



Parts Manual

N-TIMER with Touch Screen & Encoder

Issue 1.4 09/10/25
Ref. NR-00047-ENG



Before installing the unit and starting it up, carefully read all the technical and safety documentation included in this manual. Pay special attention to the information to know and understand the handling and the conditions of use of the unit. All of the information is aimed at enhancing User Safety and avoiding possible breakdowns derived from the incorrect use of the unit.



WARRANTY

HI-TECH SPRAY EQUIPMENT, S. A. (hereinafter "HI-TECH") grants this Limited Guarantee to the original buyer (hereinafter the "Client") for the unit and the original accessories given with the unit (hereinafter the "Product") against any fault in the design, materials or manufacture of the Product at the time of the first purchase by the user and for a duration of two (2) years thereafter, except in the case of hoses and TSU's, which will have a warranty period of one (1) year. Additionally, for any other product manufactured by external suppliers, the warranty period will be as specified by the manufacturer.

If during the guarantee period and under normal conditions of use, the Product should fail to work correctly due to defects of design, material or manufacture, the authorised distributor of the country where the HI-TECH Product or technical assistance service has been purchased shall repair or replace the Product in accordance with what is established in the following

CONDITIONS

- a) The validity of this guarantee will be subject to the presentation of the original invoice issued by the HI-TECH authorised distributor for the sale of the Product along with the Product handed over for repair or replacement, which must show the date of purchase and the serial number. HI-TECH reserves the right to refuse to give the guarantee service when the indicated data fail to appear on the invoice or have been modified after the purchase of the Product.
- b) The repaired or replaced Product will continue to maintain the original guarantee for the time remaining until the end of the guarantee or for three (3) months from the repair date, if the remaining period of the original guarantee were shorter.
- c) This guarantee will not be applied to the faults in the Product caused by its faulty installation, the natural wear and tear of the components, any use other than that considered normal for this Product or which should fail to strictly comply with the instructions of use provided by HI-TECH; due to accident, carelessness, adjustments, alterations or modifications of the Product not authorised by HI-TECH or due to the use of accessories, heating devices, pumping equipment and/or dispensers that have not been approved or manufactured by HI-TECH.
- d) The guarantee applicable to the components and accessories forming part of the Product and which have not been made by HI-TECH will be limited to the guarantee offered by the original manufacturer thereof.

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All of the information provided in this manual has been included with the confidence that it is true, but this does not constitute any implicit or explicit guarantee. **HI-TECH** reserves the right to make, at any time and without prior notice, the necessary improvements and modifications to this manual in order to rectify possible typographical errors, expand the information provided, and introduce the changes in the characteristics and functions of the equipment.

SAFETY AND HANDLING

The equipment described in this manual has been designed and manufactured in compliance with the following European Directives, following as application guide the harmonized standards detailed and in conformity with the relevant UK Statutory Instruments (and their amendments):

2006/42/EC Machinery Directive

2014/35/EU Low Voltage Directive

2014/30/EU EMC Directive

2011/65/EU RoHS Directive with amendment 2015/863

2012/19/EU Directive on waste electrical and electronic equipment

Standards used:

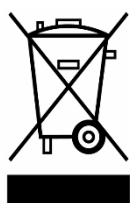
EN ISO 12100:2010

EN 60204-1:2018

EN IEC 61000-6-4:2019

EN IEC 61000-6-2:2019

EN IEC 63000:2018



Electrical products cannot be thrown out with the rubbish. They must be taken to a dedicated collection point for an environmentally sound disposal in accordance with local regulations. You must contact your local collective or retailer for information about recycling. Before leaving WEEE at appropriate collection facilities, batteries must be removed and disposed of separately for proper recycling. The packaging materials are recyclable. Dispose of packaging materials in an environmentally sound manner and place them at the disposal of

recycling sectors.

TRANSPORT AND STORAGE

Proper precautions must be taken so that the equipment can withstand the effects of transport and storage temperatures between -25°C and $+55^{\circ}\text{C}$ or up to $+70^{\circ}\text{C}$ for short periods that do not exceed 24 hours. Also, appropriate means to prevent damage from moisture, vibrations or shocks must be foreseen.



N-TIMER CONFIGURATIONS

**Table 1. N-Timer Assembly
#N-TIMER-T**

item	Description	Part Number	Qty.
1	N-Timer Pneumatic Kit (See Table 16)	KT-00080-03	1
2	N-Timer Control Panel	EL-00285N	1
3 (#)	Cable Switch & Connectors (See Table 6)	EL-00096-81	1
4 (*)	Cable Connection Gun (See Table 7)	EL-00136-07	1

(*) Supplied with the Timer version Gun. (#) Supplied with the Pneumatic kit.

**Table 2. N-Timer Assy with Encoder, for novaG “Monobloc” Pumps
#N-TIMER-E-M**

item	Description	Part Number	Qty.
1	N-Timer Pneumatic Kit (See Table 16)	KT-00080-03	1
2	N-Timer Control Panel	EL-00285N	1
3 (#)	Cable Switch & Connectors (See Table 6)	EL-00096-81	1
4 (*)	Cable Connection Gun (See Table 7)	EL-00136-07	1
5	Mechanical Encoder Kit for novaG “Monobloc” Pumps (See Table 12)	KT-00079-08NAW	1

(*) Supplied with the Timer version Gun. (#) Supplied with the Pneumatic kit.

**Table 3. N-Timer Assy with Encoder, for novaG “Monobloc” AR Pumps
#N-TIMER-E-MAR**

item	Description	Part Number	Qty.
1	N-Timer Pneumatic Kit (See Table 16)	KT-00080-03	1
2	N-Timer Control Panel	EL-00285N	1
3 (#)	Cable Switch & Connectors (See Table 6)	EL-00096-81	1
4 (*)	Cable Connection Gun (See Table 7)	EL-00136-07	1
5	Mechanical Encoder Kit for novaG “Monobloc” Pumps (See Table 12)	KT-00079-11NAW	1

(*) Supplied with the Timer version Gun. (#) Supplied with the Pneumatic kit.



