



SPAC[®]
AUTOMAZIONE

2020

Electrical CAD

Design and auto-documentation of electrical schemes



AutoCAD OEM



SPAC Automazione is developed with Autodesk 2019 technology



Hardware & Software Requirements

For Operating Systems at 32 / 64 bits



Minimum Hardware Configuration:

- Processor 2.5GHz Intel® Core™ i5 or AMD Ryzen™ 5 with SSE2 technology
- Video Board 1 GB with 29 GB/s bandwidth, compatible DirectX 11
- Screen scale factor DPI lower or equal to 125%
- USB 2.0 port for installation
- Video adapter supported by Windows (screen)
- USB port for Hardware protection key
- Mouse or other pointing device
- Eventual plotter or printer
- RAM Memory: 8 GB
- Free space on disk:
 - SPAC Automazione 2020: 6 GB
 - SPAC Automazione CAD 2020: 8 GB

Software Configuration:

- Microsoft Windows® 7 SP1 32/64 bits
Microsoft Windows® 10 version 1803 or higher 32/64 bits
- For the Plug-In version:
Autodesk AutoCAD Full or AutoCAD Electrical 2020/2019 installed and working



Suggested Hardware Configuration Hardware:

- Processor 3GHz Intel® Core™ i7 or AMD Ryzen™ 7 with SSE2 technology
 - Video board 4 GB with 106 GB/s bandwidth, compatible DirectX 11
 - USB 3.0 port for installation
 - RAM Memory: 16 GB
- Graphical Hardware and Autodesk certified drivers available at the following link
<https://knowledge.autodesk.com/it/certified-graphics-hardware>

Installation



Versions



It is possible to install in Italian, English and Spanish using the same installation SetUp:

SPAC Automazione 2020	(Add-On AutoCAD Full)	Version FULL or EL (Entry Level)
SPAC Automazione 2020 CAD	(OEM)	Version FULL or EL (Entry Level)
SPAC Automazione 2020 TRIAL	(OEM)	Evaluation for 30 days

Data and customization migration:

Available for previous versions of SPAC Automazione starting from version 2004.

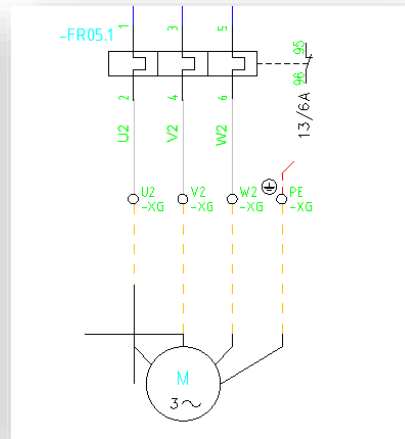
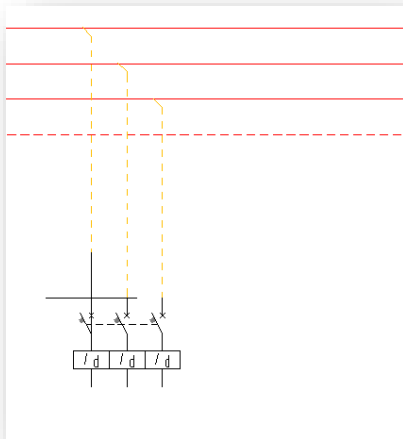
Once the program is installed, all the data customized by the end-user is recovered (symbols, archives, translations, etc.)

SPAC Automazione 2020 coexists with previous versions of SPAC.

It is possible to install the new version without **uninstall the previous one.**

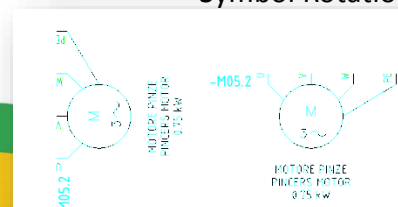
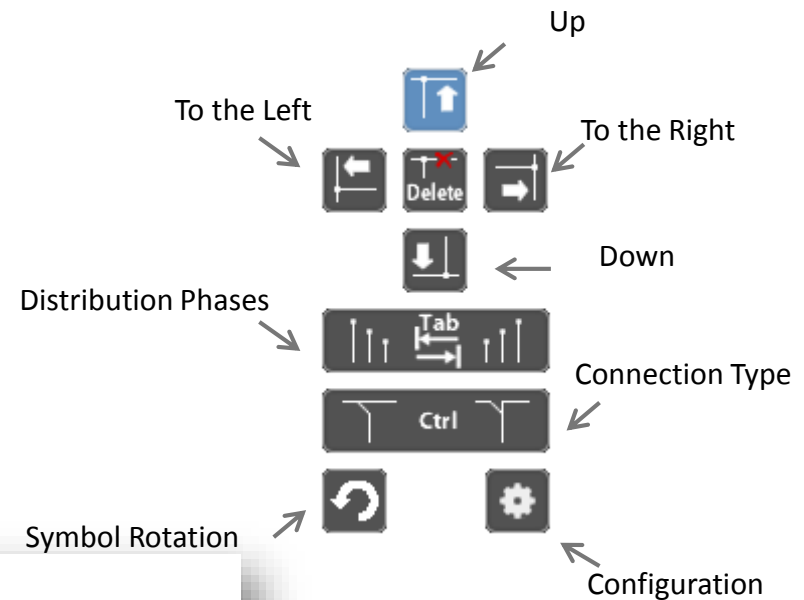
Automatic connections drawing

Faster drawing using features that analyze the scheme and propose connections with other components or conductors



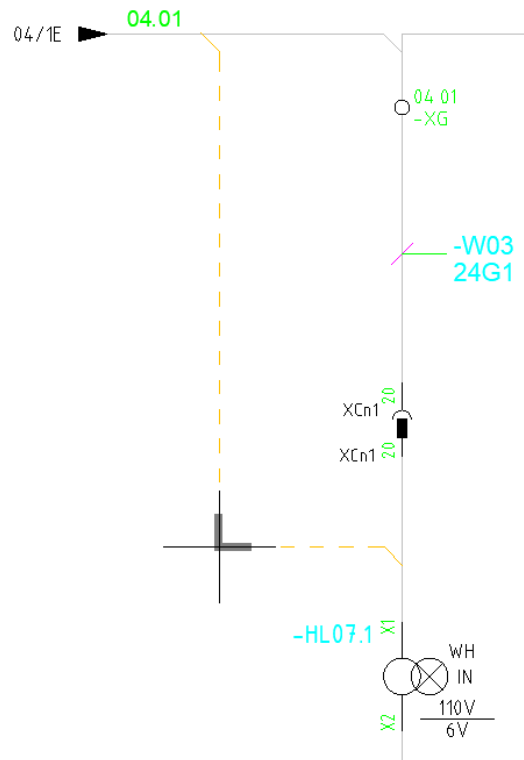
Dedicated Menu with a set of options to change the connection types dynamically.

The functionalities could be executed from the keyboard



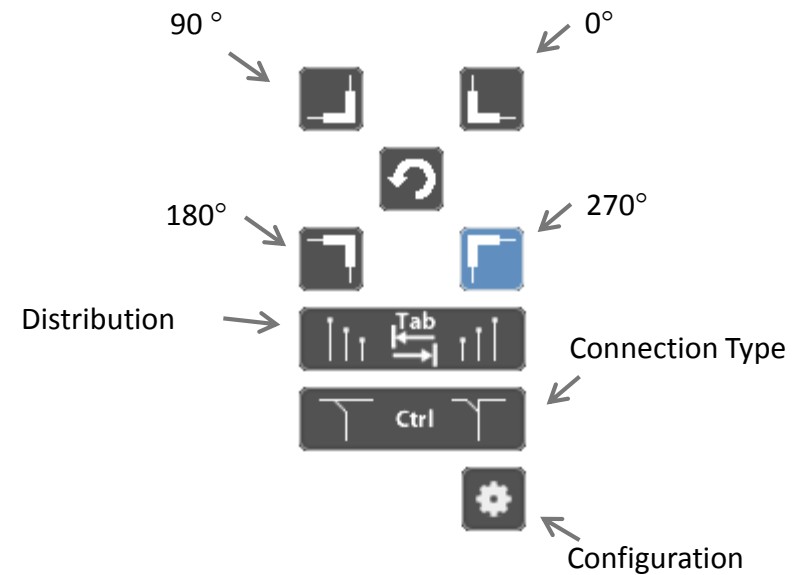
Automatic L Conductors drawing

4 graphical options to draw easily the L Connections in all directions

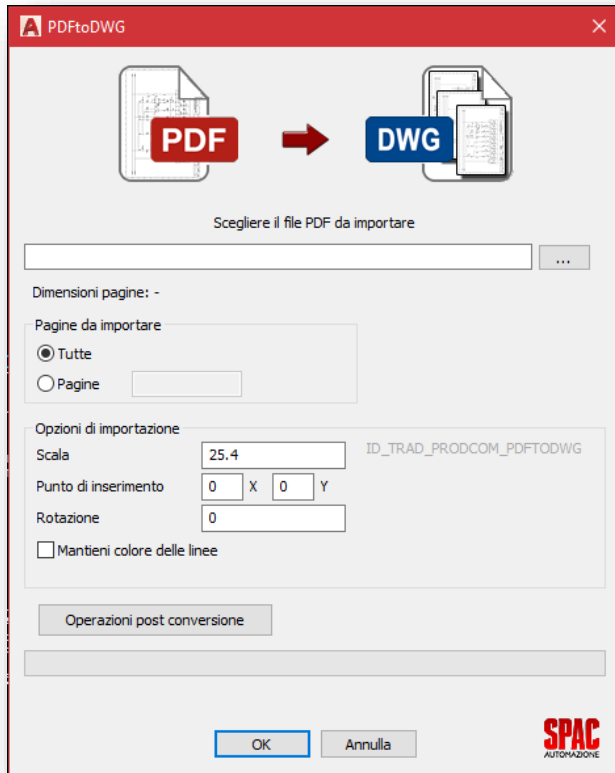


Dedicated Menu with a set of options to change the connection types dynamically.

