

FILES LEGEND

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1. HANDLING



CAUTION: These instructions shall be made available to the personnel involved in the handling and installation of the machine.

The machine is sent to the Customer usually packed in a properly sized wooden crate and wrapped in plastic film for additional protection, unless otherwise specified in the Order Confirmation.

The wooden crate allows the machine to be handled with a fork lift or crane, and appropriate marks are provided on the crate at the points for running steel cables or belts for lifting (figure 1.1).

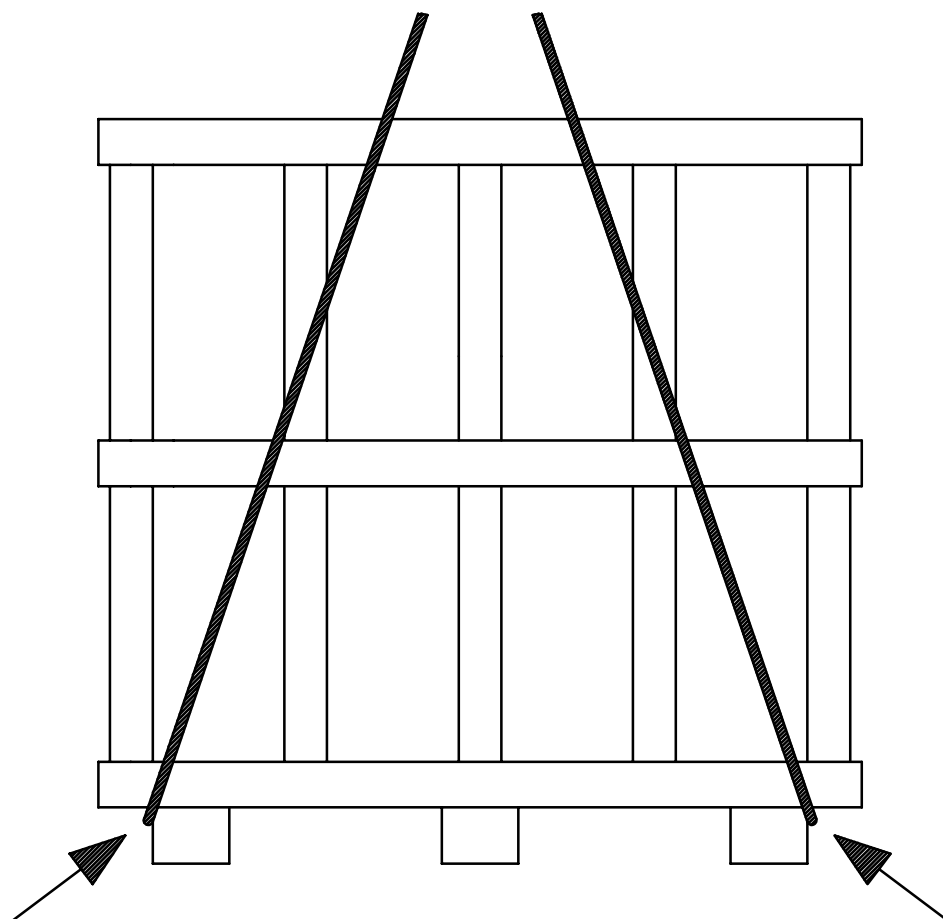


FIGURE 1.1

Concerning the dimensions and weight of the machine, see the “Installation Drawing”, in order to use the proper lifting equipment.

The weight given is merely indicative and should be used only to select the correct handling and transport means.

Please note that the center of gravity of the machine lies towards the compression head (front part).

When handling unpacked machines use fork lifts (unless otherwise specified in the handling instructions) and make sure that the compression head lies on the operator's side. Forks should be adequately spaced and sized so as to accommodate the entire base of the frame (figure 1.2) to prevent damage to the machine frame or panels.

Side panels can be removed during transport to prevent damage; the front part of the bodywork, under the compression head, has not been constructed to support the weight of the machine. Do not use this part as a lifting point as this could result in damage.

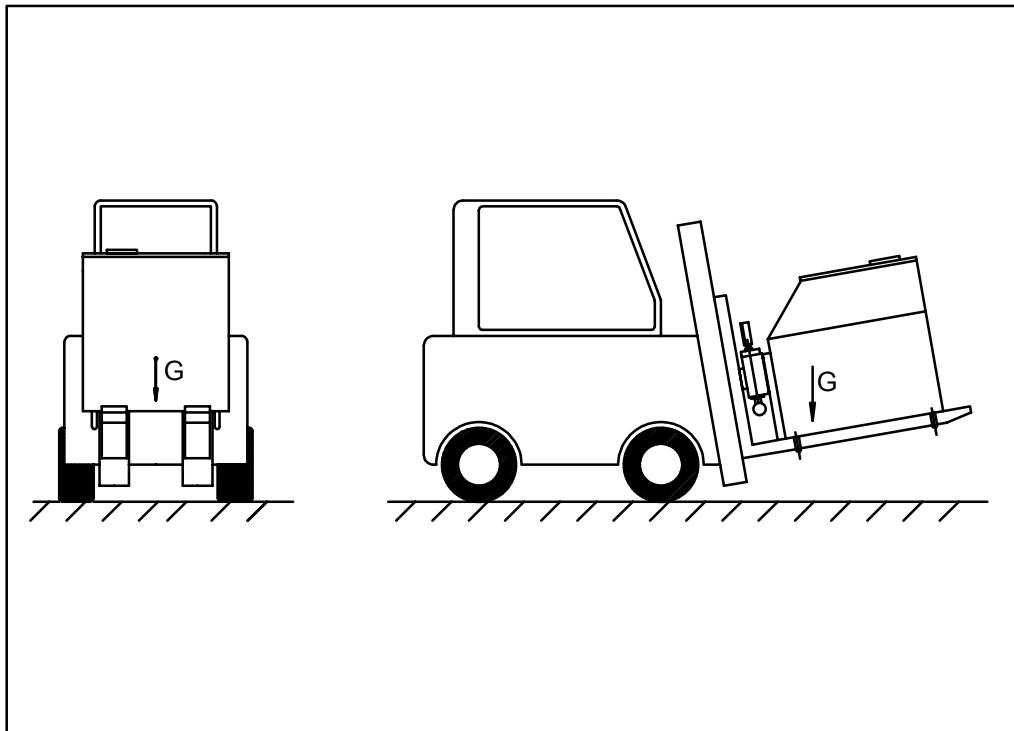


FIGURE 1.2

The machines model NS6200 and NS8315 must be supported entirely by the central main frame, and not by the external part which is intended only to support the panels of the cladding.

Forks should be adequately spaced and sized so as to accomodate the entire base of the main frame.

In case of not correct handling, the panels and the external structure can be damaged.

See the below drawing (figure 1.3), where with (1) is indicated the main frame and with (2) the structure supporting the panels.

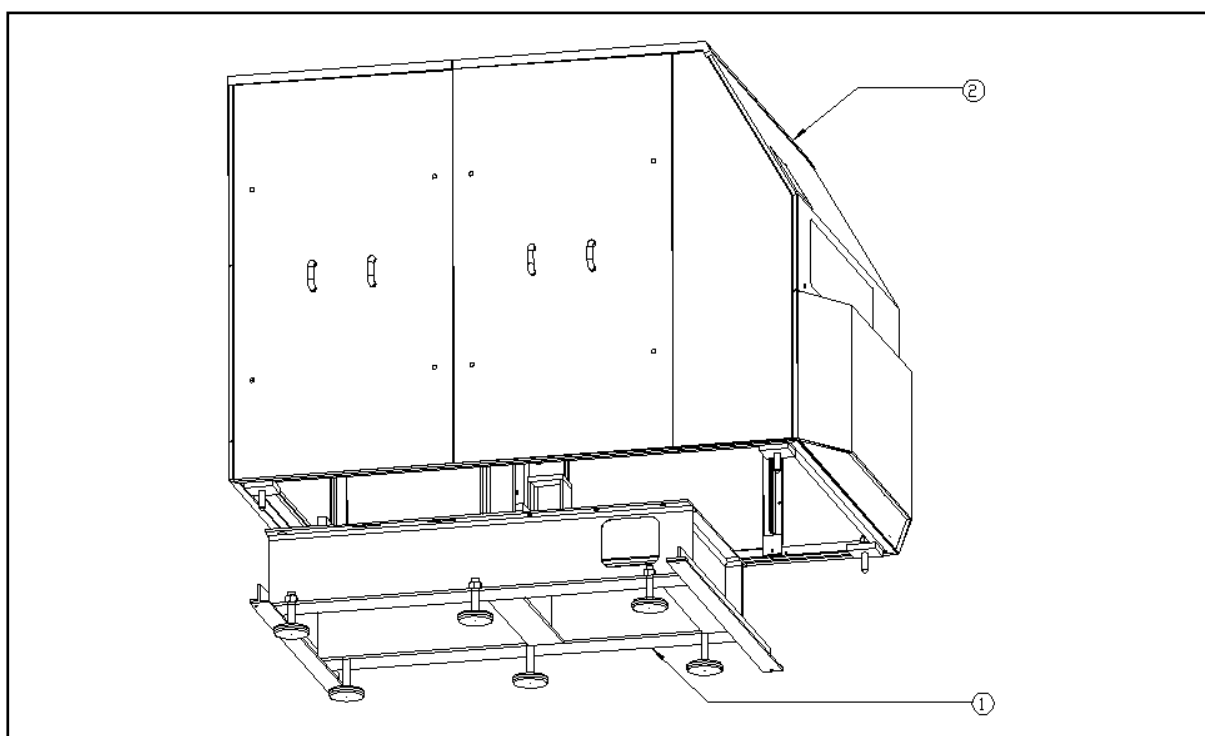


FIGURA 1.3



CAUTION: In order to ensure a balanced handling of the machine and avoid damage to the machine itself or hazards for the personnel, all movements should be carried out **VERY SLOWLY** by authorized operators, who must wear suitable protection devices and comply with safety regulations.



WARNING: Before handling the machine, make sure that the route to be followed and the intended place of installation are clear of any obstacle.



WARNING: Operators are required to read these instructions before handling the machine; all personnel involved in handling of the machine must be acquainted with transport and handling regulations, as well as with regular safety standards.



WARNING: Use only tested hoisting devices approved to support the machine's weight, as indicated in the "Installation Drawing".
Do not under any circumstances leave suspended loads and never stand below suspended loads.



WARNING: The floor on which the machine is to be placed must withstand to at least 150% of the machine's weight indicated in the "Installation Drawing".

2. RECEIVING AND CHECKING THE MACHINE

Unless specified otherwise in the Order Confirmation, once the machine has left the Manufacturer's premises, any damage shall be under the responsibility of the carrier - whether an independent one or a Customer's employee.

Therefore, when receiving the machine, the following should be checked:

- contents of the packing against the Packing List;*
- integrity of the packing, so that any evident damage can be immediately reported to the carrier;*
- any damage suffered by the machine as a result of improper transport by the carrier.*

In order to minimize the amount of inconvenience for the Customer, NIRO-SOAVI Shipping Department is always available to assist with clarifications, evaluation of any damages, and any other action required to restore the machine to its proper and safe conditions.

3. STORAGE

3.1 STORAGE BEFORE INSTALLATION

During the time preceding installation, the machine and its apparatus should be conveniently stored in closed, clean premises to avoid deterioration and preserve its efficiency.

If no storage place can be provided other than outdoor, a waterproof cover should be provided to prevent contact with dust, humidity, rain, etc.

Special attention should be given to electric control boards and electronic equipment, which are easily affected by humidity and low temperature.

If separate from the machine, they should be stored indoors and provided with special humidity absorbers.



WARNING: Storage temperature should not be less than -5°C and more than +55°C; humidity should be less than 95%, with no-condensate. Vibrations should be avoided as much as possible.

3.2 STORAGE FOR PERIODS LONGER THAN 3 MONTHS

If the machine is expected to remain stored for over three months before installation, provide a closed storage place protected from bad weather, dust or corrosive releases, as described before. Observe the above precautions for electric components.

In addition YOU MUST:

- *loosen the tension of V-Belts using the appropriate tighteners (see Section 3 - MAINTENANCE);*
- *disassemble the plungers and seal packings (see Section 3 - MAINTENANCE)*



WARNING: Pistons and seal packings should be reassembled, and belts tensioned at the time of machine installation.



WARNING: In case the machine plungers are chrome coated, or are using a tungsten carbide detonated coating, they must be disassembled together with the packings if the machine is in storage more than ONE month.

4. INSTALLATION GUIDELINES

These guidelines are provided to ensure correct machine installation and operation and guarantee long life to the machine and its components while preventing situations of danger for operators.