**Table 4. N-Timer Assy with Encoder, for novaG-2K
#N-TIMER-E-EASY**

item	Description	Part Number	Qty.
1	N-Timer Pneumatic Kit (See Table 16)	KT-00080-03	1
2	N-Timer Control Panel	EL-00285N	1
3 (#)	Cable Switch & Connectors (See Table 6)	EL-00096-81	1
4 (*)	Cable Connection Gun (See Table 7)	EL-00136-07	1
5	Mechanical Encoder Kit for novaG-2K (See Table 14)	KT-00079-09AW	1

() Supplied with the Timer version Gun. (#) Supplied with the Pneumatic kit.*

**Table 5. N-Timer Assy with Encoder, for novaG-I
#N-TIMER-E-ESH**

item	Description	Part Number	Qty.
1	N-Timer Pneumatic Kit (See Table 16)	KT-00080-03	1
2	N-Timer Control Panel	EL-00285N	1
3 (#)	Cable Switch & Connectors (See Table 6)	EL-00096-81	1
4 (*)	Cable Connection Gun (See Table 7)	EL-00136-07	1
5	Mechanical Encoder Kit for novaG-I (See Table 15)	KT-00079-10NAW	1

() Supplied with the Timer version Gun. (#) Supplied with the Pneumatic kit.*

**Table 6. Connectors & Cable Switch Assembly
#EL-00096-81**

item	Description	Part Number	Qty.
1	Cable 20 mts	EL-00102-06 (#)	1
2	Aerial Connector Assembly Male 5 Pins M12	EL-00096-79	1
3	Female Square Connector	EL-00096-07	1
4	Flanged Connector Housing	EL-00096-05	1
5	Reduction	EL-00091-03	1
6	Cable Gland	EL-00088-05	1

(#) Raw material Reference.



**Table 7. Cable Connection Gun Assembly
#EL-00136-07**

item	Description	Part Number	Qty.
1	Cable 2.5 mts with M.8 Connector	EL-00137-02	1
3	Male Square Connector	EL-00096-08	1
4	Connector Housing	EL-00096-06	1
5	Reduction	EL-00091-02	1
6	Cable Gland	EL-00088-00	1

Note: This Cable connection Assembly EL-00136-07 is supplied with the Gun Timer version.



N-TIMER WITH ENCODER FOR “MONOBLOC” PUMPS

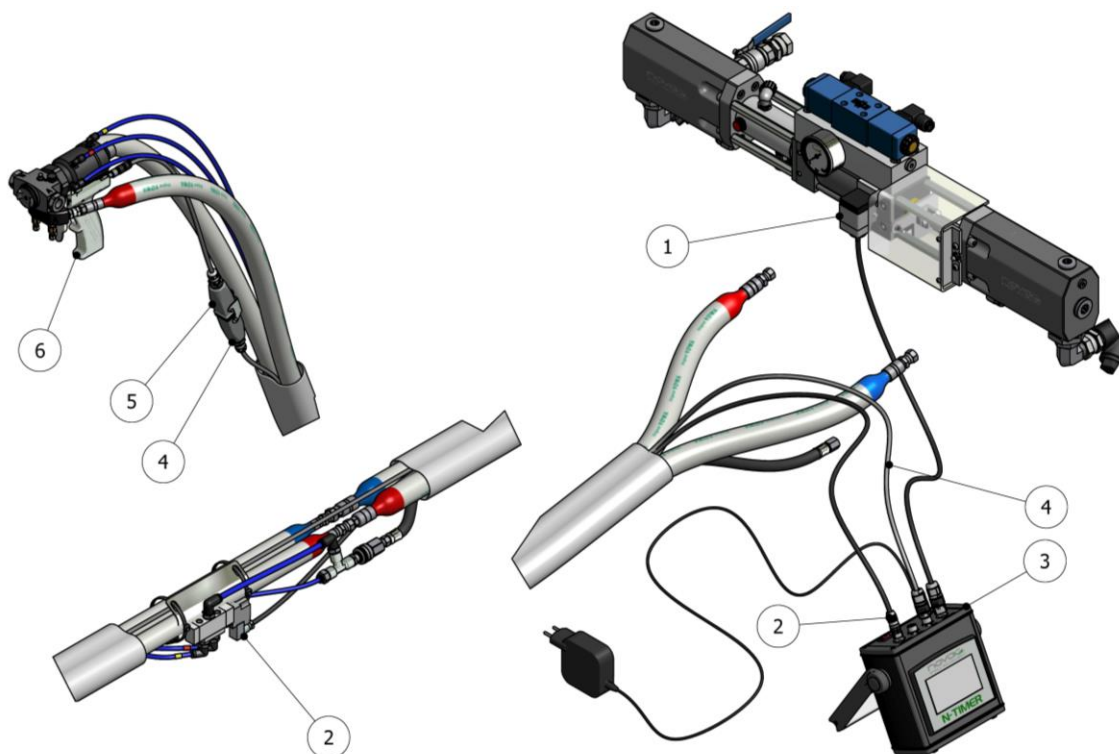


Figure 1. N-Timer with Encoder for “Monobloc” Pumps

Table 8. N-Timer with Encoder for “Monobloc” Pumps

item	Description	Part Number	Qty.
1	Mechanical Encoder Kit for “Monobloc” novaG Pumps (Table 12)	KT-00079-08NAW	1
2	N-Timer Pneumatic Kit (See Table 16)	KT-00080-03	1
3	N-Timer Control Panel	EL-00285N	1
4 (#)	Cable Switch & Connectors (See Table 6)	EL-00096-81	1
5 (*)	Cable Connection Gun (See Table 7)	EL-00136-07	1
6 (%)	Gun Timer version	(%)	1

(%) See specific Parts Manual for Timer version guns.

() The Cable connection Assembly EL-00136-07 is supplied with the Gun.*

(#) The Cable Switch & Connectors supplied with the Pneumatic Kit.