The functionalities could be executed from the keyboard



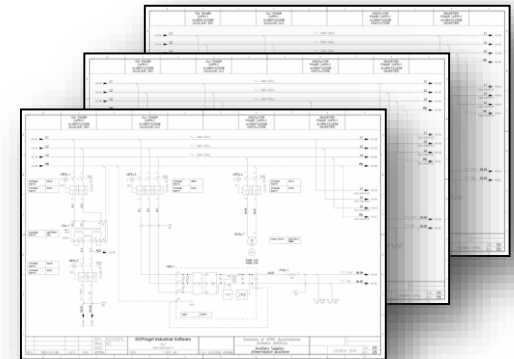
PDF to DWG* Conversion



The command imports schemes created by other Electrical CAD in PDF format and transform them in SPAC Automazione DWG Multi-Sheets

All graphics are converted in PDF format so it is possible to edit the Project using AutoCAD commands

The Multi-Sheet will be compatible with all SPAC commands including automatic printing



Creation of QR Code*

Documentation available always



→ URL with component's datasheet

→ URL with electrical scheme

→ Project Information:

- Panel
- Name
- Function
- Material Code
- Description

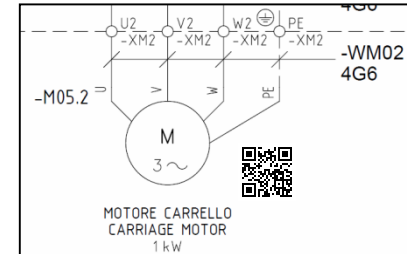
→ Project name and customer data



Creation of QR Code *

The QR-Code could be:

Inserted in the electrical or pneumatic scheme
nearby the associated component



QR-Code Legend

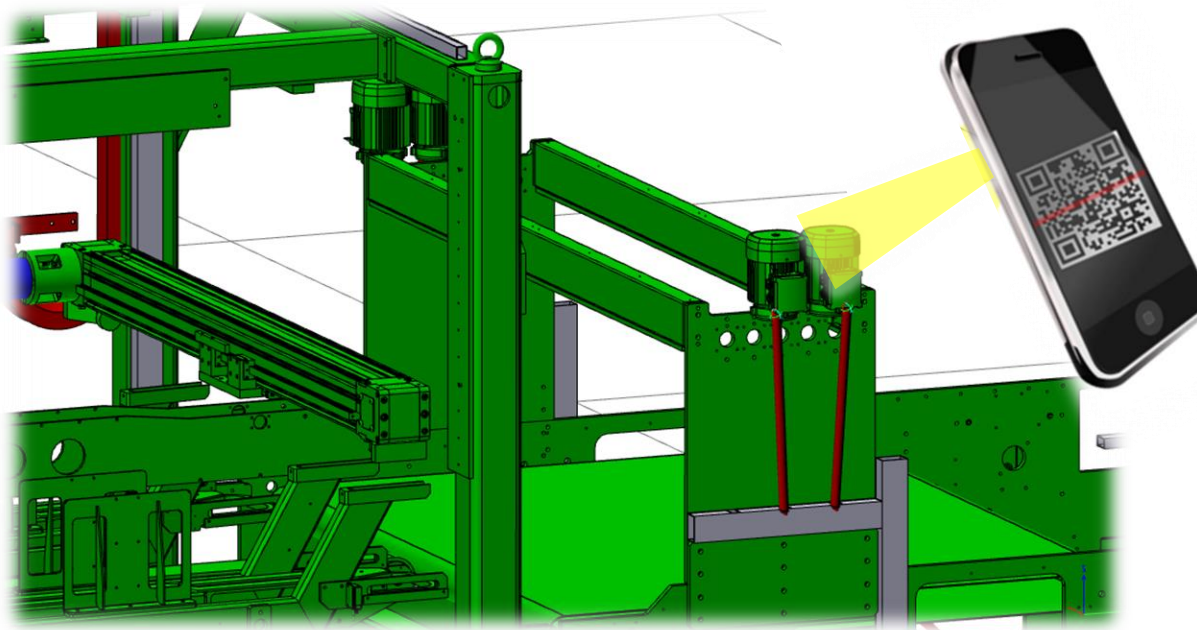
	M01	Motore Pinze
	M02	Motore Carrello
	M03	Motore Rulli
	SQ10	Sensore Carrello Avanti
	SQ11	Sensore Carrello Indietro

Printed in adhesive and customizable labels
To be used in the plant



Creation QR Code *

It is possible to read the QR-Code and consult the information contained with free APP «QR-SPAC»



Ricerca

Descrizione del tipo motore Misura ricerca Ricerca

Esecuzione del riduttore ☐ ☒ senza riduttore

Tipo di motore ☐ DKL - motore trifase

Nominale di utilizzo ☐ Europlanet gear (IEC 60 IAC)

Potenza motore [kW] - motore tra 3kw e 24

Velocità di carter [mm] - Rapporto di riduzione a b

Motore di servizio IS ☐ ☒

Classe di rendimento internazionale (%)

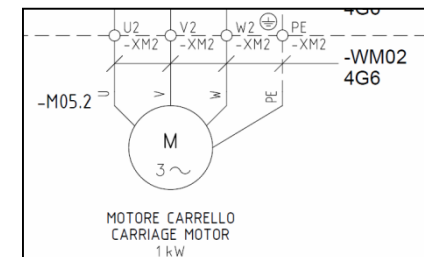
Numero di poli ☐ 4 poli ☒ rapporto di interconnessione 1:1-100%

Basta revisione ☐ (Seleziona) ☐ Funzionamento convenzionale di frequenza

Visualizza risultati basati su

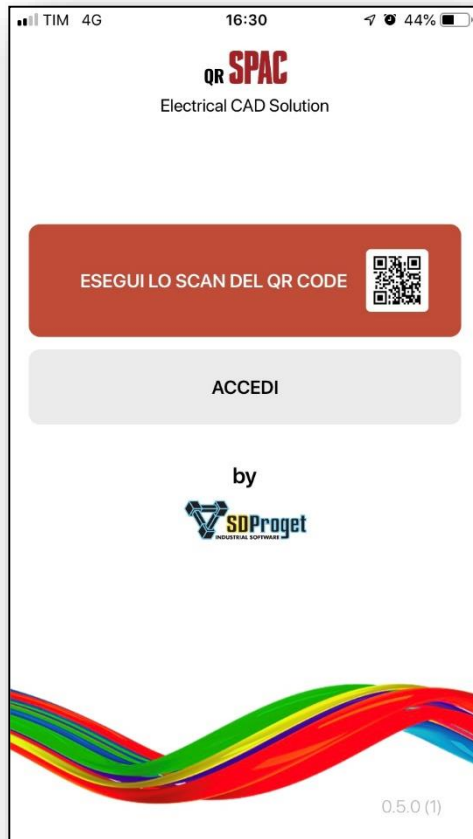
Result data search

Designazione	Classe di efficienza	P [kW]	Veloc [rpm]	Quanto meno altro
DZK100L2	B3	0,12	1420	01-100%
DZK100L4	B3	0,18	1375	01-100%
DZK100L6	B3	0,28	1420	01-100%
DZK120H	B3	0,37	1410	01-100%
DZK160L2	B3	0,68	1420	01-100%
DZK160L4	B3	0,75	1400	01-100%
DZK160L6	B3	1,1	1400	01-100%
DZK180L4	B3	1,8	1400	01-100%
DZK180L6	B3	2,2	1400	01-100%
Continuare	B3	3	1400	01-100%

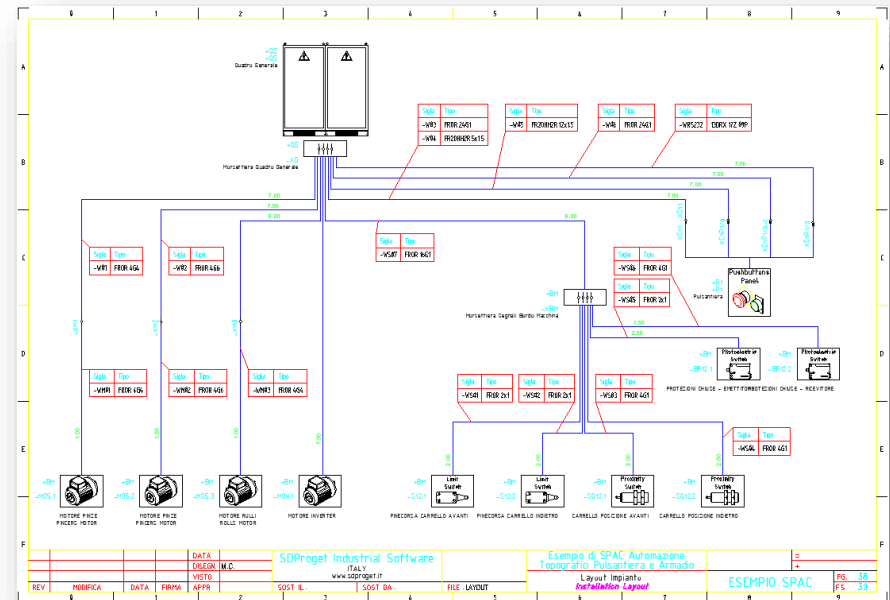


Free QR SPAC App

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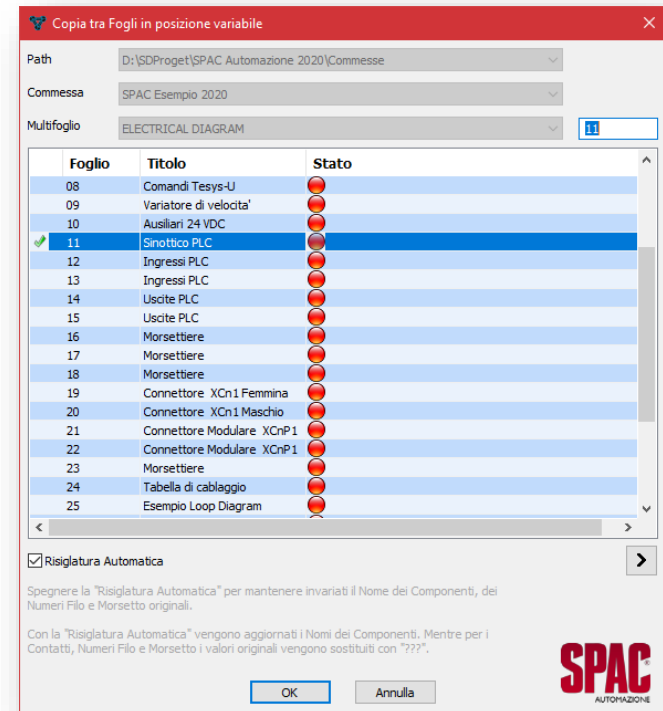


Overall Plant Design



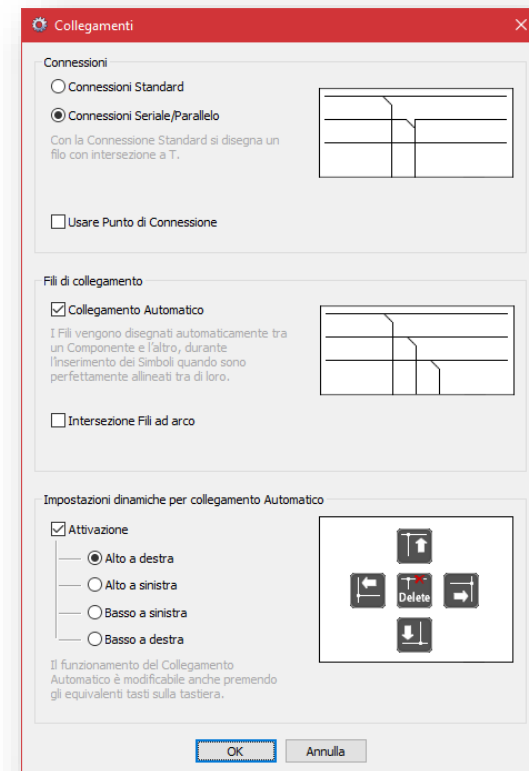
Copy / Move between Sheets

- Display the free and occupied sheets
- If the Rename option is enabled, the Names of the Components and the Values of the Contacts, Thread Numbers and Terminals are updated with «???». Cables are also considered to avoid repeated names.
- If the Rename option is disabled, all original values are retained.
- Any serial connections that are not designed correctly are corrected during the operation.
- In the case of a multiple copy on the same Sheet, the same separation distance from the previous element is proposed.



Threads / Connections Configuration

- Intuitive Interface with images
- New section dedicated to the Dynamic options for the automatic connections of components



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SPAC ESEMPIO 2020.pdf - Adobe Acrobat Reader DC
File Modifica Vista Finestra

Home Strumenti

SPAC ESEMPIO 20...

