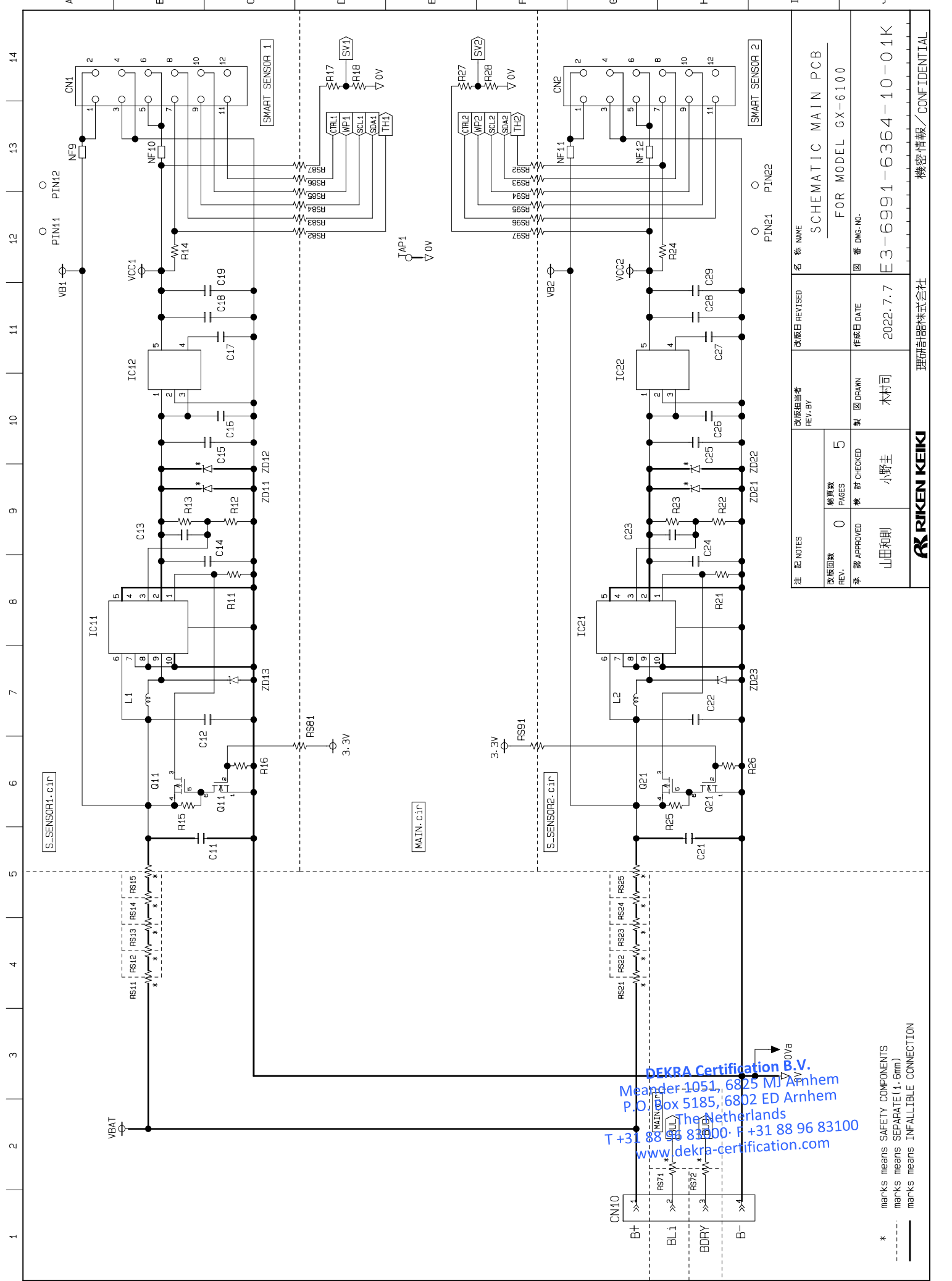
△	REVISION H3	2023.1.20	伊藤周
△	記 事	年 月 日	訂 正 者

1991. 9. CAD A3



表面処理	TREAT.	許容差	TOL.	尺 度	SCALE	投影法	PROJECTION	名 称	NAME
材質	MAT.	1/1	1:1	1:1	1:1	第一角	First Angle	主 機	MAIN UNIT
承認	APPROVED	検 討	CHECKED	製 図	DRAWN	作 成 日	DATE	図 番	DWG. NO.
2024/5	伊藤 周	2024/5	伊藤 周	2024/5	伊藤 周	2022.8.10		M2-4777-33-01K	
△ Correction		△ Correction		△ Correction					
△ Correction		△ Correction		△ Correction					
△ Correction		△ Correction		△ Correction					

表面処理	TREAT.	許容差	TOL.	尺 度	SCALE	投影法	PROJECTION	名 称	NAME
材質	MAT.	1/1	1:1	1:1	1:1	第一角	First Angle	主 機	MAIN UNIT
承認	APPROVED	検 討	CHECKED	製 図	DRAWN	作 成 日	DATE	図 番	DWG. NO.
2024/5	伊藤 周	2024/5	伊藤 周	2024/5	伊藤 周	2022.8.10		M2-4777-33-01K	
△ Correction		△ Correction		△ Correction					
△ Correction		△ Correction		△ Correction					
△ Correction		△ Correction		△ Correction					

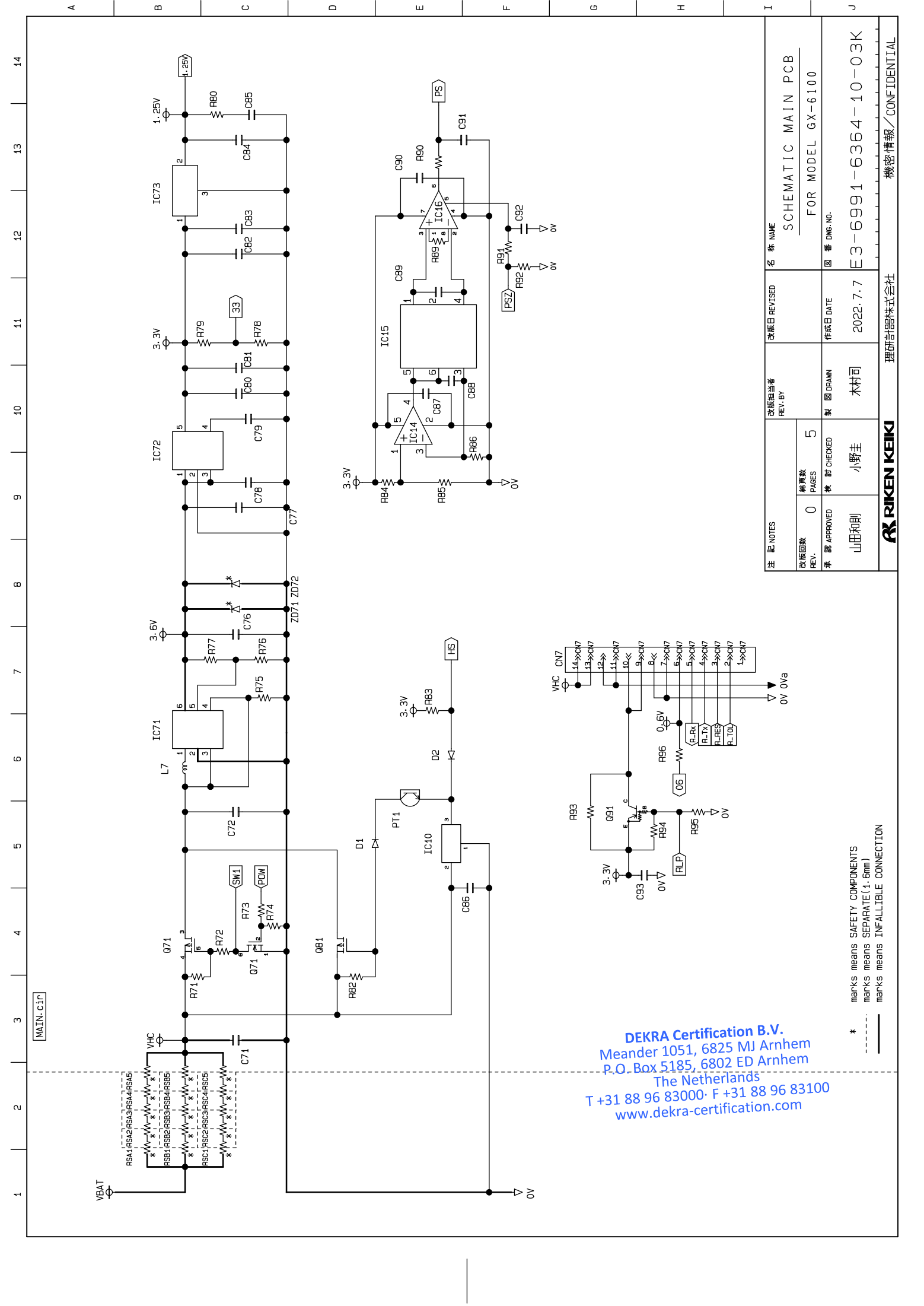


注 記 NOTES		改版担当者 REV. BY	改版日 REVISED	名 称 NAME
改版回数 REV.	0	繪真数 PAGES	5	SCHEMATIC MAIN PCB FOR MODEL GX-6100
承認 APPROVED	山田和則	校 討 CHECKED	小野圭	
		製 図 DRAWN	木村司	図 番 DWG. NO.
		作成日 DATE	2022.7.7	E3-6991-6364-10-01K
理研計器株式会社 機密情報 / CONFIDENTIAL				

* marks means SAFETY COMPONENTS
--- marks means SEPARATE (1.5mm)
—— marks means INFALLIBLE CONNECTION



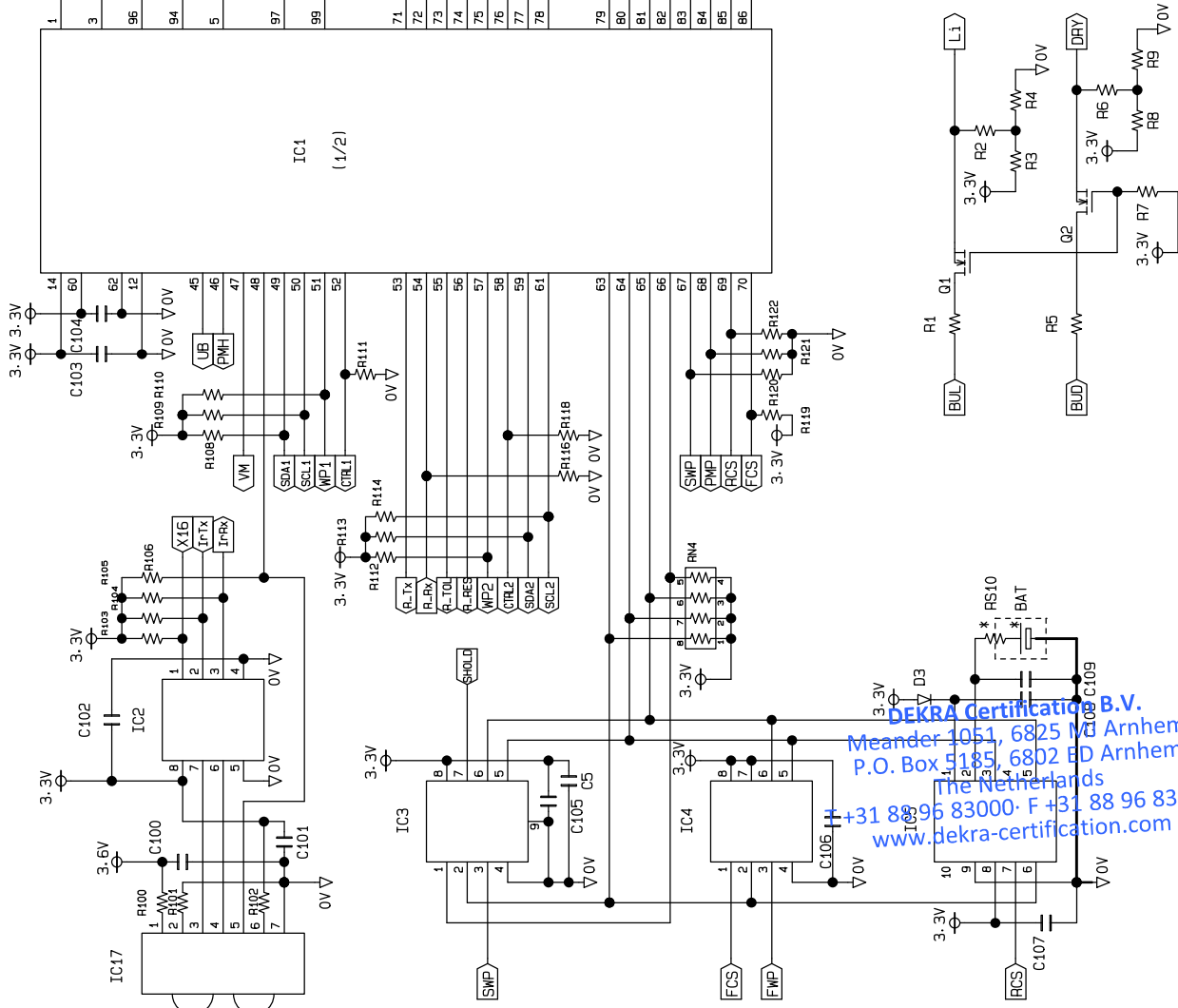
* marks means SAFETY COMPONENTS
 --- marks means SEPARATE (1.6mm)
 — marks means INFALLIBLE CONNECT



注 記 NOTES		改版担当者 REV. BY	改版日 REVISED	名 称 NAME
改版回数 REV.	0	総頁数 PAGES	5	SCHEMATIC MAIN PCB
承認 APPROVED	山田和則	検 討 CHECKED	小野圭	FOR MODEL GX-6100
		製 図 DRAWN	木村司	図 番 Dwg. NO.
		2022.7.7		E3-6991-6364-10-03K
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* marks means SAFETY COMPONENTS
marks means SEPARATE(1.6mm)
marks means INFALLIBLE CONNECTION

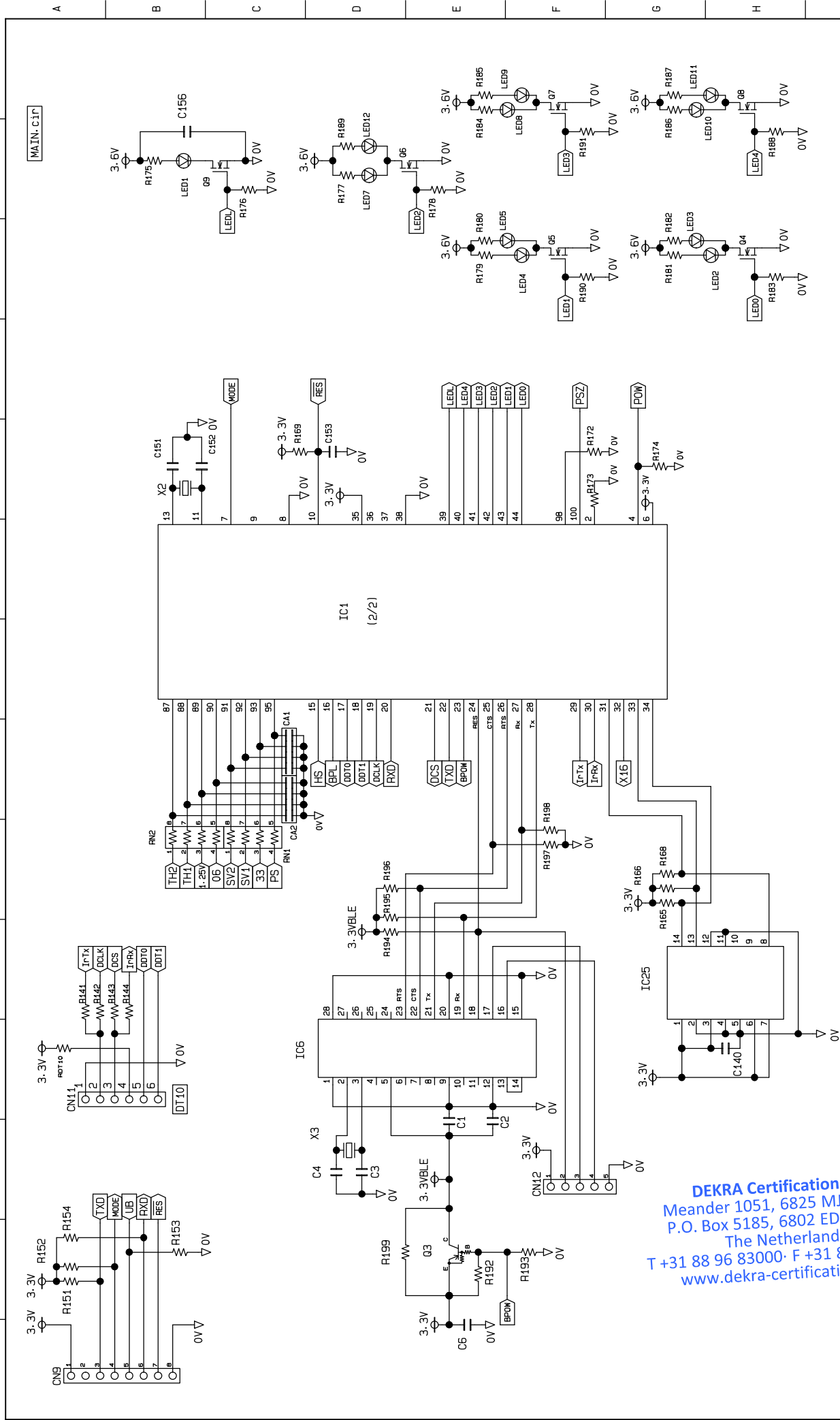


* marks means SAFETY COMPONENTS
 ----- marks means SEPARATE(1.6mm)
 ===== marks means INFALLIBLE CONNECTION

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注 記 NOTES		改版担当者 REV. BY	改版日 REVISED	名 称 NAME
改版回数 REV.	0	繪頁数 PAGES	5	SCHEMATIC MAIN PCB FOR MODEL GX-6100
承認 APPROVED	山田和則	校 討 CHECKED	小野圭	
製 図 DRAWN		木村司	作成日 DATE	図 番 Dwg. No.
			2022.7.7	E3-6991-6364-10-05K
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Mark of drawing	Kind of parts	Rating/Model of parts	Remarks
IC1	IC (CPU)	R5F564MFCDFP [RENESAS]	m
IC2	IC (IrDA encoder/decoder)	TIR1000IPWR [TI]	m
IC3	IC (Serial flash memory)	AT25SF641B-MHB [ADESTO]	m
IC4	IC (FRAM)	MB85RS512TPNF [FUJITSU]	m
IC5	IC (RTC)	RX4111CE [EPSON]	m
IC6	IC (BLE Module)	EYSHJN [TAIYO YUDEN]	D
IC10	IC (HALL EFFECT SWITCH)	S-5716ANDL0-M3T1U [ABLIC]	m
IC11,IC21	IC (Step up DC/DC Converter)	TPS61020DRC [TI]	m
IC12,IC22,IC72	IC (LDO)	TPS73133DBV [TI]	m
IC14	IC (OPAMP)	TLV333IDCK [TI]	m
IC15	IC (Pressure sensor)	2SMPP-03 [OMRON]	m
IC16	IC (OPAMP)	INA317IDGK [TI]	m
IC17	IC (Infrared Transceiver)	TFBS4650-TT [VISHAY]	m
IC25	IC (Digital MEMS Accelerometer)	ADXL343BCCZ [AD]	m
IC31	IC (LDO)	TPS79901DDC [TI]	m
IC41	IC (Step up DC/DC Converter)	TPS61041DRV [TI]	m
IC42	IC (dual comparators)	TS3702IPT [STMicro]	m
IC51	IC (Voltage regulator)	S-1200B30-M5T1-G [ABLIC]	m
IC71	IC (Step up DC/DC Converter)	LTC3526LEDC [AD]	m
IC73	IC (Voltage References)	ISL21080DIH312Z [RENESAS]	m
Q1,Q2,Q4,Q5,Q6,Q7, Q9,Q61	Nch MOS FET	SSM3K36TU [TOSHIBA]	m
Q3,Q91	PNP Transistor	DTA014YUB [ROHM]	m

NOTE

* marked parts are Safety Components.

m marked parts are mounted or not.

D marked parts, refer to datasheet.

[] Parts manufacturer and () Parts size code.

Non-Safety Components may be replaced with equivalent components or may not be mounted.

