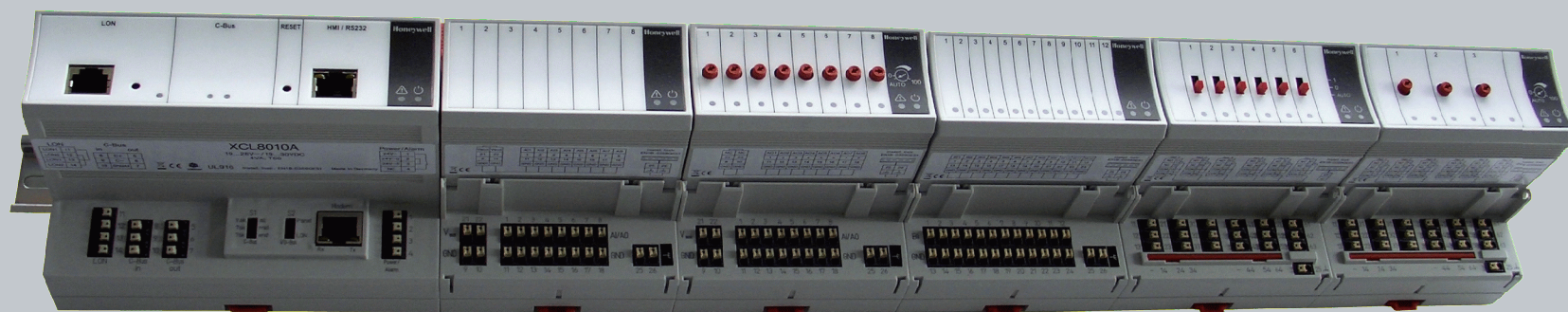


Excel 800

Technical Instruction



Honeywell

Excel 800

Index

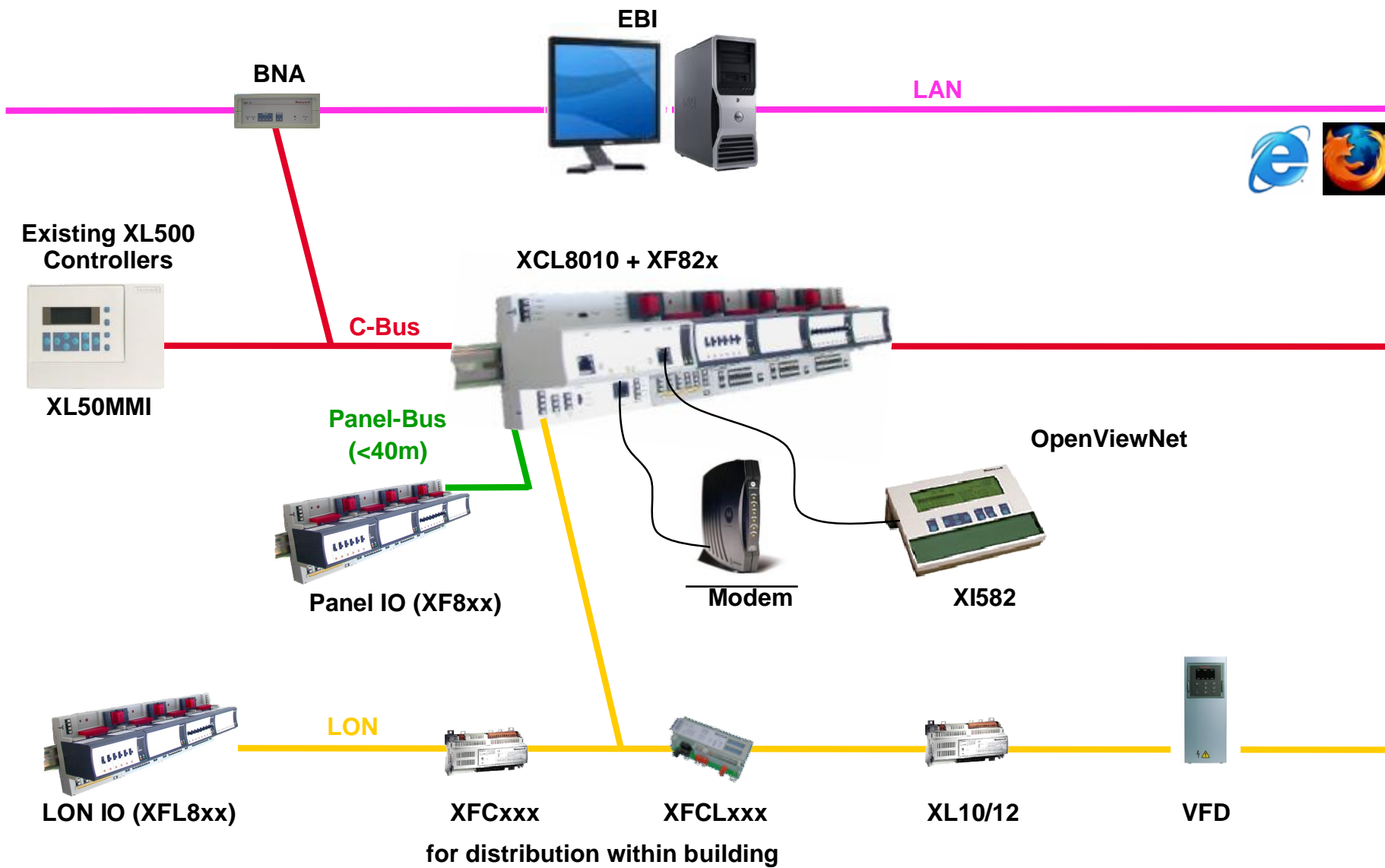
Honeywell

- **Index**
 - **Introduction**
 - **Overview**
 - ◆ System Overview
 - ◆ Parts Overview
 - **Excel 800 Controller**
 - **Excel 800 IO Modules**
 - **CARE**
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 - **Bus Wiring**
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 - ◆ LON
 - ◆ Panel Bus
 - **Hands On**
 - ◆ Floating Output
 - Wiring
 - Auto mode / safety position
 - Manual override
 - ◆ Upgrading from XL500
