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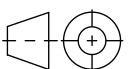

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1	2	3	4	5	6
DOCUMENT_LIST					
SHEET	DOCUMENT NAME	MODIFICATIONS		LOCALIZATION	
1	DOCUMENT LIST OF INSTRUMENTATION PROJECT	FIRST ISSUE		-	
2	NOTES AND GENERAL INFORMATION	FIRST ISSUE		-	
3	INSTRUMENTS LIST OF ELECTRICAL PROTECTION	FIRST ISSUE		-	
4	WIRING DIAGRAM:STATOR INSTRUMENTATION	FIRST ISSUE		-	
5	WIRING DIAGRAM:SPACE HEATERS	FIRST ISSUE		-	
6	WIRING DIAGRAM:STATOR INSTRUMENTATION, BEARING INSTRUMENTATION	FIRST ISSUE		-	
7	WIRING DIAGRAM:SHAFT INSTRUMENTATION	FIRST ISSUE		-	
8	MAXIMUM ADMISSIBLE VALUES FOR ALARM AND TRIPPING OF THE INSTRUMENTS	FIRST ISSUE		-	

MOTOR N°1: EJECTOR STACK FAN
MOTOR N°2: MAIN AIR BLOWER

DOCUMENT LIST OF INSTRUMENTATION PROJECT											
GROSS WEIGHT		kg		NET WEIGHT		kg		SCALE			
500001601078							NBIANCHI	PIRWBUSER	PIRWBUSER	23.05.2019	
500001600553		-	FIRST ISSUE				NBIANCHI	PIRWBUSER	PIRWBUSER	22.05.2019	00
CHANGE NUMBER		LOC	SUMMARY OF MODIFICATIONS				EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	RALCANTARA		WIRING DIAGRAM					10006617182			
CHECKED	PIRWBUSER										
RELEASED	PIRWBUSER		W60560								
REL. DATE	15.05.2019	WEN	HUEHUETOCA	ENGENHARIA DO PRODUTO			SHEET	1	/	8	