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REV.	0	NAME	PARTS LIST OF MAIN PCB FOR MODEL GX-6100
DATE	2022.7.7	DWG.No.	PLT-6991-6364-10 (1/4)
RIKEN KEIKI CO., LTD.		機密情報 / CONFIDENTIAL	

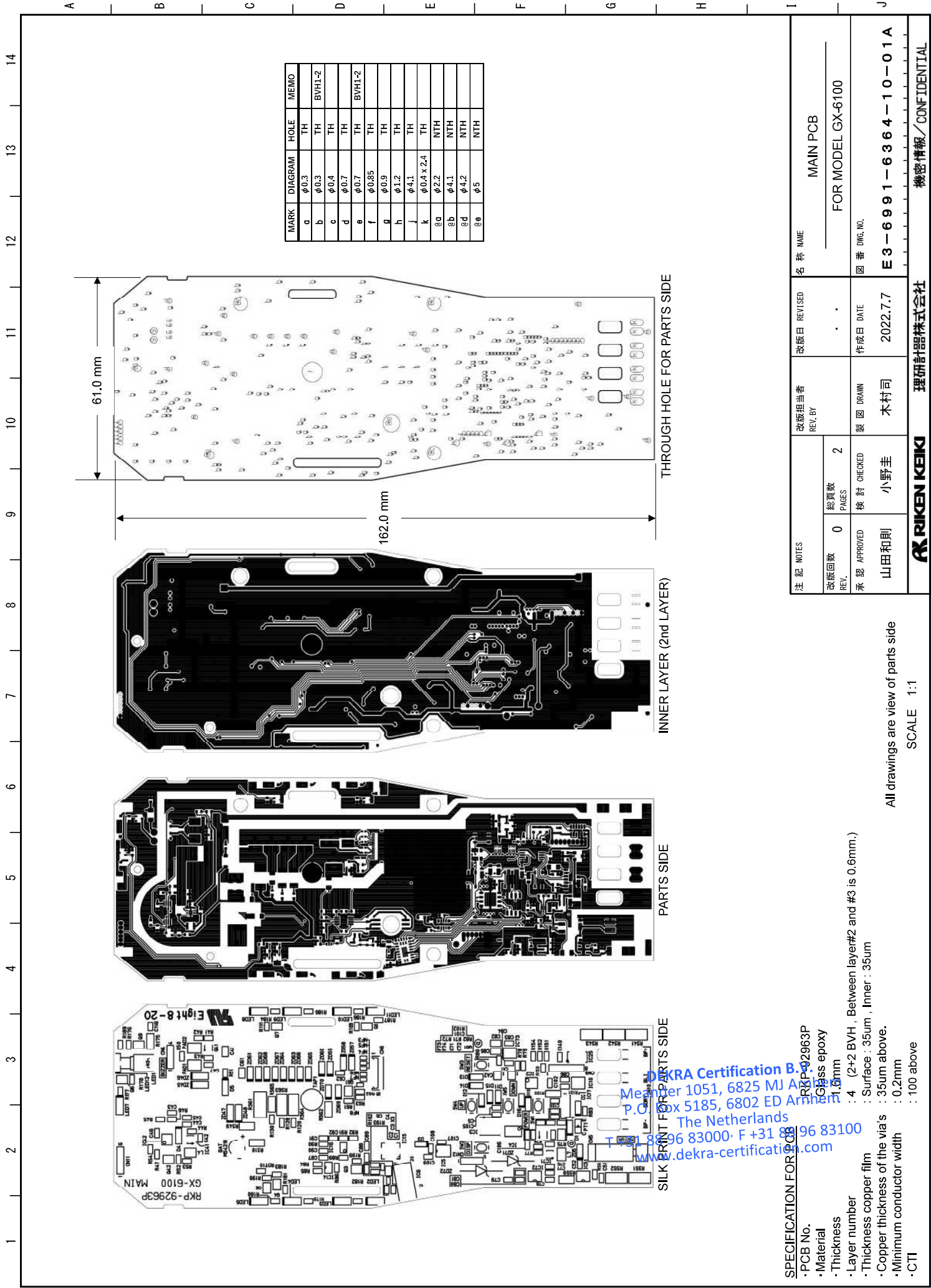
Mark of drawing		Kind of parts	Rating/Model of parts	Remarks
Q11,Q21,Q41,Q71		Nch MOS FET	NTLJD3119C [Onsemi]	m
Q32,Q42		Nch MOS FET	RU1C001UN [ROHM]	m
Q31		Nch MOS FET	SSM3K123TU [TOSHIBA]	m
Q81		Pch MOS FET	SSM3J130TU [TOSHIBA]	m
D1,D2,D10,D11,D12, D13,D14,D15,D16		Schottky Barrier Diode	RB160VA-40 [ROHM] If = 0.7A, Vr = 40V	m
D3		Schottky Barrier Diode	RB751VM-40 [ROHM]	m
D4,D5		Schottky Barrier Diode	MMSD301T1G [Onsemi] If = 0.2A, Vr = 30V	m
ZD5		Zener Diode	TFZ5.1B [ROHM]	m
ZD61,ZD62,ZD63,ZD64, ZD65,ZD66,ZD67,ZD68, ZD69,ZD70		Zener Diode	TFZ5.1B [ROHM] Vz= 4.94 - 5.20V, 0.5W, Tj = 150°C	*
ZD11,ZD12,ZD21,ZD22		Zener Diode	1SMB5918BT3G [Onsemi] Vz=4.84 - 5.36V, 0.55W, Tj= 226°C	*
ZD13, ZD23		Zener Diode	TFZ6.8B [ROHM]	m
ZD45, ZD46		Zener Diode	KDZ11B [ROHM] Vz= 11.0 - 12.3V, 1.0W, Tj = 150°C	*
ZD47, ZD48		Zener Diode	KDZ4.7B [ROHM] Vz= 4.70 - 5.20V, 1.0W, Tj = 150°C	*
ZD49,ZD50,ZD51,ZD52		Zener Diode	KDZ15B [ROHM] Vz= 14.7 - 16.5V, 1.0W, Tj = 150°C	*
ZD57,ZD58,ZD59,ZD60		Zener Diode	TFZ18B [ROHM] Vz= 16.8 - 17.7V, 0.5W, Tj = 150°C	*
ZD71,ZD72		Zener Diode	1N5338BG [Onsemi] Vz = 4.85 - 5.36V, 5W, Tj = 200°C	*
LED1		LED Lamp	HLMP-NW50-U0000 [AVAGO]	m
LED2,LED3,LED4,LED5, LED7,LED8,LED9, LED10,LED11		LED Lamp	KPTD-3216SURCK [KINGBRIGHT] (3216 t1.8)	m
LED12		LED Lamp	HSMZ-C110 [AVAGO]	m
NOTE	<p>* marked parts are Safety Components. m marked parts are mounted or not. D marked parts, refer to datasheet. [] Parts manufacturer and () Parts size code. Non-Safety Components may be replaced with equivalent components or may not be mounted.</p> <p>DEKRA Certification B.V. Meander 1051, 6825 MJ Arnhem P.O. Box 5185, 6802 ED Arnhem The Netherlands T +31 88 96 83000 F +31 88 96 83100 info@dekra-certification.com</p>			
REV.	1	NAME	PARTS LIST OF MAIN PCB FOR MODEL GX-6100	
DATE	2022.9.26	DWG.No.	PLT-6991-6364-10 (2/4)	
RIKEN KEIKI CO., LTD.			機密情報 / CONFIDENTIAL	

Mark of drawing	Kind of parts	Rating/Model of parts	Remarks
R1-R9, R11-R18, R21-R28, R31-R36, R41-R47, R50-R55, R61-R63, R71-R80, R82-R86, R89-R96, R101-R106, R108-R114, R116, R118-R132, R141-R144, R151-R154, R165, R166, R168, R169, R172-R174, R176-R199, RDT10	Chip metal film fixed resistor or Chip jumper	10 - 10M ohm / 1%, 0.1W or 50m ohm max, 1A (1608)	m
R48, R49, R100, R175	Chip metal film fixed resistor	10 - 10M ohm / 1%, 0.25W (3216)	m
RN1, RN2, RN3, RN4	Chip fixed resistor array	10 - 1M ohm x4 / 5%, 0.063W	m
RS81, RS91	Chip metal film fixed resistor	10 - 1M ohm / 0.5%, 0.5W (3216)	m
RS10	Chip metal film fixed resistor	ESR18_3001 [ROHM] 3 k ohm / 0.5%, 0.5W (3216)	*
RS11, RS12, RS13, RS14, RS15, RS21, RS22, RS23, RS24, RS25, RS31, RS32, RS33, RS34, RS35	Chip metal film fixed resistor	RK73HW3A_1R30 [KOA] 1.3 ohm / 1.0%, 1.0W (6432)	*
RS61	Chip metal film fixed resistor	RK73HW3A_62R0 [KOA] 62 ohm / 1.0%, 1.0W (6432)	*
RS37, RS38, RS39, RS49, RS59, RS62, RS65, RS71, RS72, RS82, RS85, RS86, RS87, RS92, RS95, RS96, RS97	Chip metal film fixed resistor	ESR18_1002 [ROHM] 10 k ohm / 0.5%, 0.5W (3216)	*
RSA1, RSA2, RSA3, RSA4, RSA5, RSB1, RSB2, RSB3, RSB4, RSB5, RSC1, RSC2, RSC3, RSC4, RSC5	Chip metal film fixed resistor	RPL18T_2R7 [TAITOSHA] 2.7 ohm / 1.0%, 0.5W (3216)	*
RS41, RS42, RS43	Chip metal film fixed resistor	RK73HW2H_4R70 [KOA] 4.7 ohm / 1.0%, 0.75W (5025)	*
RS51, RS52	Chip metal film fixed resistor	RK73HW2H_12R0 [KOA] 12 ohm / 1.0%, 0.75W (5025)	*
RS63, RS64	Chip metal film fixed resistor	RK73HW2H_82R0 [KOA] 82 ohm / 1.0%, 0.75W (5025)	*
RS83, RS84, RS93, RS94	Chip metal film fixed resistor	MCR18_1001 [ROHM] 1 k ohm / 1.0%, 0.25W (3216)	*
C1 - C6, C72, C76 - C93, C100 - C113 C115 - C117, C140, C151 - C153, C156, CA1, CA2	Chip multilayer capacitor inside MAIN.cir	Total capacitance 16.7uFmax	m
NOTE	<p>* marked parts are Safety Components. m marked parts are mounted or not. D marked parts, refer to datasheet. [] Parts manufacturer and () Parts size code. Non-Safety Components may be replaced with equivalent components or may not be mounted.</p> <p style="text-align: right;"> DEKRA Certification B.V. Meander 1051, 6825 MJ Arnhem P.O. Box 5185, 6802 ED Arnhem The Netherlands T +31 88 96 83000 F +31 88 96 83100 www.dekra-certification.com </p>		
REV.	0	NAME	PARTS LIST OF MAIN PCB FOR MODEL GX-6100
DATE	2022.7.7	DWG.No.	PLT-6991-6364-10 (3/4)
RIKEN KEIKI CO., LTD.		機密情報 / CONFIDENTIAL	

Mark of drawing	Kind of parts	Rating/Model of parts	Remarks
C11,C12,C13,C14,C15, C16,C17,C18, C19	Chip multilayer capacitor inside S_SENSOR1.cir	Total capacitance 17.3uFmax	m
C21,C22,C23,C24,C25, C26,C27,C28,C29	Chip multilayer capacitor inside S_SENSOR2.cir	Total capacitance 17.3uFmax	m
C31,C32,C33,C34	Chip multilayer capacitor inside PUMP.cir	Total capacitance 5uFmax	m
C41,C42,C43,C44,C45, C46,C47	Chip multilayer capacitor inside BUZZER.cir	Total capacitance 12.1uFmax	m
C51,C52	Chip multilayer capacitor inside MOTOR.cir	Total capacitance 2.2uFmax	m
C61	Chip multilayer capacitor	5.17uFmax	m
C62	Chip multilayer capacitor	0.0363uFmax	m
C71	Chip multilayer capacitor	11uFmax	m
L1, L2, L4	Chip multilayer inductor	10u H / 20% (2520)	m
L7	Chip multilayer inductor	4.7u H / 20% (2520)	m
PT1	Photo transistor	VTPS1192HB	m
X2	Quartz Crystal	DSX321G 14.7456MHz	m
X3	Quartz Crystal	FC-12M 32.768kHz	m
NF2	Chip Ferrite Beads or Chip metal film fixed resistor or Chip jumper	BLM18AG151SN1 or 10 - 10M ohm / 1%, 0.1W or 50m ohm max, 1A (1608)	m
NF3,NF4,NF5,NF6, NF,7NF8	Chip Ferrite Beads or Chip metal film fixed resistor or Chip jumper	BLM15HD182SN1 or 10 - 1M ohm / 1%, 0.1W or 50m ohm max, 1A (1005)	m
NF9,NF10,NF11,NF12	Chip Ferrite Beads or Chip metal film fixed resistor or Chip jumper	BLM18HD102SN1 or 10 - 10M ohm / 1%, 0.1W or 50m ohm max, 1A (1608)	m
BAT	LITHIUM COIN CELL	MS421R [SII] Vmax = 3.3V, Vtyp = 3.0V	*
LCD	LCD Module	BTG-128160B-FBWB [YEEBO] Internal x10 charge-pump Internal C = 200pFmax	D
MOTOR	Vibration motor	A3BE-MT4 [SICOH]	D

NOTE	<p>* marked parts are Safety Components. m marked parts are mounted or not. D marked parts, refer to datasheet. [] Parts manufacturer and () Parts size code. Non-Safety Components may be replaced with equivalent components or may not be mounted.</p> <p style="text-align: right;"> DEKRA Certification B.V. Meander 1051, 6825 MJ Arnhem P.O. Box 5185, 6802 ED Arnhem The Netherlands T +31 88 96 83000 F +31 88 96 83100 www.dekra-certification.com </p>
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REV.	0	NAME	PARTS LIST OF MAIN PCB FOR MODEL GX-6100
DATE	2022.7.7	DWG.No.	PLT-6991-6364-10 (4/4)
RIKEN KEIKI CO., LTD.		機密情報 / CONFIDENTIAL	

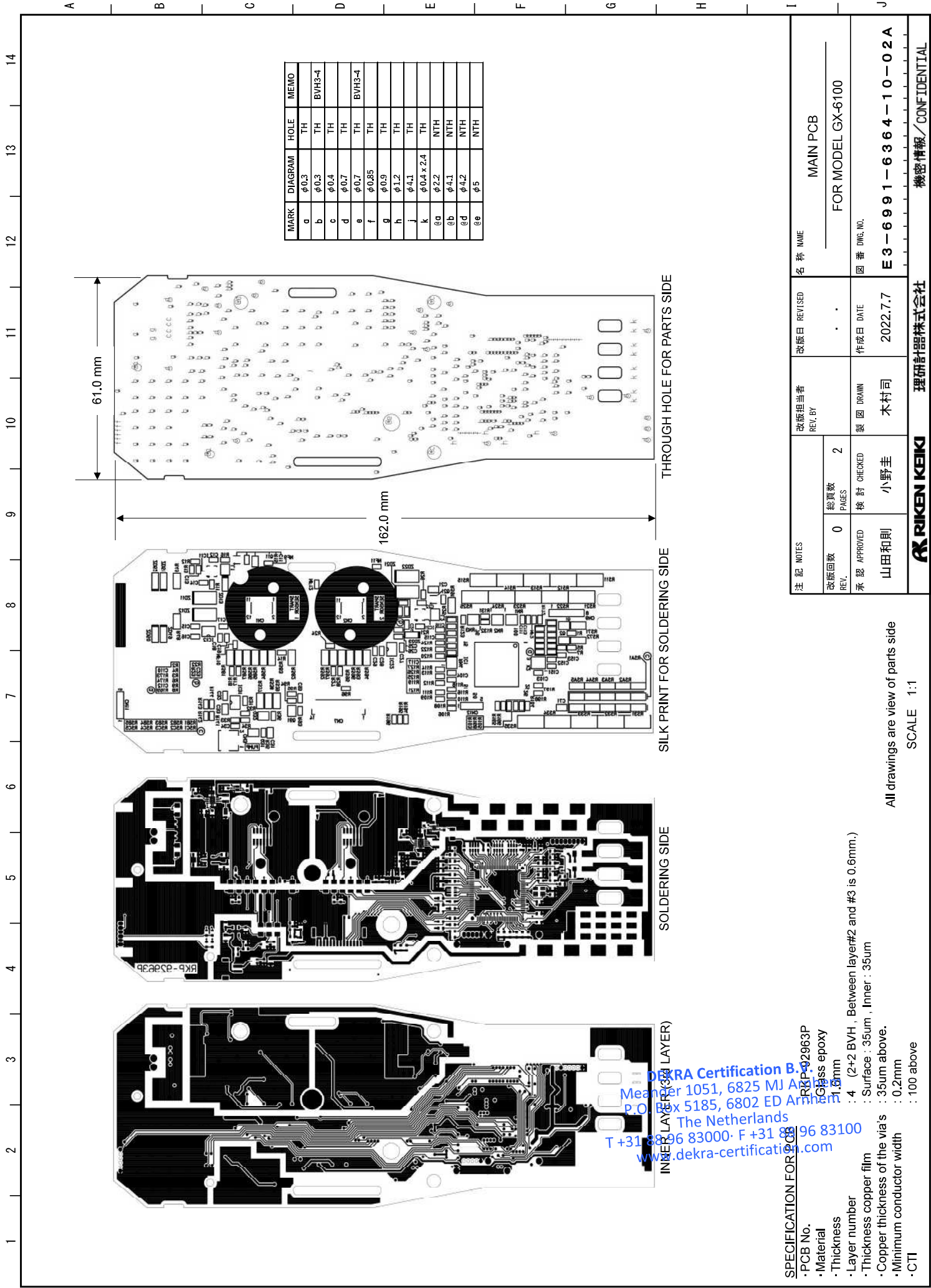


- SPECIFICATION FOR PCB
- PCB No. RKP-92963P
 - Material Glass epoxy
 - Thickness 1.6mm
 - Layer number 4 (2+2 BVH. Between layer#2 and #3 is 0.6mm.)
 - Thickness copper film : Surface : 35um , Inner : 35um
 - Copper thickness of the via's : 35um above.
 - Minimum conductor width : 0.2mm
 - CTI : 100 above

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All drawings are view of parts side
SCALE 1:1

注 記 NOTES		改版担当者 REV. BY	改版日 REVISED	名 称 NAME
改版回数 REV.	0	総頁数 PAGES	2	MAIN PCB
承認 APPROVED	山田和則	検討 CHECKED	小野圭	FOR MODEL GX-6100
作成日 DATE	2022.7.7	製 図 DRAWN	木村司	図 番 Dwg. NO.
E 3 - 6 9 9 1 - 6 3 6 4 - 1 0 - 0 1 A				機密情報 / CONFIDENTIAL



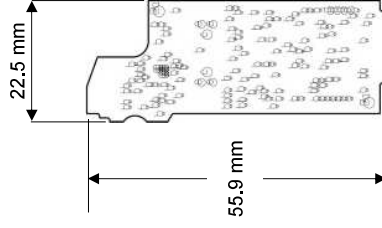
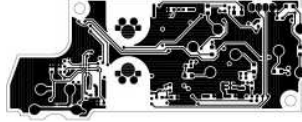
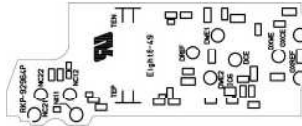
- SPECIFICATION FOR PCB
- PCB No. RKP-02963P
 - Material Glass epoxy
 - Thickness 1.6mm
 - Layer number 4 (2+2 BVH, Between layer#2 and #3 is 0.6mm.)
 - Thickness copper film : Surface : 35um , Inner : 35um
 - Copper thickness of the via's : 35um above.
 - Minimum conductor width : 0.2mm
 - CTT : 100 above

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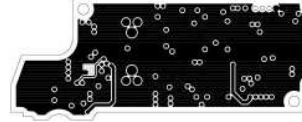
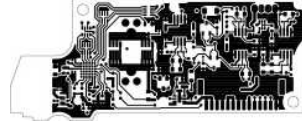
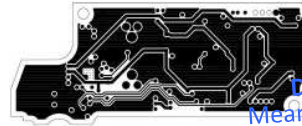
All drawings are view of parts side
SCALE 1:1

注 記 NOTES		改版担当者 REV. BY	改版日 REVISED	名 称 NAME
改版回数 REV.	0	総頁数 PAGES	2	MAIN PCB
承認 APPROVED	山田和則	検討 CHECKED	小野圭	FOR MODEL GX-6100
製 図 DRAWN	木村司	作成日 DATE	2022.7.7	図 番 DRWG. NO.
E3-6991-6364-10-02A				機密情報 / CONFIDENTIAL

Mark of drawing	Kind of parts	Rating/Model of parts	Remarks
IC1	IC (VLDO)	LTC3025EDC [AD]	m
IC2	IC (OPAMP)	LPV812DGK [TI]	m
IC3, IC4	IC (OPAMP)	LTC2064IMS8 [AD]	m
IC5	IC (CPU)	R5F11CCCGBG [RENESAS]	m
IC6	IC (Voltage regulator)	S-1335A28-A4T2U3 [ABLIC]	m
Q1	Nch + Nch MOS FET	UT6K3TCR [ROHM]	m
Q3, Q4	Nch MOS FET	2SK880-Y [TOSHIBA]	m
Q5	Pch MOS FET	SSM6J212FE [TOSHIBA]	m
Q11	Nch MOS FET	SSM3K123TU [TOSHIBA]	m
Q12	Nch MOS FET	RU1C001UN [ROHM]	m
Q13, Q14	Nch MOS FET	SiS410DN [VISHAY]	m
D1	Diode	RRE02VSM4S [ROHM]	m
D3	Schottky Barrier Diode	RB751VM-40 [ROHM]	m
R1-R4,R12-R16,R21, R27-R29,R31,R33-R36, R38,R39,R41,R43-R46, R48,R51-R65,R76,R78	Chip metal film fixed resistor or Chip jumper	10 - 10M ohm / 1%, 0.1W or 50m ohm max, 1A (1005)	m
R11, R22, R32, R42	Chip metal film fixed resistor or Chip jumper	10 - 10M ohm / 1%, 0.1W or 50m ohm max, 1A (1608)	m
R37	Chip metal film fixed resistor or Chip jumper	11M - 30M ohm / 5%, 0.05W or 50m ohm max, 1A (1005)	m
RA1, RA2	Chip fixed resistor array	10 - 1M ohm x4 / 5%, 0.031W	m
TH5	Thermistor or Chip metal film fixed resistor or Chip jumper	Rt25 = 1k - 470k ohm / 1%, B = 3000K - 5000K or 10 - 10M ohm / 1%,0.063W or 50m ohm max,1A(1608)	m
C1-C17,C20-C26, C30-C38,C40,C44-C48, CA1, CA2	Chip multilayer capacitor	Total capacitance 21.7uFmax	m
NF21,NF22,NF23, NF31,NF32, NF33, NF41	Chip Ferrite Beads or Chip metal film fixed resistor or Chip jumper	BLM18HD102SN1 or 10 - 10M ohm / 1%, 0.1W or 50m ohm max, 1A (1608)	m
NOTE	<p>* marked parts are Safety Components. m marked parts are mounted or not. D marked parts, refer to datasheet. [] Parts manufacturer and () Parts size code. Non-Safety Components may be replaced with equivalent components or may not be mounted.</p> <p style="text-align: right;"> DEKRA Certification B.V. Meander 1051, 6825 MJ Arnhem P.O. Box 5185, 6802 ED Arnhem The Netherlands T +31 88 96 83000 F +31 88 96 83100 www.dekra-certification.com </p>		
REV.	0	NAME	PARTS LIST OF SENSOR PCB FOR MODEL GX-6100
DATE	2022.7.7	DWG.No.	PLT-6991-6365-80 (1/1)
RIKEN KEIKI CO., LTD.		機密情報 / CONFIDENTIAL	



MARK	DIAGRAM	HOLE	MEMO
a	$\phi 0.15$	TH	
b	$\phi 0.3$	TH	
c	$\phi 0.8$	TH	
d	$\phi 0.85$	TH	
e	$\phi 0.9$	TH	
@a	$\phi 2$	NTH	



MINI-PC BOARD (2nd L)

DEKRA Certification B.V.
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The Netherlands

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www.dekra-certification.nl


RSP-02964P
Glass epoxy
1,0mm
: 4

SPECIFICATION FOR PCB

- PCB No. : FR-4-02964P
- Material : Glass epoxy
- Thickness : 1.6mm
- Layer number : 4
- Thickness copper film : Surface : 35um , Inner : 35um
- Copper thickness of the vias : 35um above.
- Minimum conductor width : 0.2mm
- C.TI : 100 above

All drawings are view of parts side

SCALE 1:1

注 記 NOTES		改版担当者 REV.BY		改版日 REVISED	名 称 NAME
改版回数 REV.	0	総頁数 PAGES	1	. .	
承認 APPROVED	山田和則	検討 CHECKED	製 図 DRAWN	作成日 DATE	図 番 DWG. NO.
		小野圭	木村司	2022.7.7	E3-6991-6365-80-01A
 理研計器株式会社 機密情報 / CONFIDENTIAL					