5 / 53

71%

PDF

Adobe

Segnalibri

SPAC ESEMPIO 2020

- MULTIFOGLI
- LISTA FOGLI
- LISTA QUADRI
- LISTA COMPONENTI
- LISTA CAVI
- WM01 [Collegamento +QG -XM1 - 4G6]
- WM02 [Collegamento +QG -XM2 - 4G6]
- WM03 [Collegamento +P1 - XCn1 - 24G1]
- WM04 [Collegamento Amperometro - 5x1.5+Sch]
- WM05 [Collegamento Comandi Inverter - 12x1.5+Sch]
- WM06 [Collegamento +P1 - XCnP1 - 24G1]
- WM07 [Alimentazione lampada - 2x1.5]
- WM01 [Collegamento Motore Pinze - 4G6]
- WM02 [Collegamento Motore Carrello - 4G6]
- WM03 [Collegamento Motore Rulli - 4G6]
- WM09 [Collegamento Motore Inverter - 4G6]
- WRS232 [Porta RS232 PLC - 3x2x0.25+3G1 sk]
- WRS232_P1 [Porta RS232 PLC - 3x2x0.25+3G1 sk]
- WS07 [Collegamento +BM - XBM -

REV.	MODIFICA	DATA	PROGETTA	APP.	DATA	FILE	ES.
1							

SDProget Industrial Software

ITALY

www.sdproget.it

Esempio di SPAC Automazione Schema Elettrico

Motori

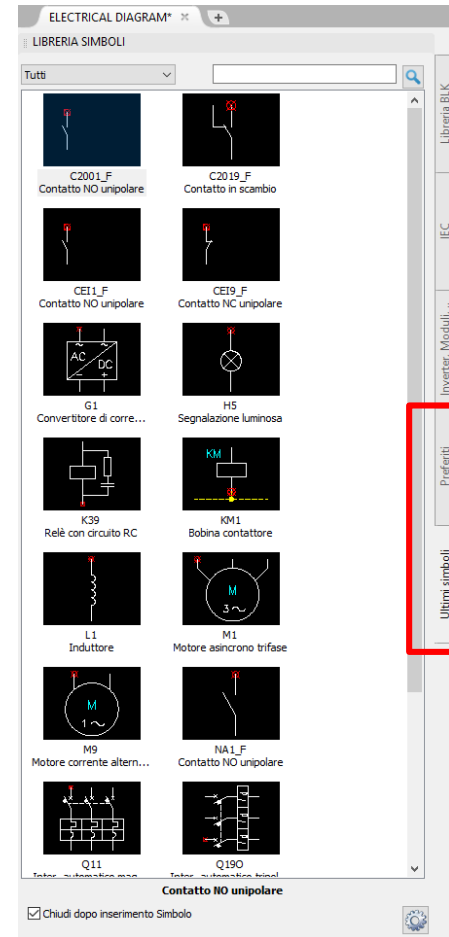
ESEMPIO SPAC

PL 05

PL 06

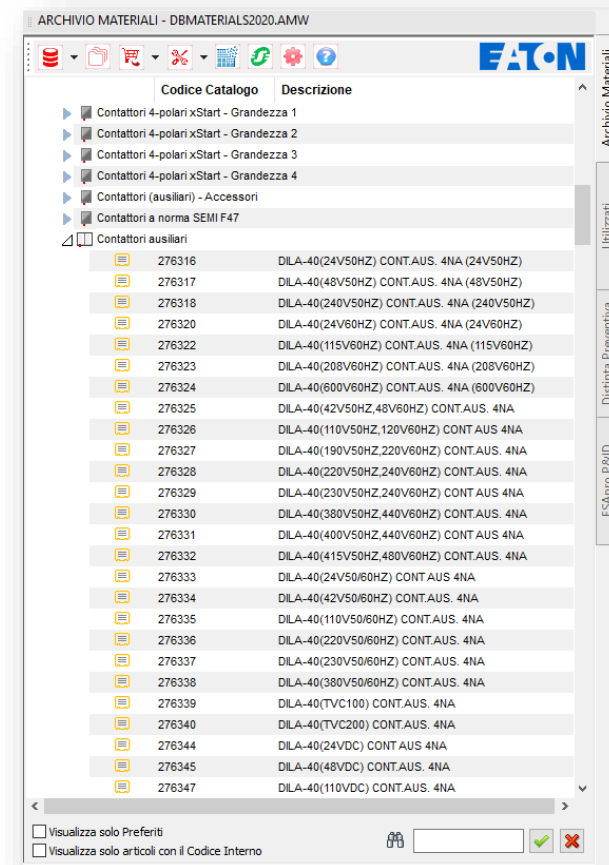
Favorites/Last Used Symbols Window

Favorites and Last Used symbols are present in the symbols general management window



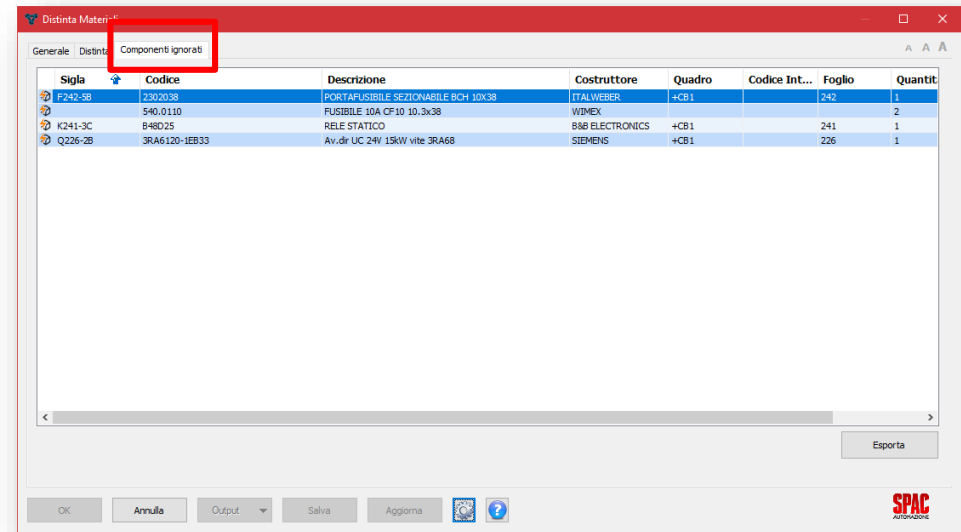
DBCcenter –Materials Management

- Display of tabulated *Tree view* to facilitate its visualization
- It is possible to delete a Macro
- It is possible to rename the Macro
- If an internal code is inserted is already used, there is a warning message
- Search is activated only if at least 3 characters are inserted



Management of Ignored Components

During the creation of the Bill of Materials, the ignored components are regrouped in a new TAB where they can be handled.



Automatic Numbering

The selection of the sheets to be numbered was transformed in a *Tree view*

Numerazione Conduttori Automatica

Numero Conduttore

Numero di Partenza 05.10

Mantieni

- ☒ Numero nei Conduttori già numerati
- ☒ Materiale nei Conduttori già numerati
- ☒ Numerazione da Modulo Cavi (Forza dati Cavo)

	Costruttore	Codice Catalogo	Codice Interno	Colore
★	None	H05V-K 1x1		
★	None	H05V-K 1x1 BK		BK
★	None	H05V-K 1x1 BN		BN
★	None	H05V-K 1x1 BU		BU
★	None	H05V-K 1x1 GNYE		GNYE
★	None	H05V-K 1x1 GY		GY
★	None	H05V-K 1x1 OG		OG
★	None	H05V-K 1x1 RD		RD

☒ Visualizza solo Preferiti
☐ Visualizza solo articoli con il Codice Interno

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OK Annulla

Numerazione Fili automatica

Fogli da elaborare

- ☒ SPAC ESEMPIO 2020 Esempio di SPAC Automazione
 - ☒ ELECTRICAL DIAGRAM Schema Elettrico
 - ☒ LAYOUT Topografici Pulsantiera e Armadio
 - ☒ 31 Fronte Pulsantiera +P1
 - ☒ 32 Retro Pulsantiera +P1
 - ☒ 33 Esterno Armadio
 - ☒ 34 Layout Interno Armadio
 - ☒ 35 Layout Interno Armadio - Vista 3D
 - ☒ 36 Bordo Macchina +BM
 - ☒ LIST Liste e Distinta Materiali
 - ☒ 37 Distinta Materiali quadro +QG
 - ☒ 38 Distinta Materiali quadro +QG
 - ☒ 39 Distinta Materiali quadro +QG
 - ☒ 40 Distinta Materiali quadro +P1
 - ☒ 41 Distinta Materiali quadro +P1
 - ☒ 42 Distinta Materiali quadro +BM
 - ☒ 43 Riserva
 - ☒ 44 Legenda Funzioni
 - ☒ 45 Legenda Funzioni
 - ☒ 46 Legenda Funzioni
 - ☒ 47 Legenda Simboli
 - ☒ 48 Legenda Simboli
 - ☒ 49 Legenda Simboli
 - ☒ 50 Riserva

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OK Annulla

PLC Bits

New parameter to define the space between bits during the drawing with *Drag/Drop*

Opzioni di configurazione

Disegno Automatico | Riconoscimento Bit | Disegno Utente

Numero Bit per foglio: 8

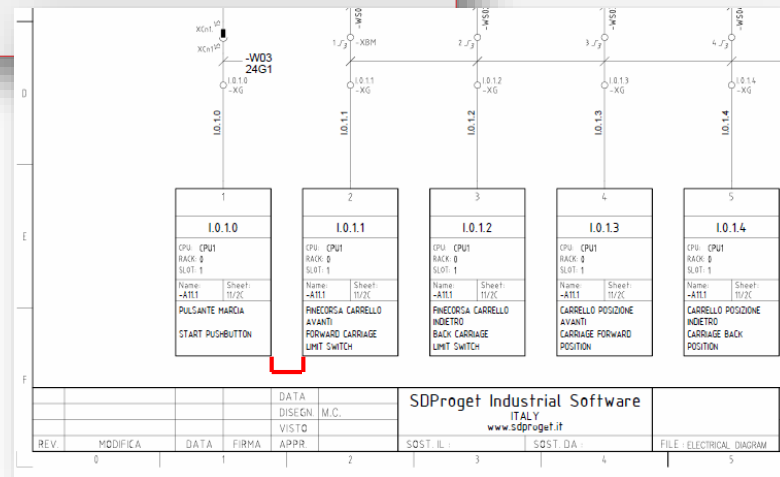
Spaziatura tra i bit: 0

Punto di inserimento Input: X 100 Y 100

Punto di inserimento Output: X 100 Y 222.5

Numero Foglio di partenza: 1

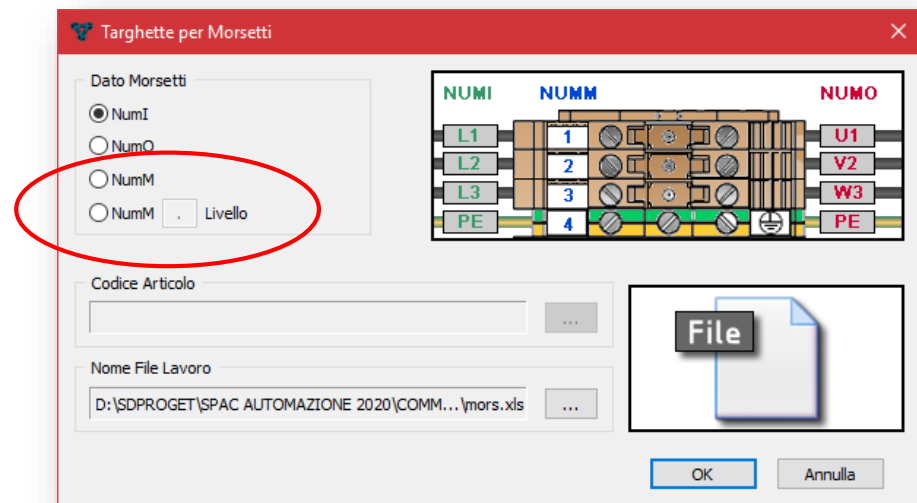
☒ Cambia/Genera Fogli in automatico



Labels Export

Export of the Labels to identify Terminals and Connectors

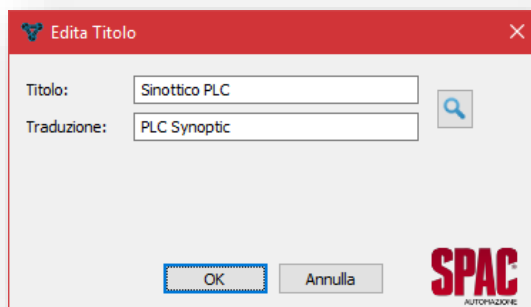
The labels to identify multi-level terminals are also exported