 - ◆ Do you own application
 - **Feed-back**

Excel 800

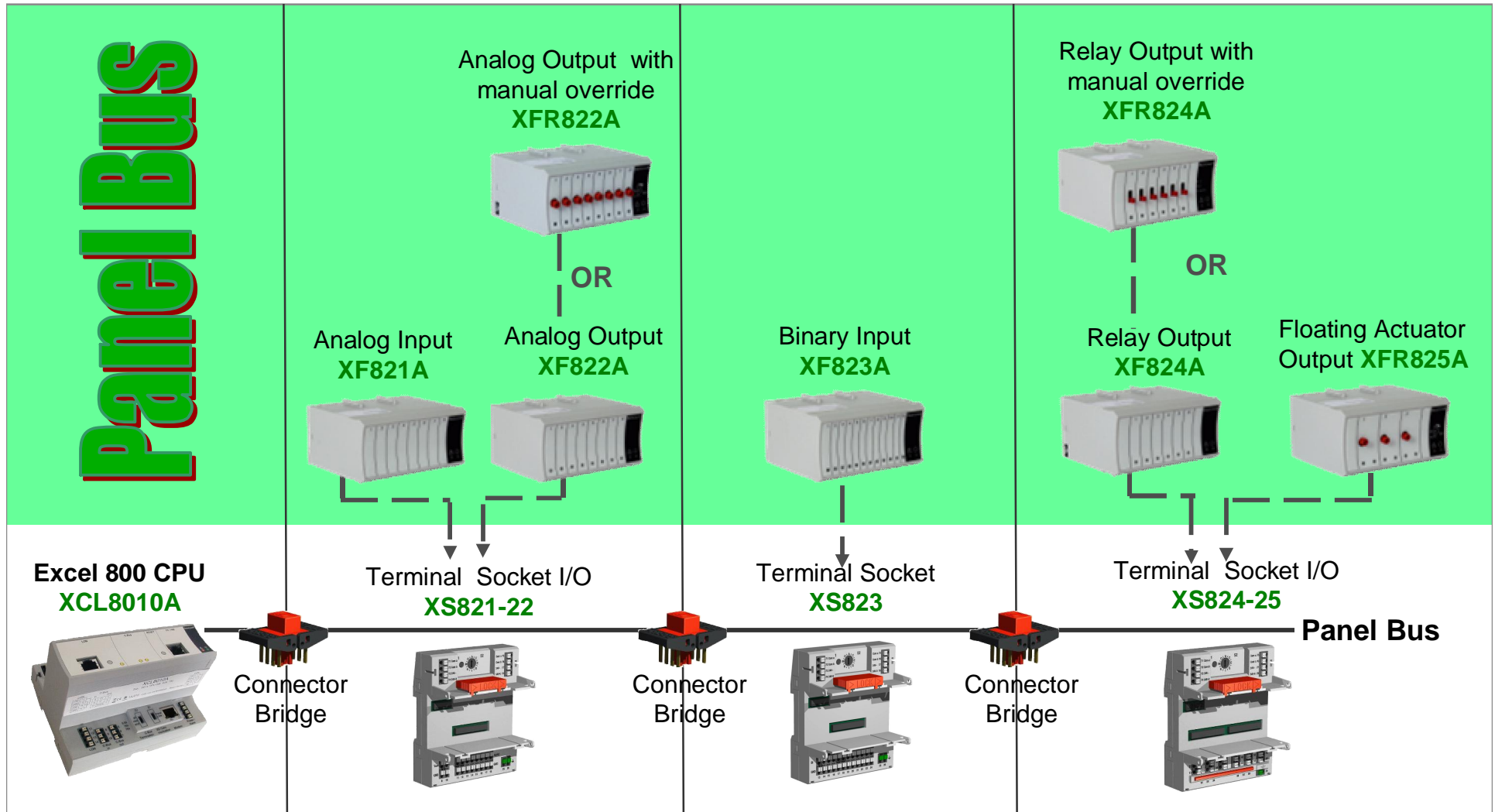
System Overview

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- **The system release includes the following products:**
 - **Excel 800 controller and IO module:** **already released**
 - **CARE/XL-ONLINE 7.02.00b140:** **already released**
 - **EXCELON 3.06b33:** **already released**
 - **XL Toolkit 7.05:** **already released**
 - **EBI Support:** **already released**
 - **XBS Support:** **already works except download
into controller; XBS 1.7.1 will
support also download**