1 2 3 4 5 6 7

A

B

C

D

E

F

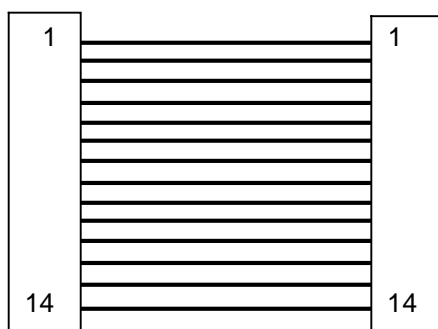
G

H

I

CN1
CONNECTOR
Model : NSHR-14V-S
Manufacturer : JST

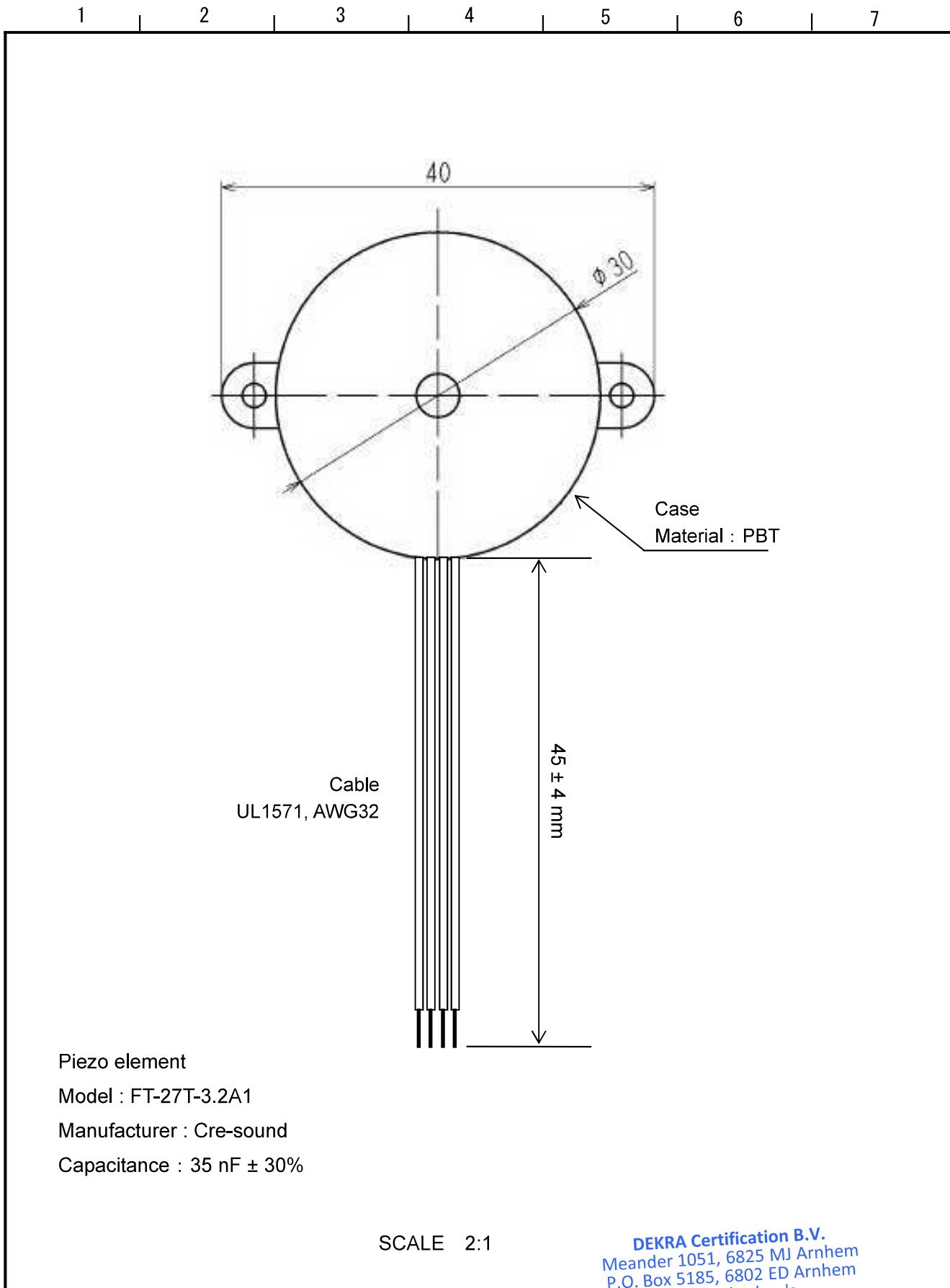
CN2
CONNECTOR
Model : NSHR-14V-S
Manufacturer : JST



Wire : UL1571 AWG30
Maximum wire length : 40mm

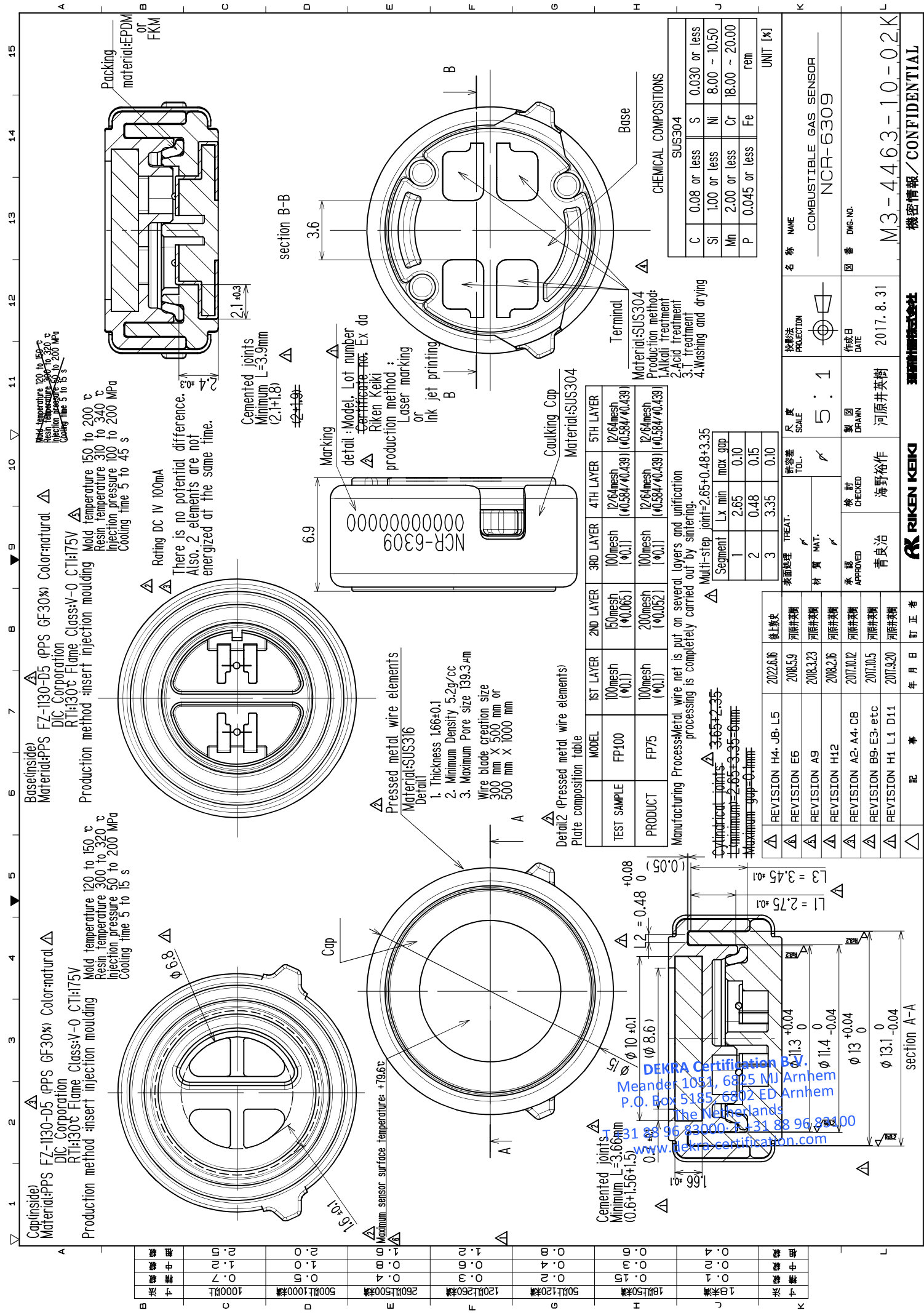
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SENSOR to MAIN WIRE

注 記 NOTES		改版担当者 REV. BY	改版日 REVISED	名 称 NAME FOR MODEL GX-6000
改版回数 REV.	0			
総頁数 PAGES	1	製 図 DRAWN	作成日 DATE	図 番 DWG. NO. E 4 - 6 9 9 1 - 5 3 8 2 - 7 0 - 0 1 K
承 認 APPROVED	検 討 CHECKED			
石橋勝	北村正英	小野圭	2014.7.14	

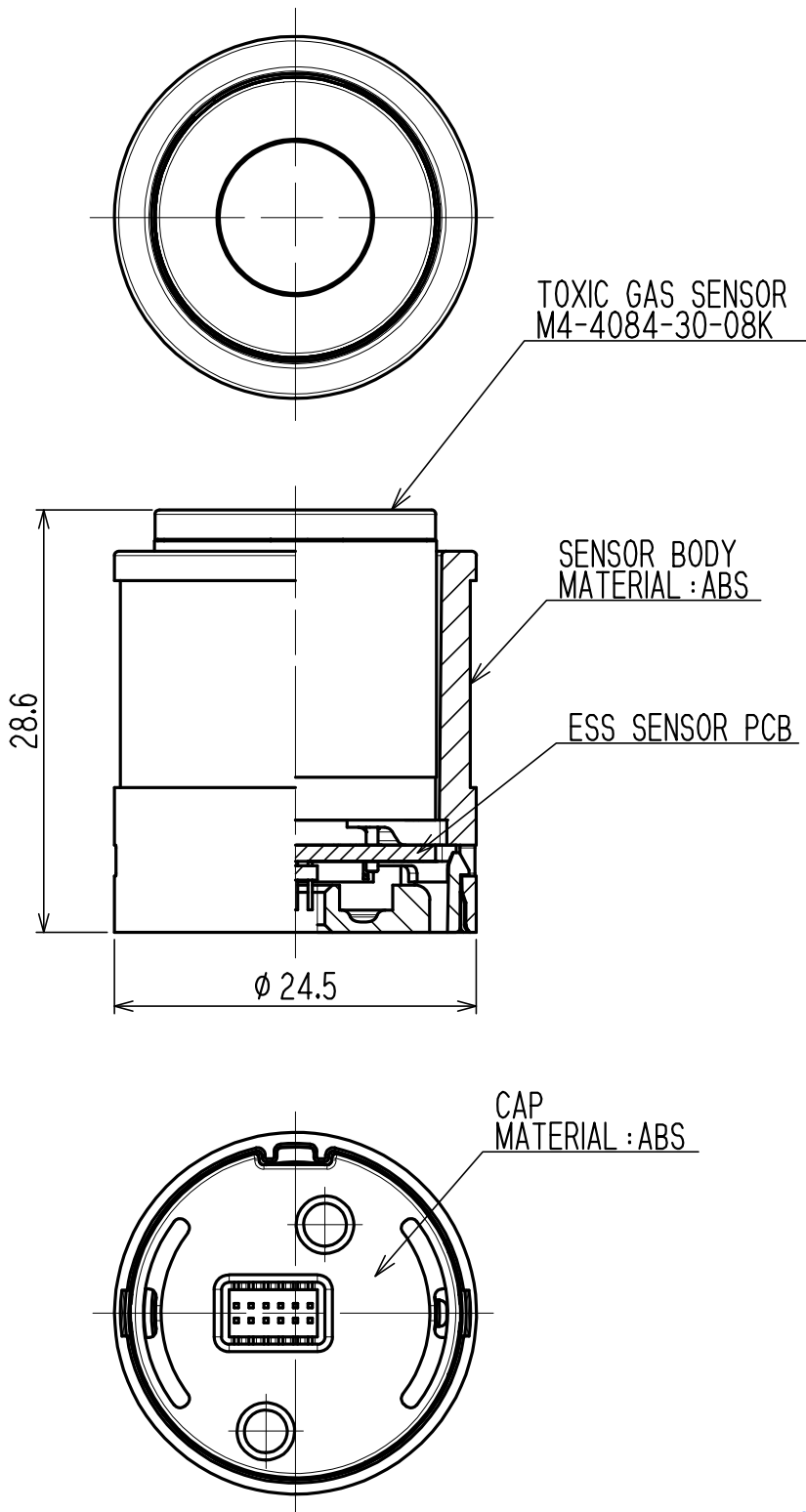


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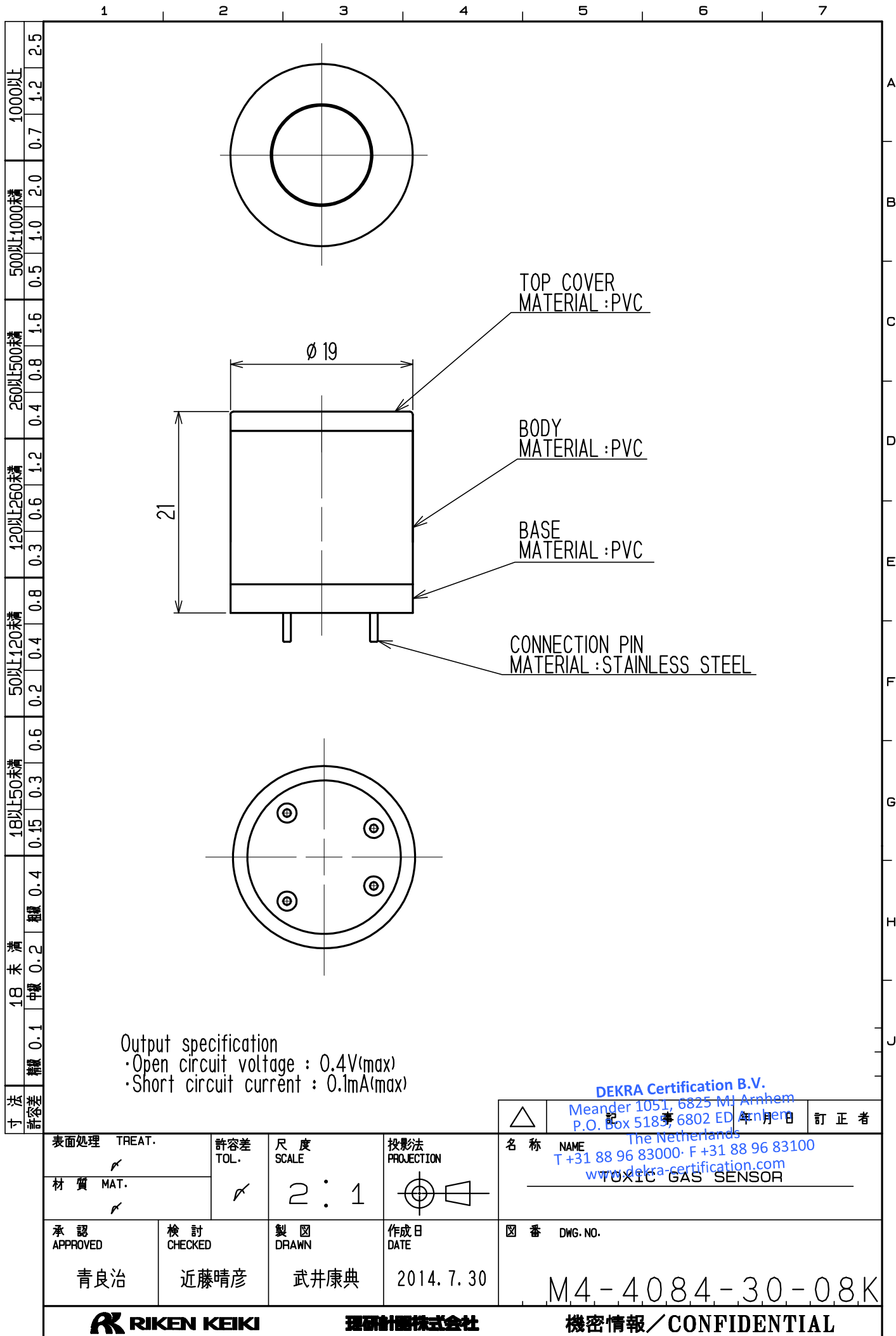
注 記 NOTES		改版担当者 REV. BY	改版日 REVISED	名 称 NAME BUZZER
改版回数 REV.	0			
総頁数 PAGES	1	製 図 DRAWN	作成日 DATE	図 番 DWG. NO.
承認 APPROVED	検 討 CHECKED			
山田和則	小野圭	木村司	2022.9.26	E 4 - 6 9 9 1 - 6 3 8 7 - 1 0 - 0 1 K

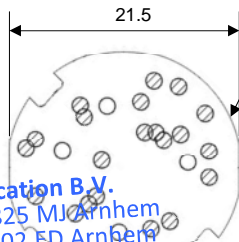
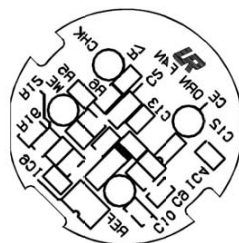
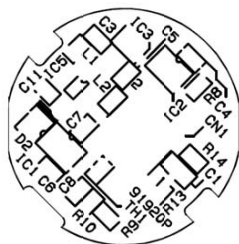


寸法	18未満	18以上50未満	50以上120未満	120以上260未満	260以上500未満	500以上1000未満	1000以上
公差	精 0.1 中 0.2 粗 0.4	精 0.15 中 0.3 粗 0.45	精 0.2 中 0.4 粗 0.8	精 0.3 中 0.6 粗 1.2	精 0.4 中 0.8 粗 1.6	精 0.5 中 1.0 粗 2.0	精 0.7 中 1.2 粗 2.5



表面処理 TREAT.		許容差 TOL.	尺 度 SCALE	投影法 PROJECTION	名 称 NAME The Netherlands T +31 88 96 83000 F +31 88 96 83100 www.dekra-certification.com	
材 質 MAT.					SMART SENSOR Type-ESS	
承認 APPROVED	検 討 CHECKED	製 図 DRAWN	作成日 DATE	図 番 DWG. NO.		
青良治	近藤晴彦	武井康典	2014. 7. 30	M4-4486-01-01K		
RIKEN KEIKI		理研計測株式会社		機密情報 / CONFIDENTIAL		





MARK	DIAGRAM	HOLE
①	φ 0.3	TH
○	φ 1.0	TH

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SILK PRINT FOR PARTS SIDE

PARTS SIDE

SOLDERING SIDE

SILK PRINT FOR SOLDERING SIDE

THROUGH HOLE DIA

SPECIFICATION FOR PCB

- PCB No. : RKP-91920P
- Material : Glass epoxy
- Thickness : 1.2mm
- Layer number : 2
- Thickness copper film : 18um
- Minimum conductor width : 0.2mm
- CTI : 100 above

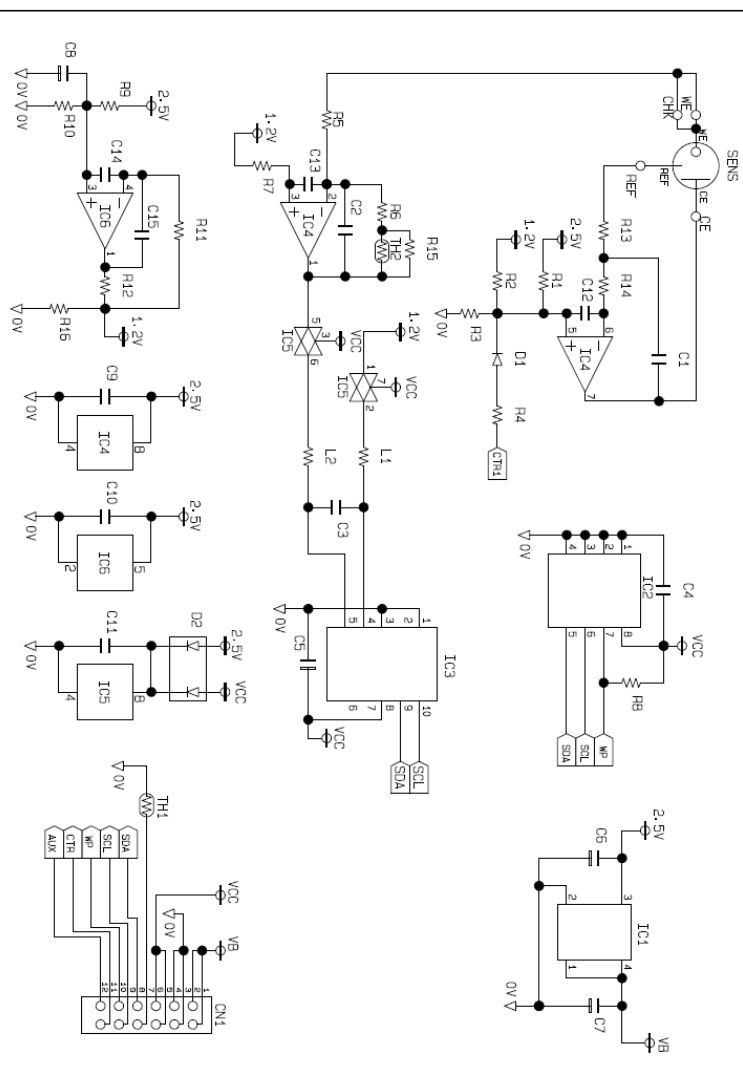
All drawings are view of parts side

SCALE 2:1

PARTS LIST

Mark of drawing	Kind of parts	Rating / Model of parts	Remarks
IC-1	IC (Voltage regulator)	S-1313D25-N4T1	m
IC-2	IC (EEPROM)	S-24C16CH8T1	m
IC-3	IC (A/D Converter)	ADS1114IRU	m
IC-4	IC (OPAMP)	LT6004CMS8	m
IC-5	IC (Logic)	HD74ALVC2G66	m
IC-6	IC (OPAMP)	AD8500AKS	m
D1	Diode	1SS335	m
D2	Diode array	RB480Y (2elements)	m
TH1	Chip thermistor	R125 = 470 ohm -100 k ohm / 5%, B=3000K-5000K (1005)	m
R1-16	Chip fixed resistor or Chip jumper	10 ohm - 1M ohm / 1%, 0.063W or 50m ohm max.1A (1005)	m
C1-2	Chip multilayer capacitor	10uF / 10%, 6.3V	m
C4,5,6,7,9,10,11	Chip multilayer capacitor	0.1uF / 10%, 16V	m
C3,8,12,13,14	Chip multilayer capacitor	10pF-1000pF / 10%, 50V	m
C15	Chip multilayer capacitor	1uF / 10%, 10V	m
L1,2	Chip fixed resistor or Chip jumper or Noise filter	10 ohm - 1M ohm / 1%, 0.063W or 50m ohm max.1A (1005) or BLM15HD182	m

m marked parts are mounted or not

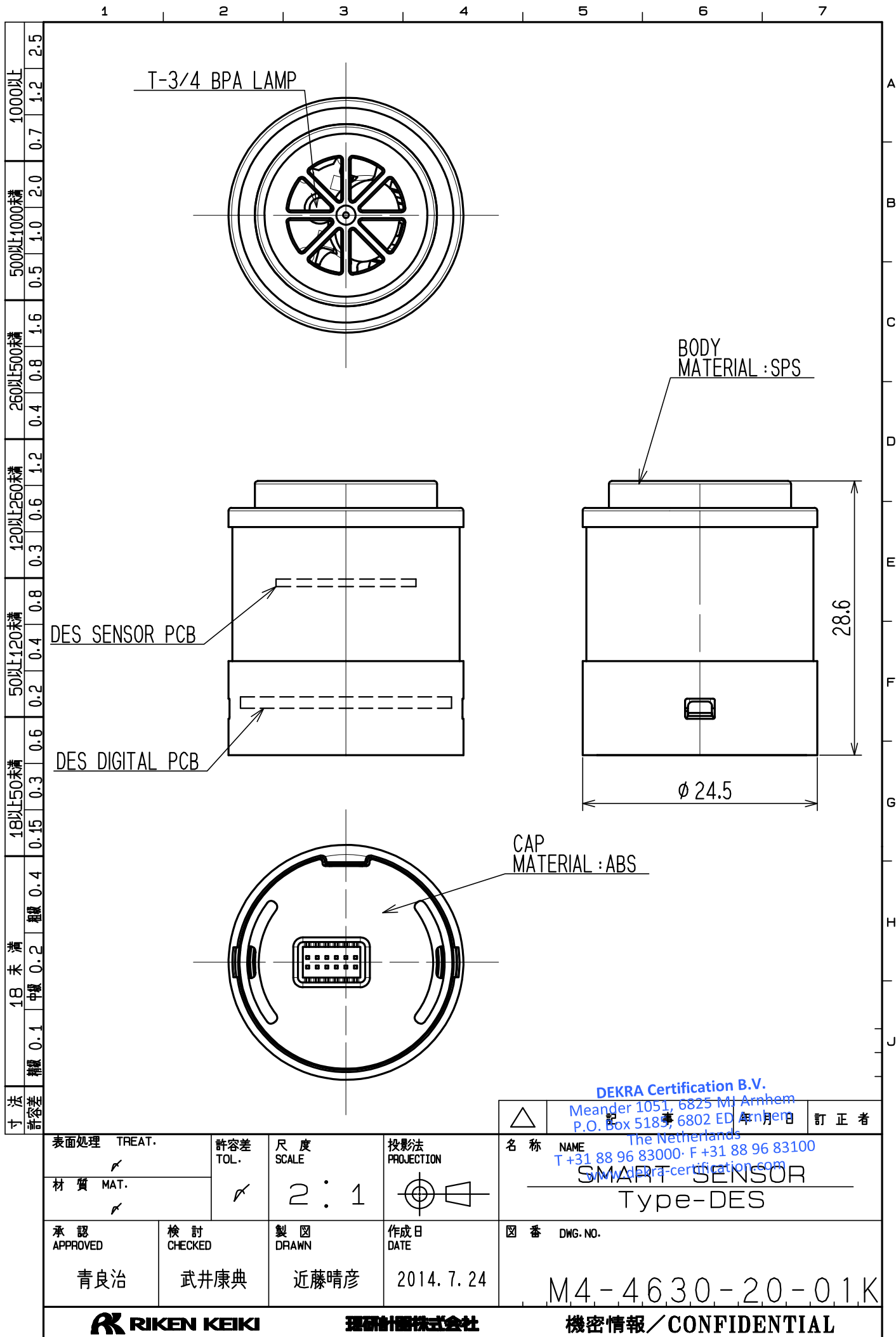


SCHEMATIC

ESS SENSOR PCB

注記 NOTES	改版担当者 REV.BY	改版日 REVISED	名称 NAME
改版回数 0	総頁数 1		
REV.	PAGES		

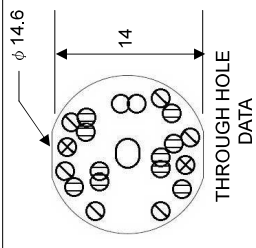
承認 APPROVED	検封 CHECKED	製図 DRAWN	作成日 DATE	図番 DWG. NO.
石橋勝	北村正英	小野圭	2014.7.14	E3-6991-5384-10-01K