- *For high-pressure positive displacement pumps and homogenizers, infeed pressure must ALWAYS be kept over a minimum level for correct operation without cavitation conditions which could damage the machine. The minimum values indicated in Section 1 – TECHNICAL SPECIFICATIONS must be observed strictly; in any case, depending on the process temperature and viscosity characteristics, it is necessary to ensure that infeed pressure is constant and sufficient to prevent cavitation and underfeeding of the machine.*

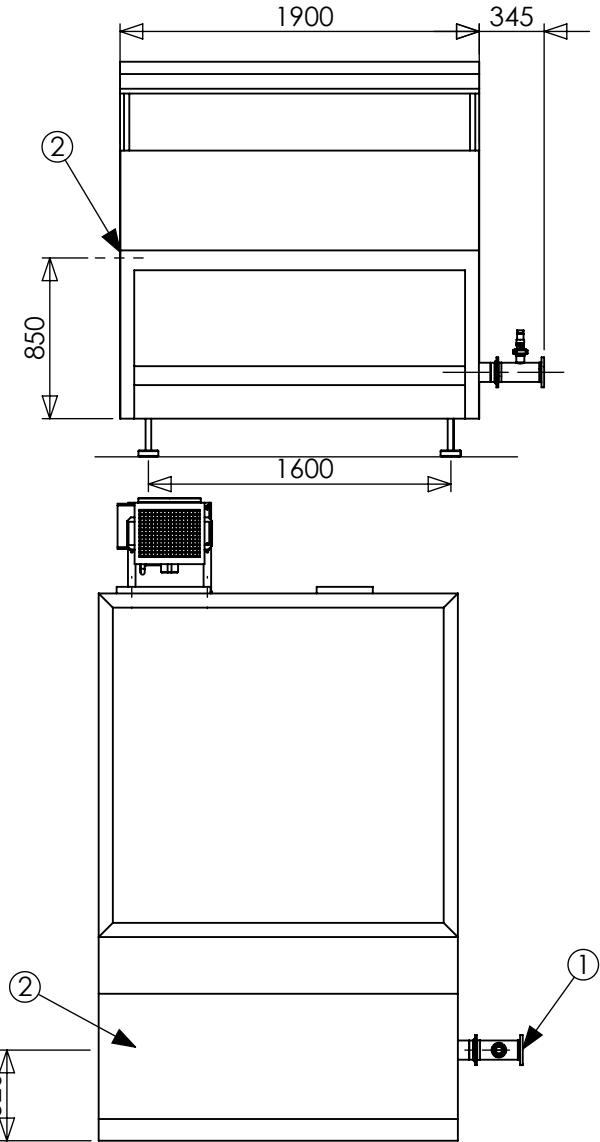
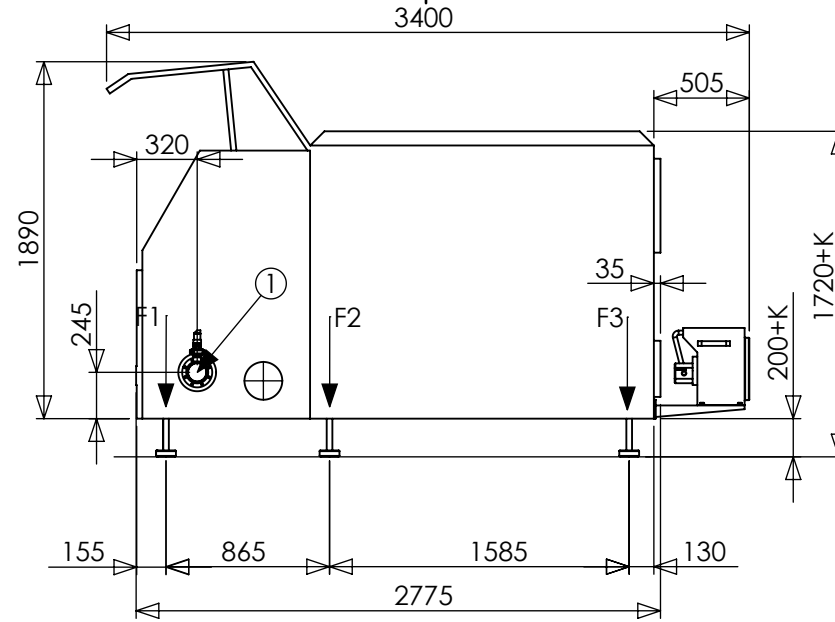
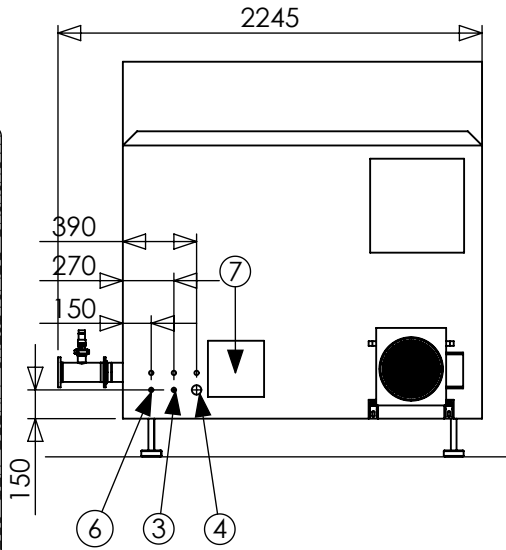
For further information or special requirements ALWAYS contact NIRO SOAVI

- *to feed the machine use an infeed pump with delivery 1.2 times greater than the rated flow in case of machines with 3 or more pistons, and 1.5 times in case of machines with 1 or 2 pistons. Pump delivery must be calculated at least over the minimum pressure required for feeding.*
- *If a positive displacement pump (lobe, single screw, etc.) or diaphragm pump is used, a suitable by-pass pipe regulated by a modulating valve on the infeed pump, and/or an adequate speed regulating system for the infeed pump, to ensure correct machine feeding*
- *if the products treated vary greatly in terms of viscosity, or if a positive-displacement pump must be used for viscous products and washing water, you must use a pump speed adjustment system regulated by infeed pressure to ensure that machine feeding is correct under all conditions, including during transitory production stages.*
- *installation of the two homogenizers or piston pumps in series can only be carried out provided a few changes are made, such as providing speed variation of both machines controlled by an infeed pressure adjustment loop and installation of a by-pass system; for information in this respect please contact NIRO SOAVI*
- *it is necessary to use a feeding pump for each single machine; do not install two or more machines in parallel with one single feeding pump to prevent dangerous pulsation interferences*

- *the feeding line between the feed pump and the homogenizer or piston pump must be direct, possibly without bends, and with a size equal to or greater than the size of the homogenizer/piston pump, without section variations, to prevent loss of load; the radius of curves must be as large as possible to prevent loss of load especially in the infeed stage and to avoid noise problems at delivery.*
- *we recommend you install a pressure gauge near the area where product is fed into the homogenizer / piston pump in order to check infeed pressure; this pressure gauge can be supplied as an optional by NIRO SOAVI and can be standard, with minimum contact or with continuous analog signal for remote control.*
- *if filters need to be installed on the feeding line, you must allow a clear area at least 3 times the size of the pipe used; you also need to install a pressure gauge downstream the filter to check actual infeed pressure and prevent filter clogging and danger of cavitation of the machine. For cleaning purposes we recommend installing parallel filters to be used alternatingly.*
- *every homogenizer or piston pump is characterized by pulsating operation: for this reason, depending on the kind of system and machine flow, we recommend you install a pulsation damper both for suction and delivery (providing up to 20 bar maximum counterpressure on the line)*
- *the pulsation damper is always recommended for flow rates exceeding 5000÷6000 l/h; on the suction end, it must be installed as close as possible to the machine inlet, while on the delivery end it must be installed on a horizontal pipe at a distance of minimum 1 meter from adjacent bends. For technical details about size and installation please contact NIRO SOAVI*
- *the pulsation damper must be installed in a vertical position; do not install the damper so that the flow enters the damper directly, otherwise the damper will fill up too quickly and become less effective as no air will be left at the top*
- *if the feed pump is connected to a tank, ensure that no air is sucked in by the suction inlet through the creation of vortices by fitting suitable internal barriers to divert the flow; the feeding pump must have a net positive suction head at all times*
- *we recommend you install a suitable safety valve downstream the homogenizer or piston pump in order to protect the system from possible overpressure caused by inexperience or incorrect operation procedures downstream the machine; the safety valve fitted in the machine, even where a piston pump is used, will protect the machine, but not the system to which it is connected, in case of dangerous overpressure.*

- *Never use the machine to fully drain the feeding tank, to avoid product suddenly running out during operation under pressure, but provide at least one level sensor to remove pressure (in the case of a homogenizer) and stop the machine before the product being fed runs out*
- *the product treated must contain no air or gas, to prevent cavitation problems in the machine. If the product contains air because it is very viscous or due to previous processing phases, you need to remove the air using appropriate deaeration equipment*
- *if processing temperature exceeds 90 °C, it is absolutely necessary to increase feeding pressure due to increased steam pressure which can lead to cavitation.
Feeding pressure should therefore be increased by 1 bar for each 5 °C of temperature increase above 90 °C added to the minimum feeding pressure specified in Section 1 - TECHNICAL SPECIFICATIONS.
This value must be doubled in case of products with a viscosity value greater than 500 cP.
For special products and special process temperatures contact NIRO SOAVI*
- *the machine is fitted with automatic pumping spring valves; the load is defined according to the type of valve and the characteristics of the product. This means that if the machine has been stopped or is inactive, and the feeding line is open and under pressure, you are able to check the flow of product through the machine. To make sure there is no product flowing through the machine when the machine is inactive, the user must provide a cutoff valve for the feeding line upstream the machine.*

(MACHINING DEVIATIONS WHERE NOT SPECIFIED ACCORDING TO UNI EN 22768/1-F, TOLERANCE CLASS F (FINE))



PRELIMINARY DRAWING

K=± 25 mm

OVERALL DIMENSIONS (mm)

LEAVE AT LEAST 1m FROM EACH SIDE OF THE MACHINE

ITEM	DESCRIPTION	CONNECTION
1	PRODUCT INLET	DN100 VARIVENT (DIN 11864-2)
2	PRODUCT OUTLET	FL. SCH. 2" 160S (SAF2205)
3	WATER INLET	G 1/2" (BSP, MALE)
4	WATER DISCHARGE	G 1" 1/2 (BSP, MALE, TO DRAIN)
5	OIL CONDENSATE DISCHARGE	INSIDE THE MACHINE
6	AIR INLET	G 1/2" (BSP, MALE)
7	ELECTRICAL CABLES INLET	HOLE
WEIGHT : KG 6000 - F1 = 2500, F2 = 2000, F3 = 1500		

REF.	PART-CODE	PART-DESCRIPTION	U.	QTY.	MATERIAL	M.CODE	NOTE
DESCRIPTION					MATERIAL	M.CODE	A4
NS5180_ID_11355_PRELIMINARY							
DESIGNER	APPROV.	CHECKED	DATE				
PM	.	.	22-08-2014				
REV.	DESCRIPTION	SIGN.	DATE				
				GEA		SCALE 1:40	
				GEA Niro Soavi		SH. 1 OF 1	
				GEA Mechanical Equipment Italia S.p.A.		DRAWING	
				via da Erba Edoari, 29 43123 Parma (ITALY)		NS5180_ID_11355	
				PHONE:++39.(0)521.965411 - FAX:++39.(0)521.242819			

MACCH.

N.P.

GEA Niro Soavi	LUBRICANT	TT-0038-C	
		03/12/2012	19
		DATA	REV.
		FG	
		SIG.	

WARNING

FOR TRANSPORT SAFETY REASONS THE MACHINE IS SUPPLIED WITHOUT LUBRICATING OIL.
BEFORE ANY OPERATION FILL UP THE MACHINE WITH OIL ACCORDING TO THE
"INSTRUCTIONS FOR USE & MAINTENANCE".

LUBRICATING OIL

Class:	ISO L-HM; ISO VG 150; DIN 51524-2-HLP			
BRAND	TYPE		BRAND	TYPE
Agip	Oso 150		Texaco	Rando oil HD 150
Klüber	Klüberoil GEM1-150N		Klüber	Klübersynth GEM4-150N
IP	Hydrus Oil 150		Gulf	Harmony 150 AW
BP	Energol HLP-HM 150		Amoco	American industrial oil 150
Mobil	DTE 19M		Total	Azolla ZS 150
Mobil	DTE Extra Heavy		Fina	Hydram 150
Chevron	AIO ISO 150		Api	Cis 150
Castrol	Hyspin AWS 150		Kuwait Petr. Int.	Q8 haidn 150
Esso/Exxon	Nuto H 150		ELF	Olna DS 150
Shell	MORLINA Oil 150		ARAL	Degol CL 150T

LUBRICATION PLANT CAPACITY (litres) *

MACHINE MODEL	TYPE OF LUBRIFICATION		
	FORCED	SPLASH	
ONE 7TS	/	2,5	
ONE11TS-ONE15TS	/	9	
ONE 37TF	28		
ONE 75TF	30		
NS 2006	3	1,5	
NS 3006	4,5	3	
NS 3011 - NS 3015	14		
NS 3018 - NS 3024	14		
NS 3030 - NS 3037	28		
NS 3045	30		
NS 3055 - NS 3075	30		
NS 3090 - NS 3110	38		
NS 5132 - NS 5180	55		
NS 5250 - NS 5355	95		
NS 6200	75		
NS 8315	105		

* APPROXIMATE

GEA Niro Soavi	FOOD GRADE LUBRICANT	TT-0038-C	
		03/12/2012	19
		DATA	REV.
		FG	
		SIG.	

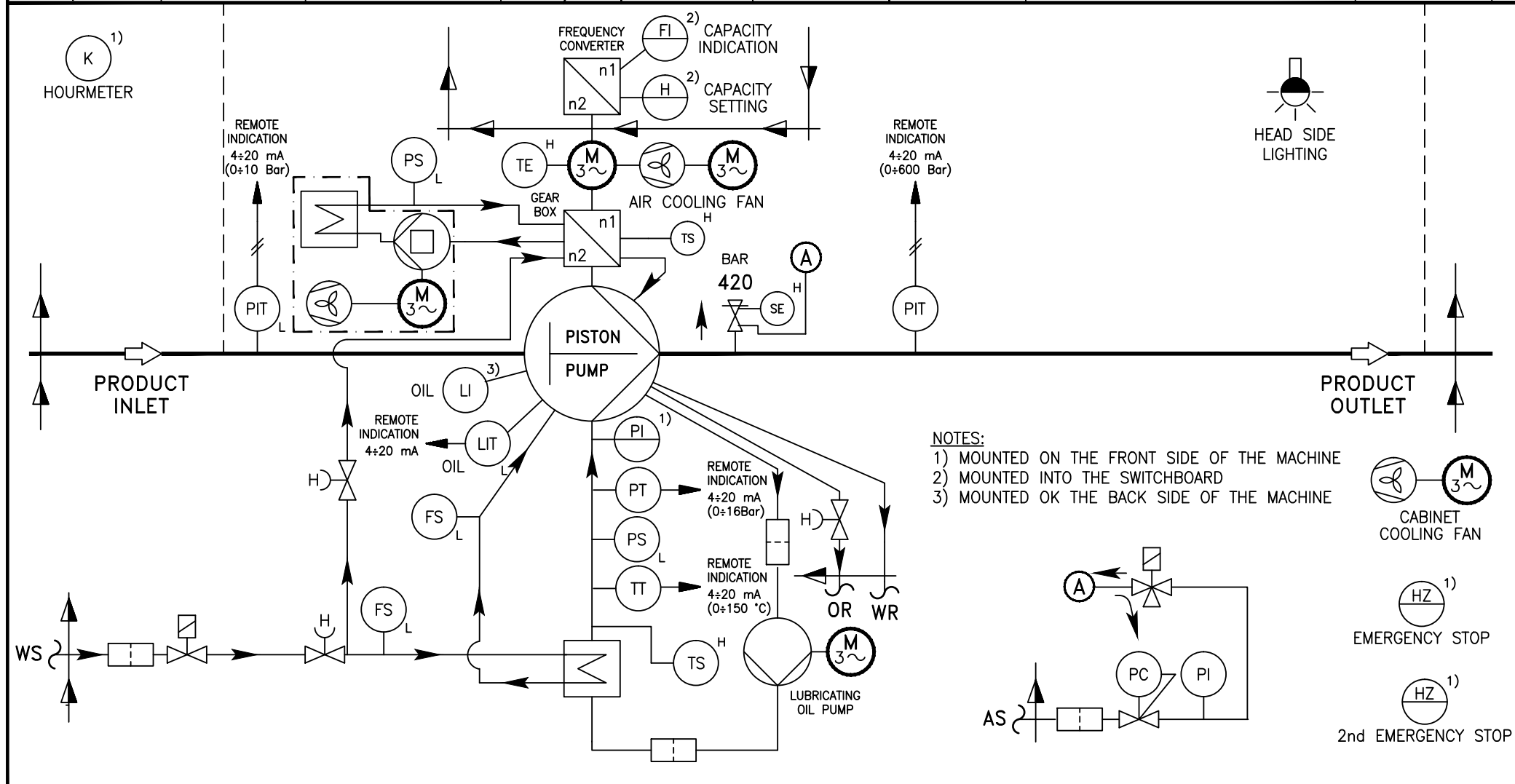
WARNING

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BEFORE ANY OPERATION FILL UP THE MACHINE WITH OIL ACCORDING TO THE
"INSTRUCTIONS FOR USE & MAINTENANCE".