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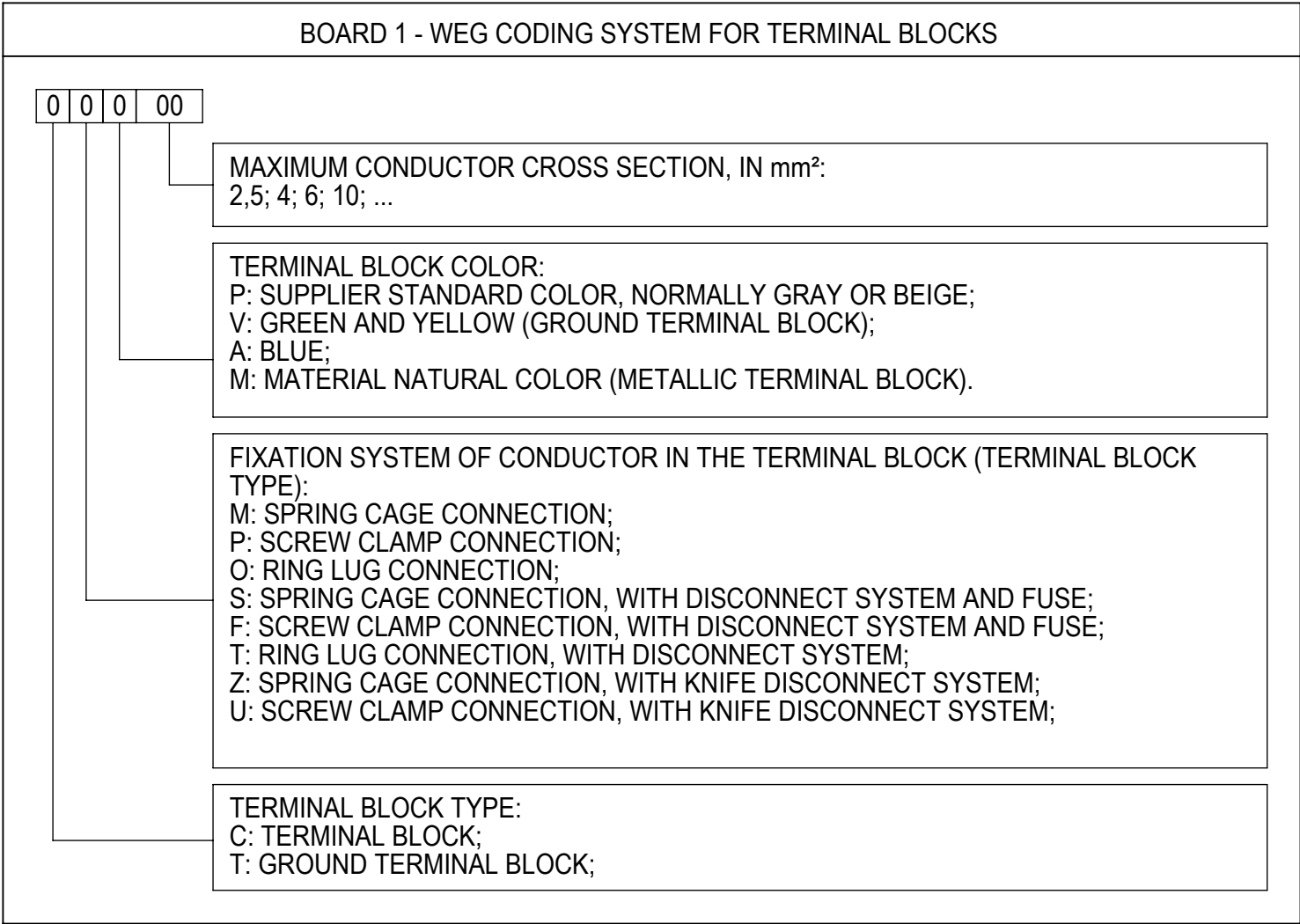
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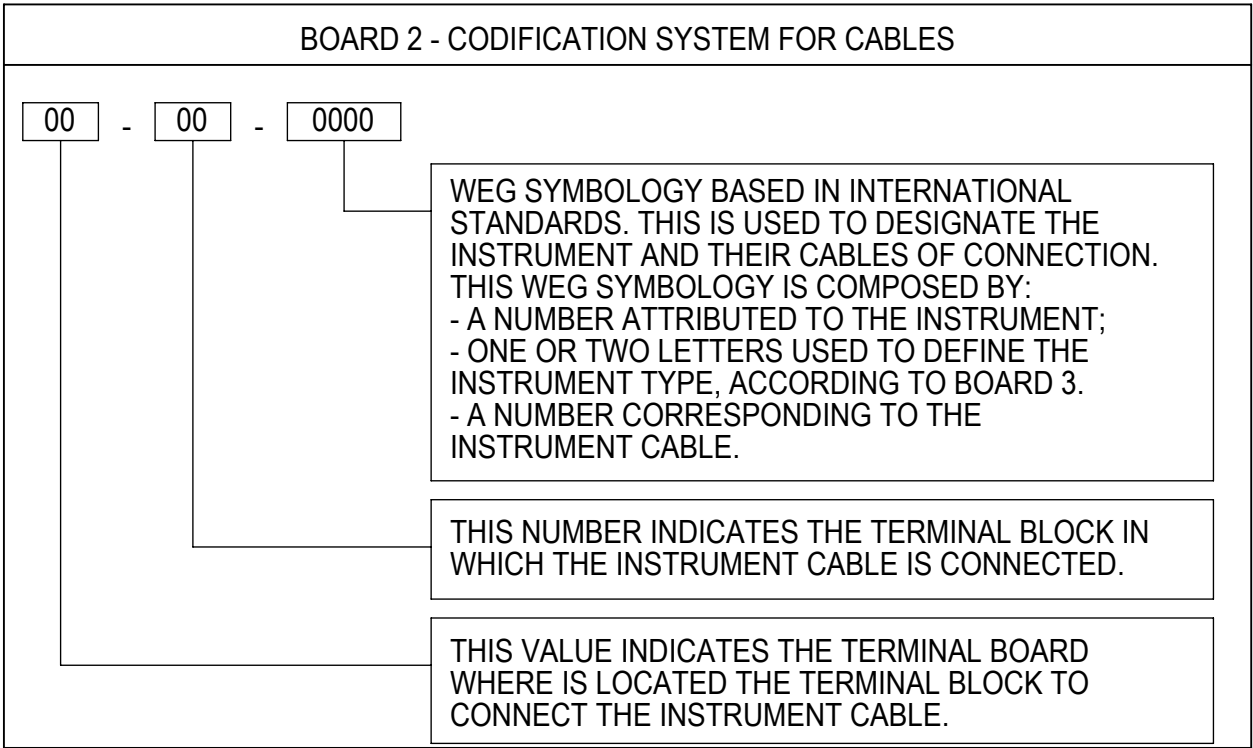
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1. NOTES:
- 1.1. RESISTANCE THERMOMETERS (Pt-100):
- THE RESISTANCE THERMOMETERS SUPPLIED IN THE WEG PRODUCTS ARE ACCORDING STANDARD IEC 60751.
 - THE MEASURING CURRENT THROUGH RESISTANCE THERMOMETERS (Pt-100) MUST BE LESS THAN 1 mA.
- 1.2. INSTRUMENTS SWITCHES:
- THE SWITCHES CONTACTS INDICATED IN THE CONNECTION DIAGRAMS OF THIS DOCUMENT, REFERS TO CONDITION NOT ACTUATED OF INSTRUMENTS.