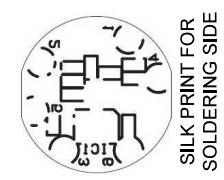
1 2 3 4 5 6 7 8 9 10 11 12 13 14

SPECIFICATION FOR PCB
•PCB No. : RKP-91936P
•Material : Glass epoxy
•Thickness : 0.8mm
•Layer number : 4
•Thickness copper film : 18um
•Minimum conductor width : 0.2mm
•CTI : 100 above

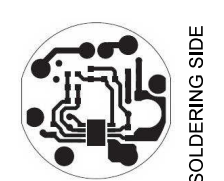
MARK	DIAGRAM	HOLE
①	φ0.3	TH
○	φ0.5	TH
⊗	φ0.8	TH
⊗	φ1.7	NTH



THROUGH HOLE DATA



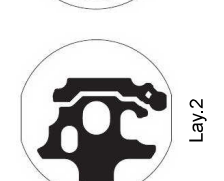
SILK PRINT FOR SOLDERING SIDE



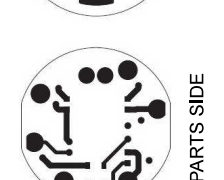
SOLDERING SIDE



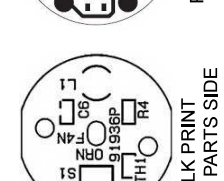
Lay.3



Lay.2



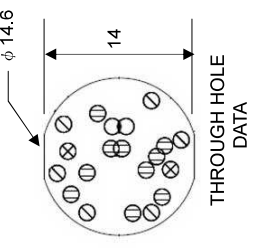
PARTS SIDE



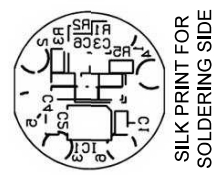
SILK PRINT FOR PARTS SIDE

SPECIFICATION FOR PCB
•PCB No. : RKP-91834P
•Material : Glass epoxy
•Thickness : 0.8mm
•Layer number : 2
•Thickness copper film : 18um
•Minimum conductor width : 0.2mm
•CTI : 100 above

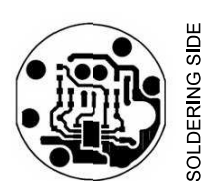
MARK	DIAGRAM	HOLE
①	φ0.3	TH
○	φ0.5	TH
⊗	φ0.8	TH
⊗	φ1.7	NTH



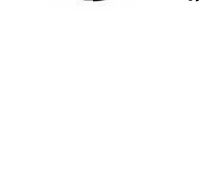
THROUGH HOLE DATA



SILK PRINT FOR SOLDERING SIDE



SOLDERING SIDE



PARTS SIDE



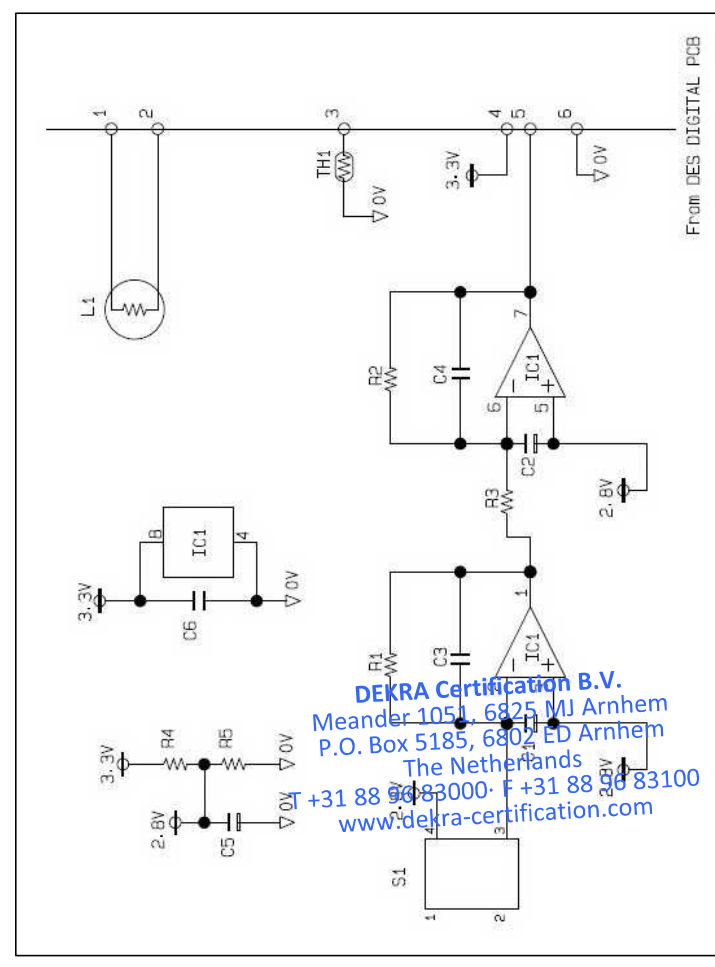
SILK PRINT FOR PARTS SIDE

All drawings are view of parts side
SCALE 2:1

PARTS LIST

Mark of drawing	Kind of parts	Rating / Model of parts	Remarks
S1	IR Sensor	IR1011	
IC1	IC (OPAMP)	LTC2055HDD	m
TH1	Chip thermistor	RT25 = 470 ohm -100 k ohm / 5%, B=3000K-5000K (1005)	m
R1,2,3,4,5	Chip fixed resistor or Chip jumper	10 ohm - 1M ohm / 1%, 0.063W or 50m ohm max, 1A (1005)	m
C1,2	Chip multilayer capacitor	10pF-1000pF / 10%, 50V	m
C3	Chip multilayer capacitor	0.01uF / 10%, 25V	m
C4,5,6	Chip multilayer capacitor	0.1uF / 10%, 25V	m
L1	T-3/4 BPA LAMP	OL-8270BPA refer to E4-6991-5129-60-01K	m

m marked parts are mounted or not

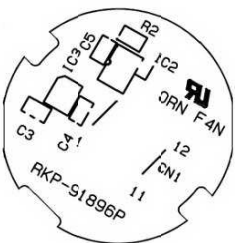


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P.O. Box 5185, 6801 ED Arnhem
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注 記 NOTES	改版担当者 REV.BY	名称 NAME
Add RKP-91936P	小野圭	DES SENSOR PCB
改版回数 REV. 1	総頁数 PAGES 1	2015.5.25
承認 APPROVED 石橋勝	検討 CHECKED 北村正英	作成日 DATE 2014.7.14
	製 図 DRAWN 小野圭	國 番 DWG. NO. E3-6991-5385-90-01K

理研計器株式会社
機密情報 / CONFIDENTIAL

SCHEMATIC



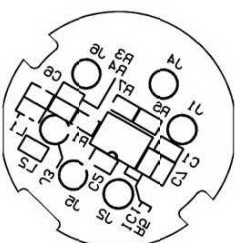
SILK PRINT FOR PARTS SIDE



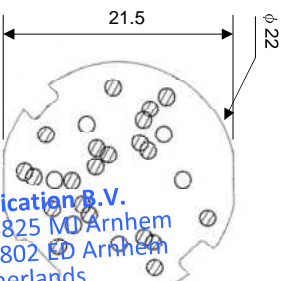
PARTS SIDE





SOLDERING SIDE



SILK PRINT FOR SOLDERING SIDE



THROUGH HOLE DATA

MARK	DIAGRAM	HOLE
	$\phi 0.3$	TH
	$\phi 0.9$	TH

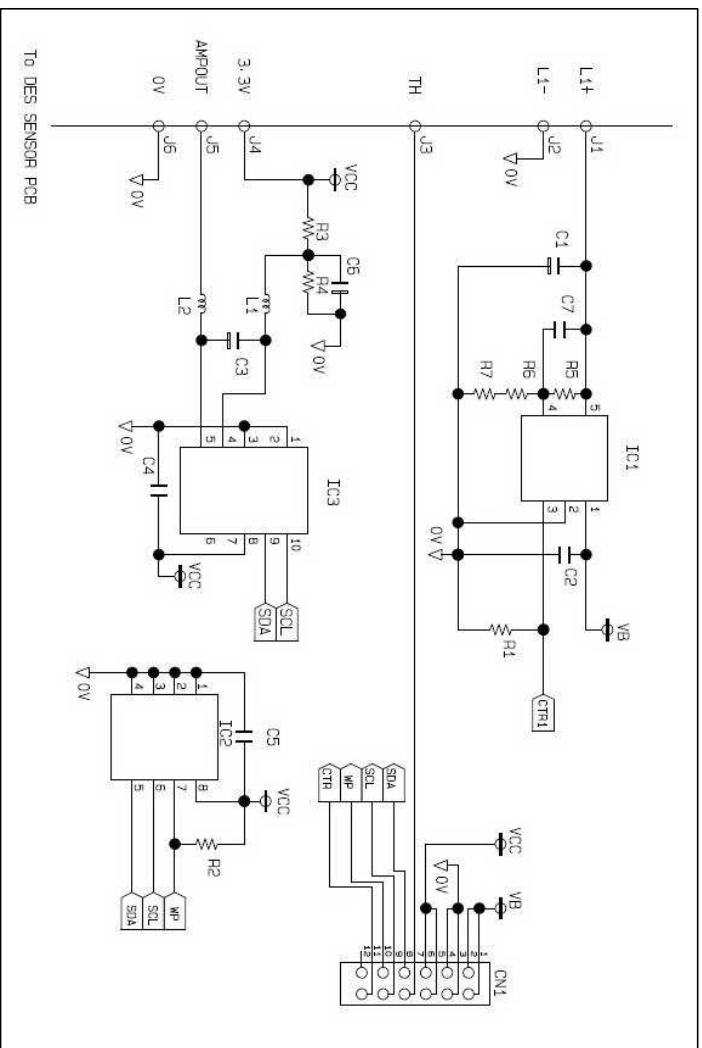
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P.O. Box 5185 6802 LD Arnhem
The Netherlands
T +31 88 96 83000 F +31 88 96 83100
www.dekra-certification.com

SPECIFICATION FOR PCB

- PCB No. : RKP-91896P
- Material : Glass epoxy
- Thickness : 1.2mm
- Layer number : 2
- Thickness copper film : 35um
- Minimum conductor width : 0.3mm
- CTI : 100 above

All drawings are view of parts side

SCALE 2:1



SCHEMATIC

Mark of drawing	Kind of parts	Rating / Model of parts	Remarks
IC1	IC (Voltage regulator)	TPS73201DBV	m
IC2	IC (EEPROM)	S-24C16CH8T1	m
IC3	IC (A/D Converter)	ADS1114IRU	m
R1,2,3,4,5,6,7	Chip fixed resistor or Chip jumper	10 ohm – 1M ohm / 1%, 0.063W or 50m ohm max, 1A (1005)	m
C1,2	Chip multilayer capacitor	4.7uF / 20%, 6.3V	m
C3,4,5,6	Chip multilayer capacitor	0.1uF / 10%, 25V	m
C7	Chip multilayer capacitor	1uF / 10%, 10V	m
L1,2	Chip fixed resistor or Chip jumper or Noise filter	10 ohm – 1M ohm / 1%, 0.063W or 50m ohm max, 1A (1005) or BLM15HD182	m

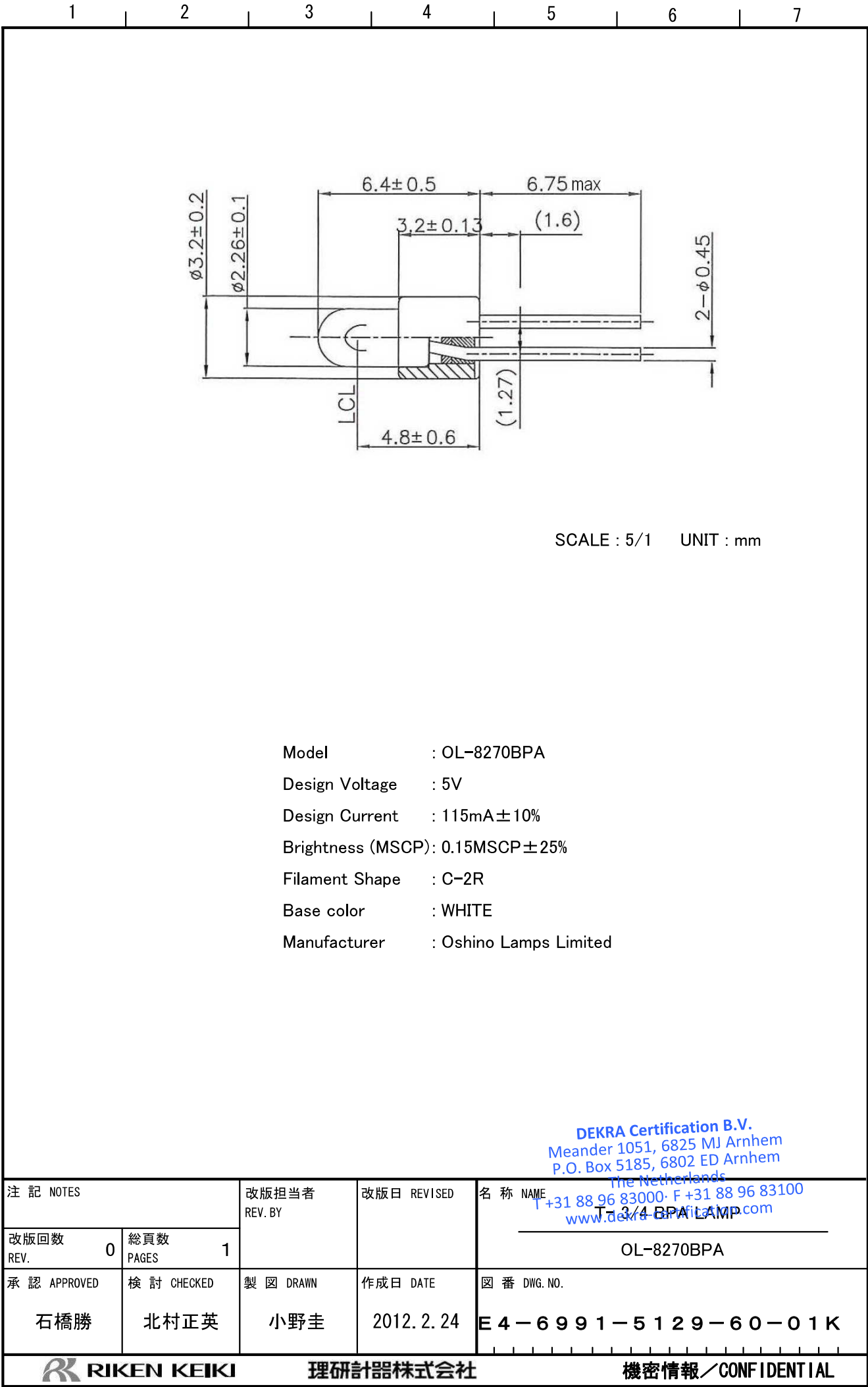
m marked parts are mounted or not

注 記 NOTES		改版担当者 REV. BY	改版日 REVISED	名 称 NAME
C1、C2 change				DES DIGITAL PCB
改版回数 REV.	1	総頁数 PAGES	1	
承認 APPROVED	検討 CHECKED	製 図 DRAWING	作成日 DATE	
石橋勝	北村正英	小野圭	2014.7.14	
				E3-66991-5386-60-01K



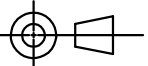

RIKEN KEIKI

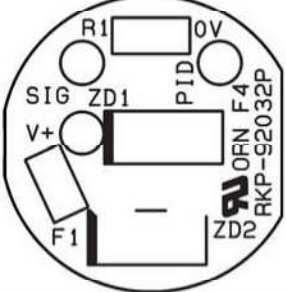

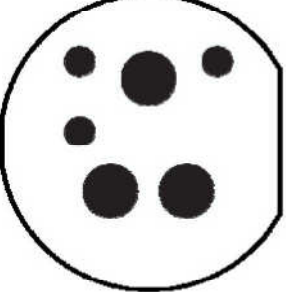
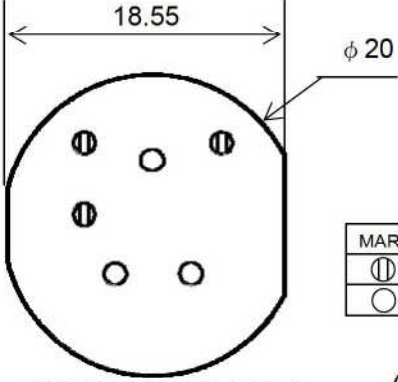
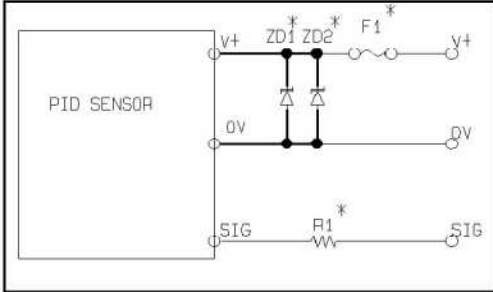

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機密情報／CONFIDENTIAL

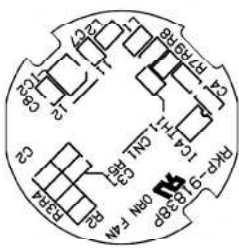


寸法		18 未満		18以上50未満		50以上120未満		120以上260未満		260以上500未満		500以上1000未満		1000以上									
精線	0.1	中線	0.2	粗線	0.4	0.15	0.3	0.6	0.2	0.4	0.8	0.3	0.6	1.2	0.4	0.8	1.6	0.5	1.0	2.0	0.7	1.2	2.5

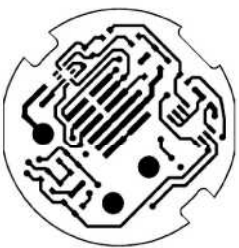
表面処理 TREAT. 		許公差 TOL. 	尺度 SCALE 2 : 1	投影法 PROJECTION 	名称 NAME The Netherlands T +31 88 96 83000 F +31 88 96 83100 www.pedra-certification.com		訂正者 武井康典
材質 MAT. 					名称 NAME The Netherlands T +31 88 96 83000 F +31 88 96 83100 www.pedra-certification.com		訂正者 武井康典
承認 APPROVED	検討 CHECKED	製図 DRAWN 武井康典	作成日 DATE 2014. 7. 30	図番 DWG. NO. M4-4830-01-01K			
青良治	近藤晴彦			機密情報 / CONFIDENTIAL			

1	2	3	4	5	6	7
						
SILK PRINT FOR PARTS SIDE			PARTS SIDE		SOLDERING SIDE	
			<p>SPECIFICATION FOR PCB</p> <ul style="list-style-type: none"> • PCB No. : RKP-92032P • Material : Glass epoxy • Thickness : 0.8mm • Layer number : 2 • Thickness copper film : 35um • Minimum conductor width : 1.0mm • CTI : 100 above 			
THROUGH HOLE DATA			All drawings are view of parts side		SCALE 2:1	
			SCHEMATIC			
PARTS LIST						
Mark of drawing		Kind of parts	Rating / Model of parts		Remarks	
PID SENSOR		VOC GAS SENSOR	MINI PID 3PIN, Ion Science Ltd. IECEx BAS 07.0030U		Ex comp.	
F1		Fuse	MCF2 125mAR08B4, SOC In=250mA, DC72V		Safety comp.	
ZD1,ZD2		Zener diode	1SMB5917B,ON Semiconductor Vz = 4.46 – 4.94 V, 3W		Safety comp.	
R1		Chip fixed resistor	1k ohm / 1%, 0.25W (3216)		Safety comp.	
<p>DEKRA Certification B.V. Meander 1051, 6825 MJ Arnhem P.O. Box 5185, 6802 ED Arnhem The Netherlands T +31 88 96 83100 F +31 88 96 83100 www.dekra-certification.com</p>						
注 記 NOTES		改版担当者 REV. BY	改版日 REVISED	名 称 NAME		
PID=>PIS		小野圭	2015.3.25	PIS SENSOR PCB		
改版回数 REV.	2	総頁数 PAGES	1			
承認 APPROVED	検討 CHECKED	製 図 DRAWN	作成日 DATE	図 番 DWG. NO.		
石橋勝	北村正英	小野圭	2014.7.14	E 4 - 6 9 9 1 - 5 3 8 7 - 3 0 - 0 1 K		
		理研計器株式会社		機密情報 / CONFIDENTIAL		

1 2 3 4 5 6 7 8 9 10 11 12 13 14



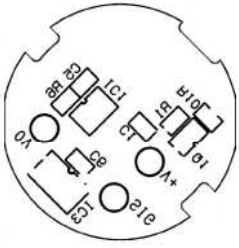
SILK PRINT FOR PARTS SIDE



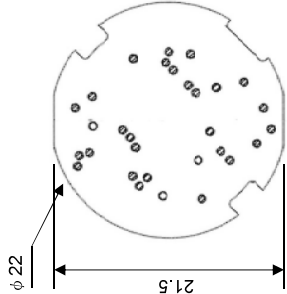
PARTS SIDE



SOLDERING SIDE



SILK PRINT FOR SOLDERING SIDE



THROUGH HOLE DATA

MARK	DIAGRAM	HOLE
①	TH	φ0.3
○	TH	φ1.0

SPECIFICATION FOR PCB

- PCB No. : RKP-91838P
- Material : Glass epoxy
- Thickness : 1.2mm
- Layer number : 2
- Thickness copper film : 18um
- Minimum conductor width : 0.3mm
- CTI : 100 above