- Components of Excel 800 system – Panel Bus



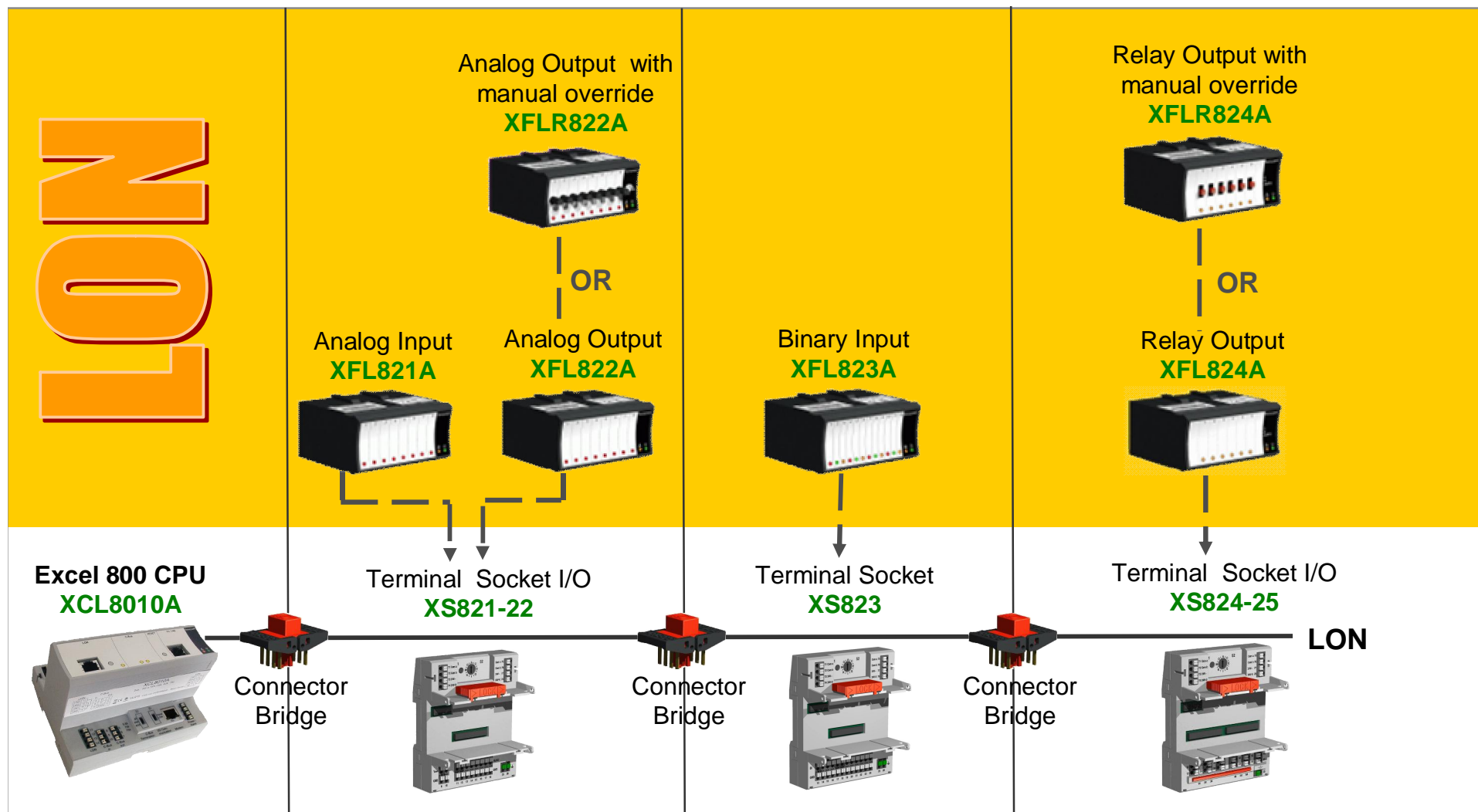
No connector module like XSL511 needed!