LUBRICATING OIL	
Class:	NSF (Class H1)
BRAND	TYPE
Shell	Cassida GL220
Fuchs	Rivolta Geralyn SF220
Klüber	Klüberoil 4 UH1-220 N
Mobil	Mobil SHC Cibus 220
Molyduval	Syntholube A 220 LM

LUBRICATION PLANT CAPACITY (litres) *			
MACHINE MODEL	TYPE OF LUBRIFICATION		
	FORCED	SPLASH	
ONE 7TS	/	2,5	
ONE11TS-ONE15TS	/	9	
ONE 37TF	28		
ONE 75TF	30		
NS 2006	3	1,5	
NS 3006	4,5	3	
NS 3011 - NS 3015	14		
NS 3018 - NS 3024	14		
NS 3030 - NS 3037	28		
NS 3045	30		
NS 3055 - NS 3075	30		
NS 3090 - NS 3110	38		
NS 5132 - NS 5180	55		
NS 5250 - NS 5355	95		
NS 6200	75		
NS 8315	105		
* APPROXIMATE			

DIMENSION	PRESSURE		FLOW (CAPACITY)		TEMPERATURE	VISCOSITY	PRESSURE	PRESSURE		PRESSURE	
MEASURE UNIT	BAR		l/h		°C	cP	BAR	BAR		BAR	
PRODUCTION	MIN. 4	÷ 5	MIN. 4200	MAX. 14000	MAX. 90	MAX. 500	MAX. —	MAX. —		MAX. 350	
CLEANING/STERILIZATION	MIN. 2	÷ 3		MAX. 14000	MAX. 90/140	MAX. —	MAX. —	MAX. —		MAX. —	



Rev. Letter	Revision	Rev.	Appr.	Date	This drawing is property of GEA Mechanical Equipment Italia S.p.a., which will guard its rights by law terms. PHONE: +39.0521.965411 - TELEFAX: +39.0521.242819						
GEA Niro Soavi GEA GEA Mechanical Equipment Italia S.p.a. Via M. da Erba Edoari, 29, 43123 PARMA (ITALY)		SCALE	Drawn.	LUR	21.08.14	SHEET	MACHINE TYPE	MACHINE SERIAL NUMBER	NIRO-SOAVI JOB	FLWSHEET No.	Rev.
			Check.			1/1	NS5180H	11355		001135590	0
			Appr.								

1. INSTRUMENT SYMBOLS



LOCAL



IN MAIN PANEL



LIMIT VALUE

H: HIGH OR OPEN

L: LOW OR CLOSED



POINT OF MEASUREMENT

WITHOUT INSTRUMENTATION

2. PROCESS LINES



PRIMARY FLOW LINE, GENERAL



SECONDARY FLOW LINE, GENERAL



MECHANICAL CONNECTION



SUPPLY LIMIT MARKER

3. INSTRUMENT SIGNAL LINES



GENERAL



ELECTRICAL



PNEUMATIC



HYDRAULIC



CAPILLARY

4. FLOW LINE ABBREVIATIONS

AS	AIR SUPPLY
CIP	CLEANING IN PLACE
CS	CONDENSATE SUPPLY
CWS	CHILLED WATER SUPPLY
ES	ELECTRIC SUPPLY
GS	GAS SUPPLY
NS	NITROGEN SUPPLY
OS	OIL SUPPLY
SS	STEAM SUPPLY
WS	WATER SUPPLY
R	RETURN

5. MACHINERY AND EQUIPMENT



AUTOMATIC ACTUATOR FOR REMOTE
 CONTROL, GENERAL



MANUAL ACTUATOR NOT FOR REMOTE
 CONTROL



AUTOMATIC ACTUATOR WITH INTEGRATED
 MANUAL CONTROL FACILITY



DIAPHRAGM ACTUATOR



SOLENOID ACTUATOR



PISTON ACTUATOR



ELECTRIC AC MOTOR



ADJUSTABLE SPEED CONTROL



COMPRESSOR OR VACUUM PUMP,
 GENERAL



FAN



PUMP FOR LIQUIDS GENERAL



CENTRIFUGAL PUMP



HIGH PRESSURE PUMP



1-STEP HOMOGENIZER



2-STEP HOMOGENIZER



FILTER, GENERAL



HEAT EXCHANGER WITHOUT CROSS
 FLOW e.g. ELECTRIC HEATER



LIGHT SOURCE



VALVE CLOSING (FC)



VALVE OPENING (FO)



VALVE RETAINS POSITION



FAIL-OPEN INDICATION FOR A 3-WAY VALVE

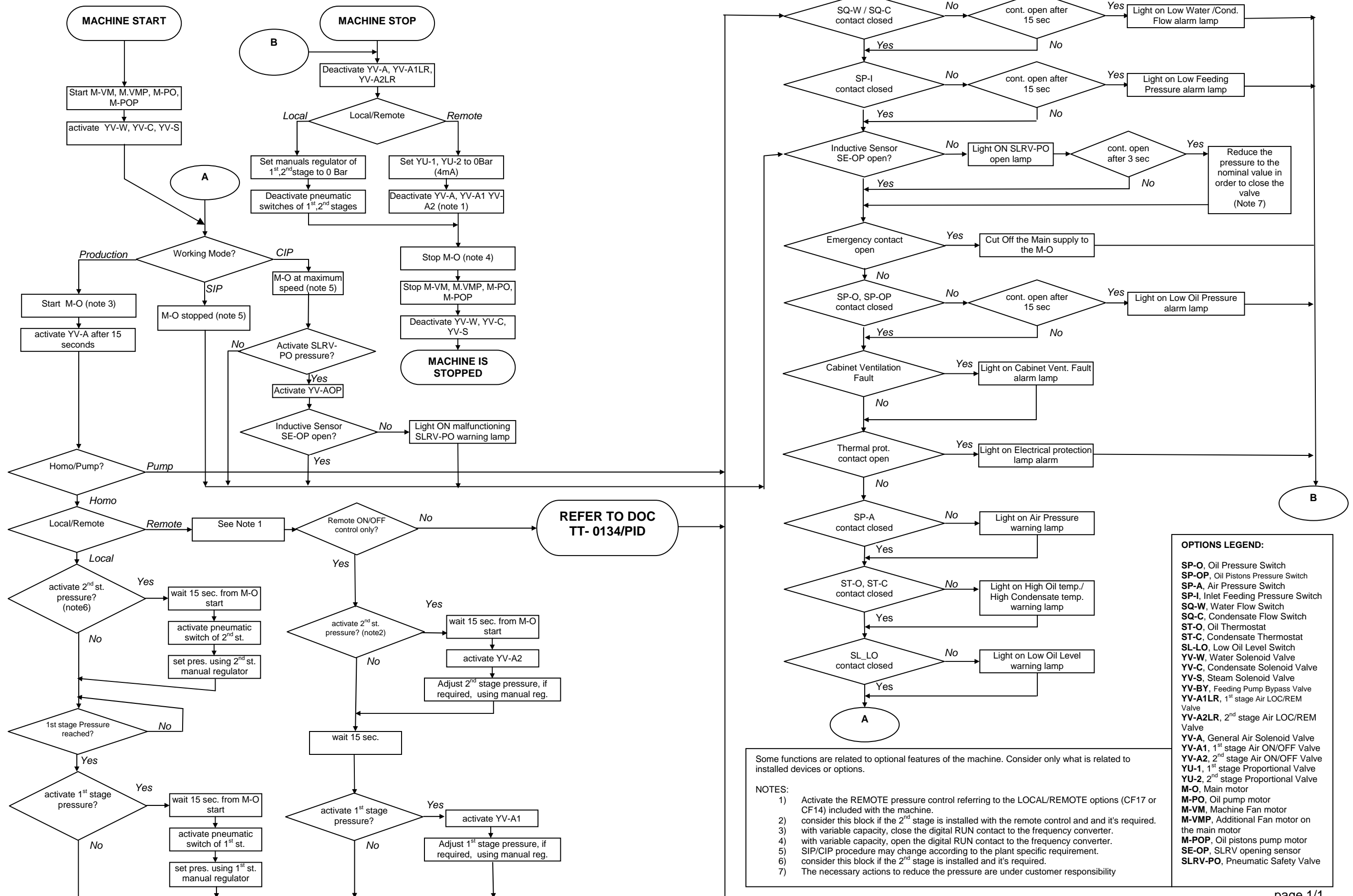
6. LETTER CODE FOR IDENTIFICATION OF INSTRUMENT FUNCTIONS

	FIRST LETTER MEASURED OR INITIATING VARIABLE	MODIFIER	SUCCEEDING LETTER (1) DISPLAY OR OUTPUT FUNCTION
A			ALARM
B			DISPLAY OF STATE (2)
C			CONTROLLING (4)
D	DENSITY	DIFFERENCE	
E	ALL ELECTRICAL VARIABLES (5)		SENSING ELEMENT
F	FLOW RATE	RATIO	
G	GAUGING, POSITION OR LENGTH		
H	HAND (MANUALLY INITIATED) OPERATED		
I			INDICATING (3)
J		SCAN	
K	TIME OR PROGRAMMED TIME		
L	LEVEL		
M	MOISTURE OR HUMIDITY		
N	USER'S CHOICE		USER'S CHOICE
O	USER'S CHOICE		
P	PRESSURE OR VACUUM		TEST-POINT CONNECTION
Q	QUALITY (5)	INTEGRATE OR TOTALIZE	INTEGRATING OR SUMMATING
R	NUCLEAR RADIATION		RECORDING
S	SPEED OR FREQUENCY		SWITCHING (2)
T	TEMPERATURE		TRANSMITTING
U	MULTIVARIABLE		MULTIFUNCTION UNIT
V	VISCOSITY		VALVE, DAMPER, ACTU, ELEMENT
W	WEIGHT OR FORCE		
X	UNSPECIFIED (5)		UNCLASSIFIED FUNCTIONS
Y	VIBRATION		COMPUTING RELAY, RELAY
Z			EMERG. / SAFETY ACTING (2)

EXAMPLE : PDIRC

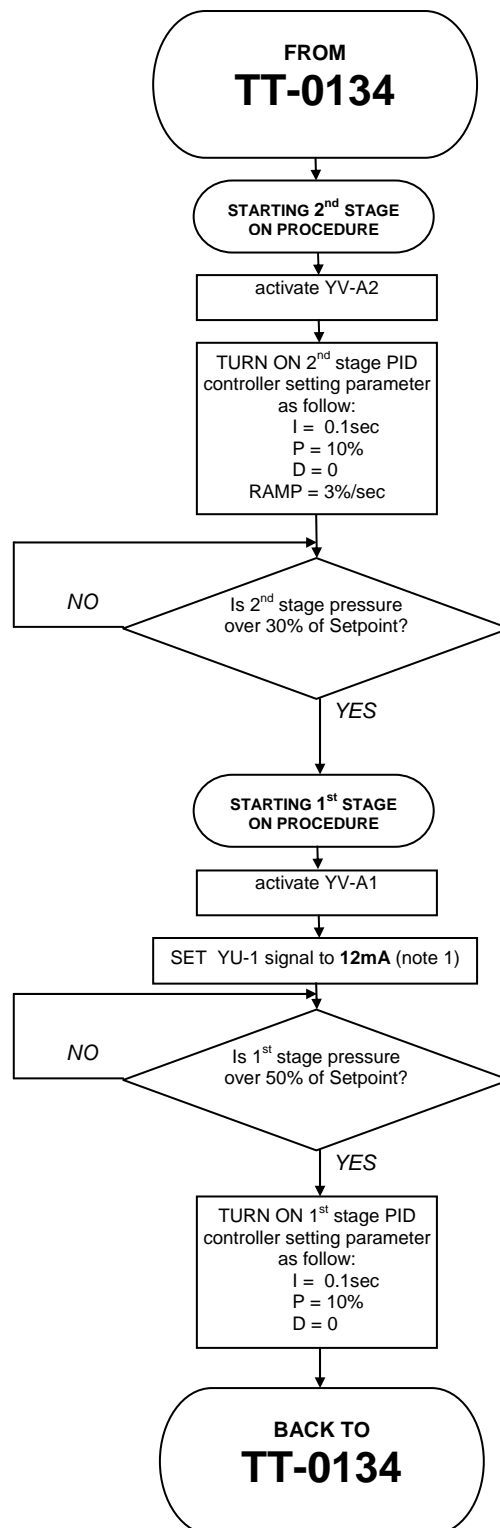
DIFFERENTIAL PRESSURE INDICATION, RECORDING AND CONTROL
 FIRST LETTER P, MODIFIER D, SUCCEEDING LETTERS I,R,C