2. GENERAL INFORMATION:
- 2.1. TERMINAL BOARDS:
- THE TERMINAL BLOCKS ARE ACCORDING STANDARD IEC 60947-7;
 - IN THE CONNECTION DIAGRAMS OF THIS DOCUMENT, THE TERMINAL BLOCKS ARE SPECIFIED BY THE WEG CODING SYSTEM FOR TERMINAL BLOCKS, ACCORDING TO THE BOARD 1;
 - THE TERMINAL BLOCKS ARE ASSEMBLED IN RAILS ACCORDING STANDARD IEC 715, TYPE TH 35-7,5.





- 2.2. IDENTIFICATION SYSTEM FOR INSTRUMENTS CABLES :
- ALL THE CABLES OF INSTRUMENTS ARE IDENTIFIED THROUGH LABEL SLEEVES. THESE ARE POSITIONED NEAR TO TERMINAL BLOCKS.
 - THE IDENTIFICATION OF THE INSTRUMENT CABLES ARE REALIZED THROUGH THE WEG CODIFICATION SYSTEM FOR CABLES, ACCORDING TO BOARD 2.



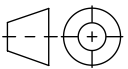

BOARD 3 - LETTERS USED TO IDENTIFY THE INSTRUMENTS

AE: AUXILIARY EXCITER (PMG) AI: ROTOR GROUND FAULT DETECTOR CE:OPTICAL SENSOR CR: WATER LEAKAGE DETECTOR CT: CURRENT TRANSFORMER EA:AUXILIARY RELAY F+,F-: MAIN EXCITER FE: FLOW METER FO: OIL FLOW SWITCH FT: FLOW TRANSMITTER FW: WATER FLOW SWITCH HE: SPACE HEATER HZ:SELECTOR SWITCH LW: LEVEL SENSOR MI: HUMIDITY SENSOR M:ELECTRIC MOTOR PA:PRESSURIZATION SYSTEM PE: GROUNDING PO: DIFFERENTIAL PRESSURE SWITCH PT: POTENTIAL TRANSFORMER PW: PRESSURE SWITCH R: RESISTANCE THERMOMETER BA: AUXILIARY BORN CC: SIGNAL CONDITIONER VA: VIBRATION MONITOR CB: CIRCUIT BREAKER AC: AUXILIARY CONTACT PD: PARTIAL DISCHARGE COUPLER RD: RTD MODULE	RT: TEMPERATURE TRANSMITTER SD:SURGE DIVERTER SN: OVERSPEED SENSOR SW: OVERSPEED SWITCH SY: SPEED (ROTATION) SENSOR SZ: ENCODER TA: TEMPERATURE MONITOR TB: THERMOSTAT TC: THERMOCOUPLE TE: THERMOMETER TI: DIGITAL DISPLAY TP: THERMISTOR VE: VELOCITY TRANSDUCTOR VP: ACCELERATION TRANSDUCTOR VS: PROXIMITY TRANSDUCTOR WE:TORQUE SWITCH ZA:CONTROL AND DETECTION OF PAD WEAR ZE:END - OF - COURSE SWITCH CS: CONTROL SYSTEM BR: CONTROL RELAY LA: LUMINAIRE S: RESERVE TERMINAL SE: INDUCTIVE SENSOR (PNP) DR: DAMPING RESISTOR AY: WEAR CONTACT LW: ELECTRONIC LEVEL SWITCH CY: SINGAL CONVERTER
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NOTES AND GENERAL INFORMATION										
GROSS WEIGHT		kg		NET WEIGHT		kg		SCALE		
500001601078						NBIANCHI	PIRWBUSER	PIRWBUSER	23.05.2019	
500001600553		-	FIRST ISSUE			NBIANCHI	PIRWBUSER	PIRWBUSER	22.05.2019	
CHANGE NUMBER	LOC	SUMMARY OF MODIFICATIONS				EXECUTED	CHECKED	RELEASED	DATE	
EXECUTED	RALCANTARA	 WIRING DIAGRAM				10006617182				
CHECKED	PIRWBUSER									
RELEASED	PIRWBUSER									
REL. DATE	15.05.2019	WEN	HUEHUETOCA	ENGENHARIA DO PRODUTO		SHEET	2 / 8			