N-TIMER WITH ENCODER FOR “MONOBLOC” AR PUMPS

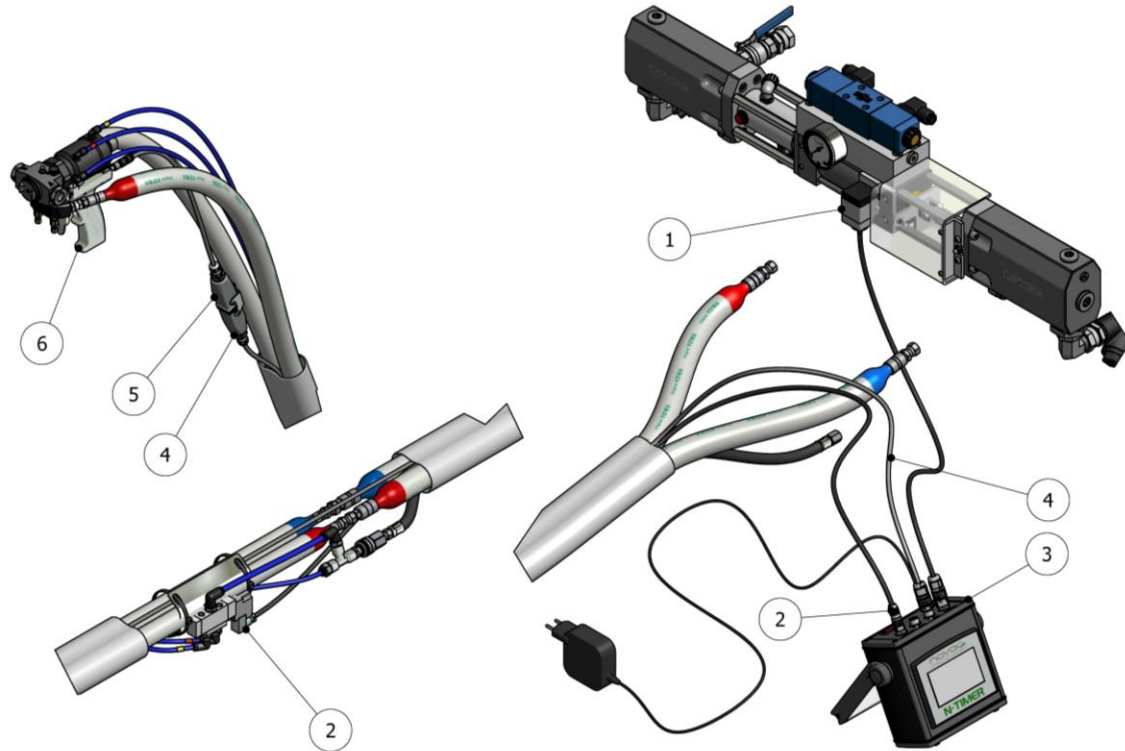


Figure 2. N-Timer with Encoder for “Monobloc” AR Pumps

Table 9. N-Timer with Encoder for “Monobloc” AR Pumps

item	Description	Part Number	Qty.
1	Mechanical Encoder Kit for “Monobloc” novaG AR Pumps (Table 12)	KT-00079-11NAW	1
2	N-Timer Pneumatic Kit (See Table 16)	KT-00080-03	1
3	N-Timer Control Panel	EL-00285N	1
4 (#)	Cable Switch & Connectors (See Table 6)	EL-00096-81	1
5 (*)	Cable Connection Gun (See Table 7)	EL-00136-07	1
6 (%)	Gun Timer version	(%)	1

(%) See specific Parts Manual for Timer version guns.

(*) The Cable connection Assembly EL-00136-07 is supplied with the Gun.

(#) The Cable Switch & Connectors supplied with the Pneumatic Kit.



N-TIMER WITH ENCODER FOR NOVAG-2K

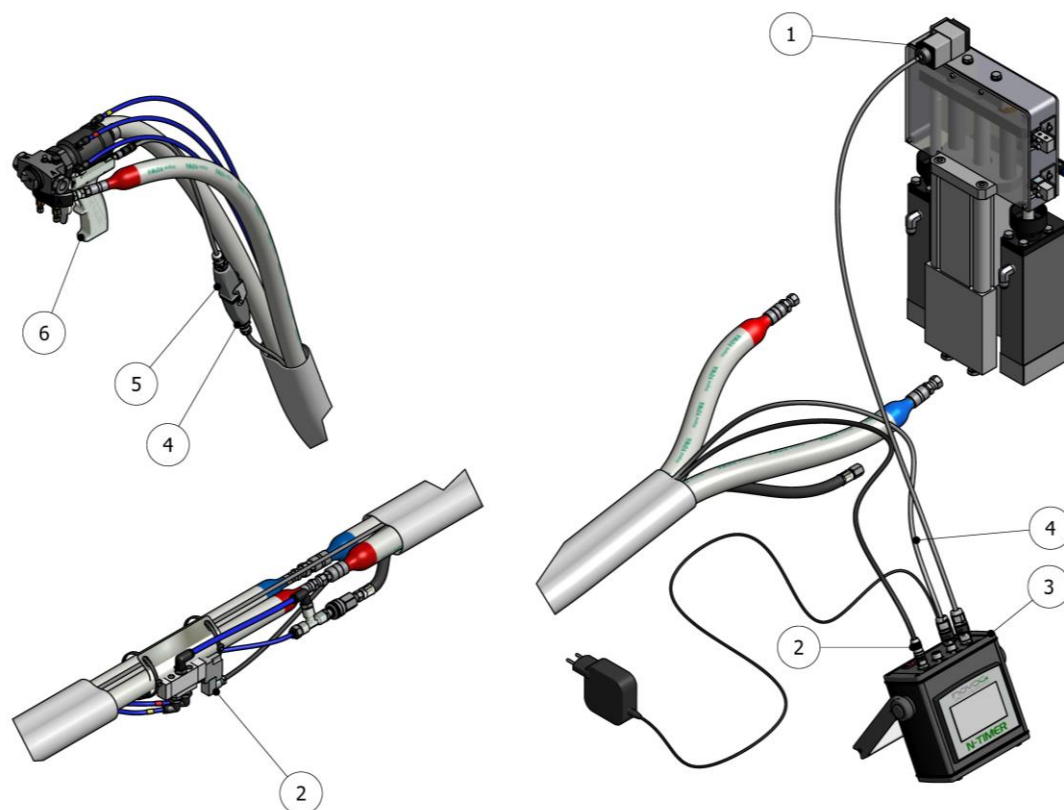


Figure 3. N-Timer with Encoder, for novaG-2K

Table 10. N-Timer with Encoder, for novaG-2K

item	Description	Part Number	Qty.
1	Mechanical Encoder Kit (See Table 14)	KT-00079-09AW	1
2	N-Timer Pneumatic Kit (See Table 16)	KT-00080-03	1
3	N-Timer Control Panel	EL-00285N	1
4 (#)	Cable Switch & Connectors (See Table 6)	EL-00096-81	1
5 (*)	Cable Connection Gun (See Table 7)	EL-00136-07	1
6 (%)	Gun Timer version	(%)	1

(%) See specific Parts Manual for Timer version guns.

(*) The Cable connection Assembly EL-00136-07 is supplied with the Gun.

(#) The Cable Switch & Connectors supplied with the Pneumatic Kit.