- 1) NORMAL SEQUENCE OF SUCCEEDING LETTERS : B.I.R.C.T.Q.S.Z.A.
- 2) SIGNAL TYPE : ON/OFF
- 3) SIGNAL TYPE : CONTINUOUS
- 4) SIGNAL TYPE : NORMALLY CONTINUOUS. IF ON-OFF, S IS ADDED
- 5) A NOTE SPECIFIES THE MEASURED PROPERTY. E.g. FOR LETTER E, I, U, P OR F



REMOTE ANALOG PRESSURE CONTROL Functional Diagram

TT- 0134/PID



note 1 : Commissioning eng. to set YU-1/2 ranges to actual normal operating pressure +10%

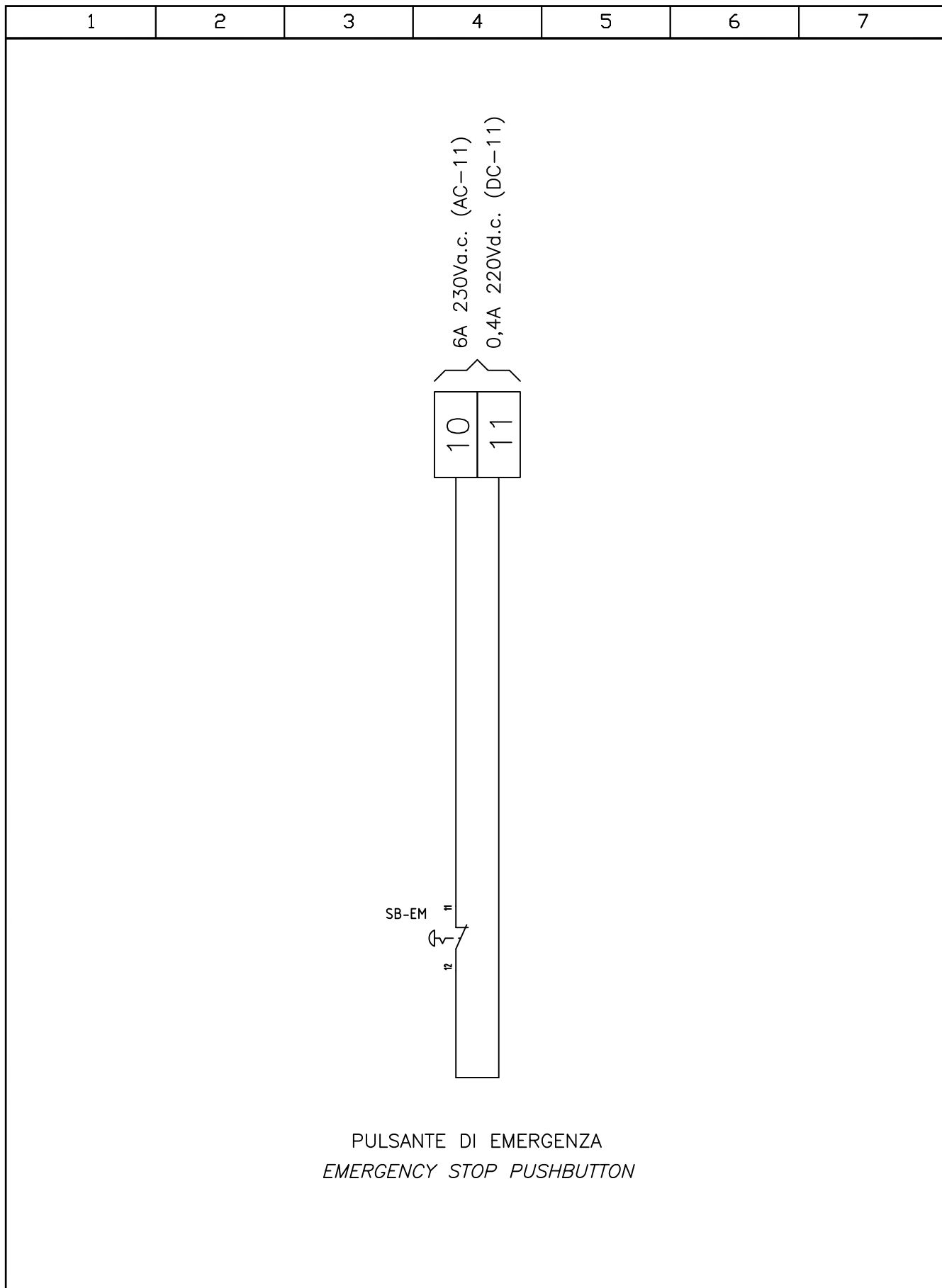
note 2 : Apply the Power Supply (24VDC) to the to the Proportional Valve only when is required the pressure regulation function.

Gea Niro Soavi Gea Mechanical Equipment Italia S.p.A.	SPECIFICA CONSUMI <i>UTILITY SPECIFICATION</i>	TT-0141		
NS5180P	11355	LUR	21.08.14	0
MODELLO MACCHINA <i>MACHINE MODEL</i>	N° DI SERIE <i>SERIAL No.</i>	SIG. <i>SIG.</i>	DATA <i>DATE</i>	REV. <i>REV.</i>

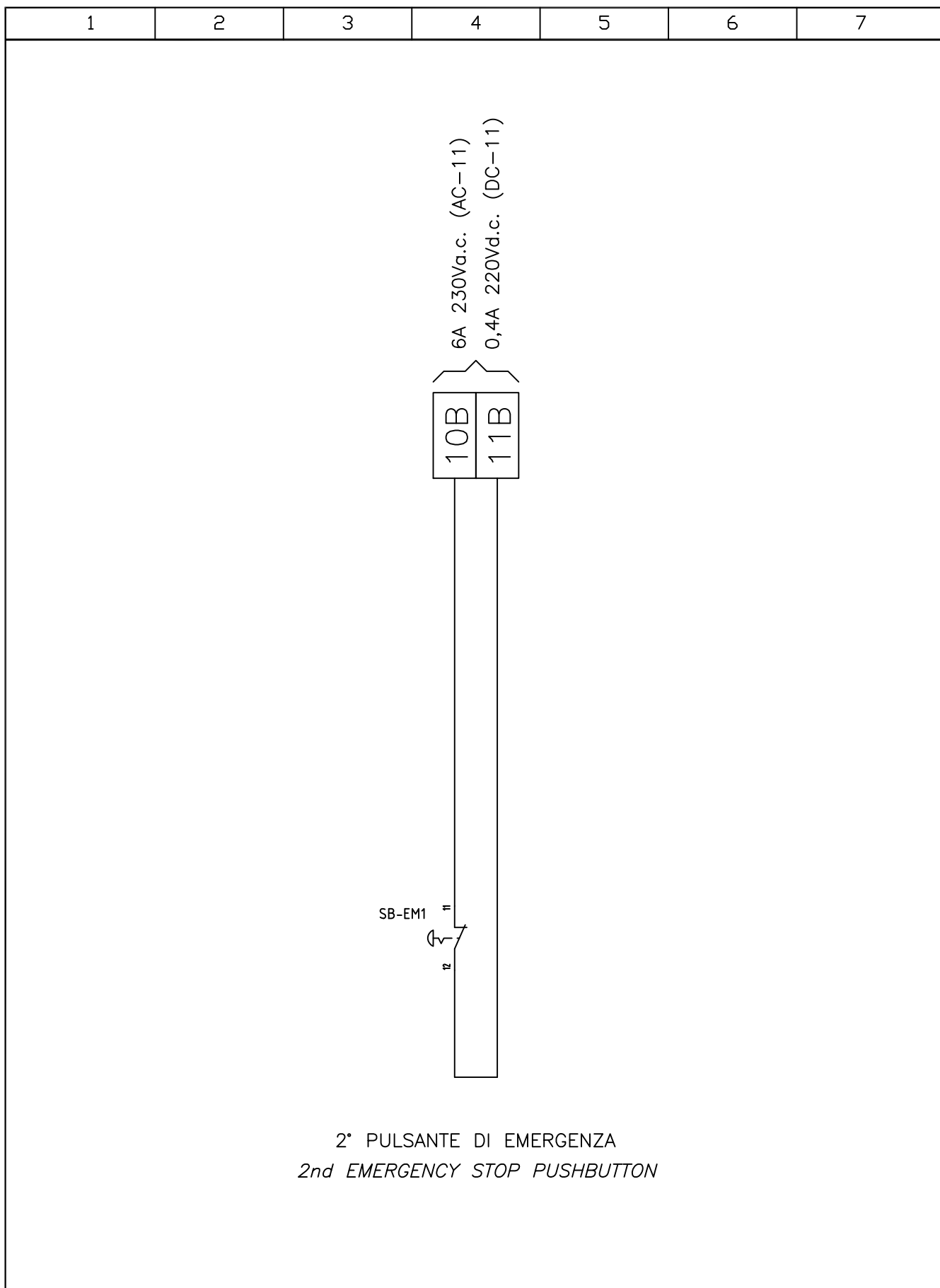
CONSUMI - CONSUMPTION								
	Fluido <i>Liquid</i>	Rich. <i>Required</i>	PRESSIONE <i>PRESSURE</i>		TEMPERATURA <i>TEMPERATURE</i>		CONSUMI <i>CONSUMPTION</i>	
			Bar		°C		l/h	
			Min	Max	Min	Max	Min	Max
PISTONI <i>PISTONS</i>	ACQUA <i>WATER</i>	SI <i>YES</i>	2	3	10	25	200	
RIDUTTORE <i>GEAR BOX</i>	ACQUA <i>WATER</i>	SI <i>YES</i>	2	3	10	25	800	
SCAMBIATORE OLIO <i>OIL EXCHANGER</i>	ACQUA <i>WATER</i>	NO <i>NO</i>						
SCAMB. CONDENSA <i>CONDENSATE EXCHANGER</i>								
Note: max. durezza < 15°fH, max. dimensioni particelle 60 micron <i>Note: max. hardness < 15°fH, max. particle size = 60 microns, filtered water</i>								
ARIA COMPRESSA <i>COMPRESSED AIR</i>		SI <i>YES</i>	6	10			0	
Note: max. dimensioni particelle < 15 µm, max. concentrazione particelle < 8 mg/m3, max. temperatura di condensazione < 3°C, max. contenuto olio < 5 mg/m3 (Rif. ISO 8573) <i>Note: max. partiel size < 15 µm, max. partiel concentration < 8 mg/m3, max. presure dew point < 3°C, max. oil concentration < 5 mg/m3 (Ref. ISO8573)</i>								
			Bar		°C		kg/h	
PROD. CONDENSA <i>CONDENSATE PROD.</i>								
Il Cliente dovrà installare un riduttore al punto di attacco del vapore per adattare la pressione alle esigenze della macchina <i>The customer must install a pressure reducer at the steam inlet connection to adapt the pressure to the machine's requirements</i>								
COMPENSAT. PULS. <i>PULSATION DAMPER</i>								
valore di pressione sul tubo di alimentazione del prodotto <i>pressure value is referred to the inlet feeding pipe</i>								
	V		Hz	kW	A			
ELETTRICITA' <i>Electrical supply</i>	3x	460	60	160	294	TENS. AUSILIARIA <i>Aux. Voltage</i>		24 DC

MOTORI - MOTORS																	
TAG TAG	Codice Code	Norme Standards	Collegamento Connection	Marca Brand	Tensione Voltage	Frequenza Frequency	Poli Poles	Potenza Rated Output	Corrente Current	Corr. spunto Start. current	Fatt. potenza Power factor	Efficienza Efficiency	Forma Frame	Grand. Size	Protezione Protection	Rulli / Edm R. bearings / Edm	
					V	Hz		kW	A	A	Cosφ	%					
M-O	9561-4328-517	IEC-CENELEC	TRIANGOLO DELTA	SIEMENS	3 x 460	60	4	200	360,1	2341	0,88	95,9	B3	315L	TERMISTORI THERMISTORS	SI YES	YES
M-VM	9572-0027-007	IEC	STELLA STAR		3 x 440	60	4	0,33	0,9				AXIAL				
M-PO	9561-1206-283	IEC	STELLA STAR		3 x 460	60	4	0,75	1,7				B14				
M-VMP	9572-0127-009	IEC	STELLA STAR		3 x 460	60	4	0,22	0,6				AXIAL				
M-OR	9579-1000-103	IEC-CENELEC	STELLA STAR		3 x 460	50	4	0,55	1,8								