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	1	2	3	4	5	6
A	INSTRUMENT	CURRENT TRANSFORMERS				
	CODE	1CT/2CT/3CT				
	CURRENT TRANSFORMER TYPE	WINDOW BUSHING				
	SECONDARY TYPE	SIMPLE				
	SECONDARY TYPE 1	PROTECTION SELF-BALANCING				
	SECONDARY TYPE 2					
	SECONDARY TYPE 3					
	SECONDARY POWER 1 (Va)	15.0				
	SECONDARY POWER 2 (Va)					
B	SECONDARY POWER 3 (Va)					
	PRYMARY CURRENT 1(A)	300.0				
	SECONDARY CURRENT 1 (A)	1.0				
	SECONDARY CURRENT 2 (A)					
	SECONDARY CURRENT 3 (A)					
	SECONDARY ACCURACY CLASS 1	5P15				
	SECONDARY ACCURACY CLASS 2					
	SECONDARY ACCURACY CLASS 3					
	FREQUENCY (Hz)	50.0				
MAXIMUM VOLTAGE (Kv)	3.0					
C	STANDARD	IEC 60044-1				
	TOTAL QUANTITY (Un)	3.0				
D						
E						

INSTRUMENTS LIST OF ELECTRICAL PROTECTION									
GROSS WEIGHT		kg	NET WEIGHT		kg	SCALE			
500001601078						NBIANCHI	PIRWBUSER	PIRWBUSER	23.05.2019
500001600553		-	FIRST ISSUE			NBIANCHI	PIRWBUSER	PIRWBUSER	22.05.2019
CHANGE NUMBER	LOC	SUMMARY OF MODIFICATIONS				EXECUTED	CHECKED	RELEASED	DATE
EXECUTED	RALCANTARA					10006617182			
CHECKED	PIRWBUSER								
RELEASED	PIRWBUSER								
REL. DATE	15.05.2019	WEN	HUEHUETOCA	ENGENHARIA DO PRODUTO	SHEET	3	/	8	