Sheets Titles


Radial command for the sheets titles management:

- Translation
- Edit
- Graphical changes



Creation of XLS files

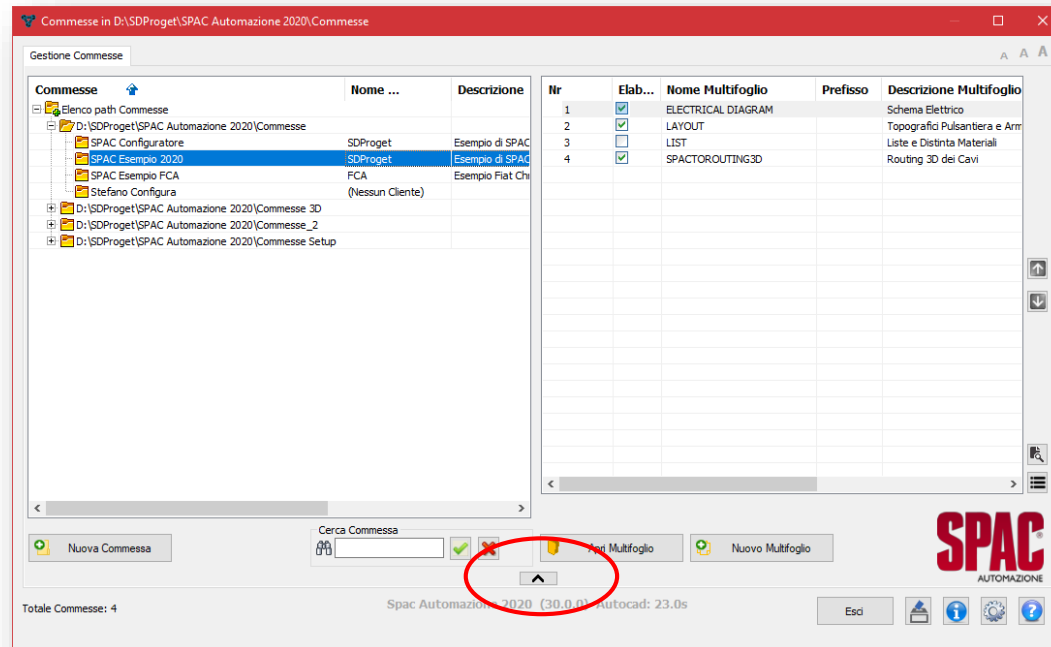
Automatic dimensioning of all the columns of the XLS outputs according to the text contained



	A	B	C	D	E	F	G
19	050PE8	Plafoniera elettronica fluorescente	Elfin	-HL03.2	+QG	03	1
20	593290240050SMA	INTERFACCIA MODULARE A RELÈ	Finder	-KA06.1	+QG	06	1
21	593290240050SMA	INTERFACCIA MODULARE A RELÈ	Finder	-KA06.2	+QG	06	1
22	593290240050SMA	INTERFACCIA MODULARE A RELÈ	Finder	-KA14.1	+QG	14	1
23	593290240050SMA	INTERFACCIA MODULARE A RELÈ	Finder	-KA14.2	+QG	14	1
24	881202300002	TEMPORIZZATORE DA INNESTO	Finder	-KT14.1	+QG	14	1
25	9026SMA	ZOCCOLO CON MORSETTI A PIASTRINA	Finder	-KT14.1	+QG	14	1
26	949430SMA	ZOCCOLO CON MORSETTI A BUSSOLA	Finder	-KA06.1	+QG	06	1
27	949430SMA	ZOCCOLO CON MORSETTI A BUSSOLA	Finder	-KA06.2	+QG	06	1
28	949430SMA	ZOCCOLO CON MORSETTI A BUSSOLA	Finder	-KA14.1	+QG	14	1
29	949430SMA	ZOCCOLO CON MORSETTI A BUSSOLA	Finder	-KA14.2	+QG	14	1
30	9980300000	MOD. DIODO (POLARITÀ STANDARD)	Finder	-KA06.1	+QG	06	1
31	9980300000	MOD. DIODO (POLARITÀ STANDARD)	Finder	-KA06.2	+QG	06	1
32	9980300000	MOD. DIODO (POLARITÀ STANDARD)	Finder	-KA14.1	+QG	14	1
33	9980300000	MOD. DIODO (POLARITÀ STANDARD)	Finder	-KA14.2	+QG	14	1
34	Fuse 10A	Fusibile 10A 8.5 x 31.3 mm	None	-FU04.1	+QG	04	1
35	18604	Int. magnetot. NG125a 3P C 100A 16kA	Schneider Electric	-QF03.1	+QG	03	1
36	19061	Sganc. emergenza MNx 220/240Vca per NG125	Schneider Electric	-FV06.1	+QG	06	1
37	19088	Manovra rotativa rinviata standard nera per NG125	Schneider Electric	-QF03.1	+QG	03	1

Projects' Management simplified

- Window simplification eliminating some TABs (commands included in the mouse right button menu)
- Inserted a button to extend / reduce the lower part of the window related to OPERA and the PDM optional modules



Projects Configurator Improved

The «Machine Configurator» command focuses on a graphic editor subdivided in 3 parts:

1) Definition of Machine Options.

Preparation phase of the Master scheme with the association of the options to the sections of the scheme

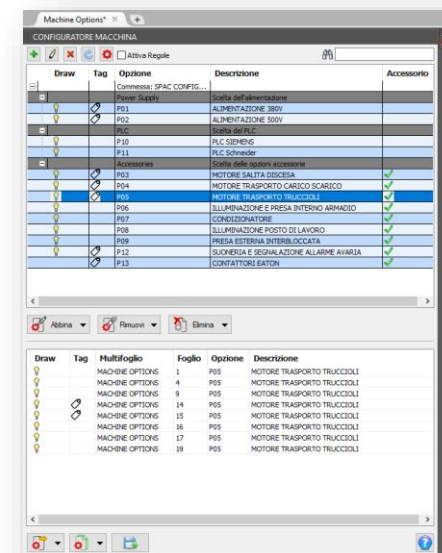
2) Machine configuration

Selection phase of the options for the final machine configuration and for the automatic creation of the schemes.

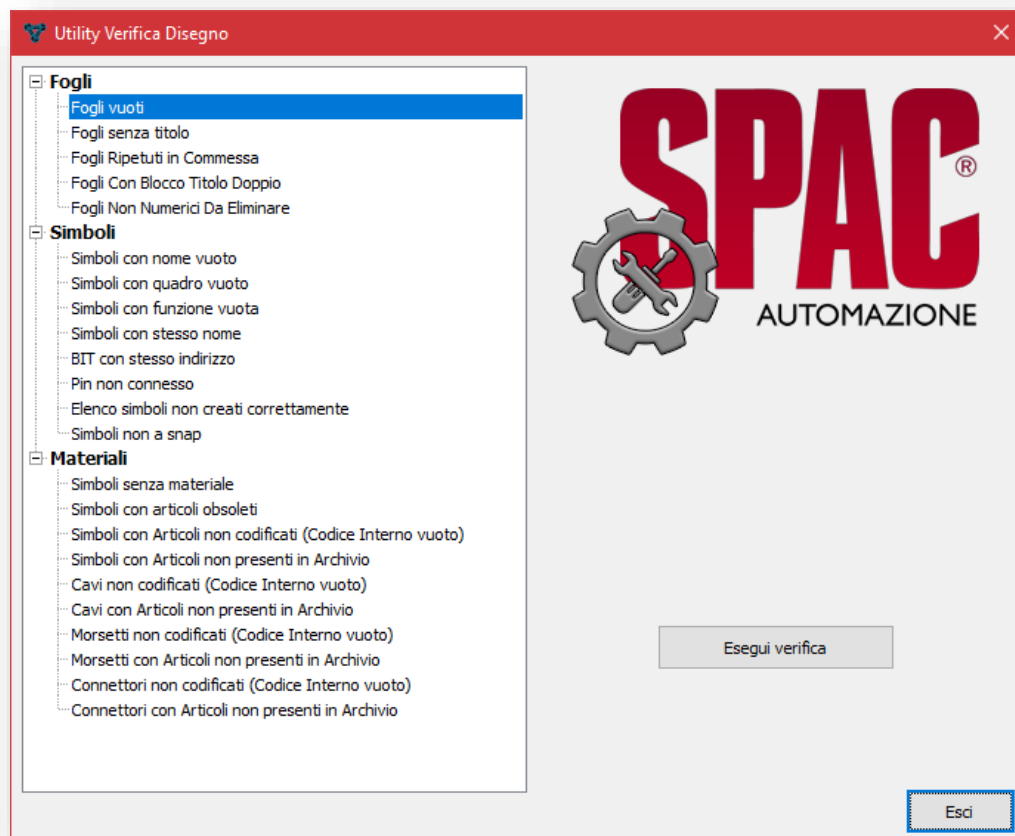
Memorize the XML file with the selected options.