Excel 800

Parts Overview

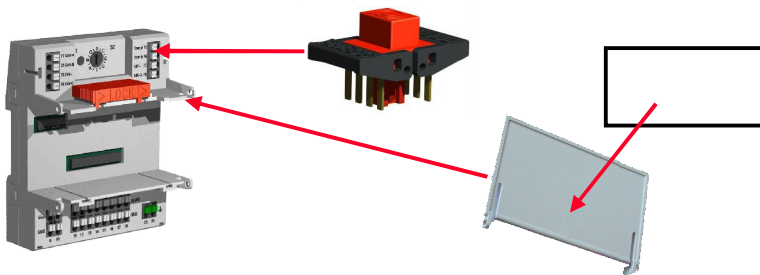
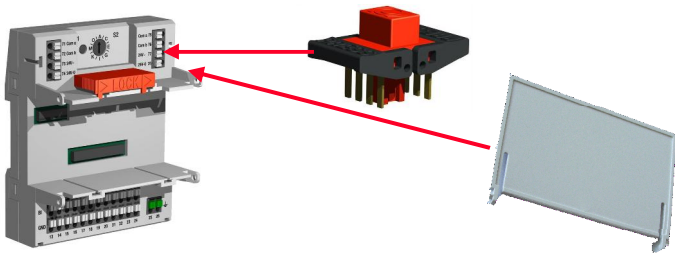
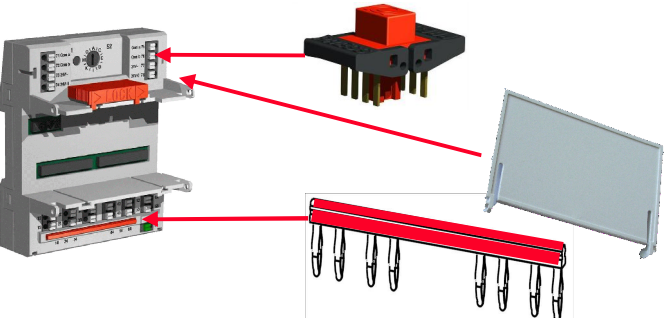
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• Excel 800 Parts Overview – LON



No connector module like XSL511 needed!

• Components of Excel 800 system – Terminal Socket Shipment

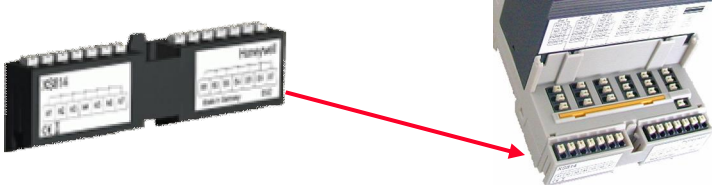
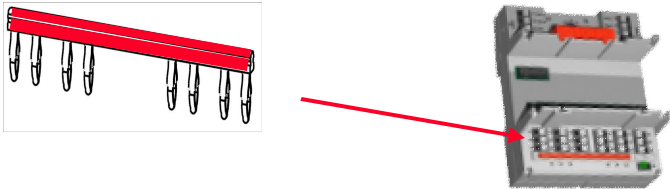
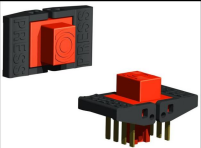


Number	Content	Figure
XS821-22	Includes: 1 Terminal Socket 1 Connector Bridge 1 Swivel Label	 <p>Standard Adhesive Labels Avery© Zweckform©, INKJET Universal Labels No. 3669</p>
XS823	Includes: 1 Terminal Socket 1 Connector Bridge 1 Swivel Label	
XS824-25	Includes: 1 Terminal Socket 1 Connector Bridge 1 Swivel Label 1 Cross Connector	

Excel 800

Parts Overview

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• Components of Excel 800 system – Auxiliary Parts

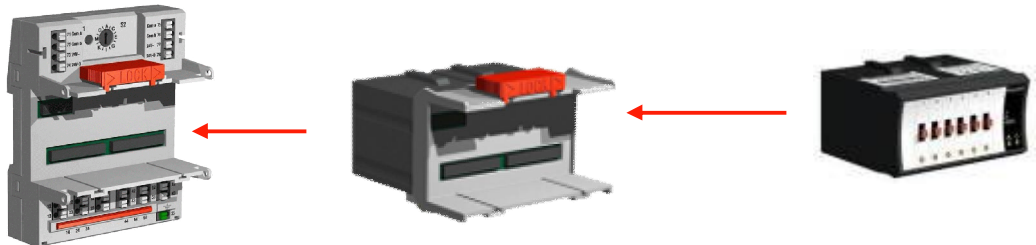
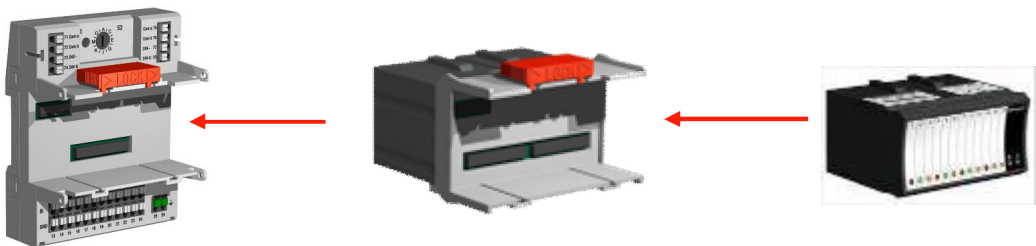
Number	Content	Information	Figure
XS814	Includes: 10 auxiliary terminals blocks	2 rows of 7 terminals connected to each other for redistributing voltage	 <p>Plugable on XS821-22 XS823 XS824-25</p>
XS815	Includes: 20 cross connectors	Connects all terminals to save time + risk of wiring each terminal	 <p>Plugable on XS824-25</p>
XS816	Includes: 10 connector bridges	Connects both CPU with socket and sockets with each other, to plug in only	 <p>Plugable on XCL8010A XS821-22 XS823 XS824-25</p>
XS817	Includes: 40 short cross connectors	Connects 3 relays, e.g. 2 relay groups with different voltage	 <p>Plugable on XS824-25</p>
XAL10	Includes: 10 swivel labels	To be plugged in socket construction to label socket	 <p>Plugable on XS821-22 XS823 XS824-25</p>