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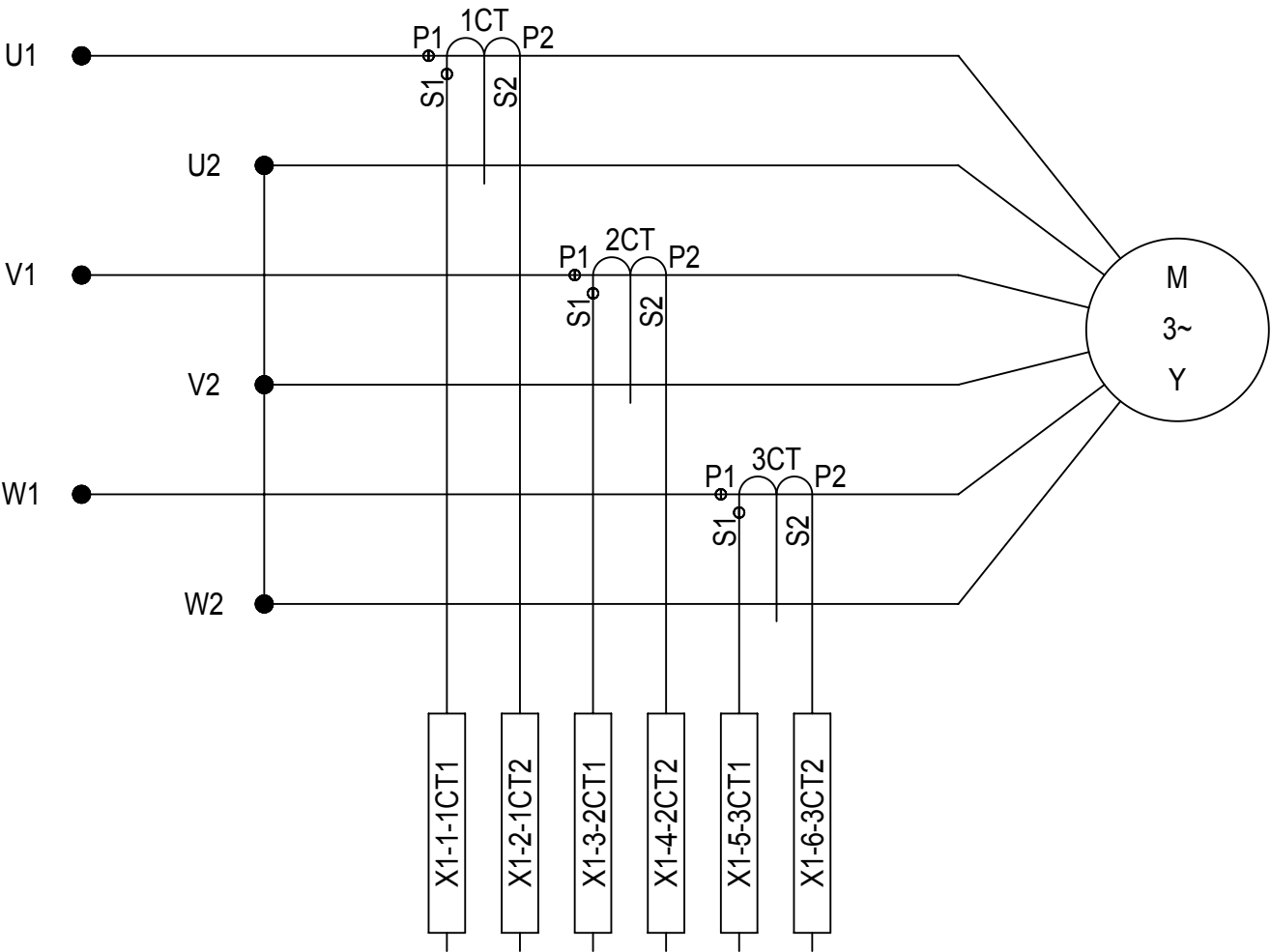
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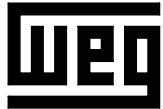
RAIL X1	TERMINAL BLOCK	1	2	3	4	5	6	PE
	PLUG-IN BRIDGE	-	-	-	-	-	-	-
	INSTRUMENT CODE	1CT	2CT	3CT	3CT	3CT	3CT	3CT
	TERMINAL BLOCK SPECIFICATION	CTP6	CTP6	CTP6	CTP6	CTP6	CTP6	TPV16



NOTES:
1 - AFTER CONNECTING CT TERMINALS, REMOVE THESE JUMPERS. INSTALL THESE JUMPERS (TO SHORT CIRCUIT THE TERMINALS) BEFORE MAINTENANCE OF MACHINE.

CODE	INSTRUMENT
-	STATOR CONNECTION DIAGRAM
1CT	CURRENT TRANSFORMERS
2CT	CURRENT TRANSFORMERS
3CT	CURRENT TRANSFORMERS

WIRING DIAGRAM:STATOR INSTRUMENTATION									
GROSS WEIGHT		kg	NET WEIGHT		kg	SCALE			
500001601078									
500001600553		-	FIRST ISSUE			NBIANCHI	PIRWBUSER	PIRWBUSER	23.05.2019
CHANGE NUMBER		LOC	SUMMARY OF MODIFICATIONS			EXECUTED	CHECKED	RELEASED	DATE
EXECUTED		RALCANTARA	WIRING DIAGRAM						
CHECKED		PIRWBUSER							
RELEASED		PIRWBUSER							
REL. DATE		15.05.2019	WEN HUEHUETOCA			ENGENHARIA DO PRODUTO		SHEET 4 / 8	