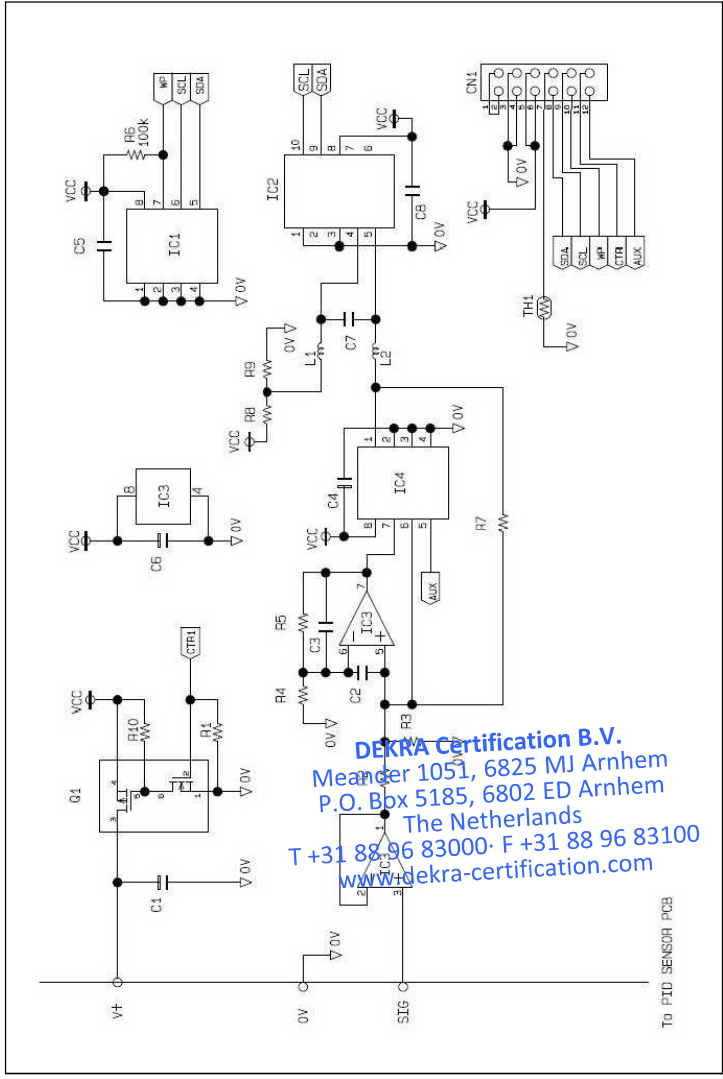
All drawings are view of parts side

SCALE 2:1

PARTS LIST

Mark of drawing	Kind of parts	Rating / Model of parts	Remarks
IC1	IC (EEPROM)	S-24C16CH-BT1	m
IC2	IC (A/D Converter)	ADS1114IRU	m
IC3	IC (OPAMP)	OPA2378AIDCN	m
Q1	N+P-ch FET	EM6M2	m
TH1	Chip thermistor	RT25 = 470 ohm -100 k ohm / 5%, B=3000K-5000K (1005)	m
R1-10	Chip fixed resistor or Chip jumper	10 ohm - 1M ohm / 1%, 0.063W or 50m ohm max 1A (1005)	m
C1,2,4,5,6,7,8	Chip multilayer capacitor	0.1uF / 10%, 16V	m
C3	Chip multilayer capacitor	10pF-1000pF / 10%, 50V	m
L1,2	Chip fixed resistor or Chip jumper or Noise filter	10 ohm - 1M ohm / 1%, 0.063W or 50m ohm max 1A (1005) or BLM15HD182	m

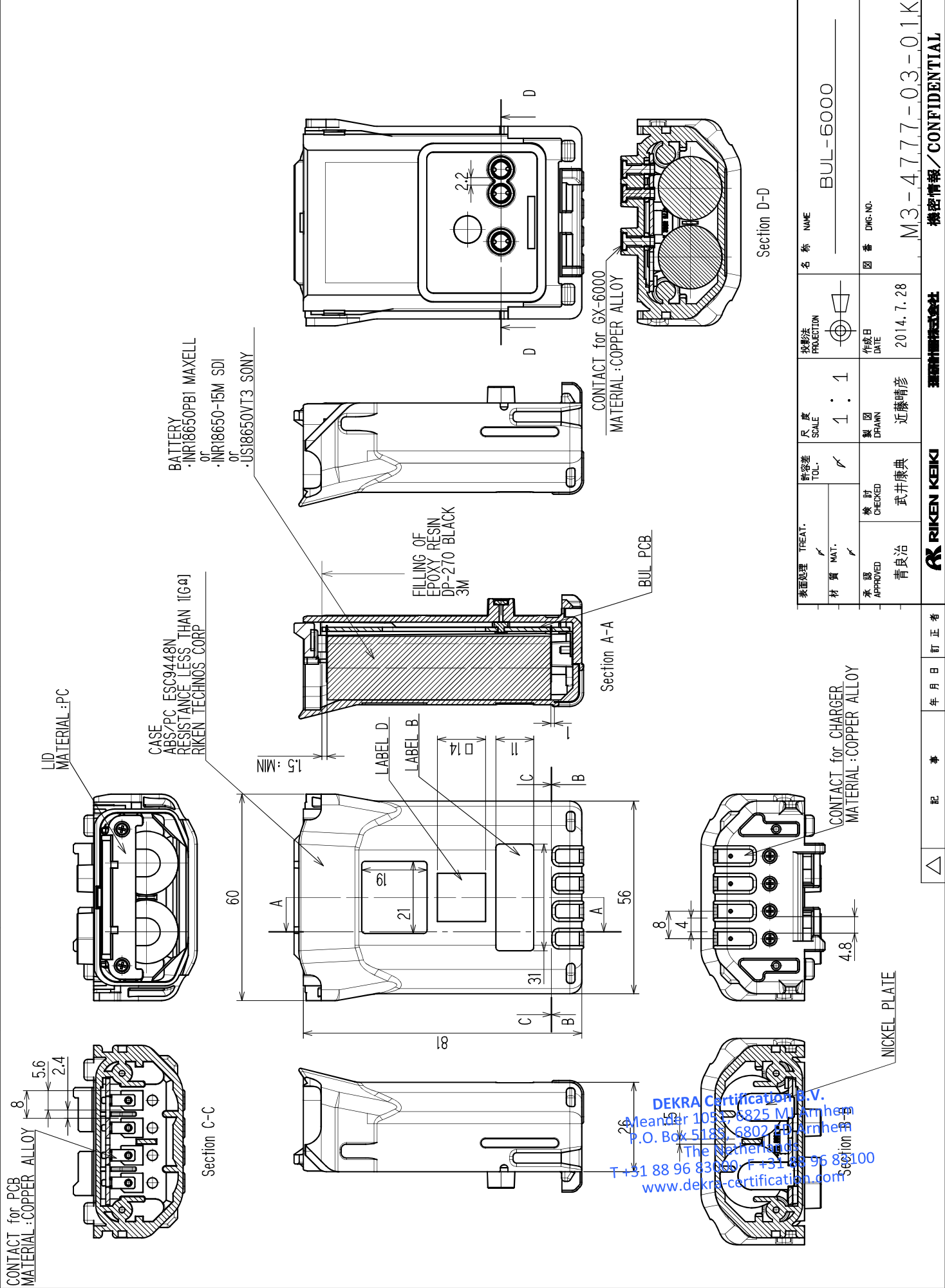
m marked parts are mounted or not

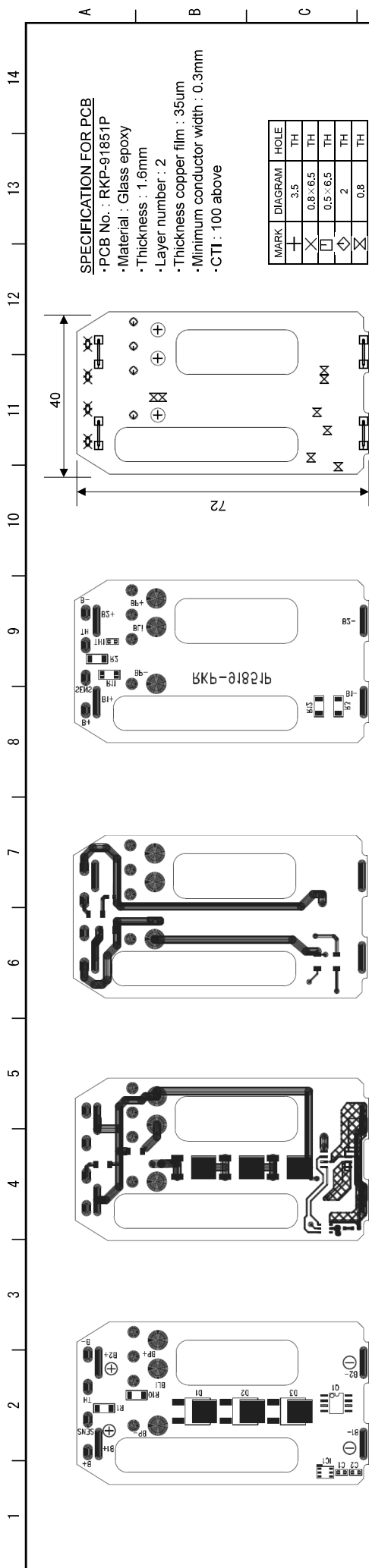


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注 記 NOTES	PID=>PIS	改版担当者	名称 NAME
改版回数 REV.	1 総頁数 1	REV. BY	小野圭
承認 APPROVED	石橋勝	製 図 DRAWN	小野圭
検討 CHECKED	北村正英	作成日 DATE	2014.7.14
		國 番 DWG. NO.	E3-6991-5388-10-01K
SCHEMATIC		理研計器株式会社	
		機密情報 / CONFIDENTIAL	

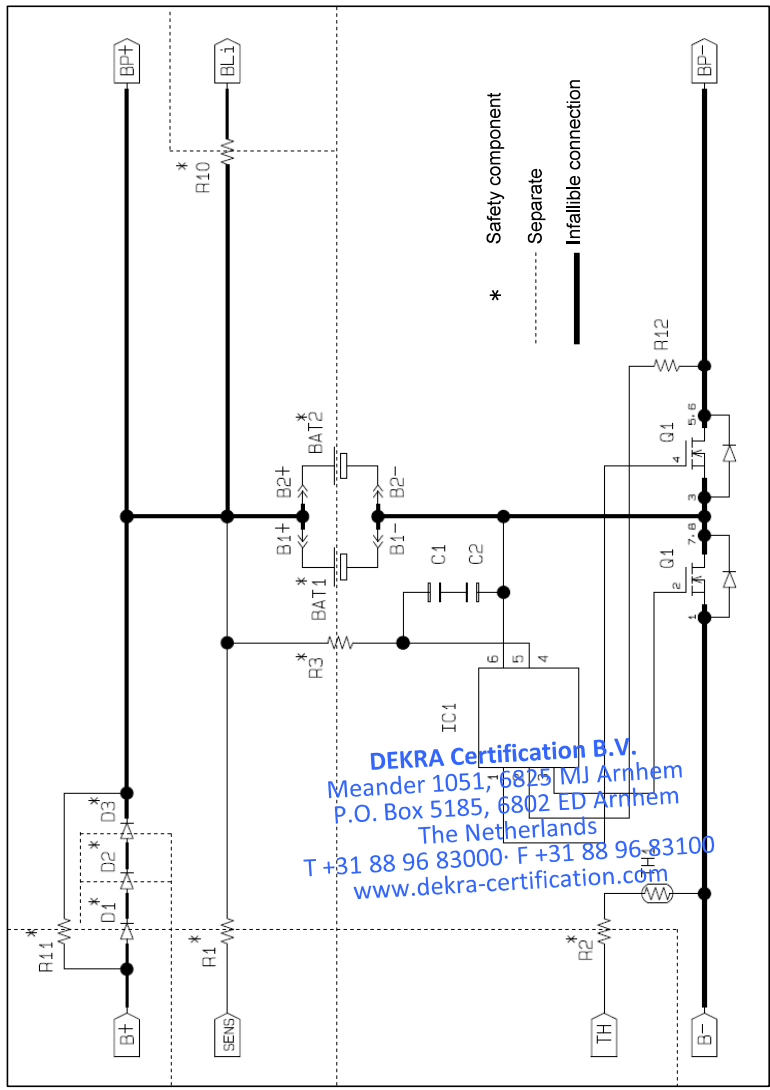
粗級	0.4	0.6	0.8	1.2	1.6	2.0	2.5
中級	0.2	0.3	0.4	0.6	0.8	1.0	1.2
精級	0.1	0.15	0.2	0.3	0.4	0.5	0.7
寸法	1日未満	1日以上50未満	50以上120未満	120以上260未満	260以上500未満	500以上1000未満	1000以上
入	イ	ロ	ハ	ニ	ホ	ヘ	コ





SILK PRINT FOR PARTS SIDE SOLDERING SIDE THROUGH HOLE DATA

All drawings are view of parts side
SCALE 1:1



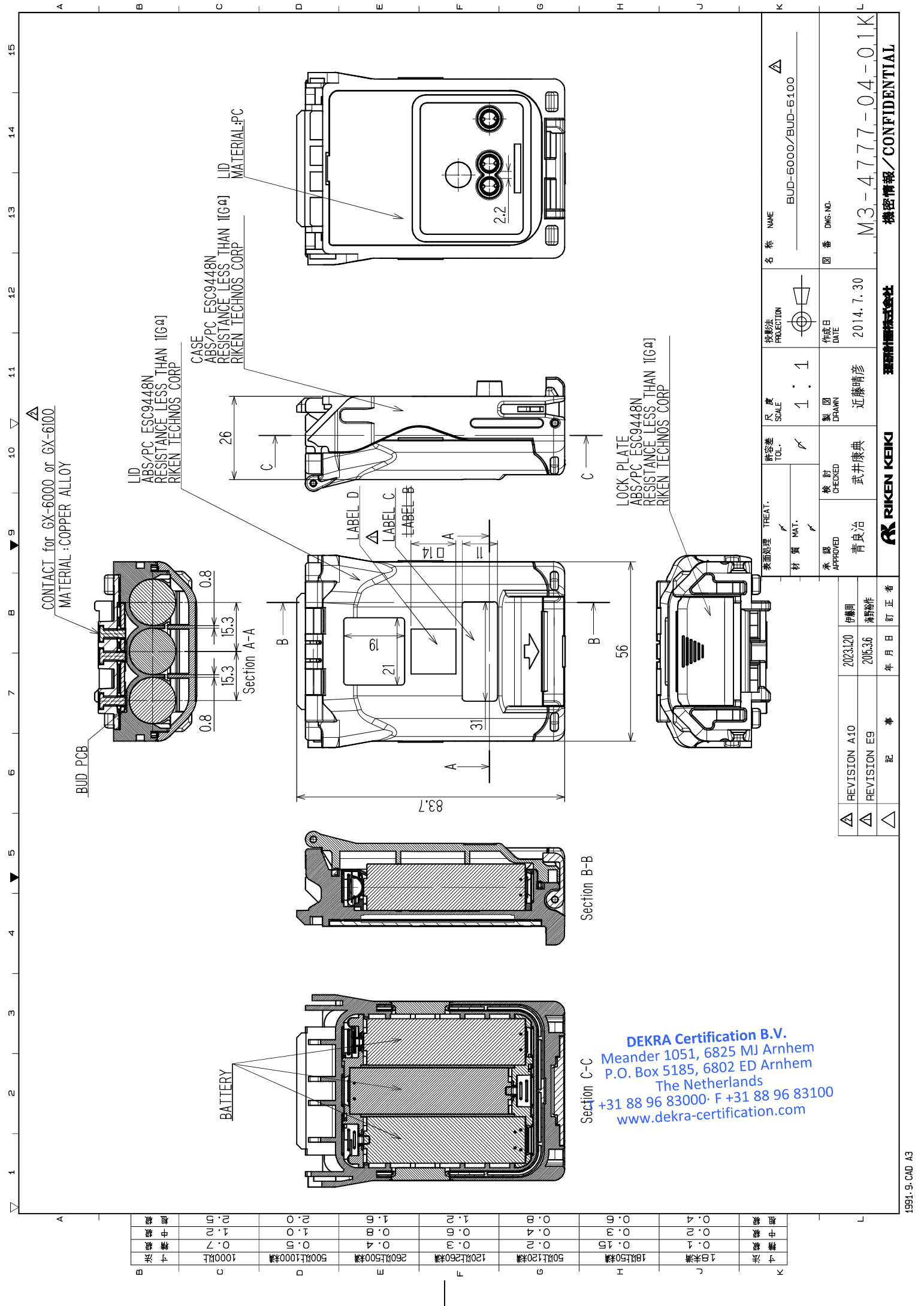
SCHEMATIC

PARTS LIST

Mark of drawing	Kind of parts	Rating / Model of parts	Remarks
IC1	IC (Protection IC)	S-8261	
Q1	FET	FDS6961A	
D1,2,3	Schottky barrier diode	MBRD1045, On semiconductor Vr = 45V, If = 10A	*
R1,2	Chip fixed resistor	MCR18EZP_2000, ROHM or RK73H2BT_2000, KOA 200ohm / 1%, 0.25W	*
R3	Chip fixed resistor	MCR18EZP_4700, ROHM or RK73H2BT_4700, KOA 470ohm / 1%, 0.25W	*
R10	Chip fixed resistor	MCR18EZP_1002, ROHM or RK73H2BT_1002, KOA 10k ohm / 1%, 0.25W	*
R11	Chip fixed resistor	MCR18EZP_1002, ROHM or RK73H2BT_1002, KOA 2.2k ohm / 1%, 0.25W	*
R12	Chip fixed resistor	200Q-10KQ / 1%, 0.25W (3216)	
C1,2	Chip multilayer capacitor	0.1uF / 10%, 50V	m
TH1	Chip thermistor	RT25 = 470 ohm -100 k ohm / 5%, B=3000K-5000K (1005)	

m marked parts are mounted or not

注 記 NOTES		改版日 REVISED	名称 NAME
改版回数 REV.	1	2014.9.5	BUL PCB
総頁数 PAGES	1		
承認 APPROVED	石橋勝	製 図 DRAWN	國 番 DWG. NO.
検討 CHECKED	北村正英	作成日 DATE	
		2014.7.14	E3-6991-5389-80-01K
理研計器株式会社		機密情報 / CONFIDENTIAL	

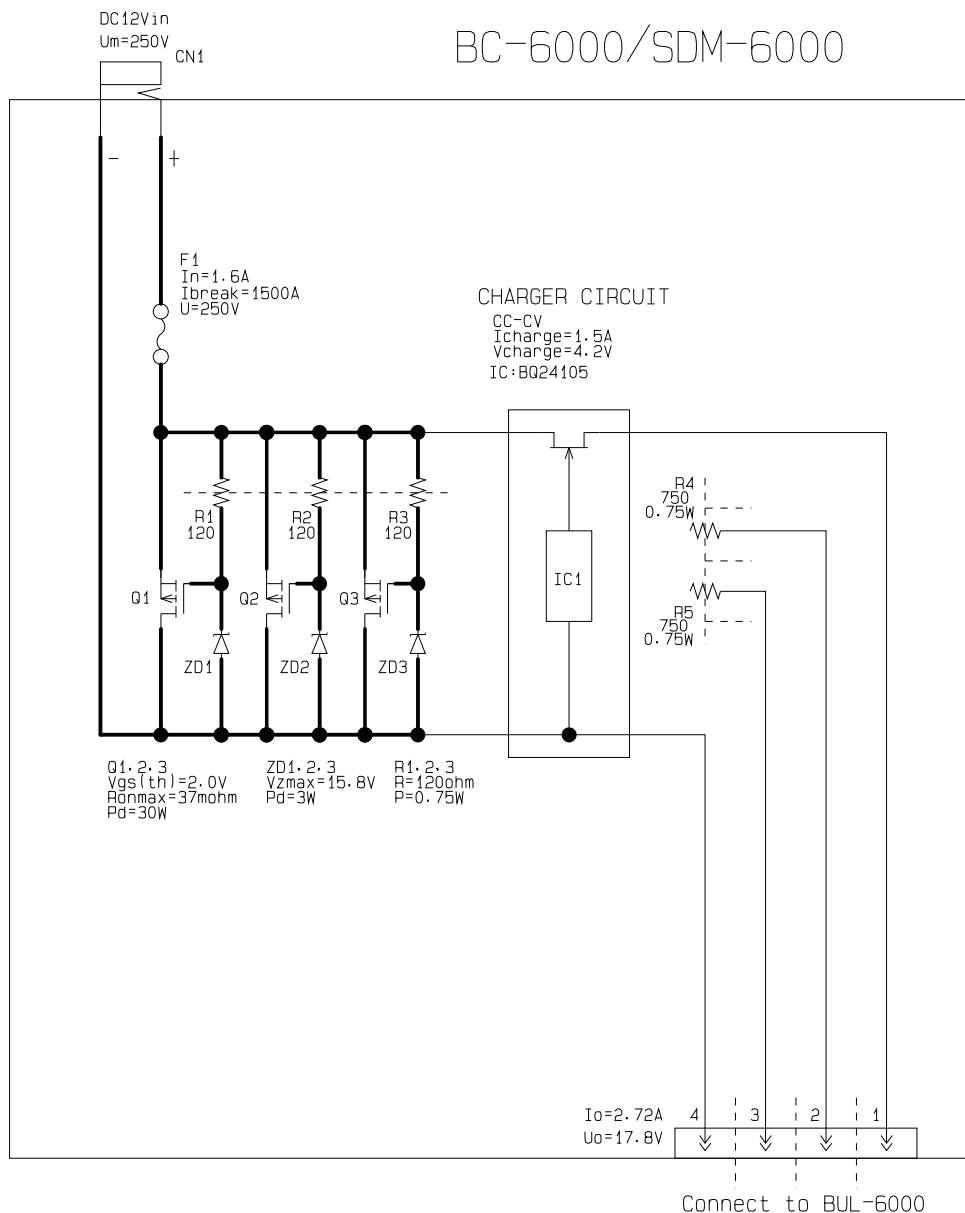


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△ REVISION A10		2023.120	伊藤周	年 月 日	訂 正 者	
△ REVISION E9		2015.36	海野裕作			
△ 記 事						
△						
△						
RIKEN KEIKI					理研計機株式会社	
機密情報 / CONFIDENTIAL						
青良治		武井康典	近藤晴彦			
2014. 7. 30						
M3-4777-04-01K						

BATTERY CHARGER

BC-6000/SDM-6000



(MEMO)