Excel 800

Parts Overview

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- Components of Excel 800 system – Manual Disconnecter Modules

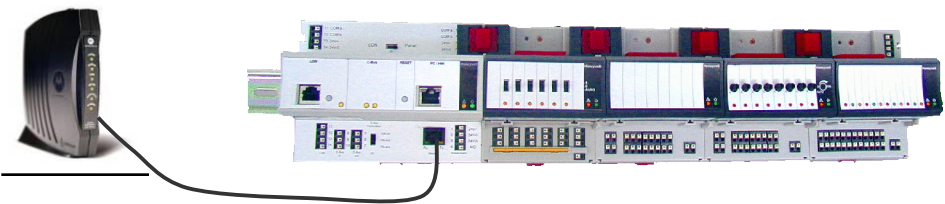

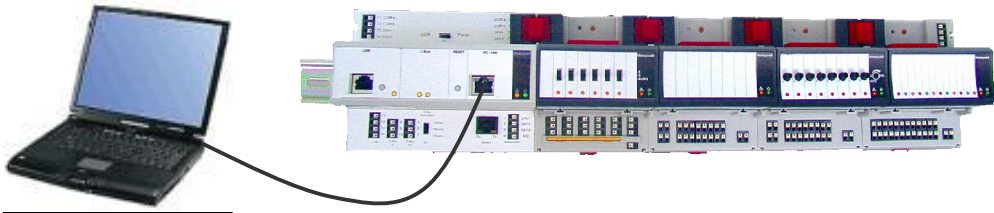
Order Number	Drawing	Information
XS812RO Disconnecter for Relay Output modules Will be available end of April 07	<p>Terminal Socket XS824-25 Disconnecter Module I/O</p> 	<p>Manual disconnecter module is plugged in between terminal socket and IO module.</p> <p>It allows disconnection of individual IO signals.</p>
XS812 Disconnecter for AI, BI and AO modules Will be available end of April 07	<p>Terminal Socket XS821-22, XS823 Disconnecter Module I/O</p> 	

Excel 800

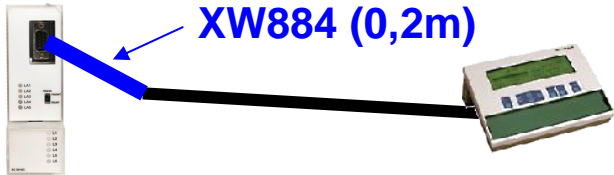
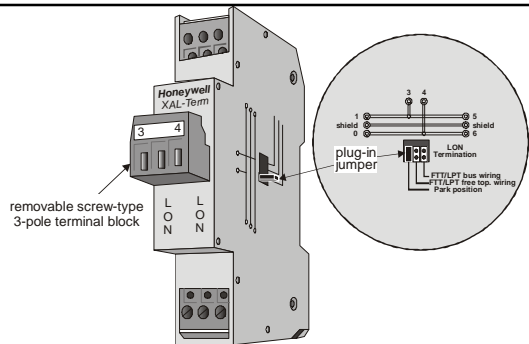
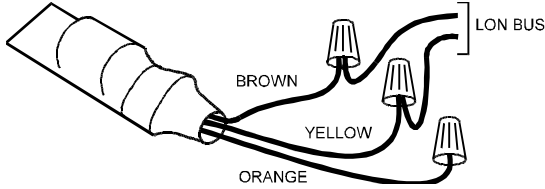
Parts Overview

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- Components of Excel 800 system – Cable Overview

Number	Information	Figure
XW586	Modem cable for Excel 800; Currently used for M-Bus metering	
XW882 Will be available end of April 07	Cable for XI582 connection. Use a combination of XW586 and XW582 until XW882 is available	
XW885 Will be available end of April 07	Download cable for Excel 800. Use a combination of XW586 and XW585 until XW885 is available	

• Components of Excel 800 system – Cable Overview

Number	Information	Figure
XW884 Will be available end of April 07	Adapter cable to use XW882 and XW885 with an XL500 controller (adapter RJ45 female to 9pin SubD female) Not needed if combination with XW586 is used	
XAL-Term	LonWorks connection and termination module	
209541B	LonWorks termination module	