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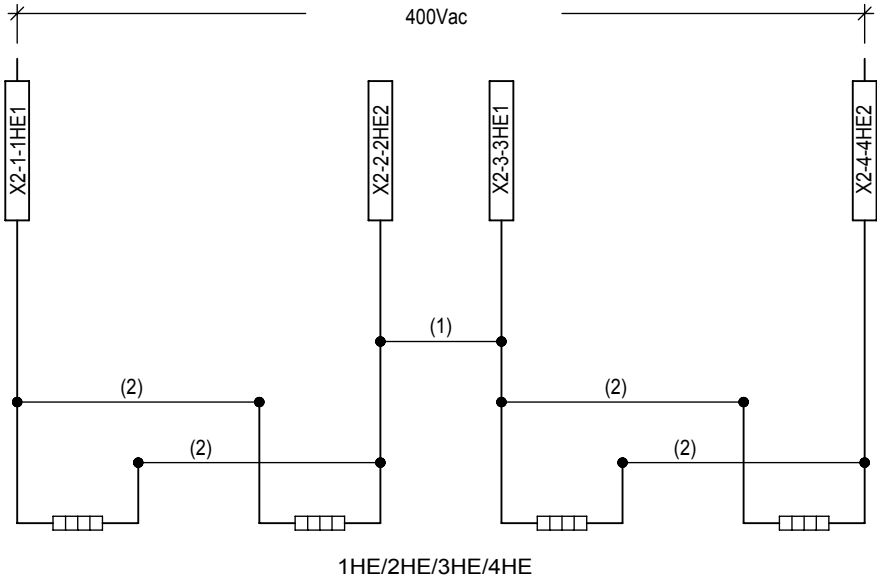
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RAIL X2	1	2	3	4	PE
	TERMINAL BLOCK				
	PLUG-IN BRIDGE		-		
	INSTRUMENT CODE	1HE/2HE/3HE/4HE			
	TERMINAL BLOCK SPECIFICATION	CMP2.5			TPV16



TOTAL POWER: 555 W
NOTE:
(1) - PLUG-IN BRIDGES (JUMPERS) INSTALLED IN THE TERMINAL BLOCKS OF RAIL.
(2) - CONNECTION BRIDGES INSTALLED IN THE SPACE HEATERS.

CODE	INSTRUMENT
1HE/2HE/3HE/4HE	SPACE HEATER - MACHINE MAIN FRAME

WIRING DIAGRAM:SPACE HEATERS											
GROSS WEIGHT		kg		NET WEIGHT		kg		SCALE			
500001601078							NBIANCHI	PIRWBUSER	PIRWBUSER	23.05.2019	
500001600553		-	FIRST ISSUE				NBIANCHI	PIRWBUSER	PIRWBUSER	22.05.2019	00
CHANGE NUMBER	LOC	SUMMARY OF MODIFICATIONS					EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	RALCANTARA		WIRING DIAGRAM W60560					10006617182			
CHECKED	PIRWBUSER										
RELEASED	PIRWBUSER										
REL. DATE	15.05.2019	WEN	HUEHUETOCA	ENGENHARIA DO PRODUTO			SHEET	5	/	8	

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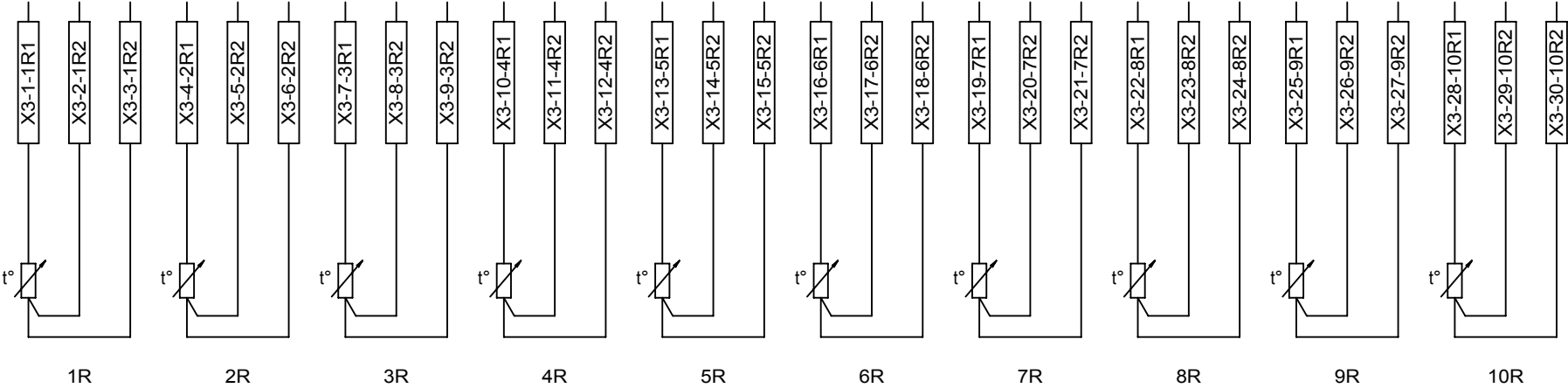
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RAIL X3	TERMINAL BLOCK	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	PE
	PLUG-IN BRIDGE																															
	INSTRUMENT CODE	1R			2R			3R			4R			5R			6R			7R			8R			9R			10R			
	TERMINAL BLOCK SPECIFICATION	CMP2.5			CMP2.5			CMP2.5			CMP2.5			CMP2.5			CMP2.5			CMP2.5			CMP2.5			CMP2.5			TPV16			