N-TIMER WITH ENCODER FOR NOVAG-I

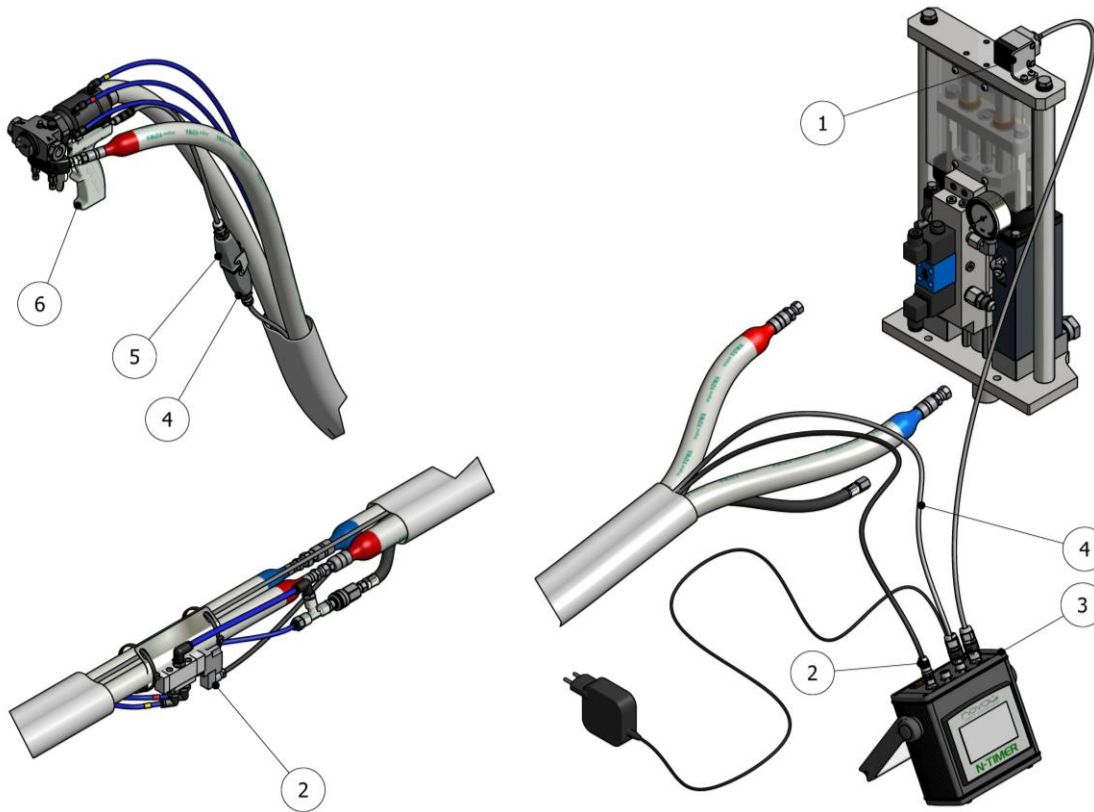


Figure 4. N-Timer with Encoder, for Novag-I.

Table 11. N-Timer with Encoder, for Novag-I.

item	Description	Part Number	Qty.
1	Mechanical Encoder Kit (See Table 15)	KT-00079-10NAW	1
2	N-Timer Pneumatic Kit (See Table 16)	KT-00080-03	1
3	N-Timer Control Panel	EL-00285N	1
4 (#)	Cable Switch & Connectors (See Table 6)	EL-00096-81	1
5 (*)	Cable Connection Gun (See Table 7)	EL-00136-07	1
6 (%)	Gun Timer version	(%)	1

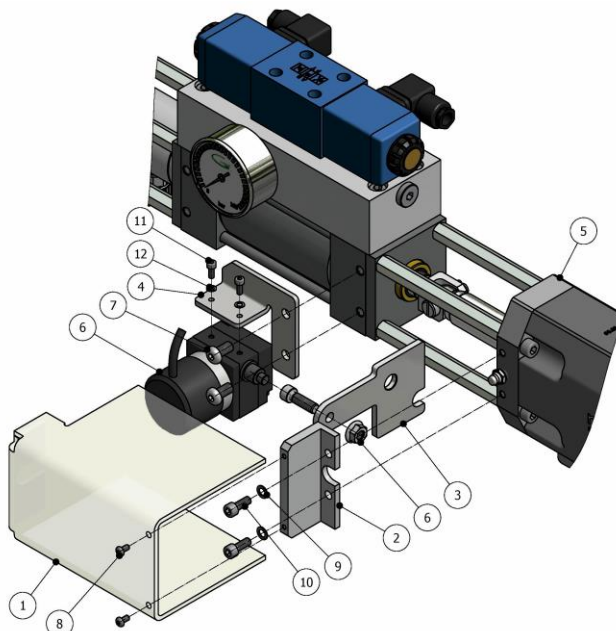
(%) See specific Parts Manual for Timer version guns.

(*) The Cable connection Assembly EL-00136-07 is supplied with the Gun.

(#) The Cable Switch & Connectors supplied with the Pneumatic Kit.



MECHANICAL ENCODER KIT FOR “MONOBLOC” PUMPS



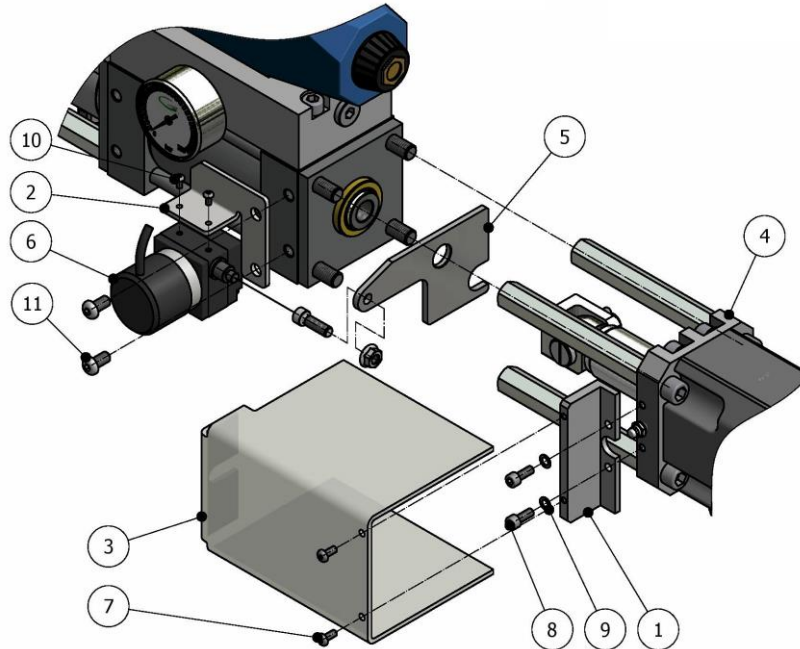
**Figure 5. Mechanical Encoder Kit, for “Monobloc” Pumps
#KT-00079-08NAW**