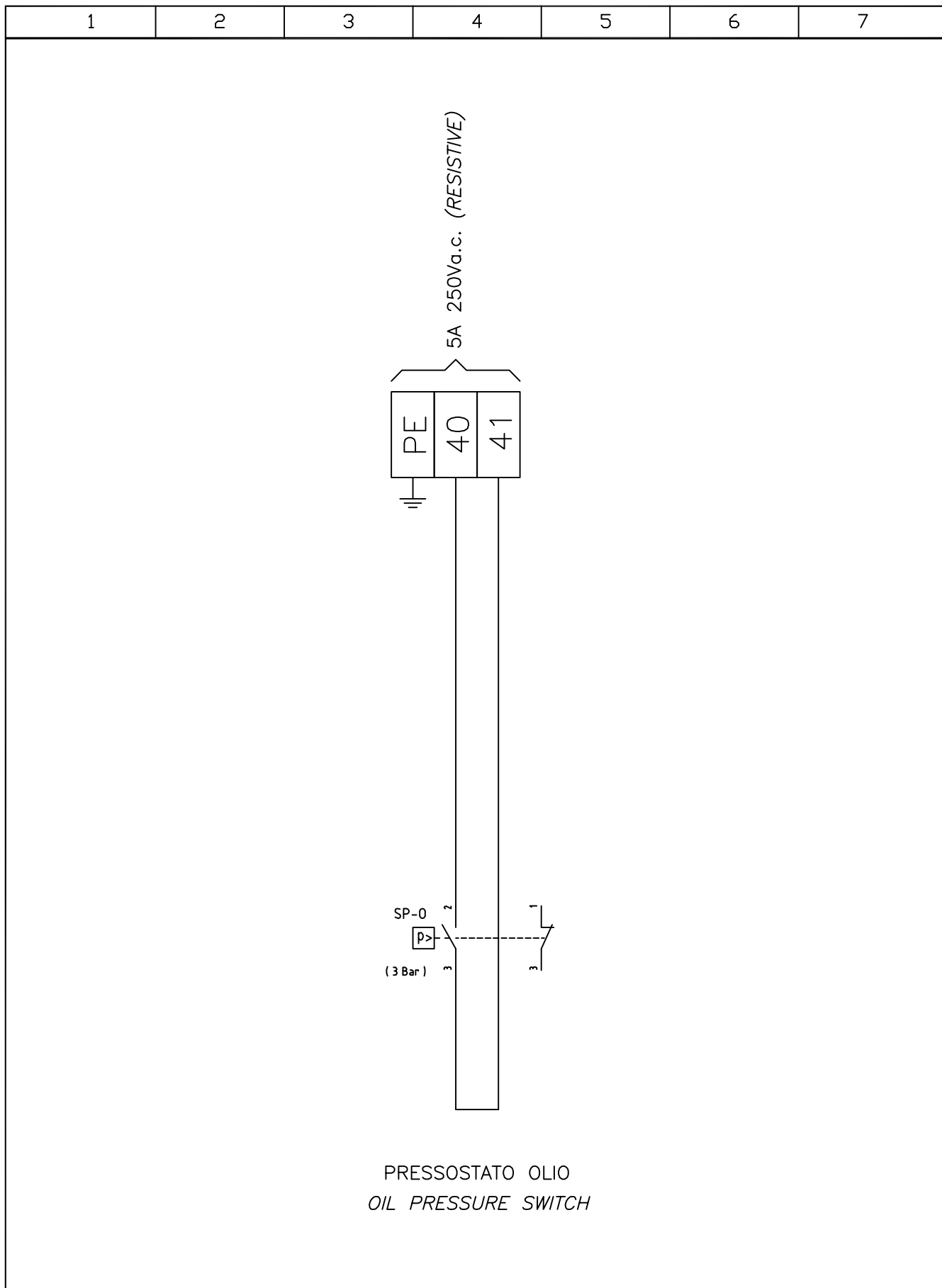
FORNITO <i>SUPPLIED</i>	NO NO	Quadro Elettrico <i>Switchboard</i>					
Installazione <i>Installation</i>		Pos. morsettiera <i>Terminal pos.</i>		corrente C.C. <i>Short circ.current</i>	kA	Protezione <i>Protection</i>	IP
Materiale <i>Material</i>		Raffreddamento <i>Cooling</i>		Norme <i>Standards</i>	IEC	Pot. dissipata <i>Dissipat. power</i>	kW
Vedere documento disposizione esterna <i>Reference: external view drawing</i>				N° Fogli <i>N° Sheets</i>		Peso <i>Weight</i>	kg



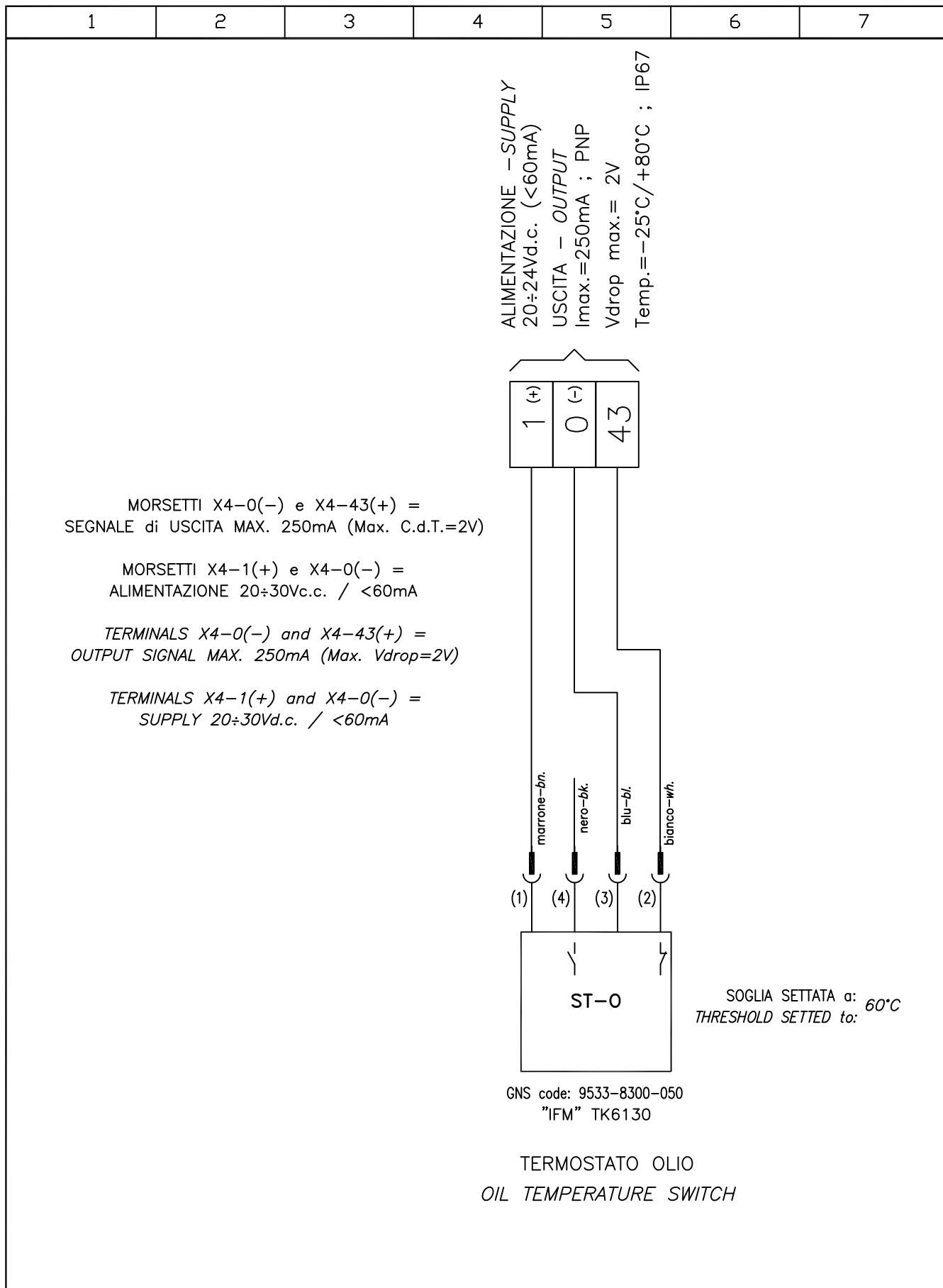
TITLE : UNIT WIRING FOR EMERGENCY STOP PUSHBUTTON					("SIEMENS" BRAND)				
DESIGNER	CHECK.	APPR.	SCALE	DATE	<div>GEA Niro Soavi</div> <div></div> <div>GEA Mechanical Equipment Italia S.p.a. Via M. da Erba Edoari, 29/A , 43123 PARMA (ITALY) PHONE: +39. 0521. 965411 –TELEFAX: +39. 0521. 242819</div> <div>This drawing is property of GEA Mechanical Equipment Italia S.p.a., which will guard its rights by law terms.</div>	DRAWING No.			PAGE
ALB				27.08.96		SB-EM / 1			1
REV.	DESCRIPTION		SIGN.	DATE					OF
0	EMITTED		ALB	27.08.96					1
1	UPDATE – TECHNICAL DATA		RBA	28.03.13					DIR.
					ORDER	SERIAL	MACHINE TYPE	ARCH.	



TITLE : UNIT WIRING FOR 2nd EMERGENCY STOP PUSHBUTTON ("SIEMENS" BRAND)						DRAWING No.			PAGE
DESIGNER	CHECK.	APPR.	SCALE	DATE	GEA Niro Soavi GEA Mechanical Equipment Italia S.p.a. Via M. da Erba Edoari, 29 , 43123 PARMA (ITALY) PHONE:+39.0521.965411-TELEFAX:+39.0521.242819 <small>This drawing is property of GEA Mechanical Equipment Italia S.p.a., which will guard its rights by law terms.</small>	SB/EM1 / 1			1
ALB				17.12.96					OF
REV.	DESCRIPTION		SIGN.	DATE		ORDER	SERIAL	MACHINE TYPE	1
0	EMITTED		ALB	17.12.96					DIR.
1	CHANGED TERMINAL No.		ALB	11.12.97					
2	CHANGED TERMINAL No.		DD	24.07.07					ARCH.



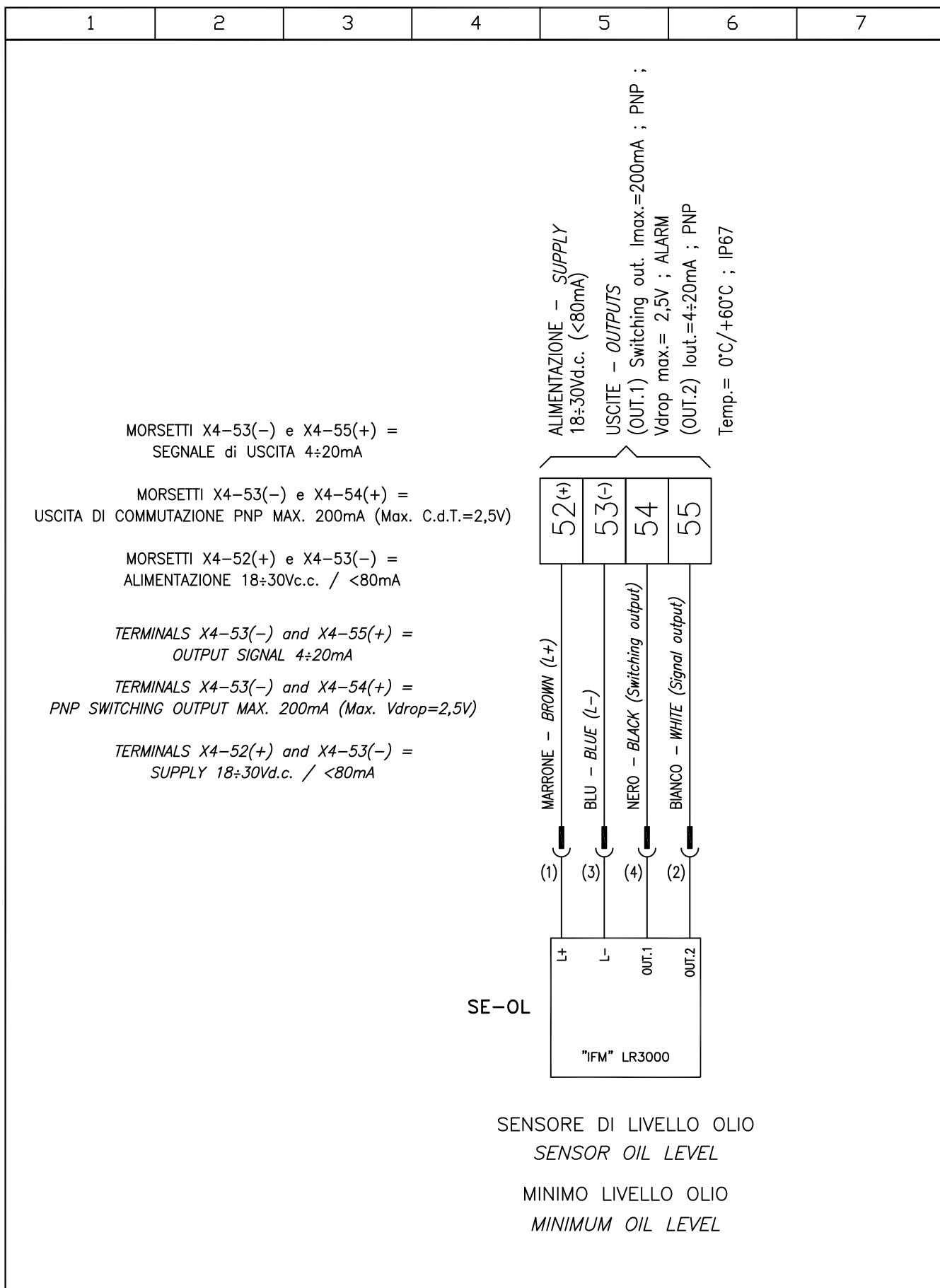
TITLE : UNIT WIRING FOR LUBRIFICATE OIL PRESSURE-SWITCH					9533-8100-110 (EFE043)				
DESIGNER	CHECK.	APPR.	SCALE	DATE	<div>GEA Niro Soavi</div> <div></div> <div>GEA Mechanical Equipment Italia S.p.a. Via M. da Erba Edoari, 29/A, 43123 PARMA (ITALY) PHONE: +39. 0521. 965411 - TELEFAX: +39. 0521. 242819</div> <div>This drawing is property of GEA Mechanical Equipment Italia S.p.a., which will guard its rights by law terms.</div>	DRAWING No.			PAGE
ALB				07.08.96		SP-0 / 26			1
REV.	DESCRIPTION		SIGN.	DATE					OF
0	EMITTED		ALB	07.08.96					1
						ORDER	SERIAL	MACHINE TYPE	DIR.
									ARCH.



TITLE : UNIT WIRING FOR OIL TEMPERATURE SWITCH

(GNS code: 9533-8300-050)

DESIGNER	CHECK.	APPR.	SCALE	DATE	<div>GEA Niro Soavi</div> <div>GEA Mechanical Equipment Italia S.p.a. Via M. da Erba Edoari, 29 , 43123 PARMA (ITALY)</div> <div>PHONE: +39. 0521 . 965411-TELEFAX: +39. 0521 . 242819</div> <div>This drawing is property of GEA Mechanical Equipment Italia S.p.a., which will guard its rights by law terms.</div>	DRAWING No.			PAGE
DD				25.11.11		ST-0 / 6	1		
REV.	DESCRIPTION		SIGN.	DATE			OF		
0	EMITTED		DD	25.11.11			1		
1	MODIFIED THRESHOLD SETTING		ALB	22.05.13		ORDER	DIR.		
2	MODIFIED DATASHEET		ALB	17.07.13		SERIAL	MACHINE TYPE	ARCH.	