CODE	INSTRUMENT
1R	SINGLE RESISTANCE THERMOMETER - Pt-100 - 3 WIRES - STATOR WINDING - PHASE U
2R	SINGLE RESISTANCE THERMOMETER - Pt-100 - 3 WIRES - STATOR WINDING - PHASE V
3R	SINGLE RESISTANCE THERMOMETER - Pt-100 - 3 WIRES - STATOR WINDING - PHASE W
4R	SINGLE RESISTANCE THERMOMETER - Pt-100 - 3 WIRES - STATOR WINDING - PHASE U
5R	SINGLE RESISTANCE THERMOMETER - Pt-100 - 3 WIRES - STATOR WINDING - PHASE V
6R	SINGLE RESISTANCE THERMOMETER - Pt-100 - 3 WIRES - STATOR WINDING - PHASE W
7R	SINGLE RESISTANCE THERMOMETER - Pt-100 - 3 WIRES - D.E. BEARING - RADIAL
8R	SINGLE RESISTANCE THERMOMETER - Pt-100 - 3 WIRES - D.E. BEARING - RADIAL
9R	SINGLE RESISTANCE THERMOMETER - Pt-100 - 3 WIRES - N.D.E. BEARING - RADIAL
10R	SINGLE RESISTANCE THERMOMETER - Pt-100 - 3 WIRES - N.D.E. BEARING - RADIAL

WIRING DIAGRAM:STATOR INSTRUMENTATION, BEARING INSTRUMENTATION											
GROSS WEIGHT		kg		NET WEIGHT		kg		SCALE			
500001601078							NBIANCHI	PIRWBUSER	PIRWBUSER	23.05.2019	
500001600553		-	FIRST ISSUE				NBIANCHI	PIRWBUSER	PIRWBUSER	22.05.2019	00
CHANGE NUMBER	LOC	SUMMARY OF MODIFICATIONS					EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	RALCANTARA		WIRING DIAGRAM W60560					10006617182			
CHECKED	PIRWBUSER										
RELEASED	PIRWBUSER										
REL. DATE	15.05.2019	WEN	HUEHUETOCA			ENGENHARIA DO PRODUTO		SHEET	6	/	8

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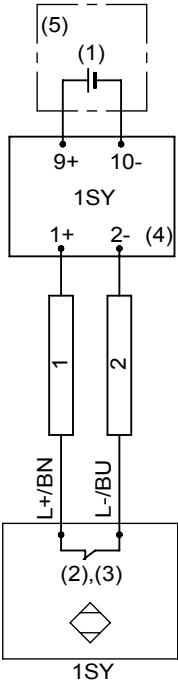
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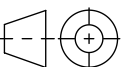

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RAIL X4	TERMINAL BLOCK		PE
	PLUG-IN BRIDGE		
	INSTRUMENT CODE	1CY	
	TERMINAL BLOCK SPECIFICATION		TPV16



NOTES:
(1) POWER SUPPLY: 24 Vcc(Vca)
(2) NOMINAL VOLTAGE: 8V
(3) MAX. SWITCHING FREQUENCY: 2000Hz
(4) SIGNAL CONVERTER PEPPER & FUCHS
KCD2-SR-EX1.LB
(5) NOT SUPPLIED BY WEG