3) Scheme Generation

Effective generation of the final scheme by processing the XML file



Scheme Control utilities



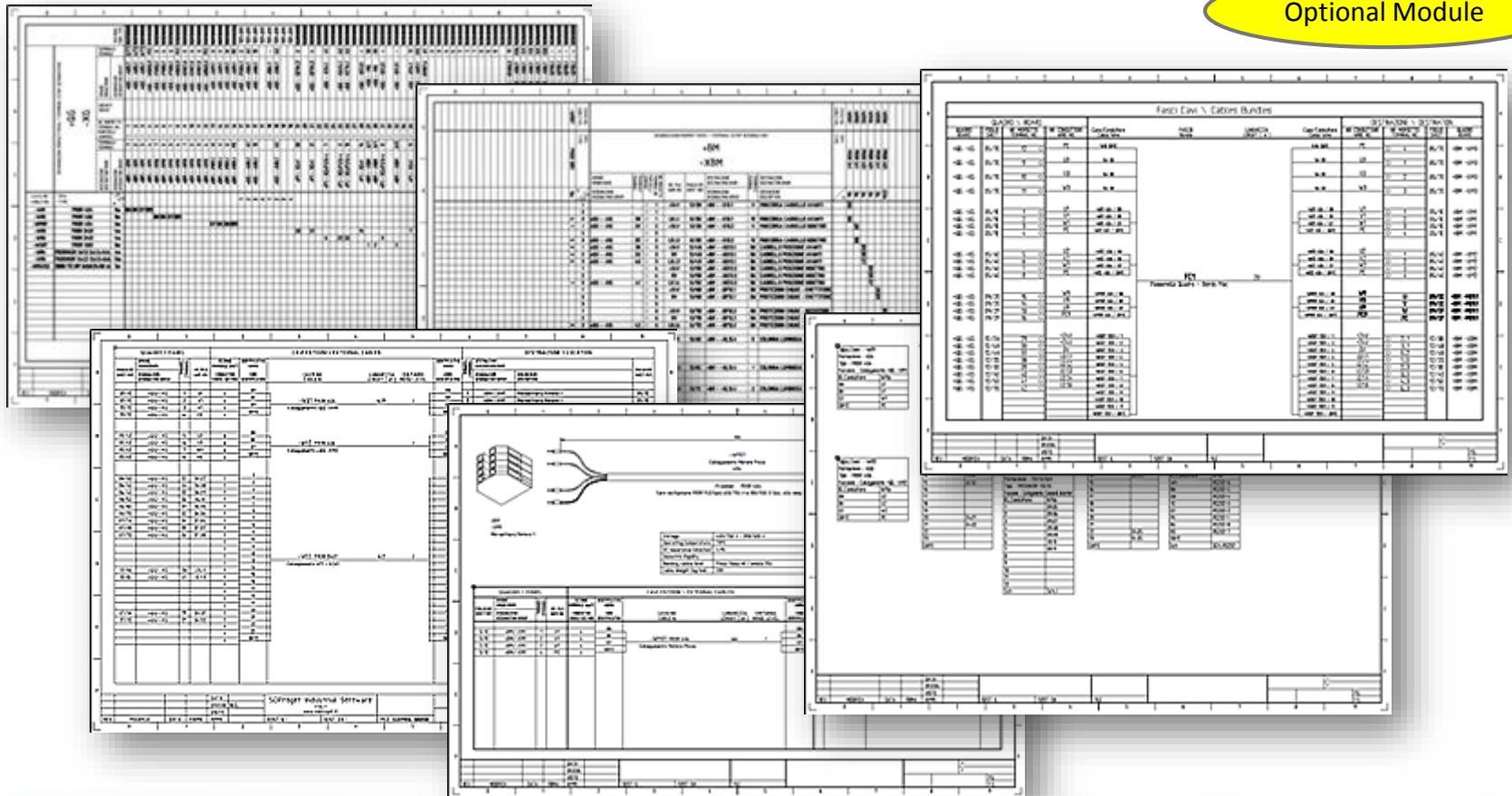
Automatic controls for the main errors committed while drawing the schemes.

Creation of graphical and XLS reports

Outputs and Reports Update

All reports are updated automatically

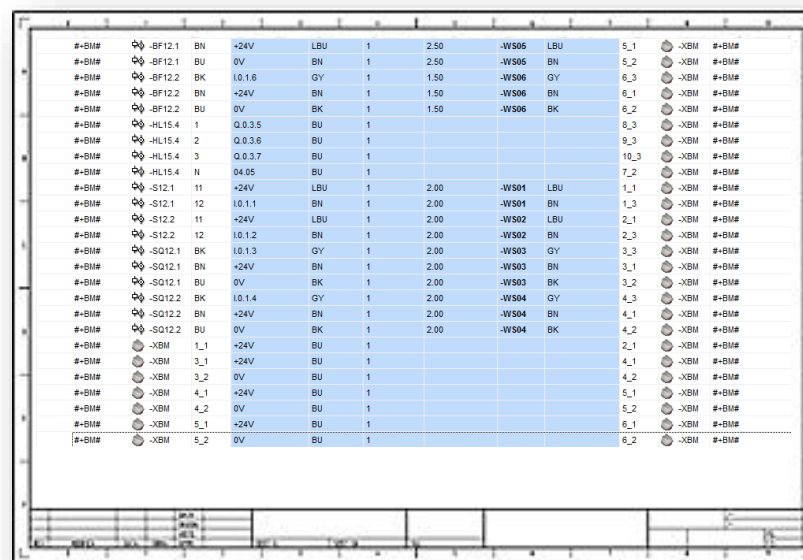
Optional Module



New Graphical Reports

New Tabular graphic report that summarizes the data of the «Connections Management» command.

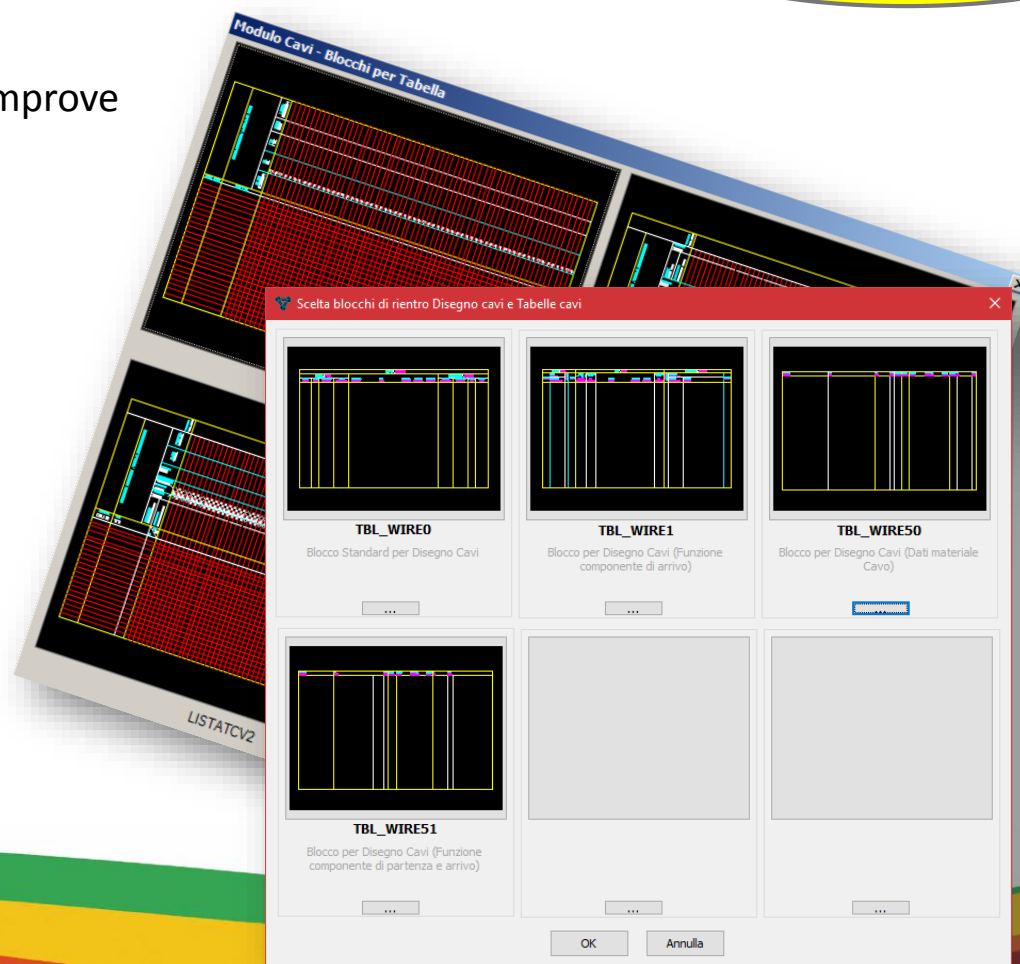
It is possible to filter the connections to be indicated in the design table



#-BIM#	⊕	-BF12.1	BN	+24V	LBU	1	2.50	-WS05	LBU	5_1	⊗	-XBM	#-BIM#
#-BIM#	⊕	-BF12.1	BU	0V	BN	1	2.50	-WS05	BN	5_2	⊗	-XBM	#-BIM#
#-BIM#	⊕	-BF12.2	BK	10.1.6	GY	1	1.50	-WS06	GY	6_2	⊗	-XBM	#-BIM#
#-BIM#	⊕	-BF12.2	BN	+24V	BN	1	1.50	-WS06	BN	6_1	⊗	-XBM	#-BIM#
#-BIM#	⊕	-BF12.2	BU	0V	BK	1	1.50	-WS06	BK	6_2	⊗	-XBM	#-BIM#
#-BIM#	⊕	-HL15.4	1	Q.0.3.5	BU	1				8_3	⊗	-XBM	#-BIM#
#-BIM#	⊕	-HL15.4	2	Q.0.3.6	BU	1				9_3	⊗	-XBM	#-BIM#
#-BIM#	⊕	-HL15.4	3	Q.0.3.7	BU	1				10_3	⊗	-XBM	#-BIM#
#-BIM#	⊕	-HL15.4	N	04.05	BU	1				7_2	⊗	-XBM	#-BIM#
#-BIM#	⊕	-S12.1	11	+24V	LBU	1	2.00	-WS01	LBU	1_1	⊗	-XBM	#-BIM#
#-BIM#	⊕	-S12.1	12	10.1.1	BN	1	2.00	-WS01	BN	1_3	⊗	-XBM	#-BIM#
#-BIM#	⊕	-S12.2	11	+24V	LBU	1	2.00	-WS02	LBU	2_1	⊗	-XBM	#-BIM#
#-BIM#	⊕	-S12.2	12	10.1.2	BN	1	2.00	-WS02	BN	2_3	⊗	-XBM	#-BIM#
#-BIM#	⊕	-SQ12.1	BK	10.1.3	GY	1	2.00	-WS03	GY	3_3	⊗	-XBM	#-BIM#
#-BIM#	⊕	-SQ12.1	BN	+24V	BN	1	2.00	-WS03	BN	3_1	⊗	-XBM	#-BIM#
#-BIM#	⊕	-SQ12.1	BU	0V	BK	1	2.00	-WS03	BK	3_2	⊗	-XBM	#-BIM#
#-BIM#	⊕	-SQ12.2	BK	10.1.4	GY	1	2.00	-WS04	GY	4_3	⊗	-XBM	#-BIM#
#-BIM#	⊕	-SQ12.2	BN	+24V	BN	1	2.00	-WS04	BN	4_1	⊗	-XBM	#-BIM#
#-BIM#	⊕	-SQ12.2	BU	0V	BK	1	2.00	-WS04	BK	4_2	⊗	-XBM	#-BIM#
#-BIM#	⊗	-XBM	1_1	+24V	BU	1				2_1	⊗	-XBM	#-BIM#
#-BIM#	⊗	-XBM	3_1	+24V	BU	1				4_1	⊗	-XBM	#-BIM#
#-BIM#	⊗	-XBM	3_2	0V	BU	1				4_2	⊗	-XBM	#-BIM#
#-BIM#	⊗	-XBM	4_1	+24V	BU	1				5_1	⊗	-XBM	#-BIM#
#-BIM#	⊗	-XBM	4_2	0V	BU	1				5_2	⊗	-XBM	#-BIM#
#-BIM#	⊗	-XBM	5_1	+24V	BU	1				6_1	⊗	-XBM	#-BIM#
#-BIM#	⊗	-XBM	5_2	0V	BU	1				6_2	⊗	-XBM	#-BIM#