1	2	3	4	5	6	7
---	---	---	---	---	---	---

MORSETTI X4-61(-) e X4-62(+) =
SEGNALE di USCITA MAX. 250mA (Max. C.d.T.=2V)

MORSETTI X4-60(+) e X4-61(-) =
ALIMENTAZIONE 20÷30Vc.c. / <60mA

TERMINALS X4-61(-) and X4-62(+) =
OUTPUT SIGNAL MAX. 250mA (Max. Vdrop=2V)

TERMINALS X4-60(+) and X4-61(-) =
SUPPLY 20÷30Vd.c. / <60mA

ALIMENTAZIONE – SUPPLY
20÷24Vd.c. (<60mA)

USCITA – OUTPUT
I max.=250mA ; PNP

Vdrop max.= 2V

Temp. = -25°C / +80°C ; IP67

MARRONE – BROWN (L+)

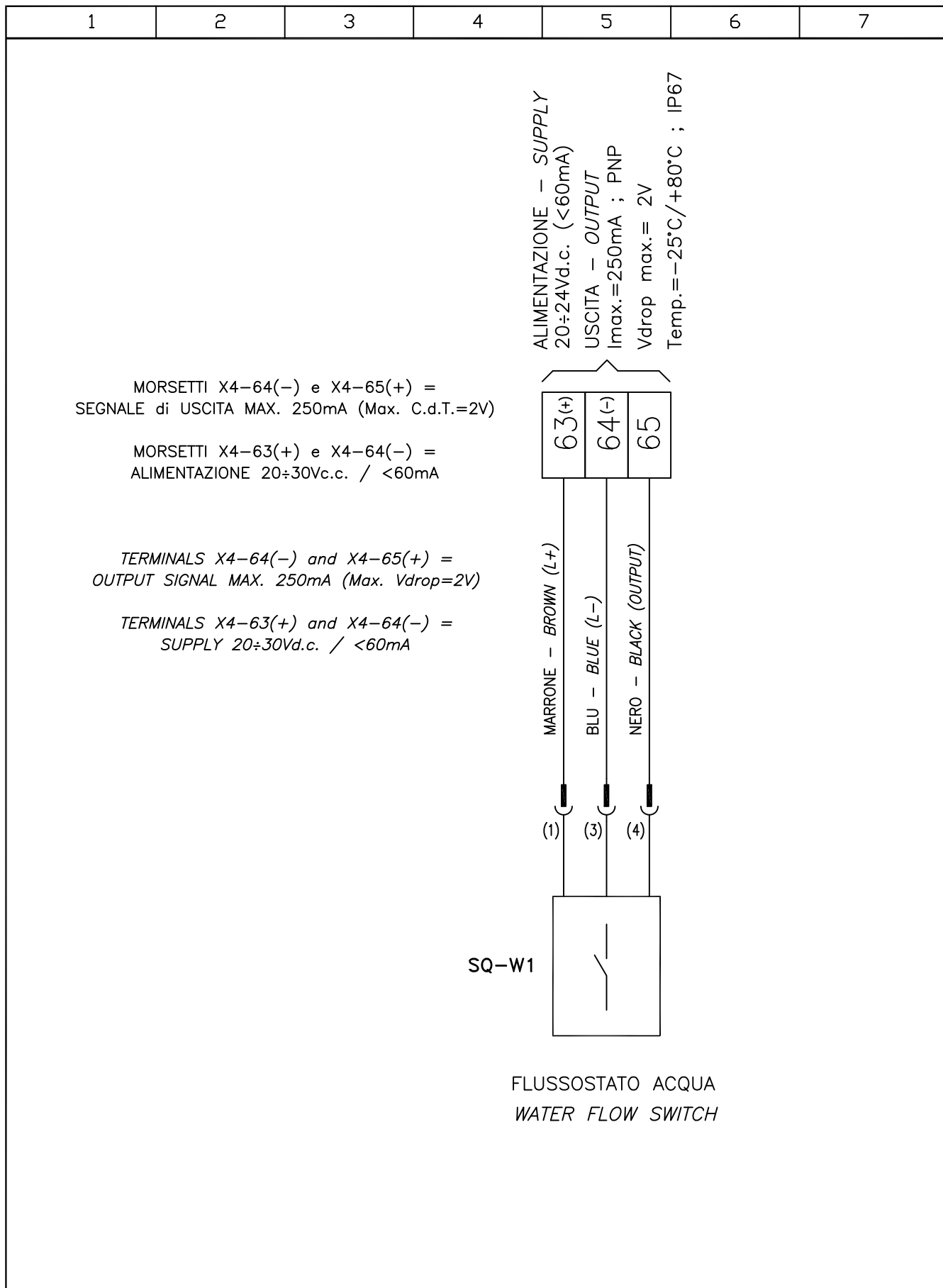
BLU – BLUE (L-)

NERO – BLACK (OUTPUT)

(1) (3) (4)

SQ-W

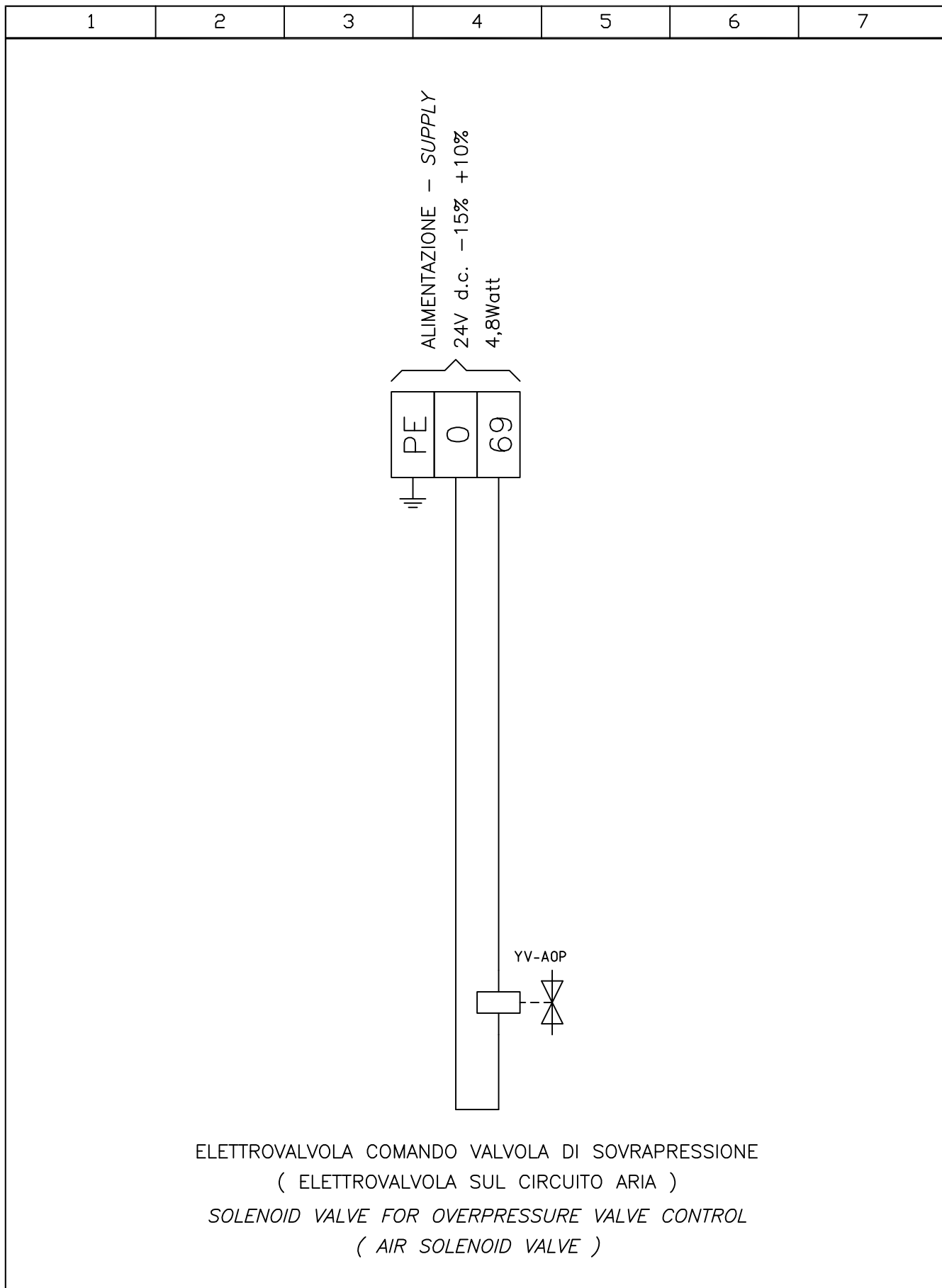
FLUSSOSTATO ACQUA
WATER FLOW SWITCH



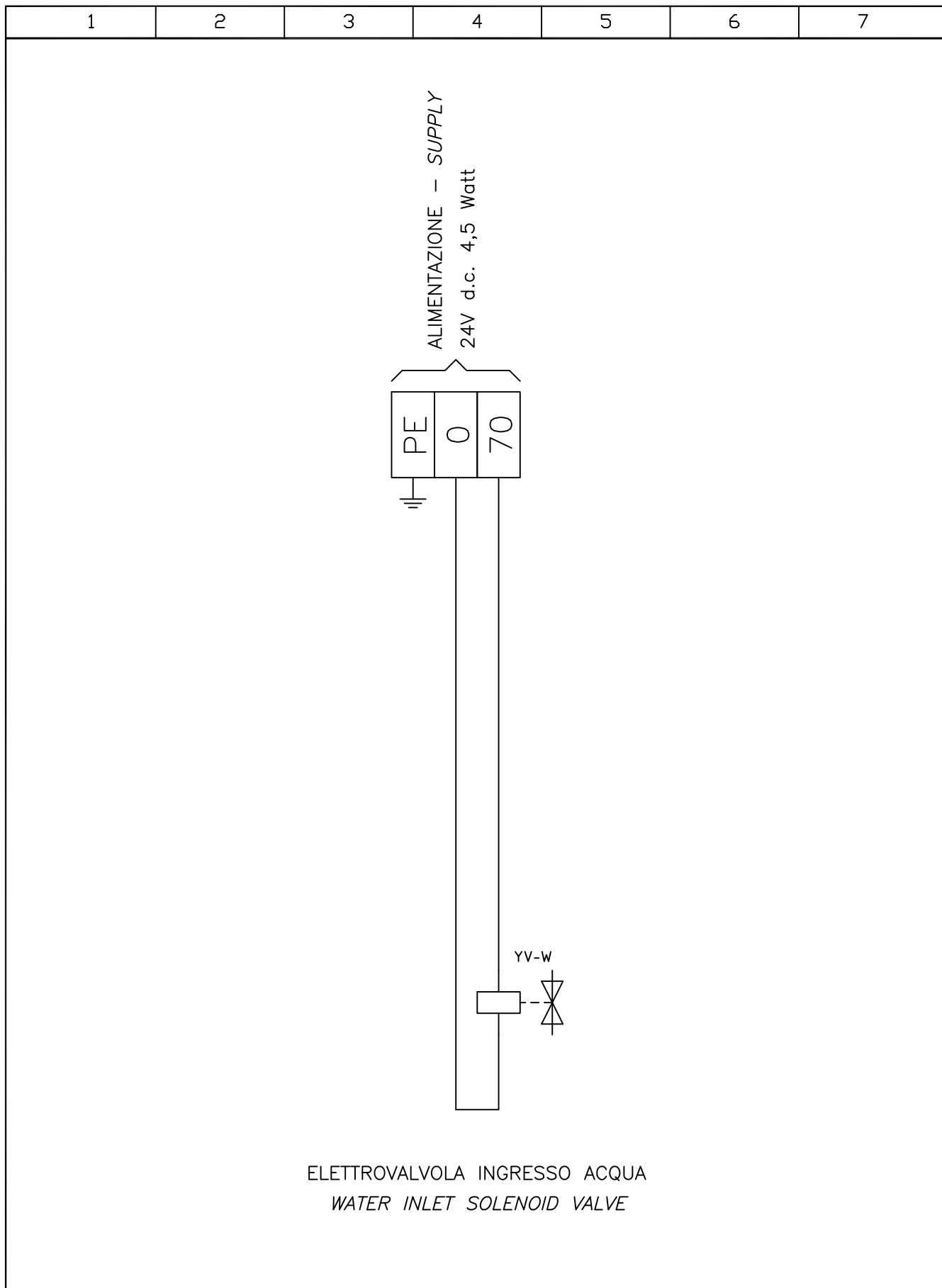
TITLE : UNIT WIRING FOR 2nd WATER FLOW-SWITCH

"IFM electronic " BRAND , NS code: EF1039

DESIGNER	CHECK.	APPR.	SCALE	DATE	GEA Niro Soavi		DRAWING No.		PAGE
ALB				27.08.96					1
REV.	DESCRIPTION		SIGN.	DATE	GEA Mechanical Equipment Italia S.p.a. Via M. da Erba Edoari, 29 , 43123 PARMA (ITALY)		SQ-W1 / 5		OF
0	EMITTED		ALB	27.08.96					1
					PHONE:+39. 0521 . 965411-TELEFAX:+39. 0521 . 242819		ORDER	SERIAL	MACHINE TYPE
					This drawing is property of GEA Mechanical Equipment Italia S.p.a., which will guard its rights by law terms.				DIR.
									ARCH.



TITLE : UNIT WIRING FOR AIR VALVES on OVERPRESSURE VALVE CONTROL					9533-9105-000 (390263)			
DESIGNER	CHECK.	APPR.	SCALE	DATE	<div>GEA Niro Soavi</div> <div></div> <div>GEA Mechanical Equipment Italia S.p.a. Via M. da Erba Edoari, 29/A , 43123 PARMA (ITALY) PHONE:+39.0521.965411-TELEFAX:+39.0521.242819</div> <div>This drawing is property of GEA Mechanical Equipment Italia S.p.a., which will guard its rights by law terms.</div>	DRAWING No.		PAGE
DD				28.10.10		YV-AOP/ 1		1
REV.	DESCRIPTION		SIGN.	DATE				OF
0	EMITTED		DD	28.10.10				1
						ORDER	SERIAL	MACHINE TYPE
								DIR.
								ARCH.