1. - - - - marks means SEPARATE

2. ——— marks means INFALLIBLE CONNECTION

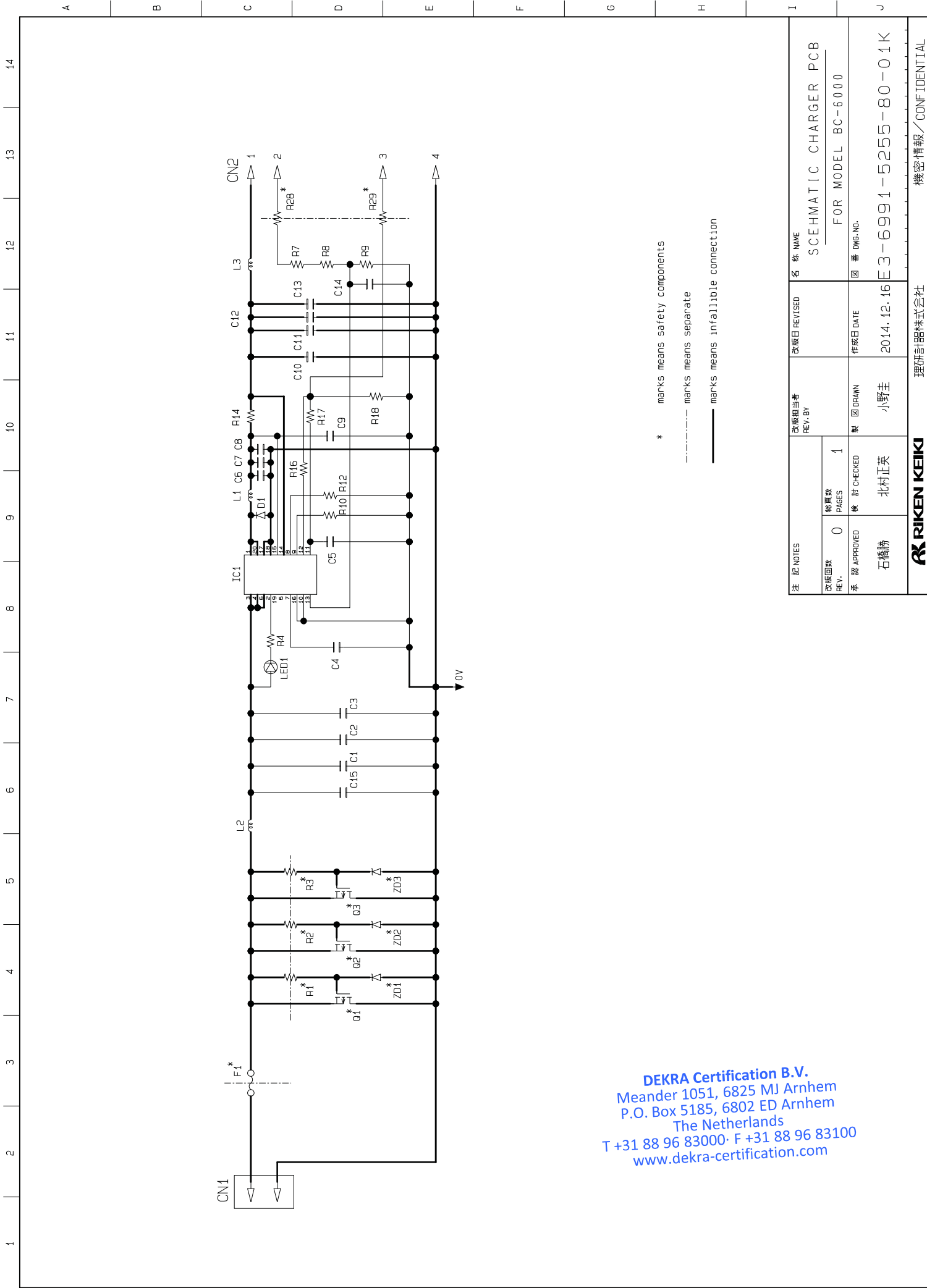
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P.O. Box 5185, 6802 ED Arnhem
The Netherlands

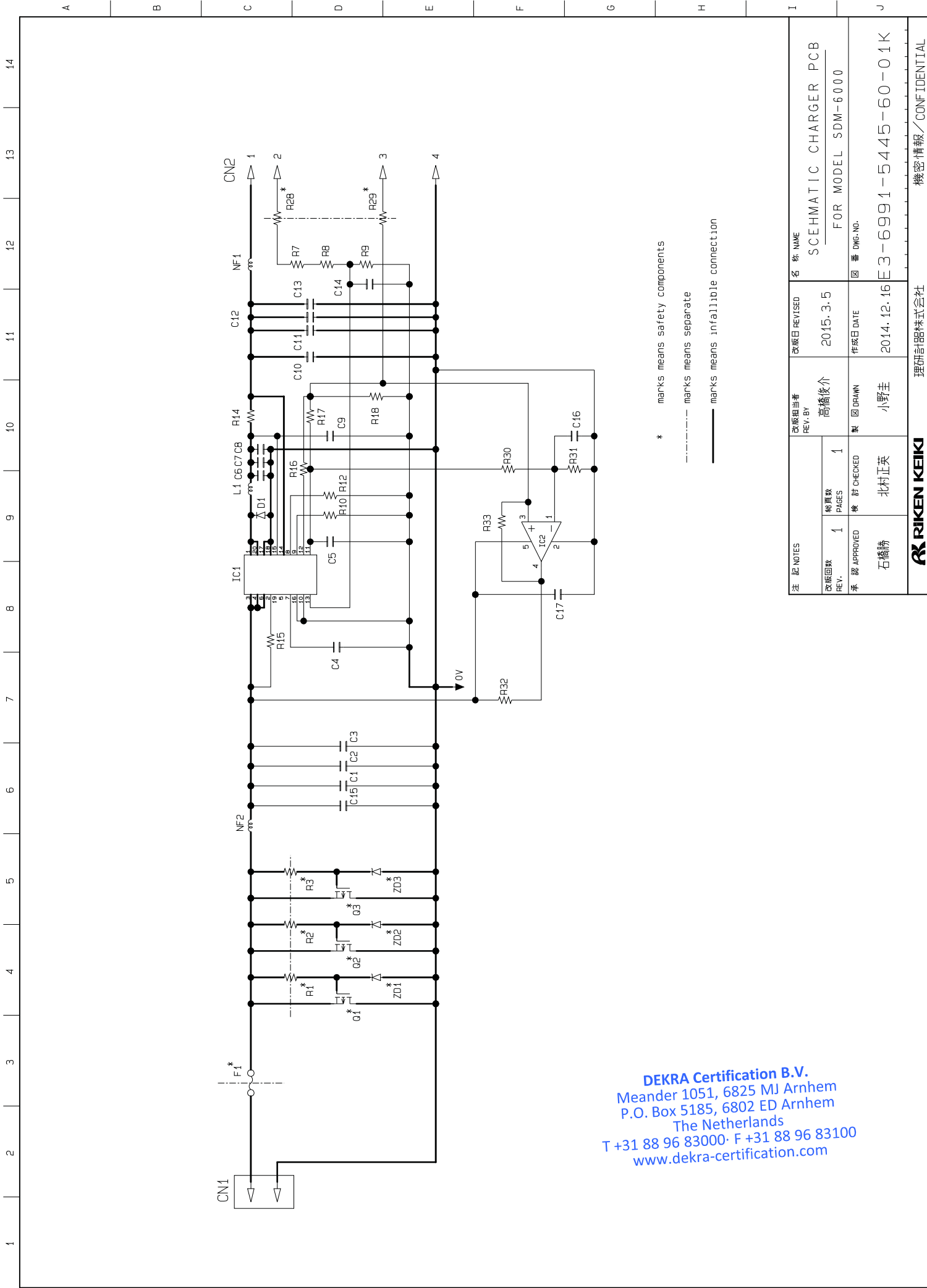
T +31 88 96 83000 F +31 88 96 83100
www.dekra-certification.com

注 記 NOTES		改版担当者 REV. BY	改版日 REVISED	名 称 NAME
改版回数 REV.	1	小野圭	2014. 9. 5	DIAGRAM FOR I. S. KEEP
承認 APPROVED	検討 CHECKED	製 図 DRAWN	作成日 DATE	図 番 DWG. NO.
石橋勝	北村正英	小野圭	2014. 7. 30	E 4-6991-5395-80-01K

1	2	3	4	5	6	7
1000以上	500以上1000未満	260以上500未満	120以上260未満	50以上120未満	18以上50未満	18未満
2.5	2.0	1.6	1.2	0.8	0.4	0.2
1.2	0.7	0.4	0.3	0.2	0.15	0.1
0.7	0.5	0.3	0.2	0.1	0.075	0.05
0.5	0.3	0.2	0.1	0.075	0.05	0.0375
0.3	0.2	0.1	0.075	0.05	0.0375	0.025
0.2	0.1	0.075	0.05	0.0375	0.025	0.01875
0.1	0.075	0.05	0.0375	0.025	0.01875	0.0125
0.075	0.05	0.0375	0.025	0.01875	0.0125	0.009375
0.05	0.0375	0.025	0.01875	0.0125	0.009375	0.00625
0.0375	0.025	0.01875	0.0125	0.009375	0.00625	0.004375
0.025	0.01875	0.0125	0.009375	0.00625	0.004375	0.0029375
0.01875	0.0125	0.009375	0.00625	0.004375	0.0029375	0.0019375
0.0125	0.009375	0.00625	0.004375	0.0029375	0.0019375	0.00125
0.009375	0.00625	0.004375	0.0029375	0.0019375	0.00125	0.0008375
0.00625	0.004375	0.0029375	0.0019375	0.00125	0.0008375	0.00054375
0.004375	0.0029375	0.0019375	0.00125	0.0008375	0.00054375	0.000354375
0.0029375	0.0019375	0.00125	0.0008375	0.00054375	0.000354375	0.000229375
0.0019375	0.00125	0.0008375	0.00054375	0.000354375	0.000229375	0.000149375
0.00125	0.0008375	0.00054375	0.000354375	0.000229375	0.000149375	0.000098375
0.0008375	0.00054375	0.000354375	0.000229375	0.000149375	0.000098375	0.000064375
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0.000098375	0.000064375	0.000042375	0.000027375	0.000017375	0.000011375	0.000007375
0.000064375	0.000042375	0.000027375	0.000017375	0.000011375	0.000007375	0.0000047375
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0.0000004375	0.0000002375	0.0000001375	0.00000008375	0.00000005375	0.00000003375	0.000000021375
0.0000002375	0.0000001375	0.00000008375	0.00000005375	0.00000003375	0.000000021375	0.000000013375
0.0000001375	0.00000008375	0.00000				

	1	2	3	4	5	6	7		
1000以上								A	
500以上1000未満								B	
260以上500未満								C	
120以上260未満								D	
50以上120未満								E	
18以上50未満								F	
18未満								G	
精細 0.1								H	
中細 0.2								J	
粗細 0.4									
寸法									
許容差									
<div><div>25</div><div>60</div><div><div>警告 WARNING</div><div>・本来の使用目的以外の使用はしないでください。 ・Do not use for any purpose other than original intended use. ・落下や水は故障の原因となります。 ・Protect from impact and moisture. ・充電は非危険場所にて行なってください。 ・Not for use in hazardous area. ・指定のACアダプタを使用してください。 ・Use only with exclusive AC adaptor.</div><div>注意 CAUTION</div><div>・ご使用前に取扱説明書を必ずお読みください。 ・Read and understand operation manual before use.</div></div></div> <div><div>40</div><div>20</div><div>MODEL _____ INST. No. _____ DATE _____ CE DC INPUT : 12V= 0.8A DC OUTPUT : 6V= 1.6A RIKEN KEIKI Co.,Ltd. JAPAN</div><div>“BC-6000” or “SDM-6000”</div></div>									
<div>DEKRA Certification B.V. Meander 1051, 6825 MJ Arnhem P.O. Box 5189, 6802 ED Arnhem The Netherlands T +31 88 96 83000 F +31 88 96 83100 www.dekracertification.com</div>								年 月 日	訂正者
表面処理 TREAT.		許容差 TOL.	尺度 SCALE	投影法 PROJECTION	名称 NAME				
材質 MAT.					BC-6000/SDM-6000				
承認 APPROVED	検討 CHECKED	製図 DRAWN	作成日 DATE	図番 DWG. NO.					
青良治	武井康典	近藤晴彦	2014. 7. 28	M4-4777-01-02K					
RIKEN KEIKI		理研計測株式会社		機密情報 / CONFIDENTIAL					





注 記 NOTES			改版担当者 REV. BY	改版日 REVISED	名 称 NAME
改版回数 REV.	1	総頁数 PAGES	1	2015. 3. 5	SCEHMATIC CHARGER PCB
承認 APPROVED	石橋勝	検討 CHECKED	北村正英	作成日 DATE	FOR MODEL SDM-6000
			小野圭	国 番 DWG. NO.	E 3-6991-5445-60-01K
理研計器株式会社 機密情報 / CONFIDENTIAL					

1 2 3 4 5 6 7 8 9 10 11 12 13 14

PARTS LIST

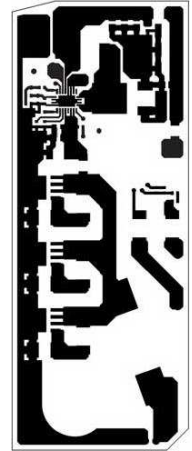
Mark of drawing	Kind of parts	Rating / Model of parts	Remarks
IC1	IC (Battery charger)	BQ24105RHLR	
IC2	IC (Comparator)	TL331	
D1	Schottky barrier diode	MBRD1045	
F1	Fuse	021601.6P Littelfuse In=1.6A, Ibreak=1500A@250Vac	*
Q1,Q2,Q3	P-ch MOSFET	TPCA8507-H TOSHIBA Ron_max=37mΩ , Pd=30W	*
ZD1,ZD2,ZD3	1SMB5929B	1SMB5929B ON Semiconductor VZ= 14.25V ~15.75V, Pd=3W	*
R1,R2,R3	Chip fixed resistor	RK73HW2H_1200F KOA 120Ω/1%, 0.75W	*
R7,R8,R9,R10,R12, R16,R17,R18,R30, R31,R33	Chip fixed resistor or Chip jumper	100Ω- 4.7MΩ/1% , 0.063W (1005) or 50mΩ max. 1A	m
R14	Chip fixed resistor	0.068Ω - 0.2Ω/1% , 0.25W (3216)	
R15	Chip fixed resistor or Chip jumper	100Ω- 1MΩ/1% , 0.1W (1608) or 50mΩ max. 1A	m
R28,R29	Chip fixed resistor	RK73HW2H_7500F KOA 750Ω/1%, 0.75W	*
R32,	Chip fixed resistor or Chip jumper	100Ω- 1MΩ/1% , 0.125W (3216) or 50mΩ max. 1A	m
C1,	Chip multilayer capacitor	1uF / 10%, 25V	m
C3,	Chip multilayer capacitor	22uF / 10% 25V	m
C11,C12,C13	Chip multilayer capacitor	47uF / 10%, 16V	m
C5,C9, C14,C15, C16,C17	Chip multilayer capacitor	0.1uF / 10%, 25V	m
C2,C6,C7,C8,C10	Chip multilayer capacitor	10uF / 10%, 16V	m
C4,	Chip multilayer capacitor	0.22uF / 10%, 10V	m
L1	Inductor	10uH / 20%	
NF1,NF2	Chip ferrite beads	BLM31PG391	m

* marked parts are for safety

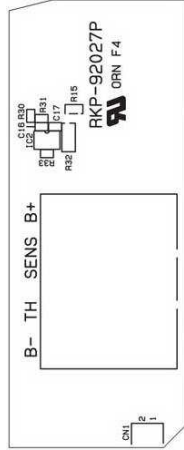
m marked parts are mounted or not



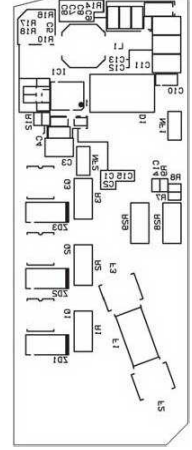
SOLDERING SIDE



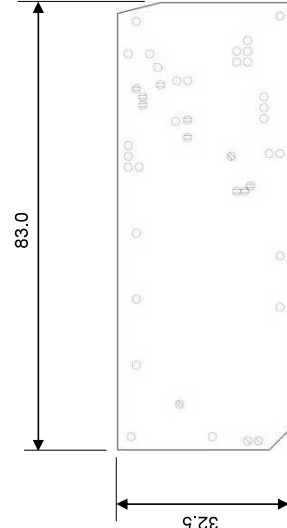
PARTS SIDE



SILK PRINT FOR SOLDERING SIDE



SILK PRINT FOR PARTS SIDE



All drawings are view of soldering side

SCALE 1:1

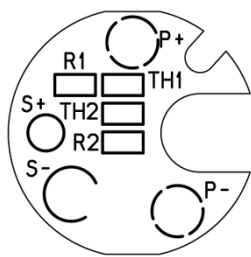
SPECIFICATION FOR PCB

- PCB No. :RKP-92027P
- Material : Glass epoxy
- Thickness : 1.6mm
- Layer number : 2
- Thickness copper film : 35um
- Copper thickness of the via's : 35um above.
- Minimum conductor width : 0.3mm
- CTI : 175 above

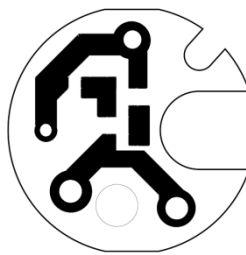
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MARK	HOLE
Ø4.4	TH
Ø4.7	TH
Ø4.8	TH
Ø5.6	NTH

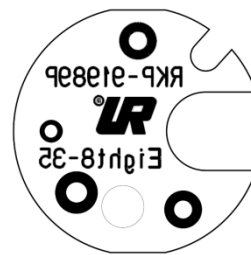
注 記 NOTES	改版担当者 REV. BY	改版日 REVISED	名 称 NAME
改版回数 REV. 2	小野圭 1	2015.6.12	CHARGER PCB
承認 APPROVED 石橋勝	検討 CHECKED 北村正英	作成日 DATE 2014.12.15	FOR MODEL SDM-6000
製 図 DRAWN 小野圭		國 番 DWG. NO. E3-6991-5445-60-01A	
RIKEN KEIKI 理研計器株式会社 機密情報 / CONFIDENTIAL			



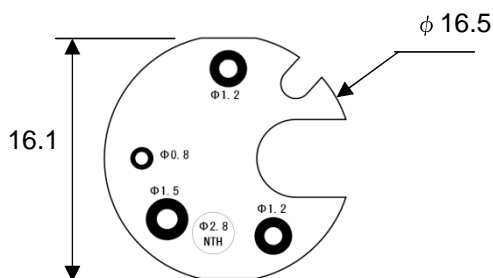
SILK PRINT FOR PARTS SIDE



PARTS SIDE



SOLDERING SIDE



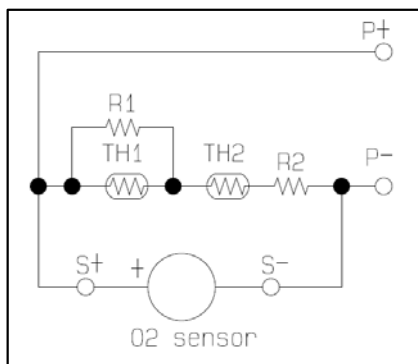
THROUGH HOLE DATA

SPECIFICATION FOR PCB

- PCB No. : RKP-91989P
- Material : Glass epoxy
- Thickness : 0.8mm
- Layer number : 2
- Thickness copper film : 35um
- Minimum conductor width : 0.5mm
- CTI : 100 above

All drawings are view of parts side

SCALE 2:1



SCHEMATIC

PARTS LIST

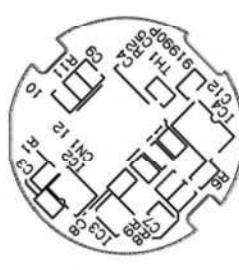
Mark of drawing	Kind of parts	Rating / Model of parts	Remarks
O2 SENSOR	OXYGEN SENSOR	Refer to M4-4080-01-01K	
R1,2	Chip fixed resistor or Chip jumper	10 ohm – 1M ohm / 1%, 0.1W or 50m ohm max, 1A (1608)	m
TH1,2	Chip thermistor	Rt25 = 470 ohm -100 k ohm / 5%, B=3000K-5000K (1608)	m

m marked parts are mounted or not

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注 記 NOTES		改版担当者 REV. BY	改版日 REVISED	名 称 NAME O ₂ SENSOR PCB
改版回数 REV.	0			
総頁数 PAGES	1	製 図 DRAWN	作成日 DATE	図 番 DWG. NO.
承認 APPROVED	検 討 CHECKED			
石橋勝	北村正英	小野圭	2015.2.24	E 4 - 6 9 9 1 - 5 4 5 7 - 0 0 - 0 1 K

1 2 3 4 5 6 7 8 9 10 11 12 13 14



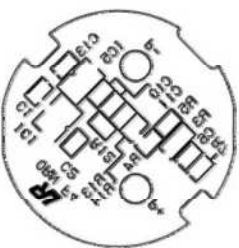
SILK PRINT FOR PARTS SIDE



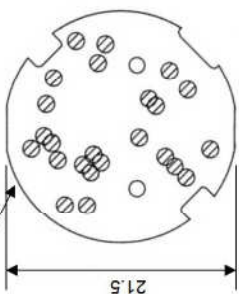
PARTS SIDE



SOLDERING SIDE



SILK PRINT FOR SOLDERING SIDE



THROUGH HOLE DATA

MARK	DIAGRAM	HOLE
①	φ0.3	TH
○	φ1.0	TH

SPECIFICATION FOR PCB

- PCB No. : RKP-91990P
- Material : Glass epoxy
- Thickness : 1.2mm
- Layer number : 2
- Thickness copper film : 18um
- Minimum conductor width : 0.3mm
- CTI : 100 above