New Graphical Reports

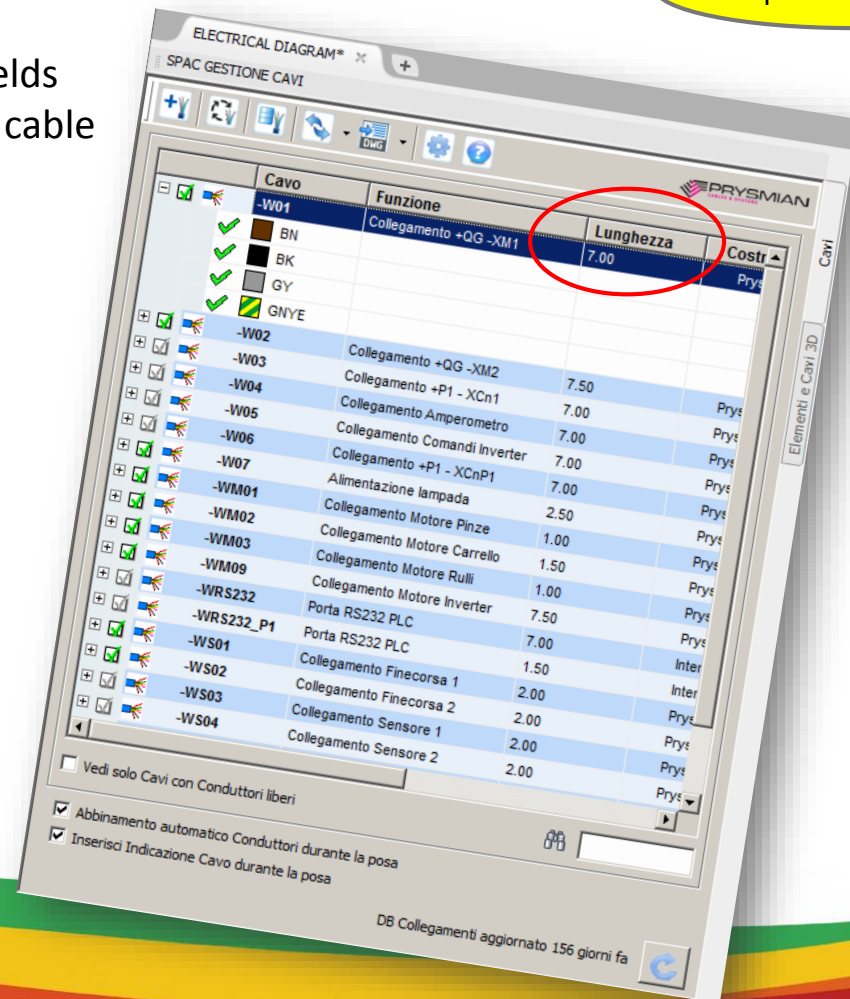
New tables for the main report to improve documentation quality



Fast fields edition

Improved editing operations of some fields
consenting their execution from the main cable
window.

(field length for example)



Cables Dimensioning

Optional Module

Dimensionamento del Cavo -W02 secondo la Norma IEC 60364-5-52:2009

Alimentazione
Tensione di alimentazione V Tipologia di alimentazione
Temperatura ambiente
Temperatura °C


☐ **Corrente nominale o valore regolato (In) del dispositivo di protezione**
In mancanza di un valore per la corrente nominale o valore regolato (In) del dispositivo di protezione la procedura di calcolo non può garantire che la portata (Iz) del Cavo soddisfi la relazione $I_b < I_n < I_z$

Cavo
Tipologia di Cavo Lunghezza m Numero di Cavi posati insieme nella stessa tubazione o canalina o passerella
Materiale conduttore ☒ Rame ☐ Alluminio Tipologia di isolante ☒ PVC (70°C) ☐ XLPE / EPR (90°C)
Tipologia di posa
☒ Posato in tubazione su parete o in canalina chiusa o in canali incassati nel pavimento ☐ Posato direttamente su parete o su passerella portacavi non traforata ☐ Posato su passerella portacavi traforata o a rete o su staffe

Carico
Potenza assorbita W Fattore di potenza Massima caduta di tensione accettabile sul carico %
Coefficiente di sicurezza
Maggiorazione %

Risultati del dimensionamento
Sezione del mm² Tensione sul carico V
Corrente assorbita (Ib) A Caduta di tensione (dV) %
Portata del Cavo (Iz) A

 Installare un dispositivo di protezione con corrente nominale (In) compresa tra 3.61 A e 9.75 A



New feature Cables Module 8 to dimension cables according to IEC 60364-5-52: 2009.

Cables Dimensioning

The information required for the cable dimensioning is:

- ☐ Supply voltage upstream the cable
- ☐ Type of power supply (direct current, single phase AC, three phase AC)
- ☐ Cable length
- ☐ Nominal current I_n (or regulated value) of the protection device upstream the cable
- ☐ Type of cable conductor (copper or aluminum)
- ☐ Type of cable insulation (PVC or XLPE / EPR)
- ☐ Type of cable routing (for example, in pipes, walls, cable trays, etc.)

The following elements are considered for the correct cable dimensioning:

- ☐ The ambient temperature at which the cable will be used
- ☐ The number of cables laid together in the same pipe, pipe or cable tray.

Depending on the load connected and the maximum acceptable voltage drop, it is calculated:

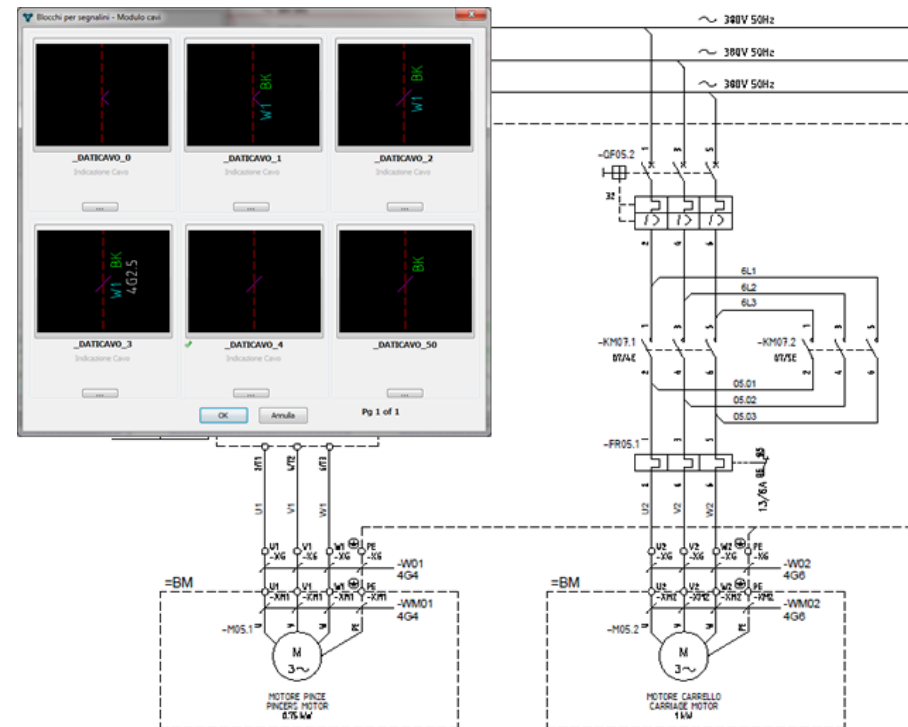
- ☐ The proper section to use for the cable
- ☐ The current absorbed by the load (I_b)
- ☐ The maximum current that the cable can support (I_z)
- ☐ The effective load voltage

Cables Indications

Optional Module

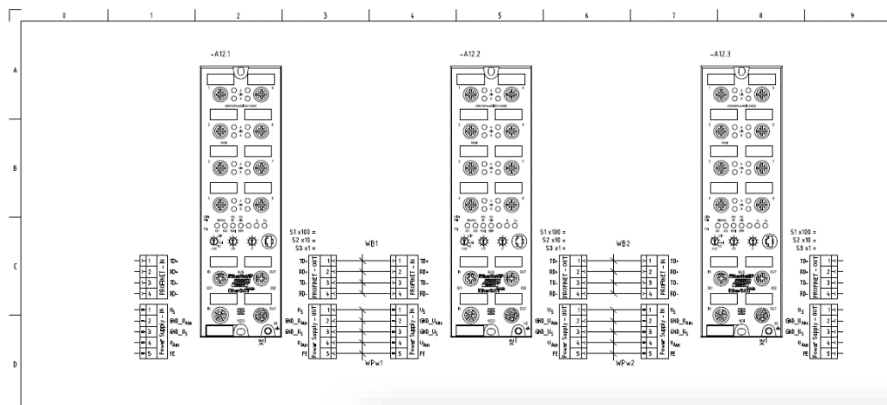
The indications, used to show the connections associated with a multipolar cable in the design, have been simplified: The selection of one or more connections is available at the beginning of the command and the options are presented only if requested by pressing Enter.

When selecting connections with associated Cable Markers, the cable indication is automatically completed, otherwise it is required a manual information collection.



Assemblies

Although it was already present in the previous version of the Cables Module, assembly management has been completely revised to make it easier to use and to offer new features to SPAC users



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Optional Module

Modulo Cavi - Definizione e inserimento Assemblati

Gli Assemblati inseriti nello schema di Spac sono utilizzabili in Cabling per creare i disegni costruttivi dei Cavi e dei Cablaggi. Definire un nuovo Assemblato o sceglierne uno esistente. Sono obbligatori Sigla e Quadro. Per Codice, Costruttore e Tipo potete: scegliere dall'archivio materiali di Cabling, dove personalizzate un Assemblato già definito - creare di nuovi per realizzare in Cabling un nuovo Assemblato da disegnare e codificare - non definiti per realizzare in Cabling un Assemblato che non è necessario codificare

Sigla	Quadro	Funzione	Codice Interno	Costruttore	Codice	Usato
WB1	+QG	Bus		Weidmuller	1025950015	Si
WB2	+QG	Bus		Weidmuller	1025950015	Si
WPw1	+QG	Power Supply		Weidmuller	2455300150	Si
WPw2	+QG	Power Supply		Weidmuller	2455300150	Si

Descrizione Cavo di alimentazione, Linea di collegamento, M12 / M12, Numero di poli : 5

☒ Inserisci indicazione

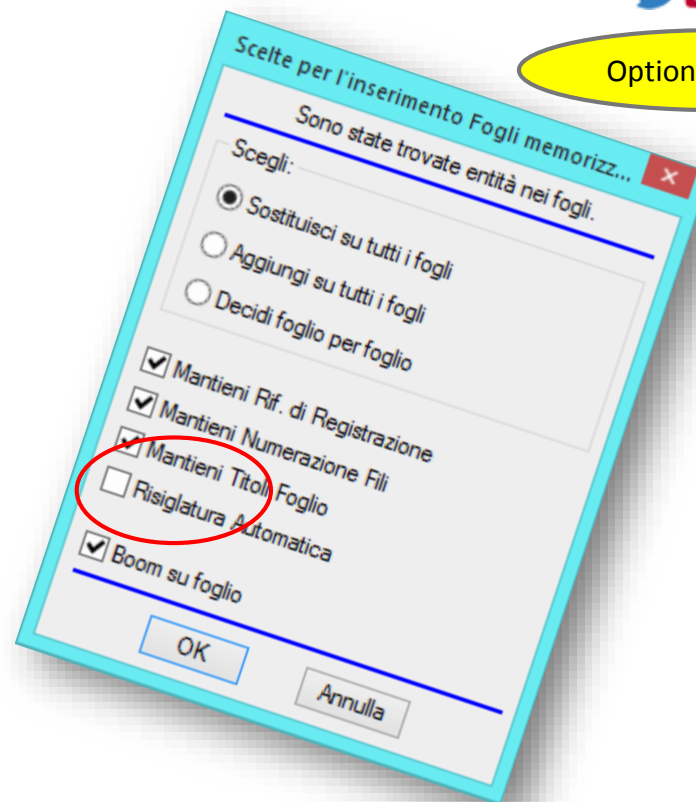
Abbina sul disegno

Fine

Insert Memorized Sheets

If there are markers that identify multipolar and assembled cables on the memorized sheets, the command "Insert Memorized Sheet" resets automatically the inserted Bookmarks in case the "Auto Rename" option is enabled.