**Table 12. Mechanical Encoder Kit, for “Monobloc” Pumps
#KT-00079-08NAW**

item	Description	Part Number	Qty.
1	Front Cover	PU-06011-AW	1
2	Cover Support	PU-06010-AW	1
3	Contact Switch	PU-01038-1AW	1
4	Encoder Base Plate	PU-01039-1AW	1
5	Flange for Encoder, novaG Pumps	NPU-06005-E	1
6	Lineal Encoder	EL-00298	1
7	Screw	TN-00135	2
8	Screw	TN-00031	4
9	Washer	TN-00048	2
10	Screw	TN-00061	2
11	Screw	TN-00002	2
12	Washer	TN-00019	2



MECHANICAL ENCODER KIT FOR AR “MONOBLOC” PUMPS



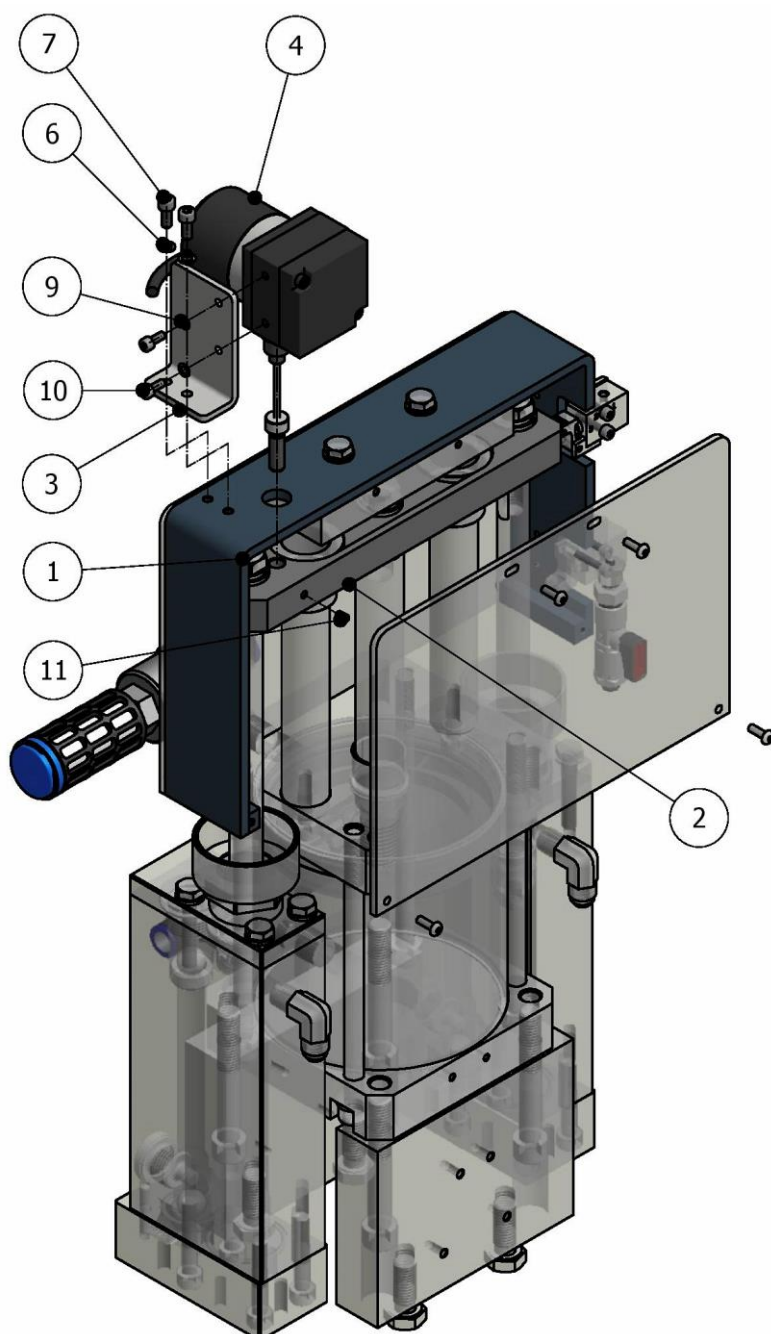
**Figure 6. Mechanical Encoder Kit, for AR “Monobloc” Pumps
#KT-00079-11NAW**

**Table 13. Mechanical Encoder Kit, for AR “Monobloc” Pumps
#KT-00079-11NAW**

item	Description	Part Number	Qty.
1	Cover Support for AR Monobloc Pumps	PU-07027-AW	1
2	Encoder Base Plate	PU-07031-AW	1
3	Front Cover	PU-07029-AW	1
4	Flange for Encoder, novaG Pumps	PU-07005E	1
5	Contact Switch	PU-07030-AW	1
6	Lineal Encoder	EL-00298	1
7	Screw	TN-00159	2
8	Screw	TN-00061	2
9	AET Washer	TN-00048	2
10	Screw	TN-00002	2
	AET Washer	TN-00019	2
11	Screw	TN-00389	2