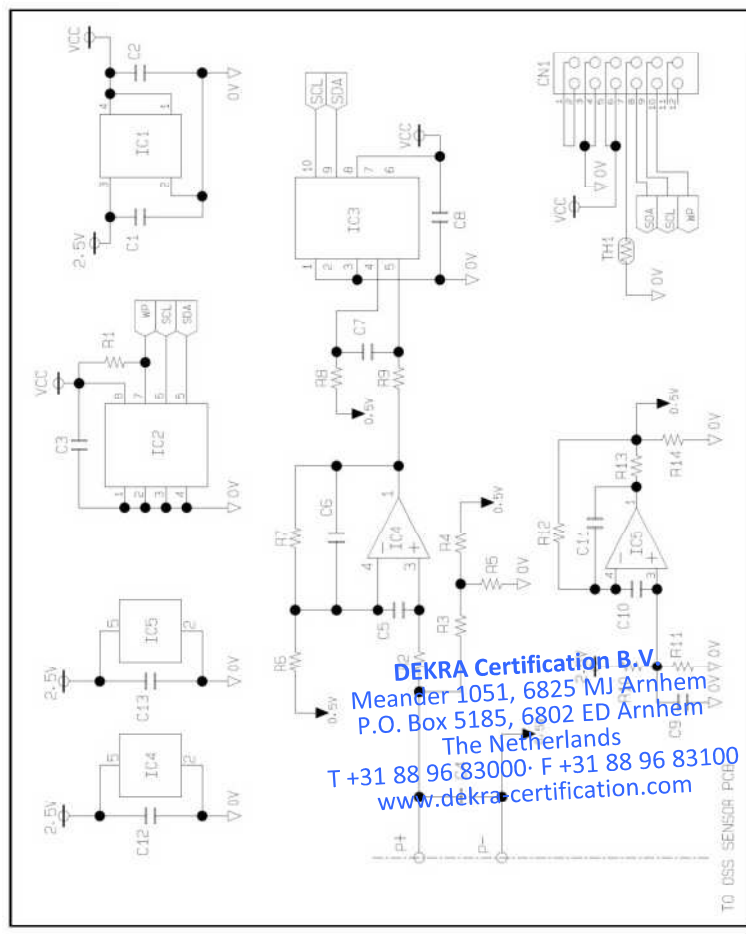
All drawings are view of parts side

SCALE 2:1

PARTS LIST

Mark of drawing	Kind of parts	Rating / Model of parts	Remarks
IC1	IC (Voltage regulator)	S-1313D25-N4T1	m
IC2	IC (EEPROM)	S-24C16CI-18T1	m
IC3	IC (A/D Converter)	ADS1114IRU	m
IC4	IC (OPAMP)	OPA333AIDBV	m
IC5	IC (OPAMP)	AD8500AKS	m
TH1	Chip thermistor	R125 = 470 ohm -100 k ohm / 5%, B=3000K-5000K (1005)	m
R1-14	Chip fixed resistor or Chip jumper	10 ohm - 1M ohm / 1%, 0.063W or 50m ohm max.1A(1005)	m
C1,2,3,8,12,13,	Chip multilayer capacitor	0.1uF / 10%, 25V	m
C4	Chip multilayer capacitor	0.01uF / 10%, 25V	m
C5,7,10	Chip multilayer capacitor	10pF-1000pF / 10%, 50V	m
C6,11	Chip multilayer capacitor	1uF / 10%, 10V	m
C9	Chip multilayer capacitor	100pF-6800pF / 10%, 50V	m

m marked parts are mounted or not

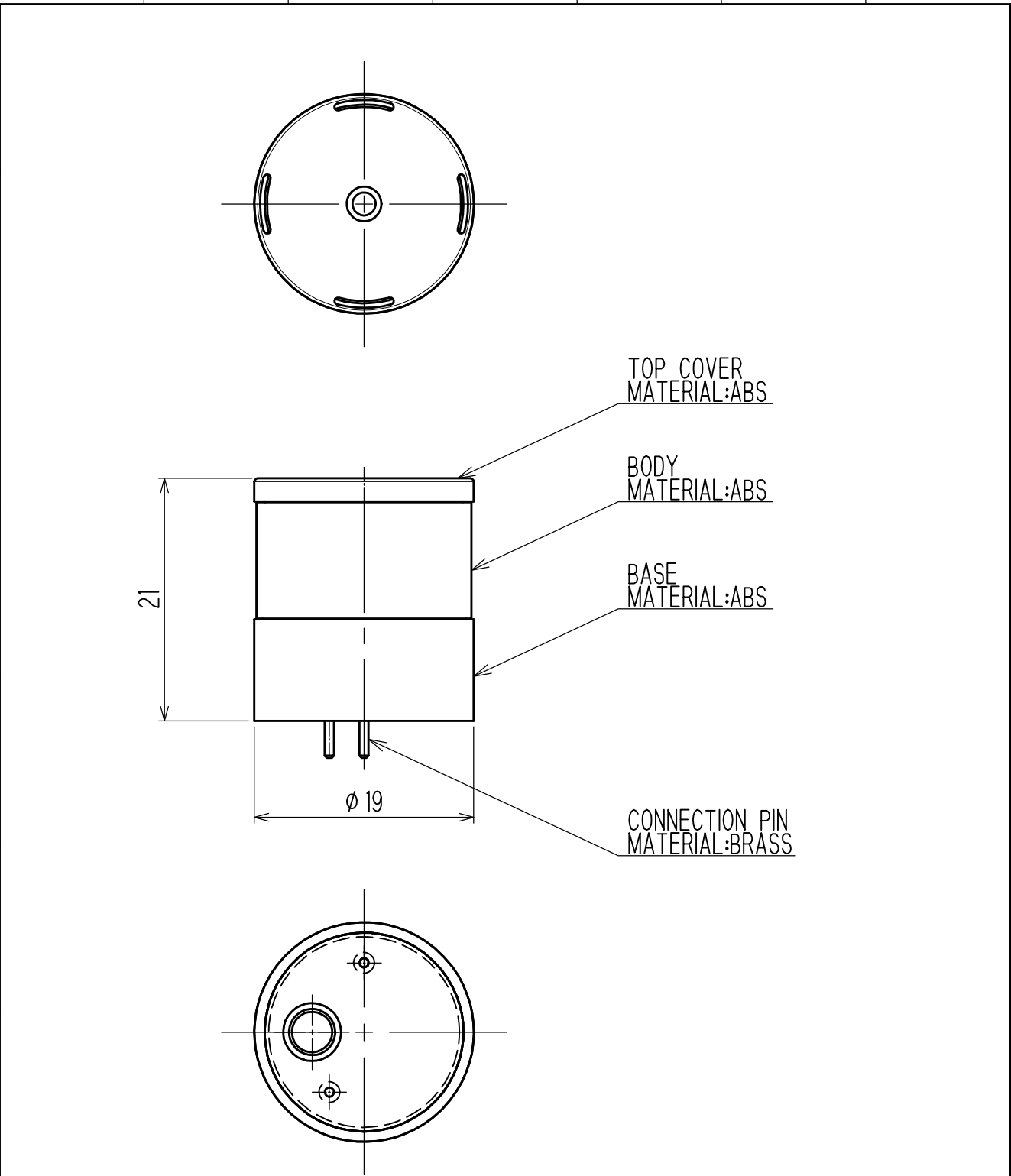


SCHEMATIC

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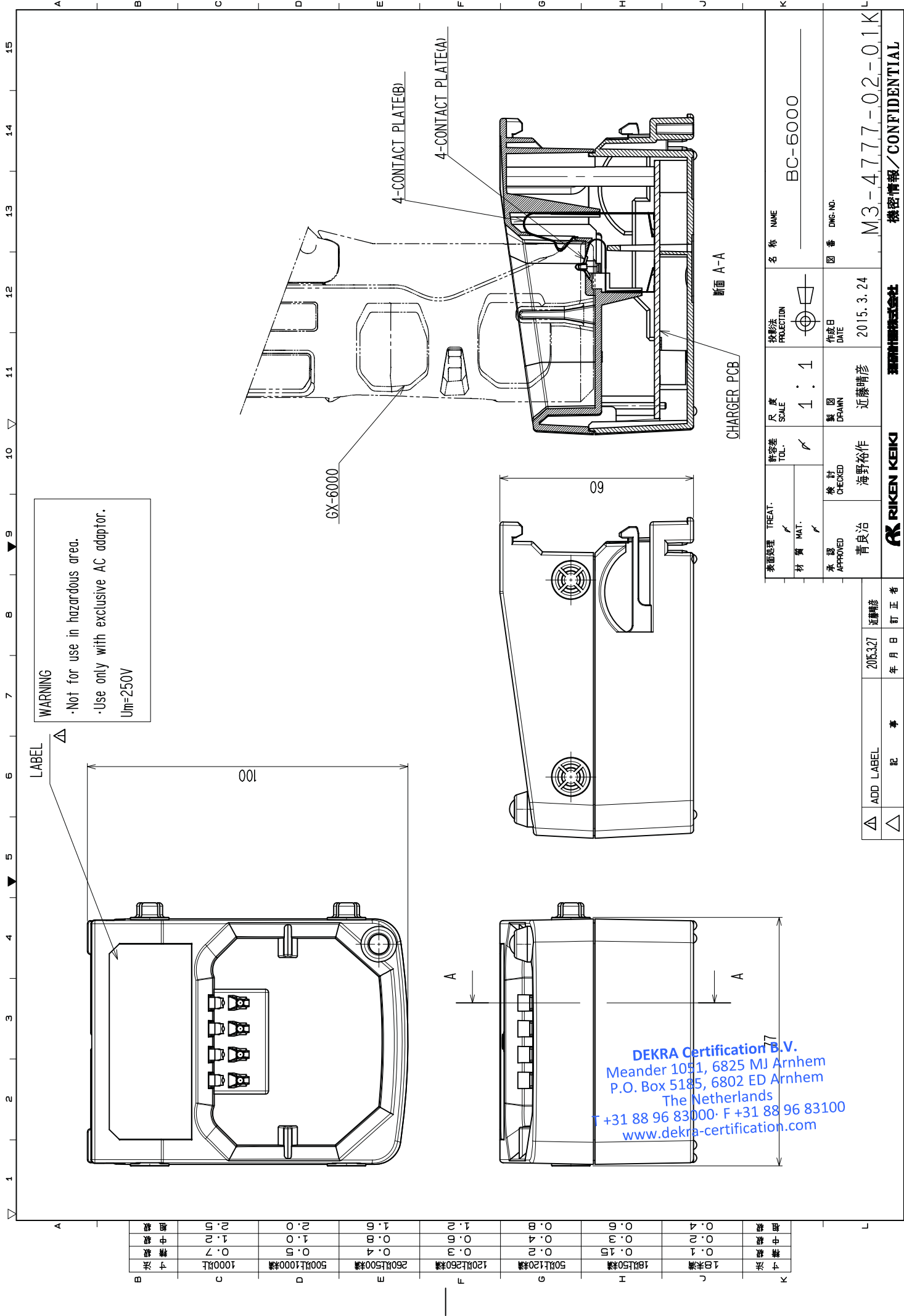
注記 NOTES	改版担当者 REV BY	改版日 REVISED	名称 NAME
改版回数 REV 0	総頁数 PAGES 1	製図 DRAWN 小野圭	図番 DRAW NO. E3-6991-5458-70-01K
承認 APPROVED 石橋勝	検討 CHECKED 北村正英	作成日 DATE 2015.2.24	機密情報 / CONFIDENTIAL

寸法	18未満	18以上50未満	50以上120未満	120以上260未満	260以上500未満	500以上1000未満	1000以上
公差	精 0.1 中 0.2 粗 0.4	精 0.15 中 0.3 粗 0.4	精 0.2 中 0.4 粗 0.8	精 0.3 中 0.6 粗 1.2	精 0.4 中 0.8 粗 1.6	精 0.5 中 1.0 粗 2.0	精 0.7 中 1.2 粗 2.5



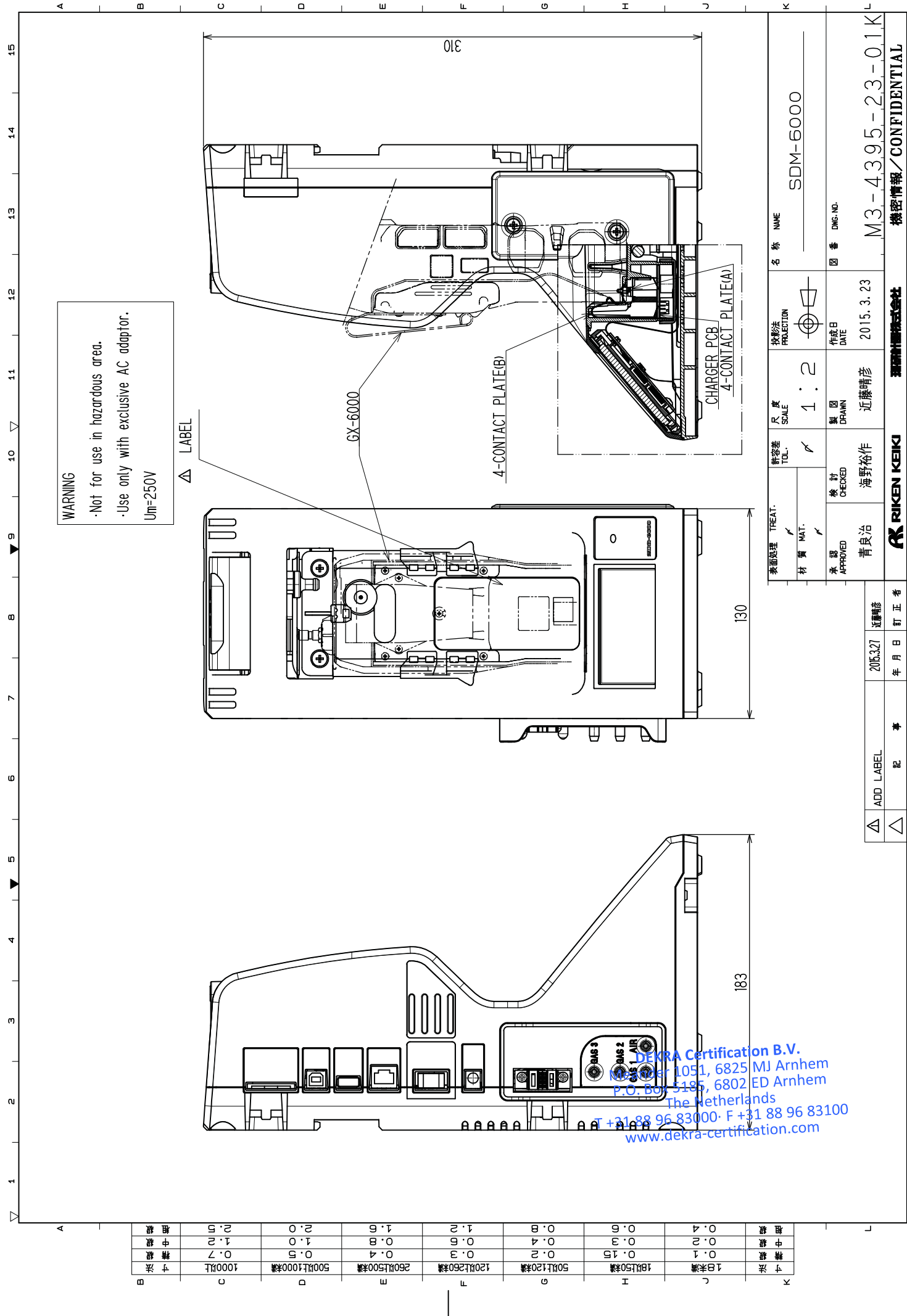
表面処理 TREAT. 材質 MAT.		許容差 TOL. 2 : 1	尺度 SCALE 2 : 1	投影法 PROJECTION 	名称 NAME OXYGEN SENSOR
承認 APPROVED 青良治	検討 CHECKED 武井康典	製図 DRAWN 武田直樹	作成日 DATE 2015. 2. 24	図番 DWG. NO. M4-4080-01-02K	

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名称	NAME	BC-6000
投影法	PROJECTION	第一角
比例	SCALE	1:1
公差	TOL.	参照
材料	MAT.	参照
承認	APPROVED	青良治
検討	CHECKED	海野裕作
製図	DRAWN	近藤晴彦
作成日	DATE	2015.3.24
図番	DWG. NO.	M3-4777-02-01K

表面処理	THEAT.	2015.3.27	近藤晴彦
材料	MAT.	年月日	訂正者
承認	APPROVED	年月日	訂正者
検討	CHECKED	年月日	訂正者
製図	DRAWN	年月日	訂正者
作成日	DATE	年月日	訂正者
図番	DWG. NO.	年月日	訂正者



名称	SDM-6000
投影法 PROJECTION	1:2
尺度 SCALE	1:2
新客差 TOL.	1:2
表面処理 THEAT.	青良治
材質 MAT.	海野裕作
承認 APPROVED	青良治
検討 CHECKED	海野裕作
製図 DRAWN	近藤晴彦
作成日 DATE	2015.3.23
図番 Dwg. NO.	M3-4395-23-01K

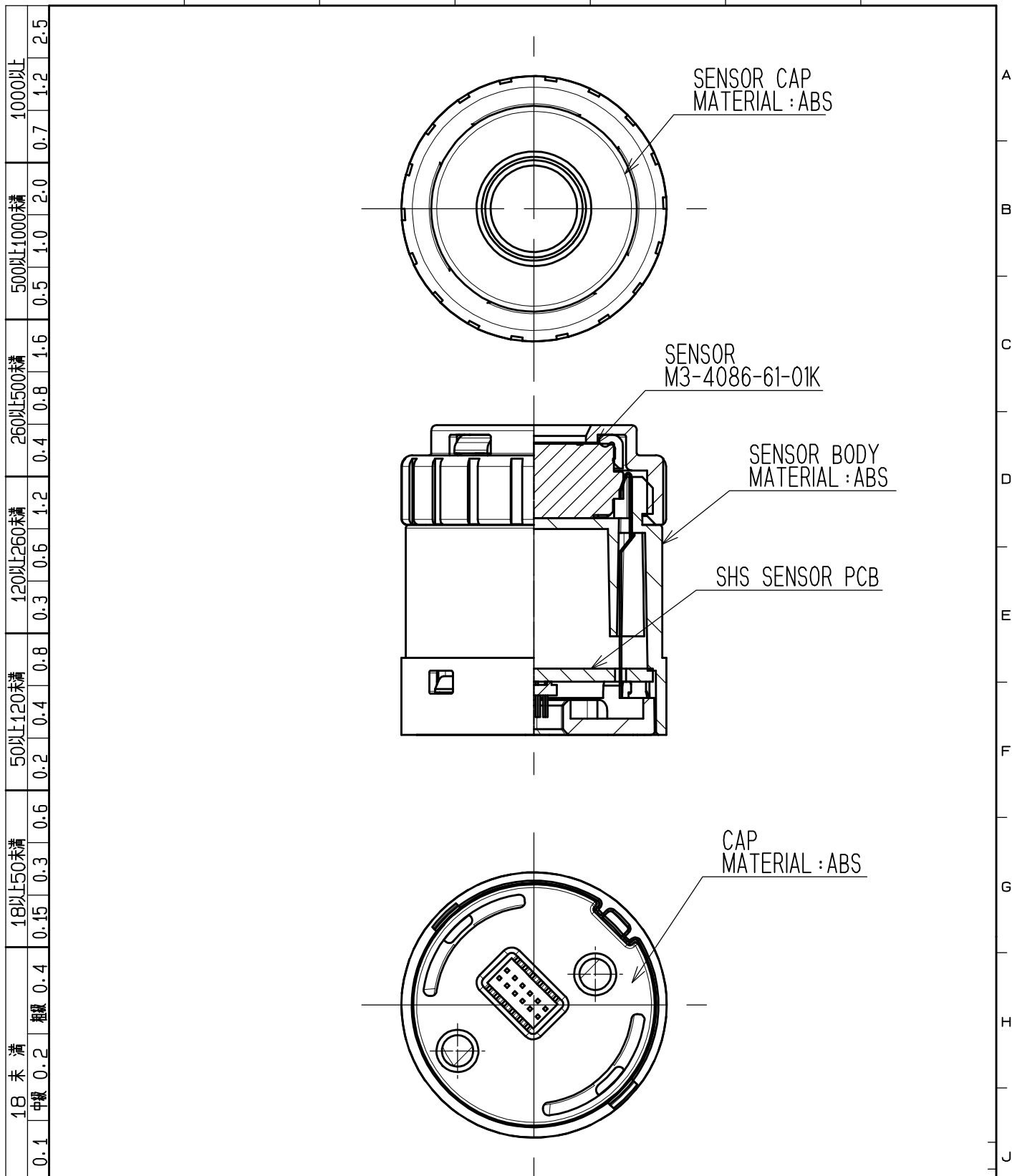
△	ADD LABEL	2015.3.27	近藤晴彦
△	記	事	訂正者

機密情報 / CONFIDENTIAL

近藤晴彦

RIKEN KEIKI

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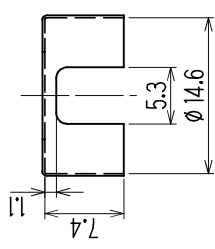
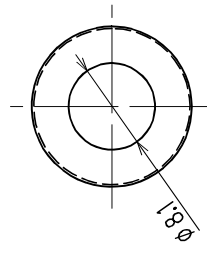
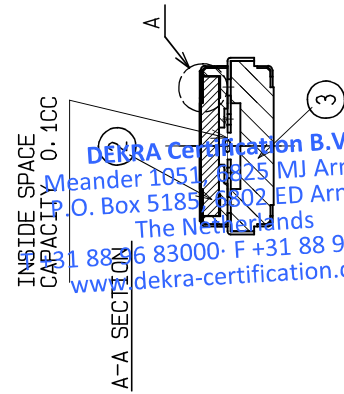
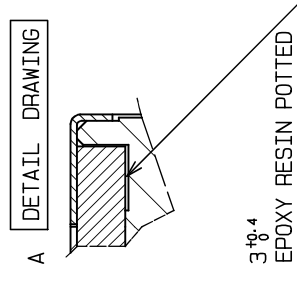
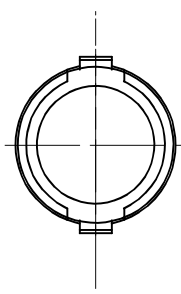
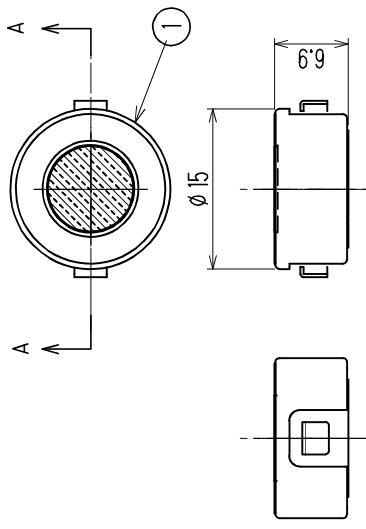
寸 法	18 未 満		18以上50未満		50以上120未満		120以上260未満		260以上500未満		500以上1000未満		1000以上								
許容差	精 0.1	中 0.2	粗 0.4	0.15	0.3	0.6	0.2	0.4	0.8	0.3	0.6	1.2	0.4	0.8	1.6	0.5	1.0	2.0	0.7	1.2	2.5

表面処理 TREAT.		許容差 TOL.	尺 度 SCALE	投影法 PROJECTION	名 称 NAME	
材 質 MAT.					SMART SENSOR Type-SHS	
承認 APPROVED	検 討 CHECKED	製 図 DRAWN	作成日 DATE	図 番 DWG. NO.		
武井康典	河原井英樹	伊藤周	2022. 7. 28	M4-4777-33-02K		

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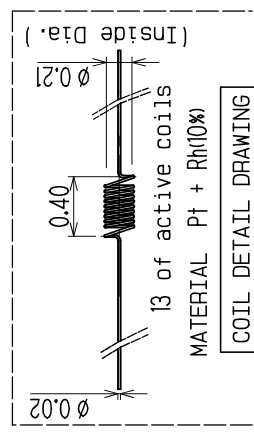
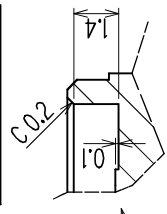
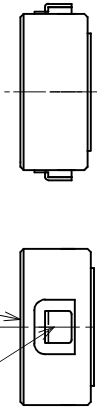
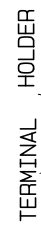
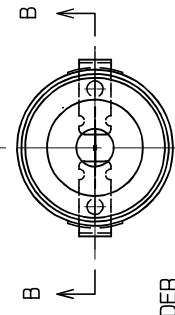
訂正者	年月日

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[illegible]

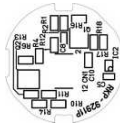
	UNIT %
C	0.08 or less
Si	1.00 or less
Mn	2.00 or less
P	0.045 or less
S	0.030 or less
Ni	8.00-10.50
Cr	18.00-20.00

MATERIAL: STAINLESS STEEL (SUS304) t0.2
CHEMICAL COMPOSITIONS:



表面処理 TREAT.	公差 TOL.	R 度 SCALE	投影法 PROJECTION	名称 NAME	図 番 Dwg. NO.	機密情報 / CONFIDENTIAL
材 質 MAT.	承認 APPROVED	検 討 CHECKED	製 図 DRAWN	作成日 DATE	図 番 Dwg. NO.	機密情報 / CONFIDENTIAL
青良治	山田健太郎	河原井英樹	2015.2.3	M3-4086-61-01K		

1 2 3 4 5 6 7 8 9 10 11 12 13 14



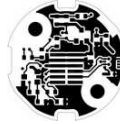
SILK PRINT FOR PARTS SIDE



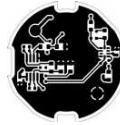
INNER LAYER (2nd LAYER)



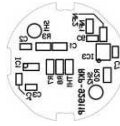
SOLDERING SIDE



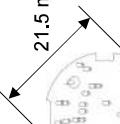
PARTS SIDE



INNER LAYER (3rd LAYER)