This avoids the creation of duplicates that had to be modified one by one previously.



Schemes Connections Control



Optional Module

SPAC users want to obtain information about the connections. Data can be used in different areas: For cable routes in the box, to pass information to CABLING to design a special cable, to generate a file for automatic cutting machines, etc.

The new connection control function ensures that the scheme has been designed correctly and indicates any possible error. For example, a thread designed but not connected at the source or destination is not shown in the Reports, which can cause errors during the system assembly or commissioning.

In the Error Report, the following information can be found:

- Connection not connected to the origin or destination
- Connection with absent or null origin or destination PIN
- Completely insulated connection
- Connection with inconsistent material data
- Others...

3D Cables Length Simulator

Cable routing and length calculation

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Optional Module

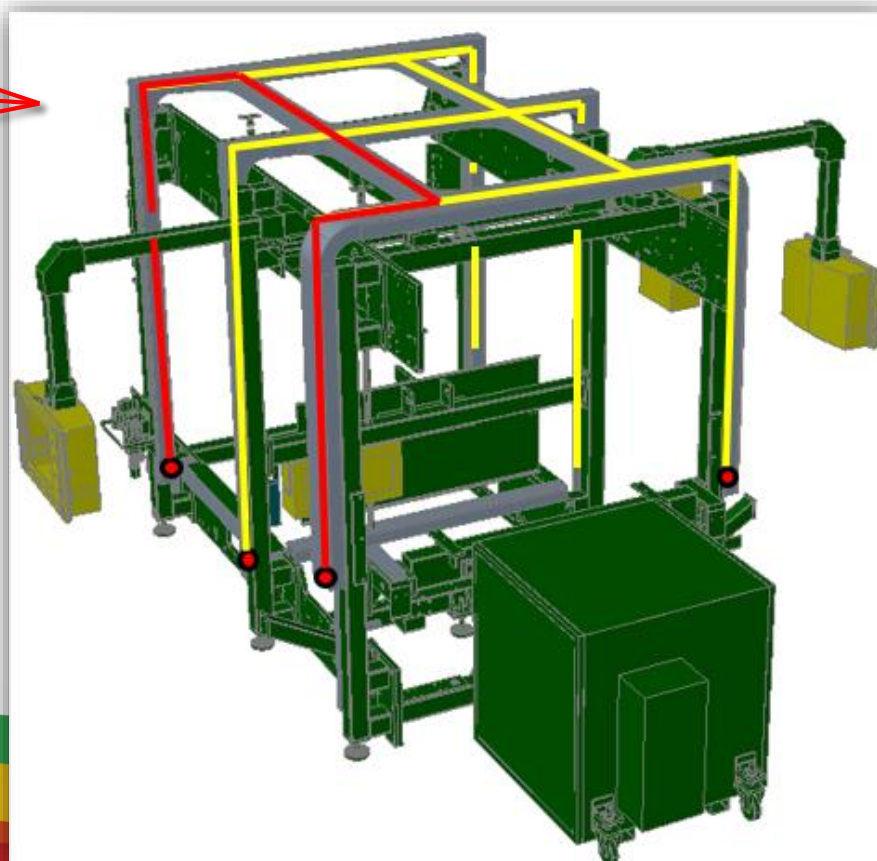
SPAC GESTIONE CAVI

	Nome	Funzione	Lunghezza	
[-]	BM			
[-]	FTC1			
[-]	W1	Cavo1	5.5 mt	[+]
[-]	FTC2			
[-]	W2	Cavo2	4.5 mt	[+]
[-]	FTC3			
[-]	W3	Cavo3	7.0 mt	[+]
[-]	QG			
[-]	XM1	Morsettiera generale		
[-]	W1	Cavo1		[+]
[-]	W2	Cavo2		[+]
[-]	W3	Cavo3		[+]

SPAC analyzes the model and obtains the wires length defining the optimal route.

If necessary, routes can be forced manually.

Cables routing of the to obtain the correct lengths



Dynamic 3D PDF



Optional Module



The 3D PDF is created with the information contained in SPAC.

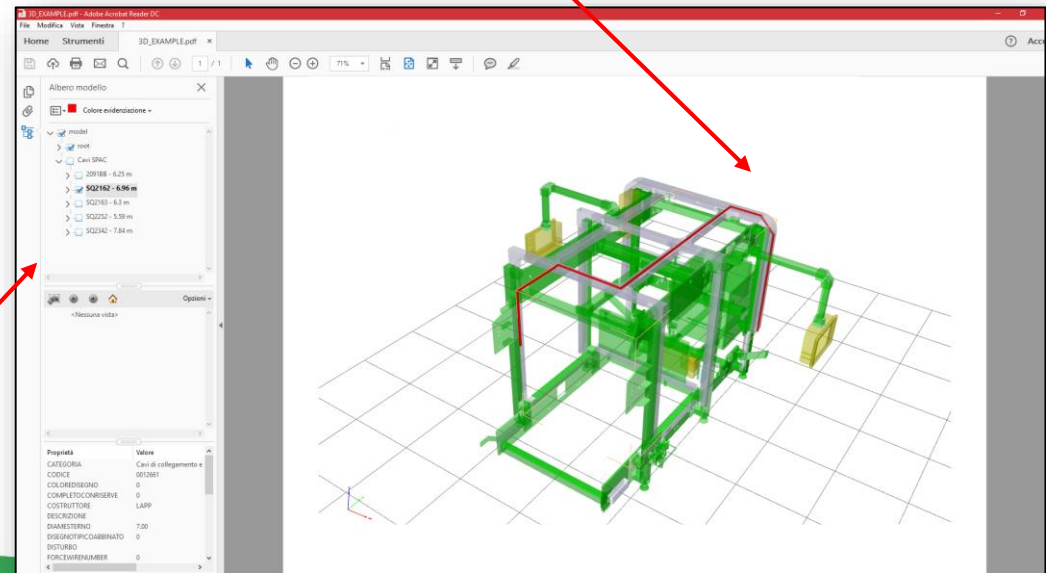
It is possible to consult the data and navigate in the Model.

The file can be viewed with Acrobat Reader.

Useful document for the wiring and for the machine operation manual.

3D Model

Treeview to navigate SPAC data



OPERA Industry

With Opera 4 SPAC schemes are available on the Smartphone



Optional Module

The Opera 4 SPAC Plug-In connects the design office with the installer and plant maintenance staff.

The schemes are visible on smartphones and eventual annotations made on the field will remain in the project

Using the App in the field, it is possible to consult the electrical scheme and insert comments in the project that will be visible using the SPAC program later



Real Time, Real Team, Real Benefits

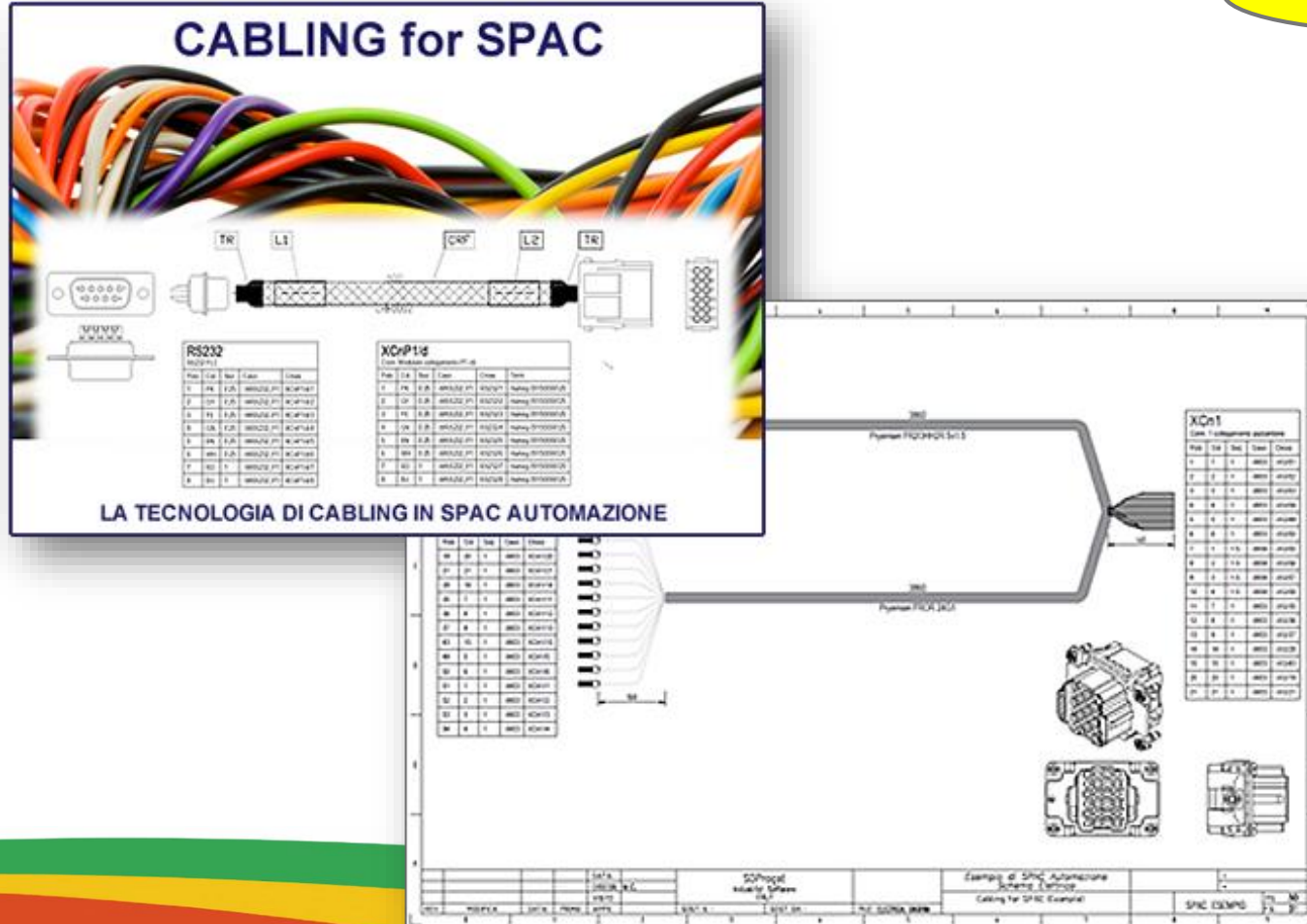
Cabling for SPAC

To design efficiently cable construction schemes



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C4S

Optional Module



PDM Module

Compatible with Vault and other PDM/PLM/ERP



Optional module for the interface between SPAC and PDM / PLM Software
to execute the basic communication operations between the systems