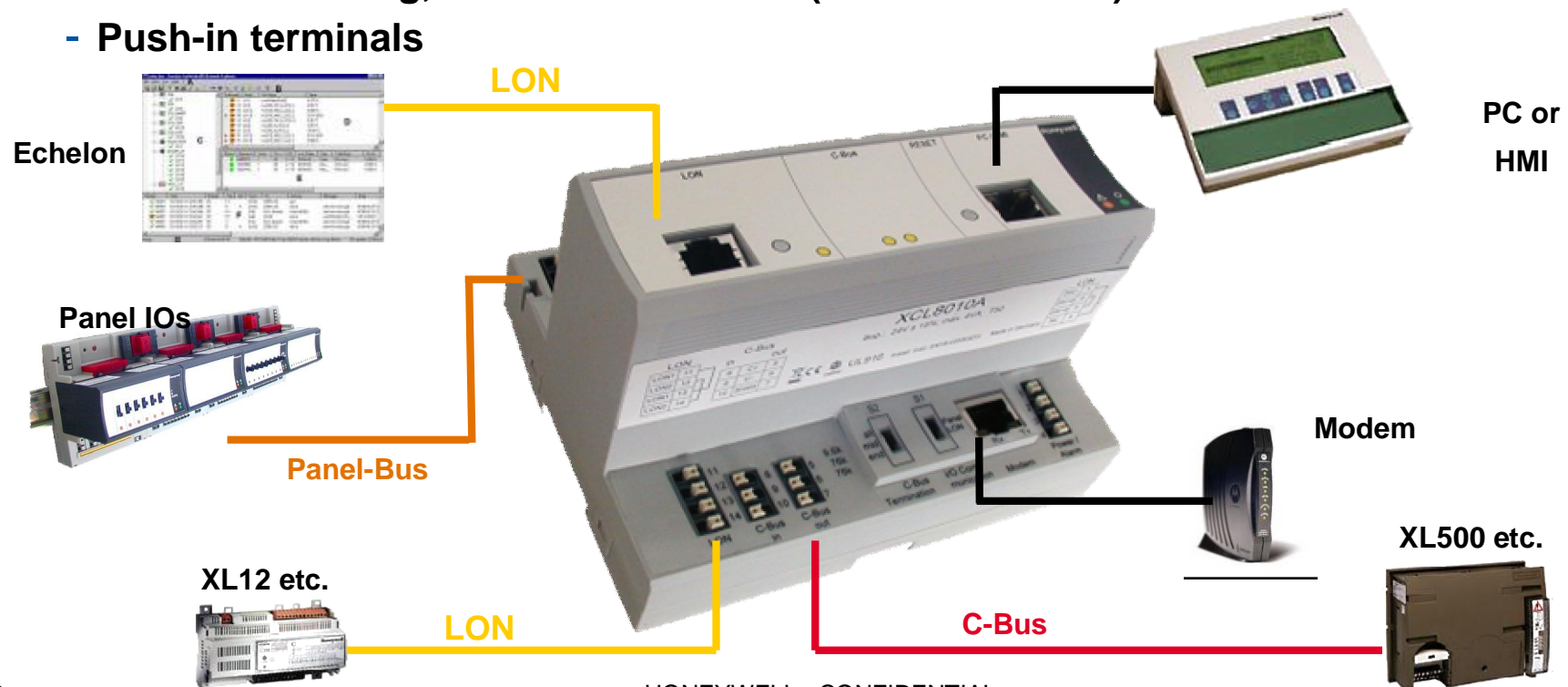
Excel 800

Controller

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- **Excel 800 Controller (XCL8010A)**

- Panel-Bus supporting 16 Panel IOs in any mixture ♦
- Double size application memory (128KB RACL; max 192KB application) ♦
- 30% faster cycle time than Excel 500 Smart with the same application
- Fast firmware download via B-Port (1,5 Min – XL500: 8 Min)
- Reduced training needs due to re-usage of existing applications
- 381 data-points (software/hardware) in random IO mix
- DIN rail mounting, fits into fuse boxes (size 3 DIN43880)
- Push-in terminals



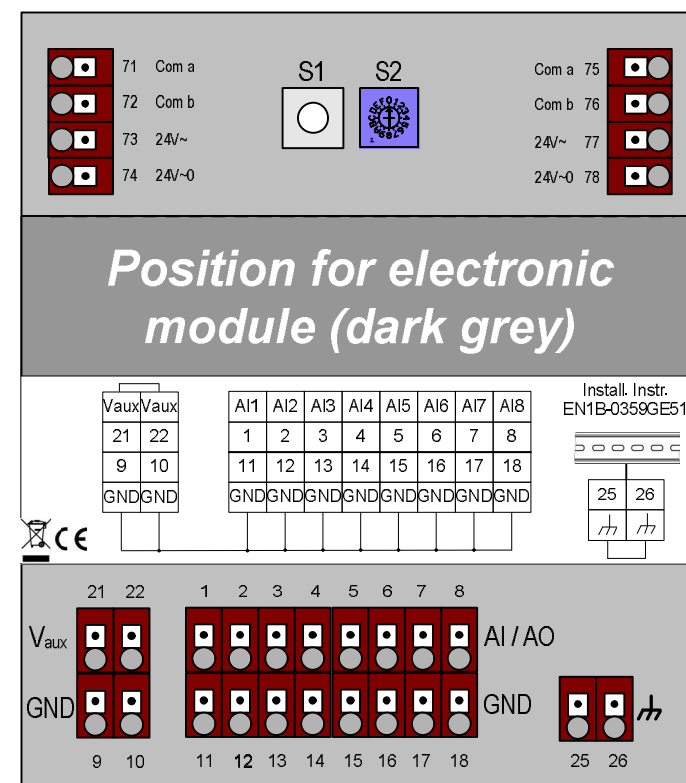
Excel 800

IO Modules

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• Analog Input Modules with 8 Analog Inputs