MECHANICAL ENCODER KIT FOR NOVAG-2K



*Figure 7. Mechanical Encoder Kit, for novaG-2K
#KT-00079-09AW*

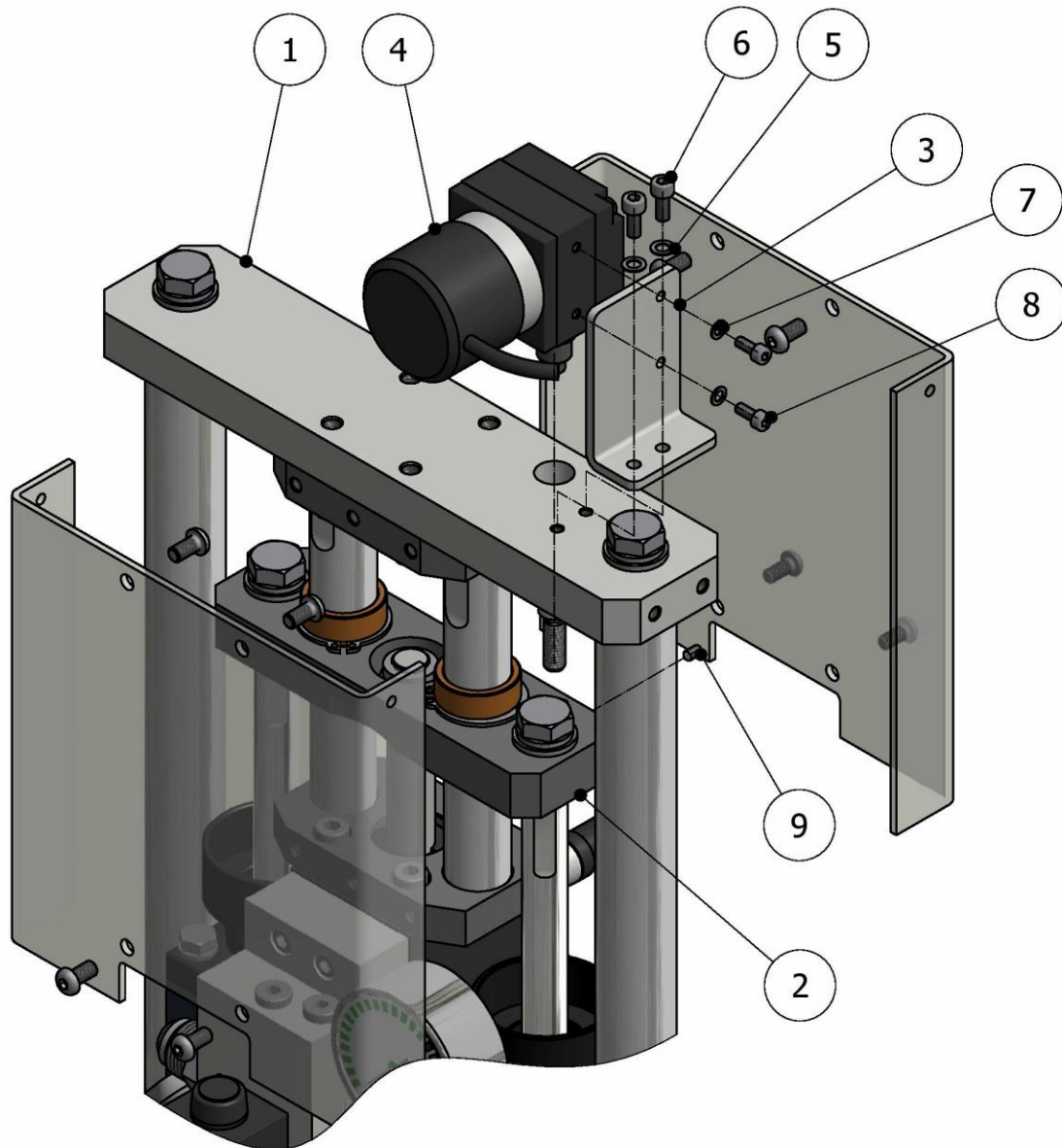


**Table 14. Mechanical Encoder Kit, for novaG-2K
#KT-00079-09AW**

item	Description	Part Number	Qty.
1	Protection Guides for Encoder	MQ-06024-00E	1
2	Drag Plate for Encoder	MQ-06023-AW	1
3	"L" Support for Encoder	MQ-06030-AW	1
4	Lineal Encoder	EL-00298	1
5			
6	Washer	TN-00017	2
7	Screw	TN-00221	2
8			
9	Washer	TN-00019	2
10	Screw	TN-00002	2
11	Headless bolt	TN-00099	1



MECHANICAL ENCODER KIT FOR NOVAG-I



**Figure 8. Mechanical Encoder Kit, for novaG-I
#KT-00079-10NAW**

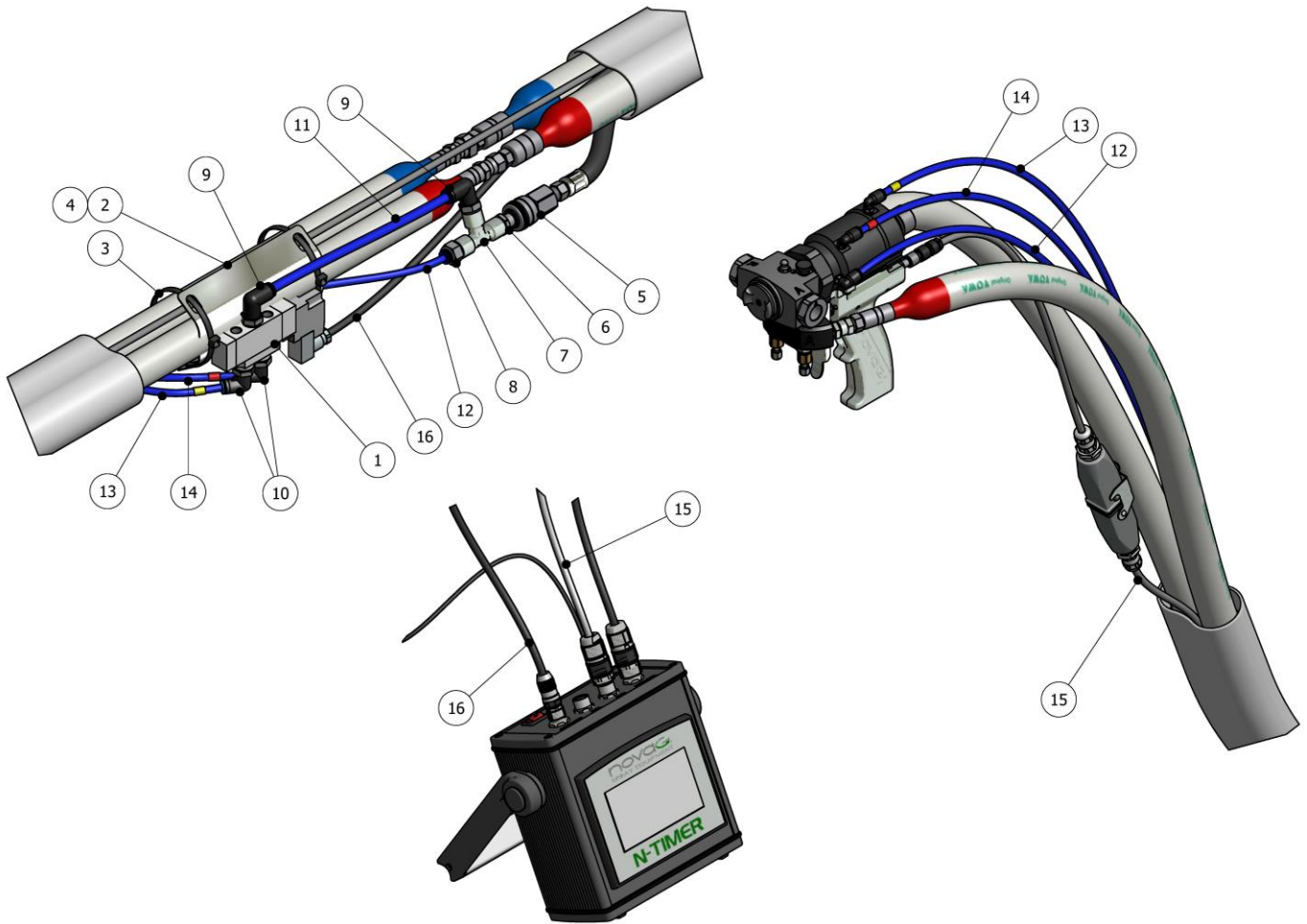


**Table 15. Mechanical Encoder Kit, for novaG-I
#KT-00079-10NAW**

item	Description	Part Number	Qty.
1	Upper Support Pump System for Encoder	MQ-18036-E	1
2	Drag Plate for Encoder	MQ-18005-AW	1
3	"L" Support for Encoder	MQ-06030-AW	1
4	Lineal Encoder	EL-00298	1
5	Washer	TN-00017	2
6	Screw	TN-00221	2
7	Washer	TN-00019	2
8	Screw	TN-00002	2
9	Headless bolt	TN-00099	1