CODE	INSTRUMENT
1SY	INDUCTIVE SENSOR PEPPERL & FUCHS NJ2-12-GM-N TO CONVERTER KCD2 - TOOTHED WHEEL
1CY	CONVERTER KCD2-SR-EX1.LB - TOOTHED WHEEL

WIRING DIAGRAM:SHAFT INSTRUMENTATION										
GROSS WEIGHT		kg		NET WEIGHT		kg		SCALE		
500001601078							NBIANCHI	PIRWBUSER	PIRWBUSER	23.05.2019
500001600553		-	FIRST ISSUE				NBIANCHI	PIRWBUSER	PIRWBUSER	22.05.2019 00
CHANGE NUMBER	LOC	SUMMARY OF MODIFICATIONS					EXECUTED	CHECKED	RELEASED	DATE VER
EXECUTED	RALCANTARA	 WIRING DIAGRAM					10006617182			
CHECKED	PIRWBUSER									
RELEASED	PIRWBUSER									
REL. DATE	15.05.2019	WEN	HUEHUETOCA		ENGENHARIA DO PRODUTO		SHEET	7 / 8		

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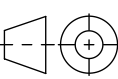

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1		2	3	4		5	6
CODE	INSTRUMENT			ALARM	TRIP	UNIT	
X3-1R	SINGLE RESISTANCE THERMOMETER - Pt-100 - 3 WIRES - STATOR WINDING - PHASE U			155	170	°C	
X3-2R	SINGLE RESISTANCE THERMOMETER - Pt-100 - 3 WIRES - STATOR WINDING - PHASE V			155	170	°C	
X3-3R	SINGLE RESISTANCE THERMOMETER - Pt-100 - 3 WIRES - STATOR WINDING - PHASE W			155	170	°C	
X3-4R	SINGLE RESISTANCE THERMOMETER - Pt-100 - 3 WIRES - STATOR WINDING - PHASE U			155	170	°C	
X3-5R	SINGLE RESISTANCE THERMOMETER - Pt-100 - 3 WIRES - STATOR WINDING - PHASE V			155	170	°C	
X3-6R	SINGLE RESISTANCE THERMOMETER - Pt-100 - 3 WIRES - STATOR WINDING - PHASE W			155	170	°C	
X3-7R	SINGLE RESISTANCE THERMOMETER - Pt-100 - 3 WIRES - D.E. BEARING - RADIAL			110	120	°C	
X3-8R	SINGLE RESISTANCE THERMOMETER - Pt-100 - 3 WIRES - D.E. BEARING - RADIAL			110	120	°C	
X3-9R	SINGLE RESISTANCE THERMOMETER - Pt-100 - 3 WIRES - N.D.E. BEARING - RADIAL			110	120	°C	
X3-10R	SINGLE RESISTANCE THERMOMETER - Pt-100 - 3 WIRES - N.D.E. BEARING - RADIAL			110	120	°C	

* VALUES CAN BE ADJUSTED ACCORDING TO THE OPERATING BASELINE WHEN STARTUP THE MACHINE.

THE LIMIT VALUES OF STATOR ARE TO ACCORDING IEC 60034-11 (TABLE 1) THAT THE THERMAL CLASSIFICATION AND THUS WILL REDUCE THE LIFETIME OF THE MOTOR, IF THE MOTOR/GENERATOR IS OPERATED OVER A LONGER PERIOD OF TIME WITH THESE VALUES.

MAXIMUM ADMISSIBLE VALUES FOR ALARM AND TRIPPING OF THE INSTRUMENTS										
GROSS WEIGHT		kg		NET WEIGHT		kg		SCALE		
500001601078						NBIANCHI		PIRWBUSER		
500001600553		-		FIRST ISSUE		NBIANCHI		PIRWBUSER		
CHANGE NUMBER		LOC		SUMMARY OF MODIFICATIONS			EXECUTED		CHECKED	
EXECUTED		RALCANTARA					10006617182			
CHECKED		PIRWBUSER					000			02
RELEASED		PIRWBUSER								
REL. DATE		15.05.2019		WEN		HUEHUETOCA		ENGENHARIA DO PRODUTO		
						SHEET		8 / 8		

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