- Panel interface: **XF821A**
- LON interface: **XFL821A**
- Features:
 - ◆ 0...10V= with pull-up (linear graph, e.g. used for wall module connection)
 - ◆ 0(2)...10V= without pull-up
 - ◆ 0(4)...20mA=, needs 499-Ω / 0.25% resistor
 - ◆ **NTC20k**
 - ◆ PT1000-1 (-50° C...150° C)
 - ◆ PT1000-2 (0° C...400° C)
 - ◆ PT3000 (-50° C...150° C)
 - ◆ BALCO500 (-30° C...120° C)
 - ◆ Binary input
 - ◆ Auxiliary voltage: 10V=, $I_{\max}=5\text{mA}$
 - ◆ Configurable offset per input
 - ◆ Protected against 24~, 30V=
 - ◆ Temperature sensor failure detection
- Disconnecter module: **XS812**



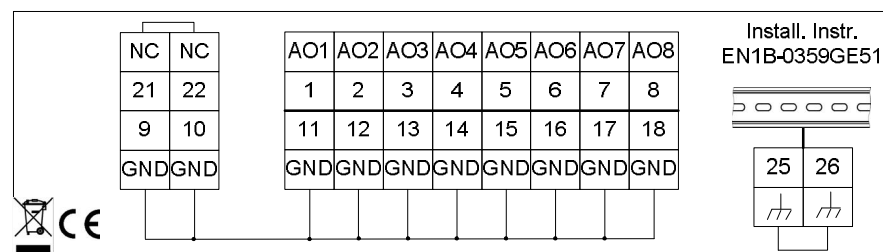
Excel 800

IO Modules

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- **Analog Output Modules with 8 Analog Outputs**

- Panel interface: **XF822A, XFR822A**
- LON interface: **XFL821A, XFLR822A**
- Features:
 - ◆ **0-11V=, +/-1mA**
 - ◆ Floating actuator
 - ◆ Binary output (0V / 10V)
 - ◆ Configurable safety position for outputs in case of communication problems (remain, 0%, 50%, 100%)
 - ◆ Red LED per output
 - Brightness according to signal level
 - Flashing in override mode
 - ◆ Optional version with manual override potentiometer per output (Auto, 0, 1)
 - ◆ Feed-back on manual override signal (mode + value)
- Disconnected module: **XS812**



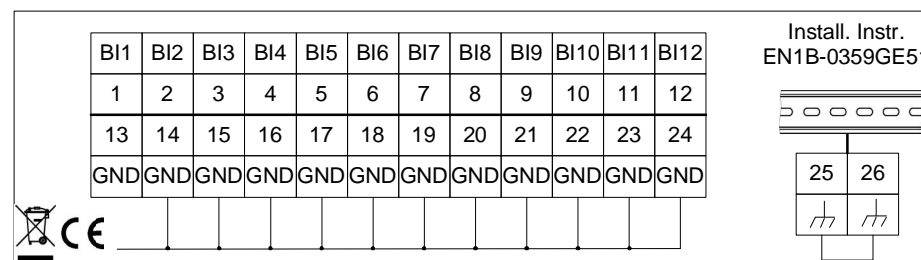
Excel 800

IO Modules

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- **Binary Input Modules with 12 Binary Inputs**

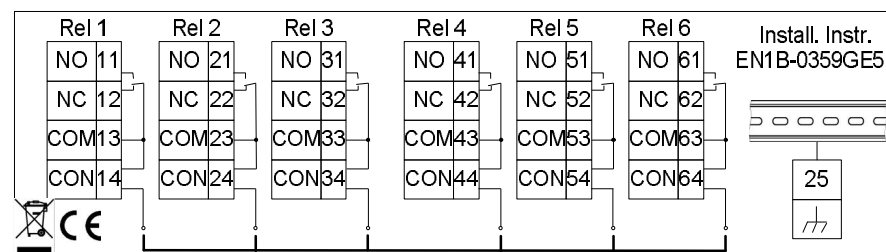
- Panel interface: **XF823A**
- LON interface: **XFL823A**
- Features:
 - ◆ **Static binary input (dry contact)**
 - ◆ Totalized for up to 20Hz
 - ◆ Configurable LED per binary input
 - alarm display mode: red/green
 - status mode: off/yellow
 - Setting via CARE
- Disconnecter module: **XS812**



• Relay Output Modules with 6 Relays Outputs

- Panel interface: **XF824A, XFR824A**
- LON interface: **XFL824A, XFLR824A**
- Features:
 - ◆ Relay output (change over contact)
 - ◆ Total 12A, no capacitive load; $P > 50 \text{ mW}$
 - ◆ ~: 19..250V~, NO:4(4)A, NC 2(1)A, per relay
 - ◆ =: 1..29V=, NO:4(1)A, NC 4(1)A, per relay
 - ◆ Configurable safety position for outputs in case of communication problems (remain, Off, On)
 - ◆ 1 yellow LED per output
 - LED flashes in override mode
 - ◆ Cross connector for easy wiring
 - ◆ Optional version with manual override switch (Auto, 0, 1)
 - ◆ Feed-back on manual override signal (mode + value)