N-TIMER PNEUMATIC KIT



**Figure 9. N-Timer Pneumatic Kit
#KT-00080-03**



**Table 16. N-Timer Pneumatic Kit
#KT-00080-03**

item	Description	Part Number	Qty.
1	Solenoid Valve	NE-00058	1
2	Valve Base Plate	MA-00080	1
3	Cable Tie	EL-00093-02	2
4	Screw	TN-00031	2
5	Quick Couple	RA-00109	1
6	Spigot Fitting	RA-00110	1
7	"T" Adapter	RA-00135	1
8	Tube Fitting 6	RA-00259	1
9	Tube Elbow 8	RA-00235	2
10	Tube Elbow 6	RA-00380	2
11	Pneumatic Tube 8	MA-00072 (#)	0,5 m
12	Pneumatic Tube 6 (Clean)	MA-00071 (#)	3 m
13	Pneumatic Tube 6 (Close)	MA-00071 (#)	3 m
14	Pneumatic Tube 6 (Open)	MA-00071 (#)	3 m
15	Gun Cable Switch Assy (18 m)	EL-00096-81	1
16	Valve Cable with Connector (15 m)	EL-00096-82	1
	Cable 15 m	EL-00102-06 (#)	17 m
	Female Connector 4 Pins M12	EL-00096-78	1

(#) Raw material Reference.