TITLE : UNIT WIRING FOR WATER INLET SOLENOID VALVE					(GNS code: 9533-7201-000 / 9533-7202-000)					
DESIGNER	CHECK.	APPR.	SCALE	DATE	GEA Niro Soavi GEA Mechanical Equipment Italia S.p.a. Via M. da Erba Edoari, 29 , 43123 PARMA (ITALY) PHONE: +39. 0521. 965411 - TELEFAX: +39. 0521. 242819	DRAWING No.			PAGE	
ALB				27.08.96		YV-W / 59			1	
REV.	DESCRIPTION		SIGN.	DATE	OF					
0	EMITTED		ALB	27.08.96	This drawing is property of GEA Mechanical Equipment Italia S.p.a., which will guard its rights by law terms.	ORDER	SERIAL	MACHINE TYPE	DIR.	
1	Changed consumption data		ALB	04.07.13						1
2	New SAP code 9533-7202-000 added.		RBA	15.04.14						ARCH.

UNITA' DI INTERFACCIA PER TERMISTORI
DI PROTEZIONE MOTORE – MARCA "SIEMENS "

*THERMITORS MOTOR PROTECTION
TRIPPING UNIT – "SIEMENS " BRAND*

TIPI DISPONIBILI DI SGANCIATORI PER TERMISTORI:

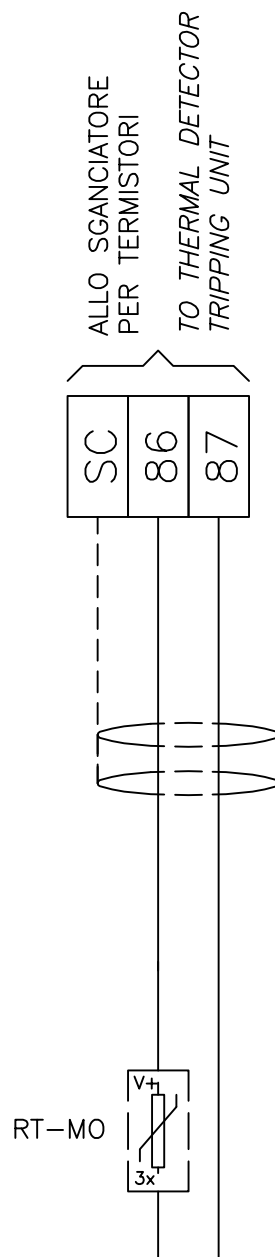
THERMAL DETECTOR AVAILABLE TYPE:

3RN1010–1CW00 (24÷240Va.c./d.c. 50/60Hz)

3RN1010–1CB00 (24Vd.c.)

3RN1010–1CG00 (110Va.c. 50/60Hz)

3RN1010–1CM00 (230Va.c. 50/60Hz)



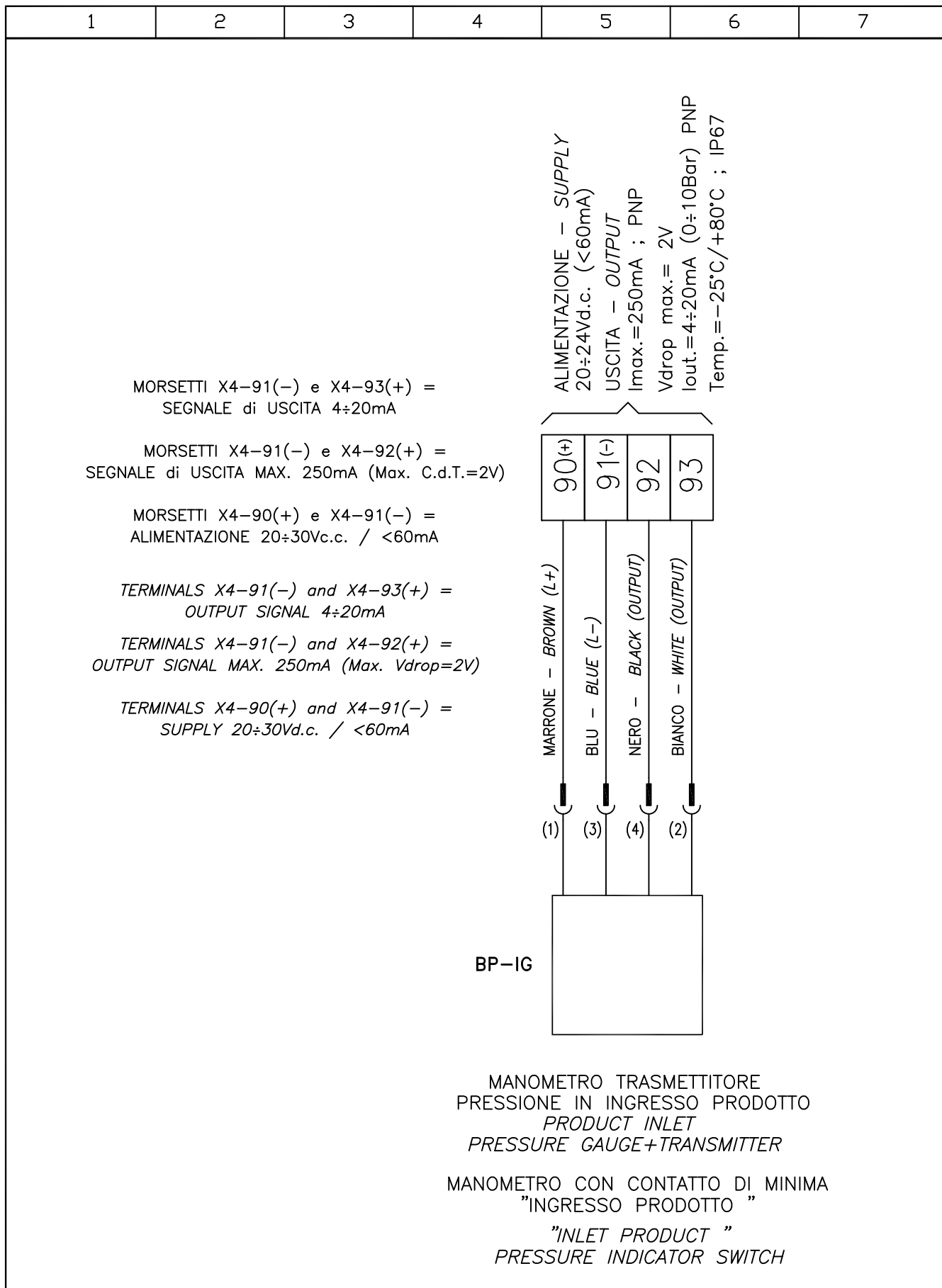
TERMISTORI SUGLI AVVOLGIMENTI
DEL MOTORE
"SIEMENS " – TIPO IP401.M.335

*THERMISTORS IN THE
MOTOR WINDINGS
"SIEMENS " – TYPE IP401.M.335*

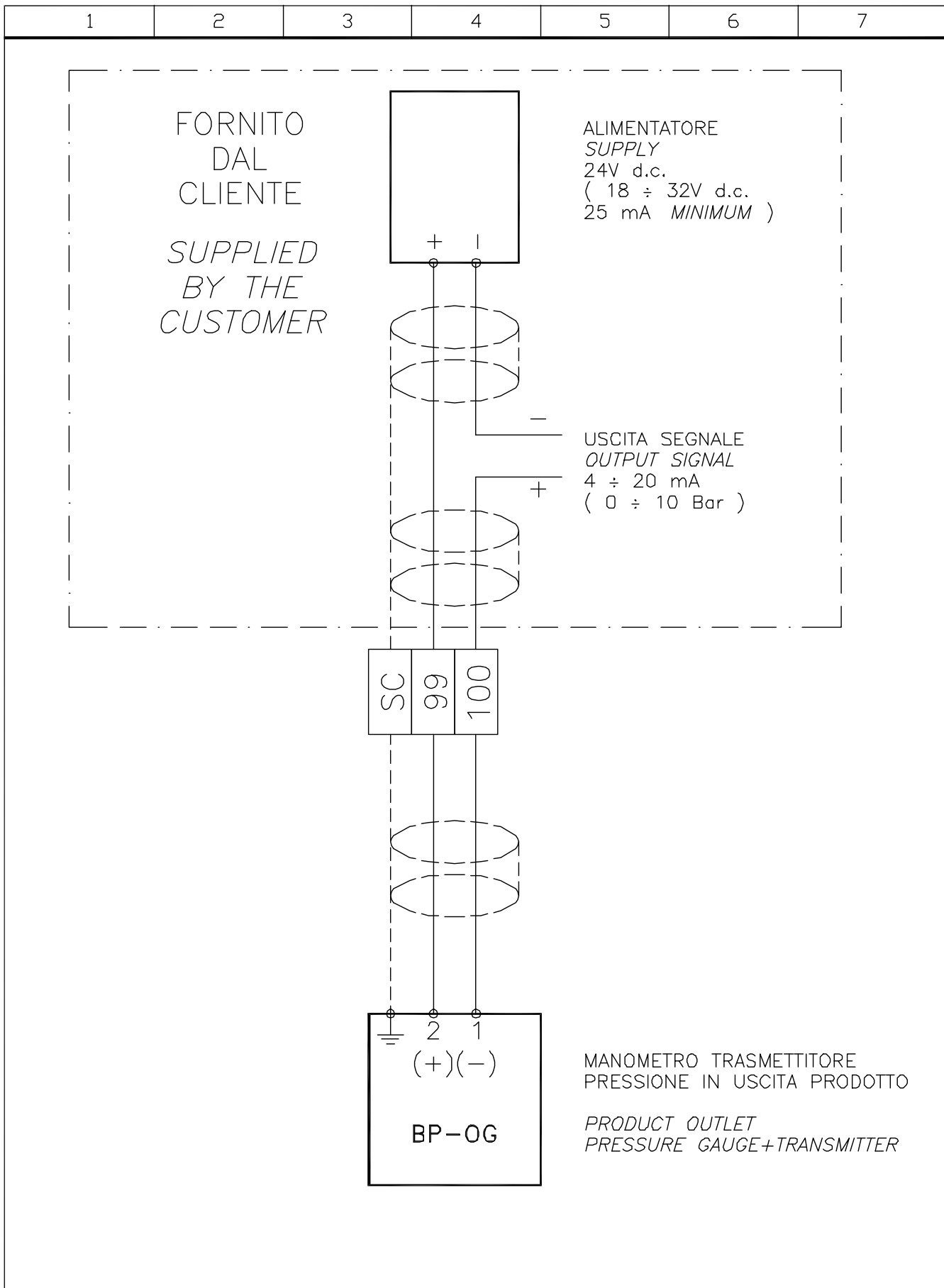
TITLE : UNIT FOR THERMISTORS IN THE MOTOR WINDINGS

("SIEMENS " BRAND)

DESIGNER ALB	CHECK.	APPR.	SCALE	DATE 27.08.96	GEA Niro Soavi	DRAWING No.	PAGE 1
REV.	DESCRIPTION	SIGN.	DATE	GEA Mechanical Equipment Italia S.p.a. Via M. da Erba Edoari, 29 , 43123 PARMA (ITALY)	RT-MO / 1		OF 1
0	EMITTED	ALB	27.08.96	PHONE:+39. 0521. 965411–TELEFAX:+39. 0521. 242819	ORDER	SERIAL	MACHINE TYPE
1	CHANGED TRIPPING UNITS	ALB	22.03.01	This drawing is property of GEA Mechanical Equipment Italia S.p.a., which will guard its rights by law terms.			DIR. ARCH.

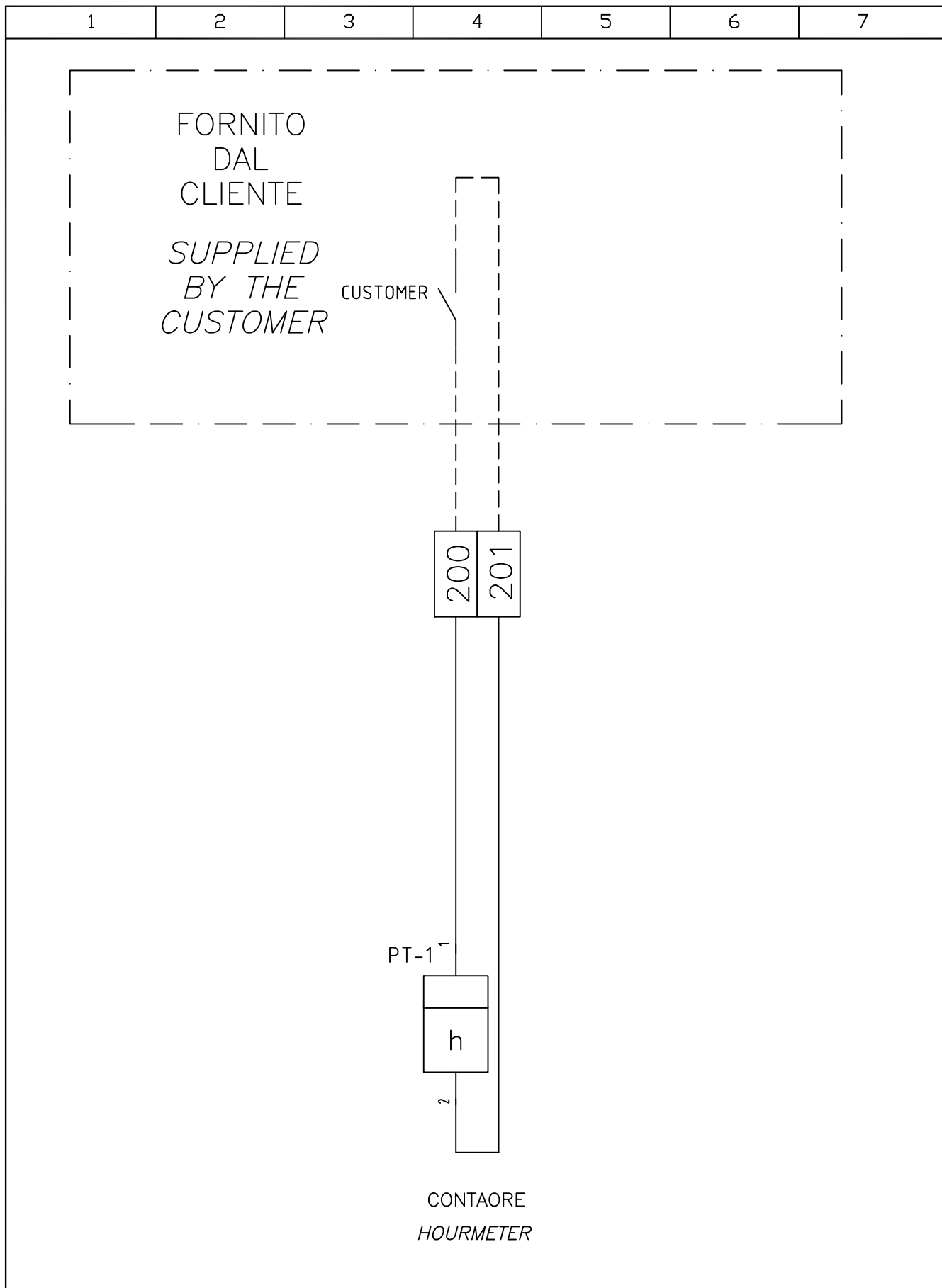


TITLE : UNIT WIRING FOR PRESSURE GAUGE + TRANSMITTER "IFM electronic" BRAND; 95333020000 (BNI010) / 95333001011 (BNI010-C)									
DESIGNER	CHECK.	APPR.	SCALE	DATE	<div>GEA Niro Soavi</div> <div></div> <div>GEA Mechanical Equipment Italia S.p.a. Via M. da Erba Edoari, 29 , 43123 PARMA (ITALY)</div> <div>PHONE:+39. 0521 . 965411-TELEFAX:+39. 0521 . 242819</div> <div>This drawing is property of GEA Mechanical Equipment Italia S.p.a., which will guard its rights by law terms.</div>	DRAWING No.			PAGE
ALB				27.08.96				1	
REV.	DESCRIPTION			SIGN.		DATE	BP-IG / 12	OF	
0	EMITTED			ALB		27.08.96		1	
1	Modified terminals No.			ALB		13.09.06			
2	Added code for IFM certified			ALB	05.09.12			DIR.	
						ORDER	SERIAL	MACHINE TYPE	ARCH.