SILK PRINT FOR SOLDERING SIDE



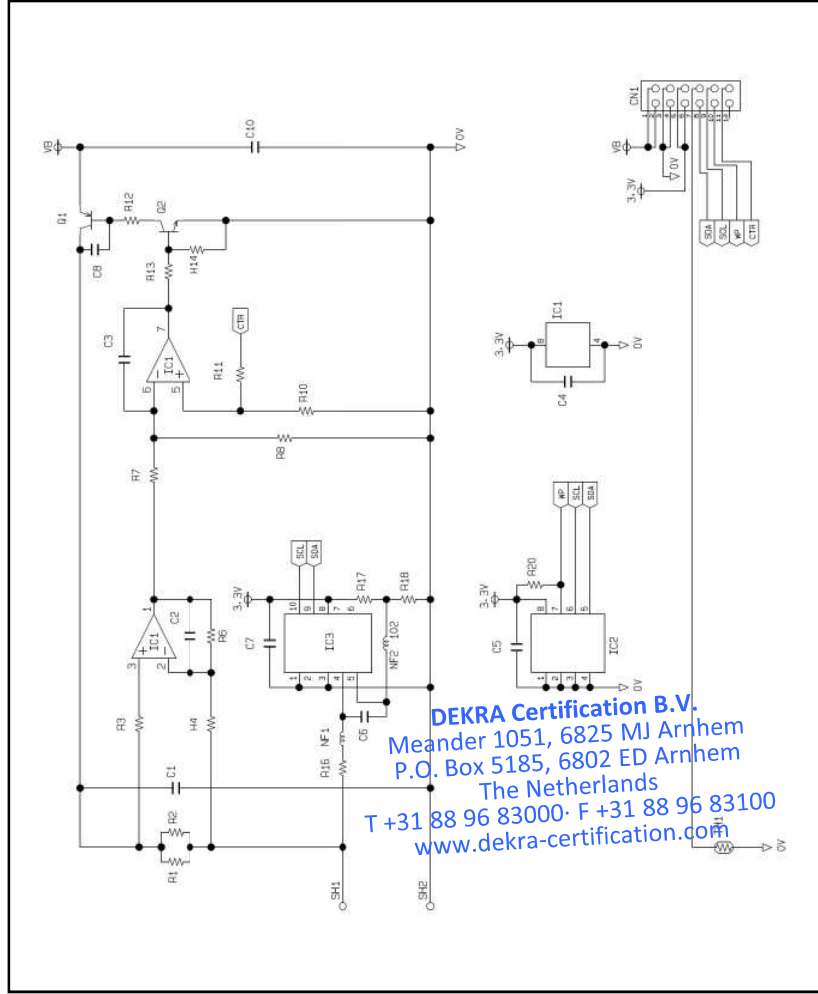
THROUGH HOLE FOR PARTS SIDE

MARK	DIAGRAM	HOLE	MEMO
a		φ0.3	TH
b		φ1	TH

SPECIFICATION FOR PCB

- PCB No. : RKP-92911P
- Material : Glass epoxy
- Thickness : 1.2mm
- Layer number : 4
- Thickness copper film : 18um
- Copper thickness of the via's : 18um above.
- Minimum conductor width : 0.2mm
- CT1 : 100 above

All drawings are view of parts side
SCALE 1:1



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SCHEMATIC

Mark of drawing	Kind of parts	Rating/Model of parts	Remarks
IC1	IC (OPAMP)	S-89713B-K8T2U [ABLIC]	m
IC2	IC (EEPROM)	S-24C16CI-18T1U3 [ABLIC]	m
IC3, IC4	IC (A/D Converter))	ADS1114IRUGR [TI]	m
Q1	PNP Transistor	NSS12200LT1G [Onsemi]	m
Q2	NPN Transistor	2SC2712Y [Toshiba]	m
R1 - R4, R6 - R8, R10 - R'4, R20	Chp metal film fixed resistor Chp jumper	10 - 10M ohm / 1%, 0.1W or 50m ohm max, 1A (1608)	m
TH1	Thermistor or Chp metal film fixed resistor Chp jumper	Rt25 = 1k - 470k ohm / 1%, B = 3000K - 5000K or 10 - 10M ohm / 1%, 0.063W or 50m ohm max, 1A (1608)	m
C1 - C8, C10	Chp multilayer capacitor	Total capacitance 17uFmax	m
NF1, NF2	Chp Ferrite Beads or Chp metal film fixed resistor Chp jumper	BLM18HD102SN1 or 10 - 10M ohm / 1%, 0.1W or 50m ohm max, 1A (1608)	m
NOTE	* marked parts are Safety Components. m marked parts are mounted or not D marked parts, refer to datasheet. [] Parts manufacturer and () Parts size code. Non-Safety Components may be replaced with equivalent components or may not be mounted.		

PARTS LIST

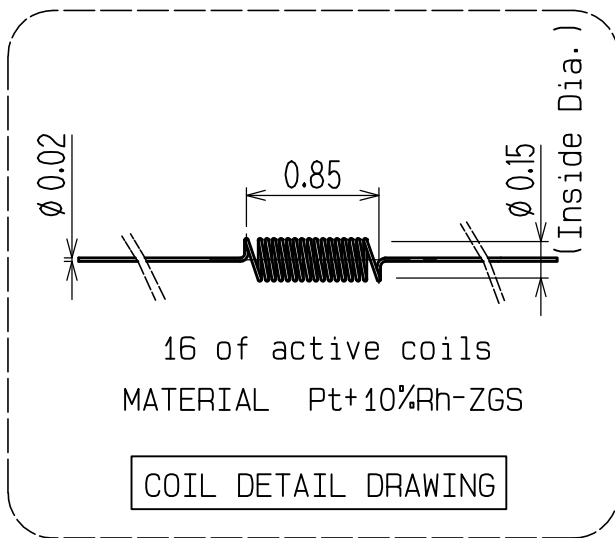
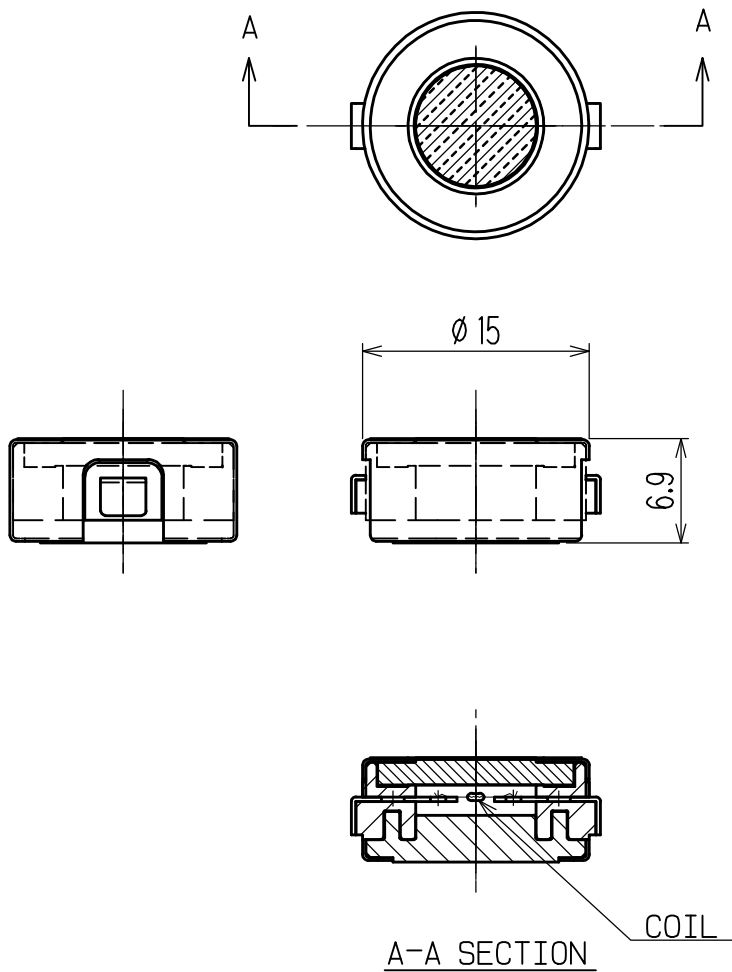
注 記 NOTES		改版担当者 REV. BY	改版日 REVISED	名 称 NAME
改版回数 REV.	0	総頁数 PAGES	1	SHS DIGITAL PCB
承認 APPROVED	山田和則	検討 CHECKED	小野圭	製 図 DRAWN
			木村司	作 成 日 DATE
			2022.7.7	図 番 Dwg. NO.
				E3-6991-6366-50-01A

理研計器株式会社

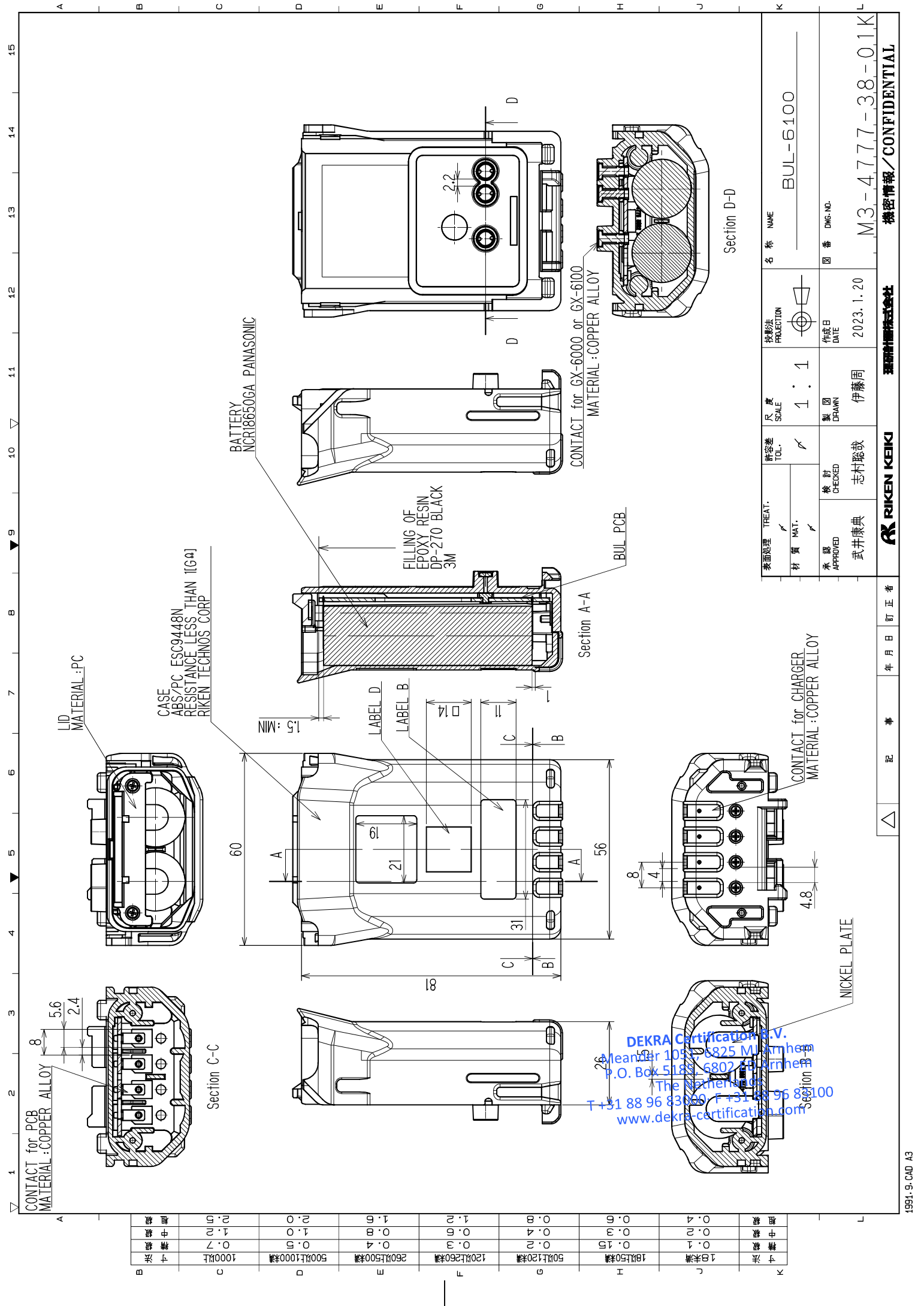
RIKEN KEIKI

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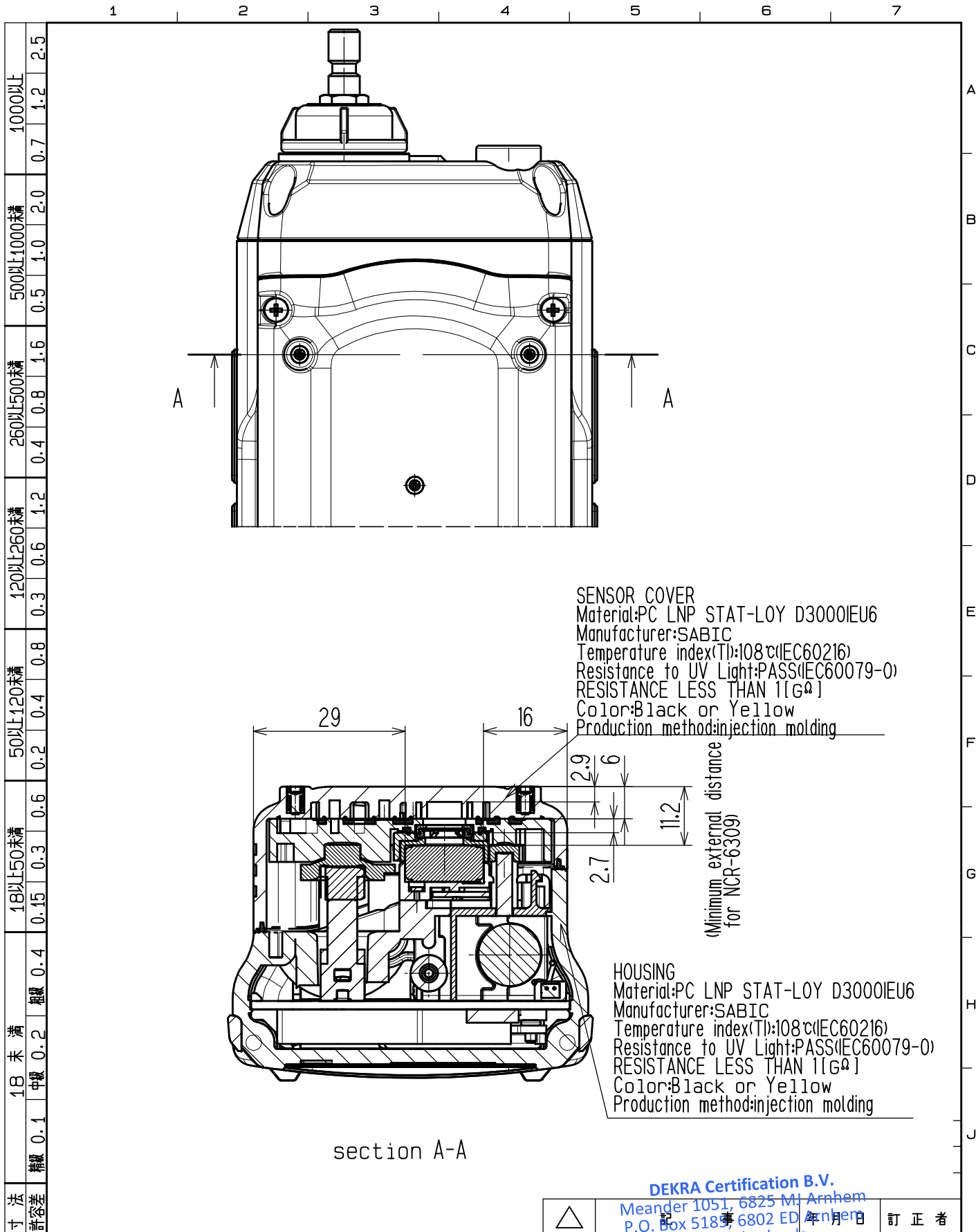
寸法	18未満	18以上50未満	50以上120未満	120以上260未満	260以上500未満	500以上1000未満	1000以上
公差	精 0.1 中 0.2 粗 0.4	0.15 0.3 0.4	0.2 0.4 0.6	0.3 0.6 1.2	0.4 0.8 1.6	0.5 1.0 2.0	0.7 1.2 2.5



表面処理 TREAT.		許容差 TOL.	尺 度 SCALE	投影法 PROJECTION	<div style="text-align: right;"> DEKRA Certification B.V. Meander 1051, 6825 MJ Arnhem P.O. Box 5189, 6802 ED Arnhem The Netherlands T +31 88 96 83000 F +31 88 96 83100 www.dekra-certification.com </div>	
材 質 MAT.					名 称 NAME	訂 正 者
承認 APPROVED		検 討 CHECKED	製 図 DRAWN	作 成 日 DATE	図 番 DWG.NO. M4-4075-63-01K	
田島秀二		近藤晴彦	島田聡	2011. 3. 1		
<div style="display: flex; justify-content: space-between; align-items: center;"> <div> 理研計測株式会社 </div> <div> 機密情報 / CONFIDENTIAL </div> </div>						



表面処理 TREAT.		許容差 TOL.	尺 度 SCALE	投影法 PROJECTION	名 称 NAME
材 質 MAT.	材 質 MAT.	材 質 MAT.	1 : 1	第一角法	BUL-6100
承認 APPROVED	検 討 CHECKED	製 図 DRAWN	伊藤 周	作成日 DATE	2023.1.20
武井 康典	志村 聡哉	伊藤 周		図 番 Dwg. NO.	M3-4777-38-01K
R RIKEN KEIKI		理研計機株式会社		機密情報 / CONFIDENTIAL	



表面処理 TREAT.		許容差 TOL.	尺 度 SCALE	投影法 PROJECTION	△ DEKRA Certification B.V. Meander 1051, 6825 MJ Arnhem P.O. Box 518 6802 ED Arnhem The Netherlands T +31 88 96 83000 F +31 88 96 83100 www.dekra-certification.com		訂正者	
材 質 MAT.					名 称 NAME			
承認 APPROVED		検 討 CHECKED	製 図 DRAWN	作 成 日 DATE	EXPLOSION PROOF STRUCTURE FOR GX-6100			図 番 DWG. NO. M4-4777-33-06K
武井康典		武田直樹	河原井英樹	2024. 1. 22				
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Safety information

The GX-6000 can measure up to six gases with six sensors.

Standard unit measures four gases with four sensors for general combustible gases (LEL), Oxygen (O₂), Hydrogen Sulfide (H₂S) and Carbon Monoxide (CO).

Other remaining two slots are for Smart Sensors which consist of sensor part and circuit board and are connected with apparatus through digital signal output to various sensors. Four different types of detection principle are applied for Smart Sensors and up to two sensors can be mounted into the GX-6000.

Just like GX-6000, GX-6100 can measure up to six gases with six sensors.

The combustible gas sensor (LEL) for GX-6100 satisfies the requirement. Moreover, Hotwire Semiconductor Sensor can be installed, making it possible to measure a range of combustible gas ppm. And with a Thermal Conductivity Sensor, %VOL of combustible gases can be measured. GX-6100 can measure a range of ppm, LEL, and %VOL of combustible gases with a use of these three sensors.

Gas is sampled by a built-in micro pump.

Either alkaline battery unit "BUD-6000/BUD-6100" or lithium-ion battery unit "BUL-6000/BUL-6100" can be installed into GX-6000 and GX-6100.




Structure of battery unit allows end users to replace it by themselves.

It is supposed to replace the battery unit, alkaline battery, and charge the rechargeable battery at non-hazardous area. Also, Charging BUL-6000/BUL-6100 should be done with a specific model, BC-6000 or SDM-6000.

BC-6000 is a battery charger for both GX-6000 and GX-6100.







SDM-6000 is a docking station for charging and calibration for both GX-6000 and GX-6100.

Specification for safety

GX-6000 Ex code T class	Ambient temperature range for use	Battery
Ex ia IIB T4 Ga  II1G Ex ia IIB T4 Ga	-20°C to +50°C	BUL-6000 / BUL-6100
Ex ia IIB T4 Ga  II1G Ex ia IIB T4 Ga	-20°C to +50°C	BUD-6000 / BUD-6100 LR6T(JE) (TOSHIBA)
Ex ia IIB T3 Ga  II1G Ex ia IIB T3 Ga	-20°C to +50°C	BUD-6000 / BUD-6100 MN1500 (DURACELL)

- Ambient temperature range during battery charging : 0°C to +40°C

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GX-6100 Ex code T class	Ambient temperature range for use	Combustible gas sensor	Battery
Ex da ia IIB T4 Ga  II1G Ex da ia IIB T4 Ga	-20°C to +50°C	Mounted	BUL-6100 / BUL-6000
Ex ia IIB T4 Ga  II1G Ex ia IIB T4 Ga	-20°C to +50°C	Not Mounted	BUL-6100 / BUL-6000
Ex da ia IIB T4 Ga  II1G Ex da ia IIB T4 Ga	-20°C to +50°C	Mounted	BUD-6100 / BUD-6000 LR6T(JE) (TOSHIBA)
Ex ia IIB T4 Ga  II1G Ex ia IIB T4 Ga	-20°C to +50°C	Not Mounted	BUD-6100 / BUD-6000 LR6T(JE) (TOSHIBA)
Ex da ia IIB T3 Ga  II1G Ex da ia IIB T3 Ga	-20°C to +50°C	Mounted	BUD-6100 / BUD-6000 MN1500 (DURACELL)
Ex ia IIB T3 Ga  II1G Ex ia IIB T3 Ga	-20°C to +50°C	Not Mounted	BUD-6100 / BUD-6000 MN1500 (DURACELL)

- Ambient temperature range during battery charging : 0°C to +40°C

Electrical data

- Power supply of Li-ion battery unit : BUL-6000
Two parallel connected Li-ion cells used in battery pack BUL-6000 are from type Maxell INR18650PB1 or SDI INR18650-15M or SONY US18650VT3.
- Power supply of Li-ion battery unit : BUL-6100
Two parallel connected Li-ion cells used in battery pack BUL-6100 are from type PANASONIC NCR18650GA.
- Um=250V.
- Power supply of alkaline battery unit : BUD-6000 and BUD-6100
Powered by three series AA size alkaline batteries, model LR6T(JE) by TOSHIBA or model MN1500 by DURACELL

Certificate numbers

- IECEx Certificate number : IECEx DEK 24.0014
- ATEX Certificate number : DEKRA 24 ATEX 0016

List of standards

- | | |
|-----------------------|-------------------------|
| • IEC 60079-0 : 2017 | • EN IEC 60079-0 : 2018 |
| • IEC 60079-1 : 2014 | • EN 60079-1 : 2014 |
| • IEC 60079-11 : 2011 | • EN 60079-11 : 2012 |

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Specific conditions of “X”-mark:

NO

WARNING

- Do not charge in hazardous location.
- Do not charge it except by genuine charger.
- Do not replace battery unit in hazardous location.
- Do not replace dry batteries in hazardous location.
- Do not attempt to disassemble or alter the instrument.
- Use only with connected alkaline aa battery, type LR6T(JE) manufactured by TOSHIBA, or type MN1500 manufactured by DURACELL
- The combustible gas sensor NCR-6309, to measure LEL, is the only part of this Gas Monitor system with flame - proof construction.
- This product is an explosion-proof product and is not to be disassembled or modified with the exception of specified parts.
- NCR-6309 must not be exposed to ultraviolet light.
- This product integrates a sensor having flameproof construction.
- If assembly is not performed as specified, explosion protection performance will be compromised. When replacing the sensor and filter, properly install genuine parts and torque to specification.
- The re-adjustment and parts replacement etc including the gas calibration shall be contacted to our nearest agent or RIKEN KEIKI Co., Ltd.

INST. No. 0 0 0 0 0 0 0 0 0 0

A B C D E

A: Manufacturing year (0-9)

B: Manufacturing month (1-9, XYZ for Oct. - Dec.)

C: Manufacturing lot

D: Serial number

E: Code of factory

**RIKEN KEIKI Co., Ltd.**

2-7-6, Azusawa, Itabashi-ku, Tokyo, 174-8744, Japan

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 E-mail : intdept@rikenkeiki.co.jp
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