N-TIMER CONTROL PANEL

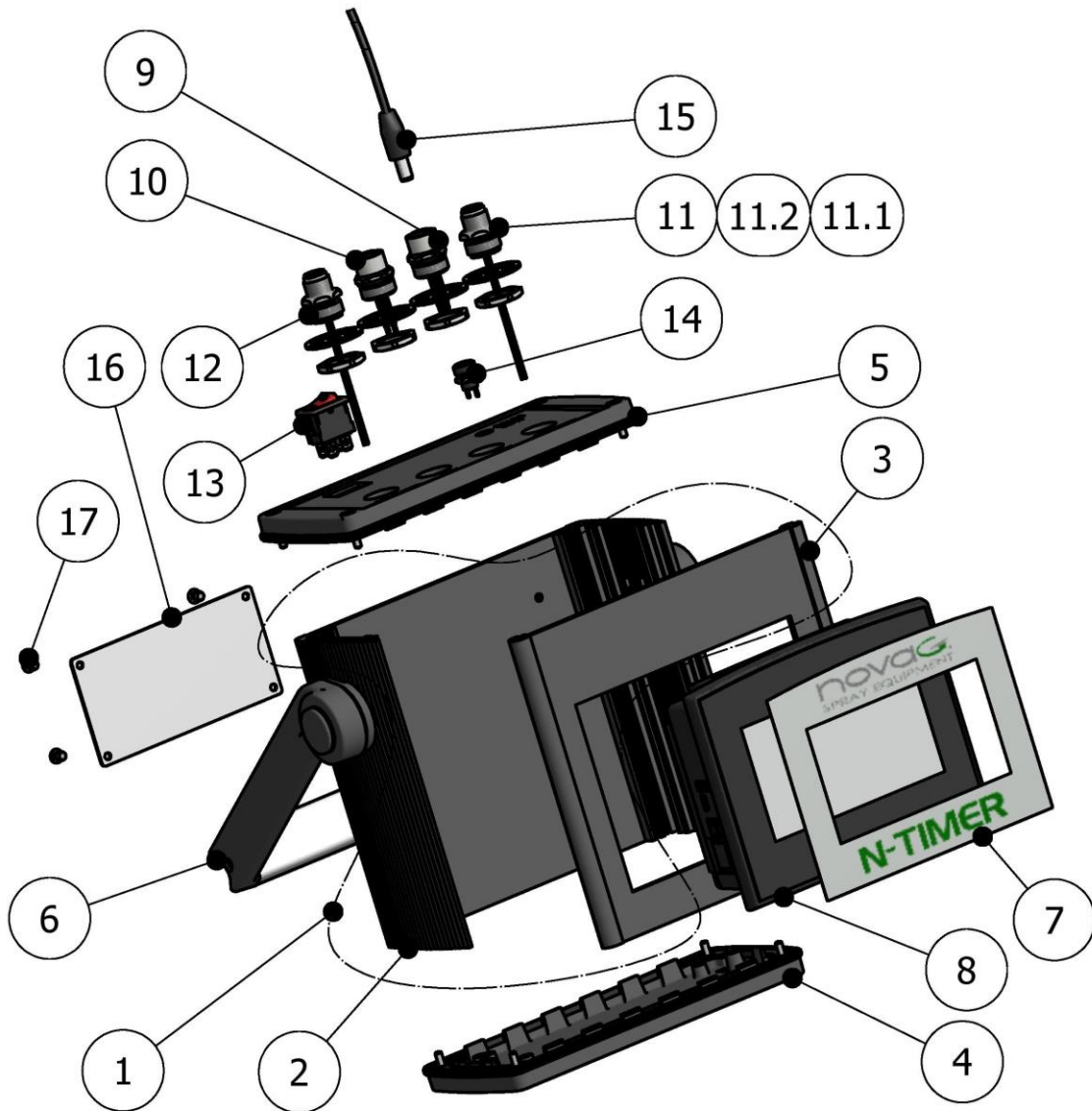


Figure 10. N-Timer Control Panel #EL-00285N



Table 17. N-Timer Control Panel #EL-00285N

item	Description	Part Number	Qty.
1	Mechanized Box Assy	EL-00297-1M	1
2	Mechanized Body Box (included in item.1) (*)		
3	Mechanized Cover Box (included in item.1) (*)		
4	Lower Cap Box with Seal	EL-00297-2	1
5	Mechanized Upper Cap Box with Seal	EL-00297-2L	1
6	Handle Assembly	EL-00297-3	1
7	Adhesive Cover	EM-00107N	1
8	OPLC	EL-00295	1
9	Female Connector Panel Mount 5 Pins M12	EL-00096-75	1
	Washer Mount (Included in item.9)		1
	Low Nut (Included in item.9)	EL-00090-06	1
10	Female Connector Panel Mount 4 Pins M12	EL-00096-73	1
	Washer Mount (Included in item.10)		1
	Low Nut (Included in item.10)	EL-00090-06	1
11	Male Connector Panel Mount 5 Pins M12	EL-00096-76	1
	Washer Mount (Included in item.11)		1
	Low Nut (Included in item.11)	EL-00090-06	1
12	Male Connector Panel Mount Panel 4 Pins M12	EL-00096-74	1
	Washer Mount (Included in item.12)		1
	Low Nut (Included in item.12)	EL-00090-06	1
13	Switch 16 A	EL-00107-11	1
14	Female Jack Connector Ø5.7x2	EL-00096-72	1
15	Power Supply	EL-00296	1
16	Identification Plate	MQ-01010-HT	1
17	Rivet	TN-00240	4

() not supplied separately.*



CIRCUIT DIAGRAM

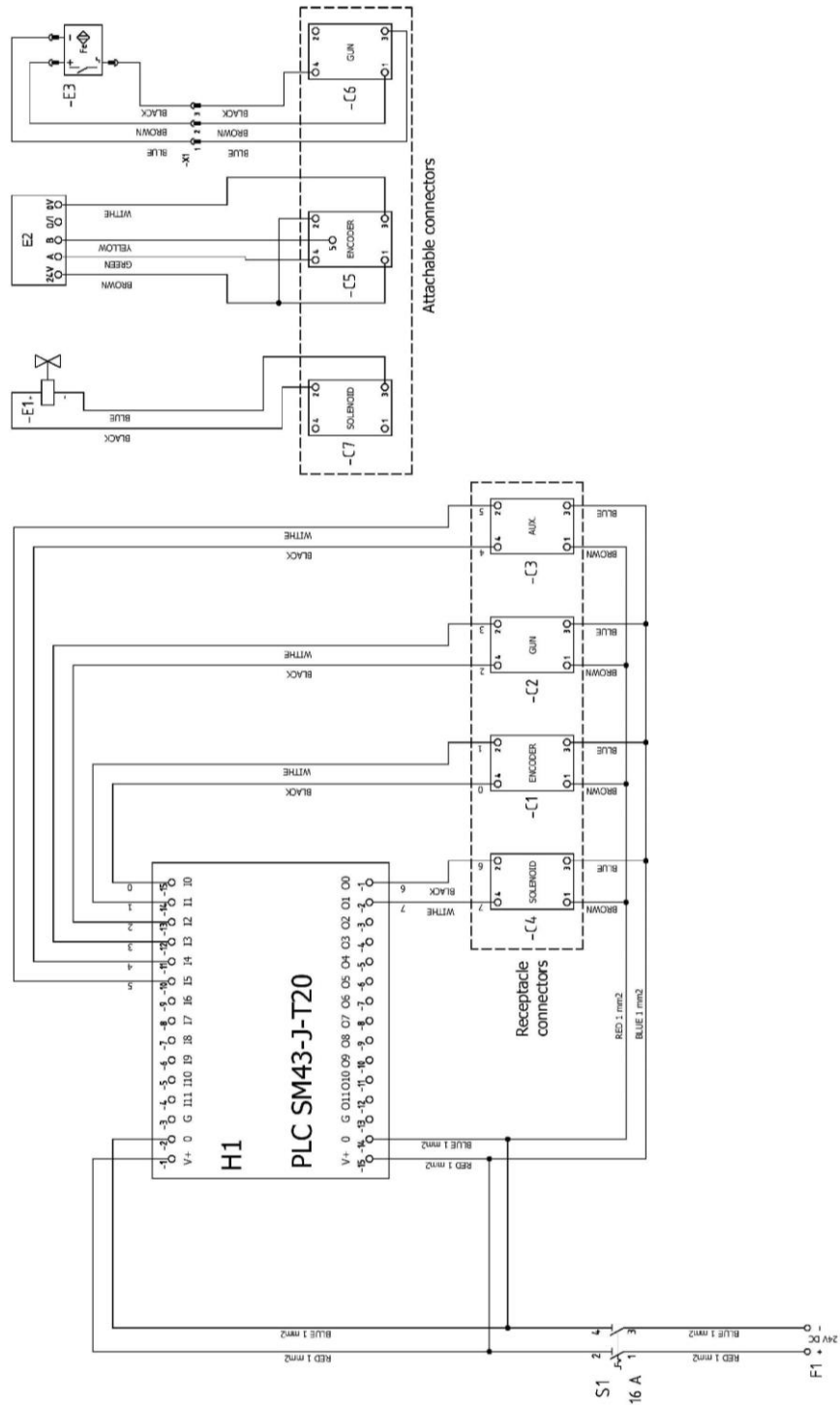


Figure 11. Circuit Diagram (Hoja 1 de 1)



Table 18. Electrical Material

item	Description	Part Number	Qty.
F.A.	Power Supply IN ~230V – OUT 24V DC 2.5A Male Jack Ø5.7x2	EL-00296	1
F1	Female Connector Socket 24V DC 0.5A	EL-00096-72	1
S1	Switch 16 A	EL-00107-11	1
H1	OPLC	EL-00295	1
C1	Male Connector Panel Mount 5 Pins M12 (Encoder)	EL-00096-76	1
C2	Female Connector Panel Mount 5 Pins M12 (Gun)	EL-00096-75	1
C3	Female Connector Panel Mount 4 Pins M12 (Aux.)	EL-00096-73	1
C4	Male Connector Panel Mount 4 Pins M12 (Solenoid)	EL-00096-74	1
C5	Aerial Female Connector 5 Pins M12 (Encoder)	EL-00096-80	1
C6	Aerial Male Connector 5 Pins M12 (Gun)	EL-00096-79	1
C7	Aerial Female Connector 4 Pins M12 (Solenoid)	EL-00096-78	1
C8	Aerial Male Connector 4 Pins M12 (Aux.) (#)	EL-00096-77	1
E1	Solenoid Valve (<i>supplied with pneumatic kit</i>)	(See Table 16)	1
E2	Encoder (<i>supplied with mechanical kit</i>)	(See Table 12)	1
E3	Switch (<i>supplied with the gun</i>)		1
X1	Male Connector (<i>supplied with the gun</i>)		1
	Female Connector (<i>supplied with pneumatic kit</i>)	(See Table 16)	1

(#) Not supplied on standard version.



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