Optional Module

Standard features for the Project's management

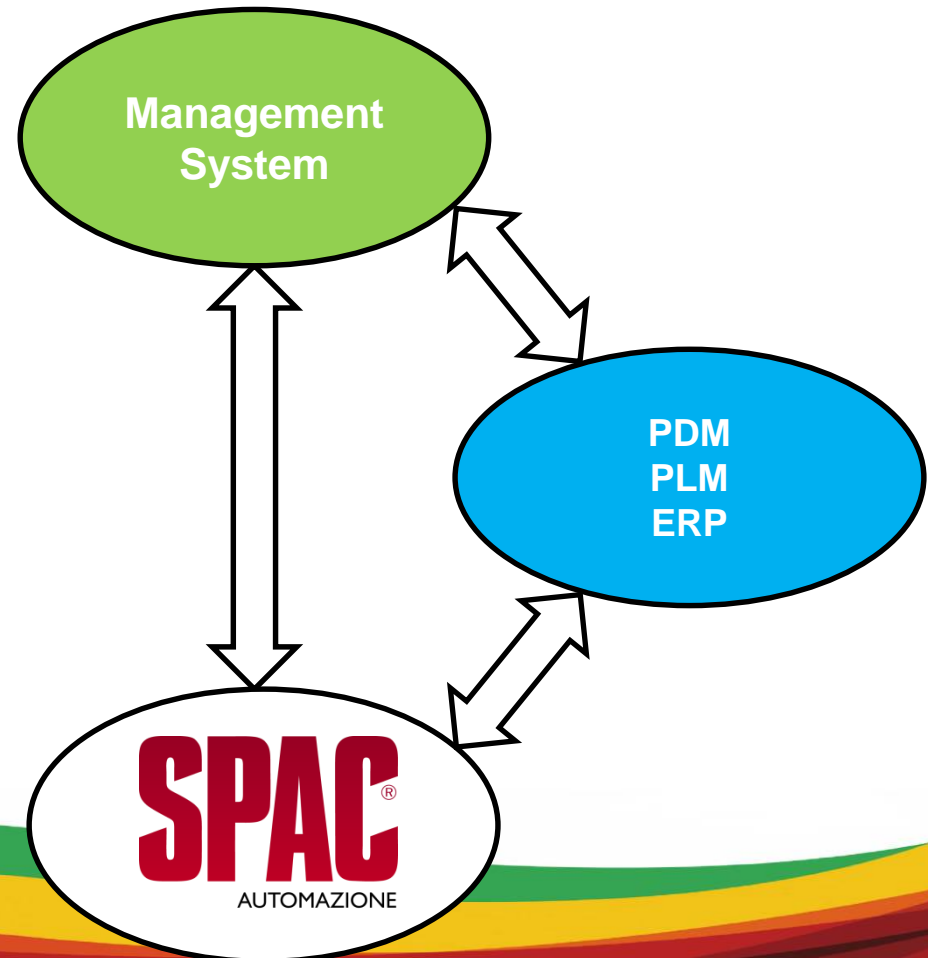
Project Check-In

Project Check-Out

PDF creation to share the visualization

Bidirectional data Exchange to update
Project data

Sent the Bill of Materials to the
documentation management system



PDM Module

Advanced features to execute operations and perform automatic processing in SPAC without the designer intervention.



Optional Module

Create and Open a Project

Alignment of SPAC Material Archive and
the Archive in the Management System

Processing

[Machine Configurator – Scheme generator](#)

[Project Translation](#)

[Substitution of SingleFeed Cables](#)

[Substitution of Multipolar Cables](#)

[Data update in the Marco](#)

[Data Update in the Blocks](#)

[Import Materials from archive](#)

[Scan Multi-Sheets](#)

[Scan Cables Module Connections](#)

[Sheets Numbering](#)

[Cross-Reference](#)

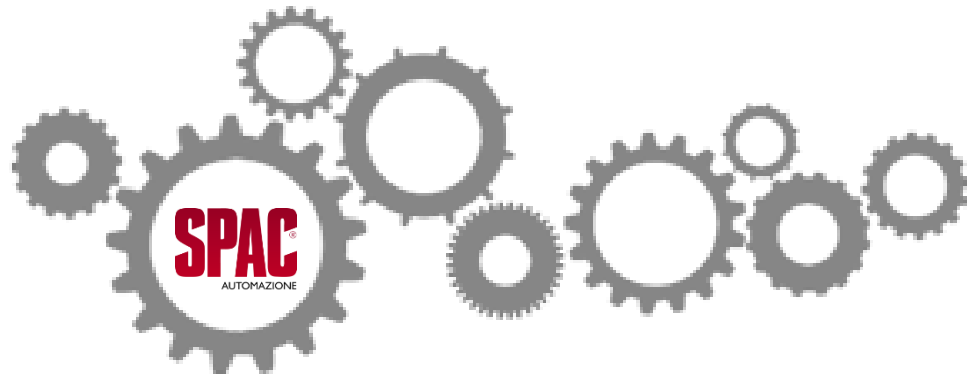
[Update Lists and Tables](#)

[Bill of Materials](#)

[Compress Project in ZIP file](#)

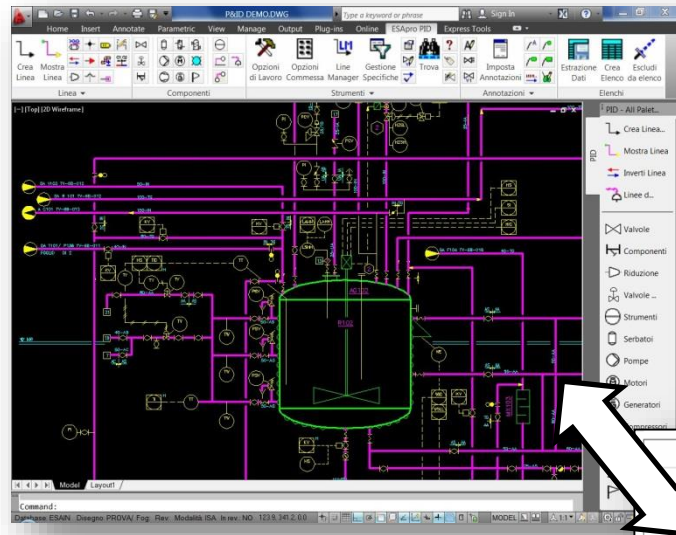
[Printing and PDF](#)

[Extract Labels](#)

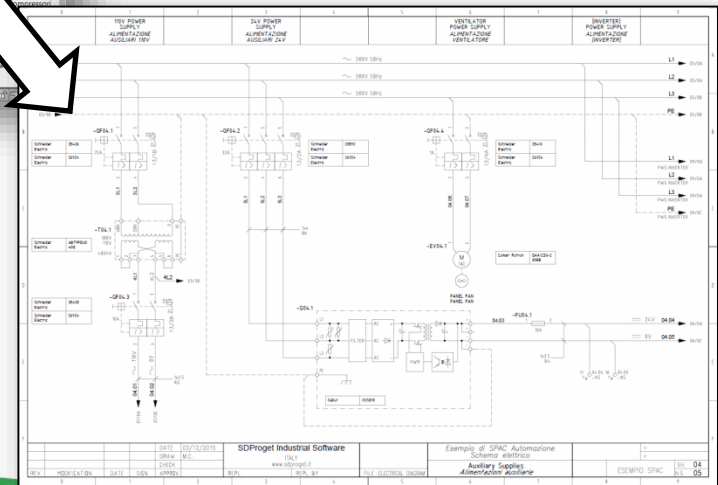


Interface SPAC and ESAPro P&ID

ESAPro P&ID facilitates the scheme design and shows automatically shows the list of lines, valves and instruments.



Integration between **process** design and **electrical** design, transferring electrical equipment and instrumentation data to **SPAC Automazione** Software

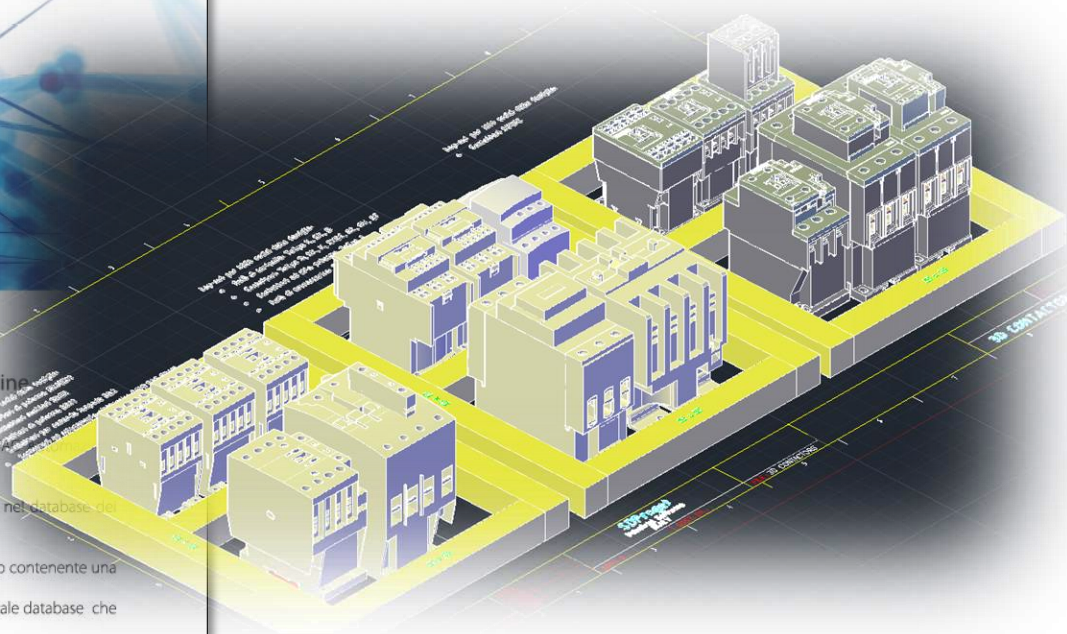


SPAC Data Web

Library of electrical components that can be synchronized on-line



New 3D Libraries



SPAC Data Web

La più vasta libreria di componenti elettrici sincronizzabile online

SPAC Data Web è il servizio di aggiornamento del database dei componenti di SPAC Automazione mediante sincronizzazione online.

Il continuo evolversi dei materiali elettrici fa sì che l'aggiornamento dei dati presenti nel database dei componenti sia diventato un argomento chiave per la progettazione efficiente.

SPAC Automazione dispone, al momento dell'installazione, di un database predefinito contenente una selezione di componenti di alcuni dei principali costruttori di materiale elettrico. Nel corso dell'anno SDProget provvede ad aggiornare ed arricchire sistematicamente tale database che sarà possibile aggiornare con pochi click direttamente all'interno del software.

Per mantenere efficiente e sempre aggiornato il database dei componenti del tuo SPAC Automazione è sufficiente sottoscrivere un contratto di assistenza e sincronizzare periodicamente SPAC Data Web.



OMRON

SIEMENS



Have a nice working experience with SPAC Automazione



Software to design and document electrical schemes



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