TITLE : UNIT WIRING FOR PRESSURE GAUGE + TRANSMITTER (" NUOVA FIMA " MANUFACTURER)

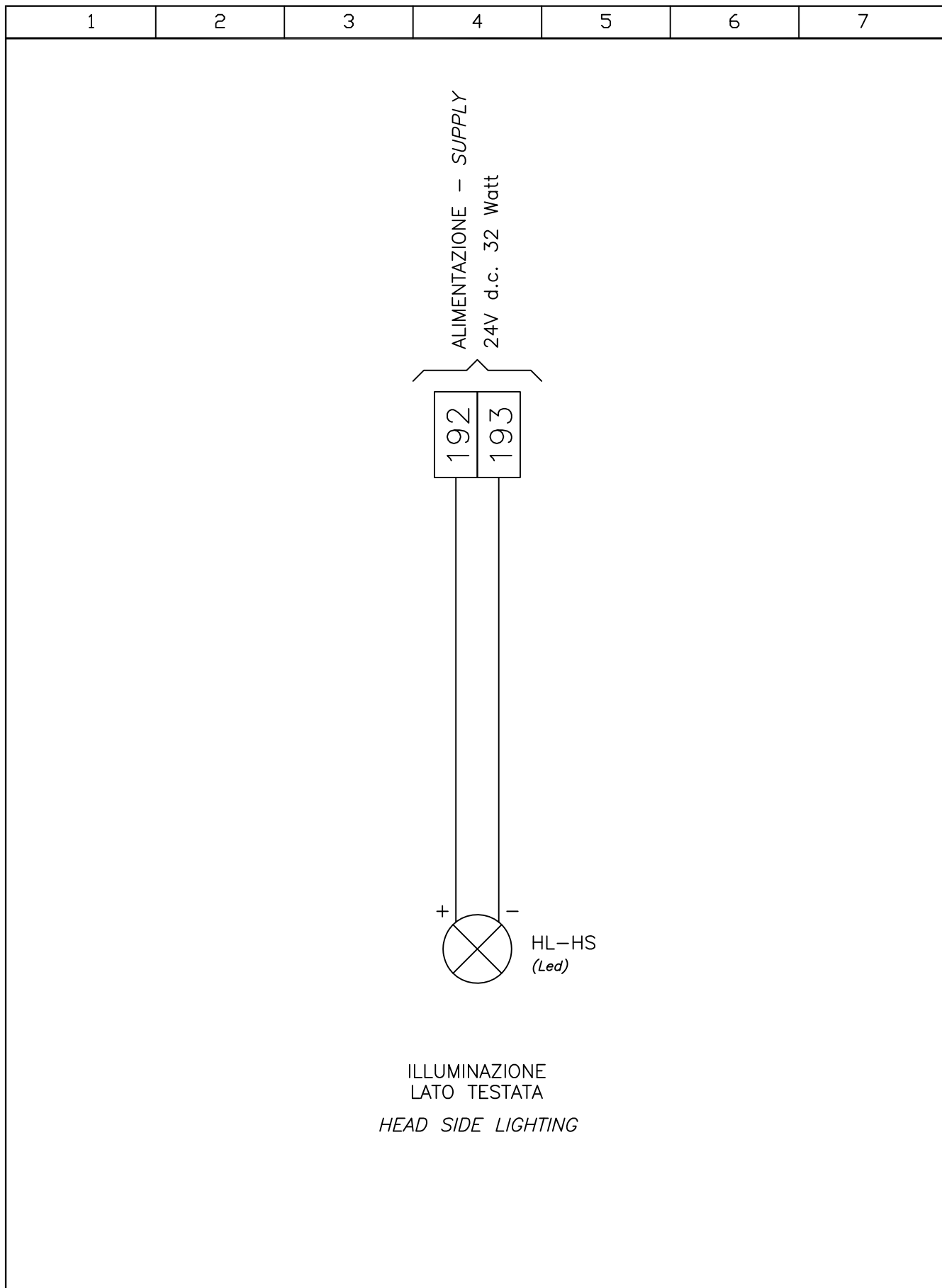
DESIGNER	CHECK.	APPR.	SCALE	DATE	<div style="display: flex; align-items: center;"> <div> Niro-Soavi S.p.A. <small>via M. da Erba Edoari, 29/A 43100 PARMA (ITALY)</small> </div> </div>	DRAWING No.			PAGE
ALB				27.08.96		BP-OG / 1			1
REV.	DESCRIPTION		SIGN.	DATE	<small>PHONE: +39. 0521. 965411 - TELEFAX: +39. 0521. 242819</small> <small>This drawing is property of NIRO-SOAVI, which will guard its rights by law terms.</small>	ORDER	SERIAL	MACHINE TYPE	DIR.
0	EMITTED		ALB	27.08.96					OF 1
1	CHANGED CONNECTION		ALB	14.02.02					1
									ARCH.



TITLE : UNIT WIRING FOR HOURMETER

GNS code 9571-1419-031 (ex PKZ206)

DESIGNER	CHECK.	APPR.	SCALE	DATE	GEA Niro Soavi GEA Mechanical Equipment Italia S.p.a. Via M. da Erba Edoari, 29 , 43123 PARMA (ITALY) PHONE:+39.0521.965411-TELEFAX:+39.0521.242819	DRAWING No.			PAGE
DD				20.11.02		PT-1 / 1			1
REV.	DESCRIPTION			SIGN.	DATE	ORDER	SERIAL	MACHINE TYPE	OF
0	EMITTED			DD	20.11.02				1
1	UPDATED SHEET TITLE			ALB	23.05.13				
This drawing is property of GEA Mechanical Equipment Italia S.p.a., which will guard its rights by law terms.									DIR.
									ARCH.



TITLE : UNIT WIRING FOR HEAD SIDE LIGHTING					"WEST ELETTRIC" BRAND Mod. 123PR9010SL , GNS code: 9571-2500-005				
DESIGNER	CHECK.	APPR.	SCALE	DATE	<div>GEA Niro Soavi</div> <div></div> <div>GEA Mechanical Equipment Italia S.p.a. Via M. da Erba Edoari, 29 , 43123 PARMA (ITALY)</div> <div>PHONE:+39. 0521 . 965411-TELEFAX:+39. 0521 . 242819</div> <div>This drawing is property of GEA Mechanical Equipment Italia S.p.a., which will guard its rights by law terms.</div>	DRAWING No.			PAGE
DD				19.07.06		HL-HS / 8	1		
REV.	DESCRIPTION		SIGN.	DATE			OF		
0	EMITTED		DD	19.07.06			1		
						ORDER	SERIAL	MACHINE TYPE	DIR.
									ARCH.



1	2	3	4	5	6	7
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MORSETTI X4-278(-) e X4-279(+) =
SEGNALE di USCITA MAX. 100mA

MORSETTI X4-278(-) e X4-280(+) =
ALIMENTAZIONE 10÷36Vc.c. / <10mA (24V)

TERMINALS X4-278(-) and X4-279(+) =
OUTPUT SIGNAL MAX. 100mA

TERMINALS X4-278(-) and X4-280(+) =
SUPPLY 10÷36Vd.c. / <10mA (24V)

ALIMENTAZIONE – SUPPLY
10÷36Vd.c. (<10mA)

USCITA – OUTPUT
Imax.=100mA ; PNP
Temp.= -0°C/+100°C ; IP68

BLU – BLUE (L-)

BIANCO – WHITE (OUTPUT)

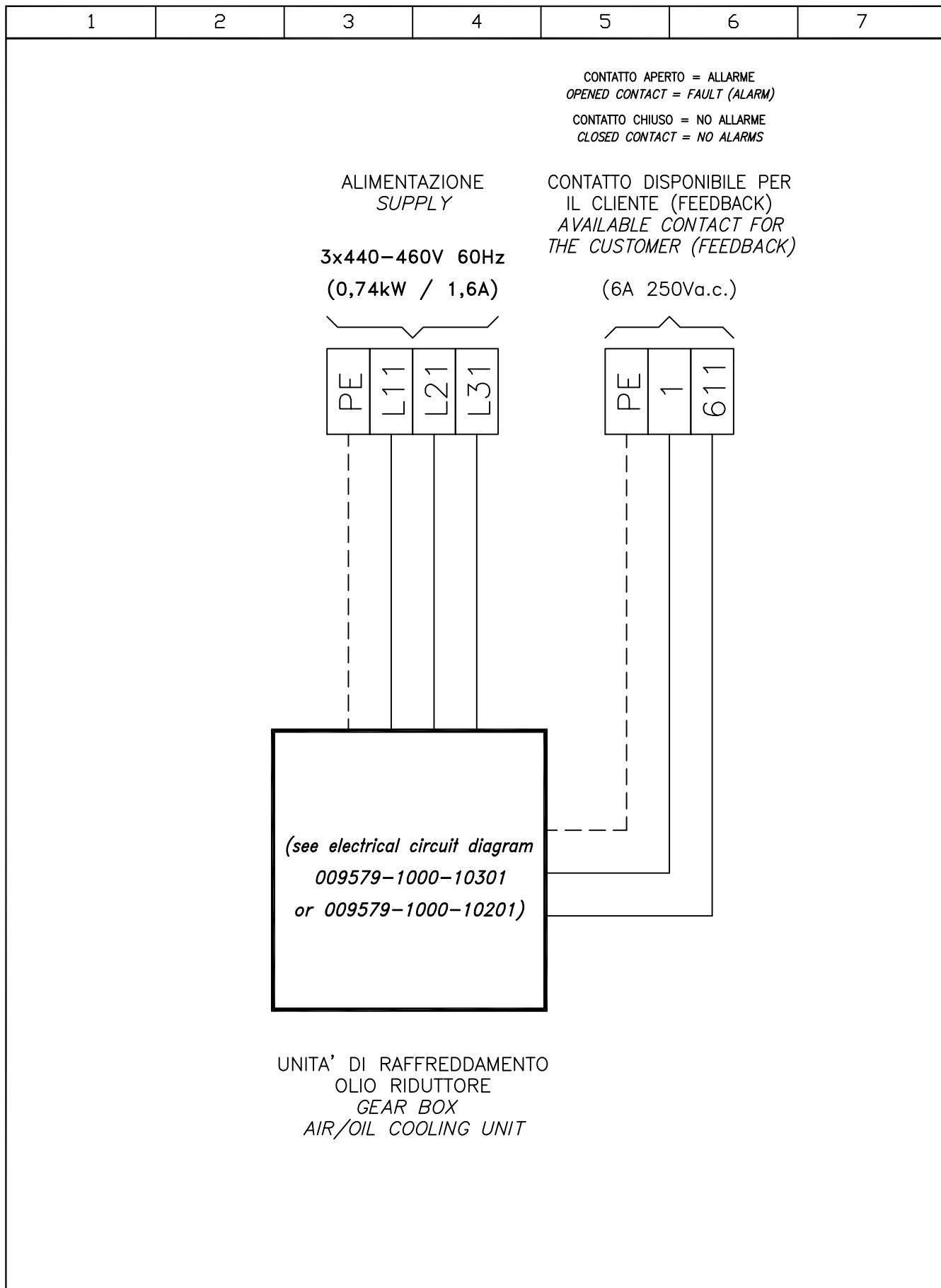
MARRONE – BROWN (L+)

(3) (2) (1)

SE-OP

SENSORE INDUTTIVO
(APERTURA VALVOLA DI SOVRAPRESSIONE)

INDUCTIVE SENSOR
(OVERPRESSURE VALVE OPENING)



TITLE : UNIT WIRING FOR 3-PHASES					GEAR BOX HEAT EXCHANGER SUPPLY					GNS code: 9579-1000-103 / 9579-1000-102				
DESIGNER	CHECK.	APPR.	SCALE	DATE	<div>GEA Niro Soavi</div> <div></div> <div>GEA Mechanical Equipment Italia S.p.a. Via M. da Erba Edoari, 29 , 43123 PARMA (ITALY) PHONE: +39. 0521 . 965411-TELEFAX: +39. 0521 . 242819</div>					DRAWING No.			PAGE	
DD				13.07.07						E-GBHE / 04			1	
REV.	DESCRIPTION		SIGN.	DATE	<div>This drawing is property of GEA Mechanical Equipment Italia S.p.a., which will guard its rights by law terms.</div>					OF				
0	EMITTED		DD	13.07.07						1				
1	ADDED NEW CODE		DD	03.09.13						1				
2	ADDED ANOTHER NEW CODE		ALB	23.07.14						1				
					ORDER					SERIAL	MACHINE TYPE	DIR. ARCH.		