- Disconnecter module: **XS812RO**



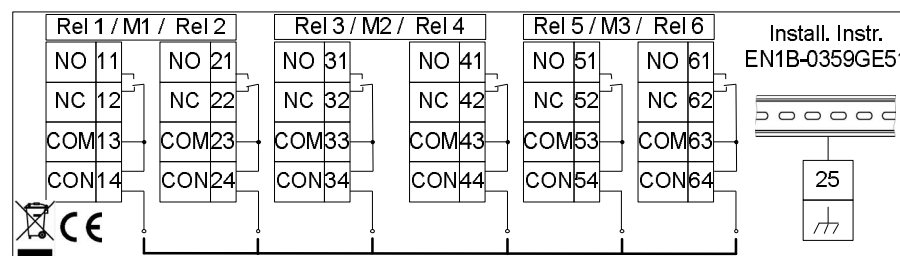
- **Floating Output Module for 3 Floating Actuators**

- Panel interface: **XFR825A**

- Features:

- ◆ Two relays per floating output
- ◆ Total 12A, no capacitive load; $P > 50 \text{ mW}$
- ◆ \sim : 19..250V~, NO:4(4)A, NC 2(1)A, per relay
- ◆ $=$: 1..29V=, NO:4(1)A, NC 4(1)A, per relay
- ◆ Configurable safety position for outputs in case of communication problems (remain, 0%, 50%, 100%)
- ◆ 1 red LED (relay 1 closed) and 1 green LED (relay 2 closed) per actuator
 - LED flashes in override mode
- ◆ Cross connector for easy wiring
- ◆ Manual override potentiometer (Auto, 0%...100%)
- ◆ Feed-back on manual override signal

- Disconnecter module: **XS812RO**



Excel 800

IO Module Overview

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8 analog inputs XF821A XFL821A	8 analog outputs XF822A, XFR822A XFL822A, XFLR822A	12 binary inputs XF823A XFL823A	6 relay outputs XF824A, XFR824A XFL824A, XFLR824A	3 floating outputs XFR825A
<ul style="list-style-type: none"> •Characteristic: <ul style="list-style-type: none"> -Linear Graph (0..10 V= with pull-up) -0...10 V= without pull-up -2...10 V= without pull-up -NTC20k (default) -PT1000-1 (-50° C–150° C) -PT1000-2 (0° C–400° C) -PT3000 (-50° C–150° C) -BALCO500 (-30° C–120° C) -Binary input -Linear graph (0...10V with pull-up) •16 bit resolution •Configurable offset per input •Auxiliary voltage: 10 V=, I_{max} = 5mA 	<ul style="list-style-type: none"> •Characteristic <ul style="list-style-type: none"> -0-11V= / ± 1mA; 8 bit resolution (default) -Floating actuator -Binary output (0V / 10V) •8 bit resolution •Safety position (remain, 0%, 50%, 100%) •Red LED per output <ul style="list-style-type: none"> -light intensity follows output level in auto -blinking in manual override position •Version with manual override (R): <ul style="list-style-type: none"> -1 potentiometer per output -automatic feed-back signal (mode + value) 	<ul style="list-style-type: none"> •Characteristic <ul style="list-style-type: none"> -Static binary input -Totalized (20Hz) •Dry contact •LED per input •Color mode can be set per input to off / yellow or green / red using CARE 	<ul style="list-style-type: none"> •Characteristic <ul style="list-style-type: none"> -relay output •Change over relays •P>50mW •Voltage: 19-250 V~ / 1-29 V= •Max. total current:12 A •Current per relay: <ul style="list-style-type: none"> -NO: 4(4)A~ / 4(1)A= -NC: 2(1)A~ / 4(1)A= •Safety position (remain, 0%, 100%) •Yellow LED per output <ul style="list-style-type: none"> -blinking in manual override position •Version with manual override (R): <ul style="list-style-type: none"> -1 switch per output -automatic feed-back signal (mode + value) 	<ul style="list-style-type: none"> •Characteristic <ul style="list-style-type: none"> -floating actuator output •2 relays per floating output •P>50mW •Voltage: 19-250 V~ / 1-29 V= •Max. tot. current:12 A •Current per relay: <ul style="list-style-type: none"> -NO: 4(4)A~ / 4(1)A= -NC: 2(1)A~ / 4(1)A= •Safety position (remain, 0%, 50%, 100%) •2 LEDs per output: <ul style="list-style-type: none"> -green: relay 1 closed -red: relay 2 closed -blinking in manual override position •1 potentiometer per floating output •automatic feed-back signal (mode + value)

All IOs protected against short circuit, 24 V~ +20% and 30V=

- New controller type in CARE

- New Controller Type

- New OS Number

- ◆ Excel 800 only

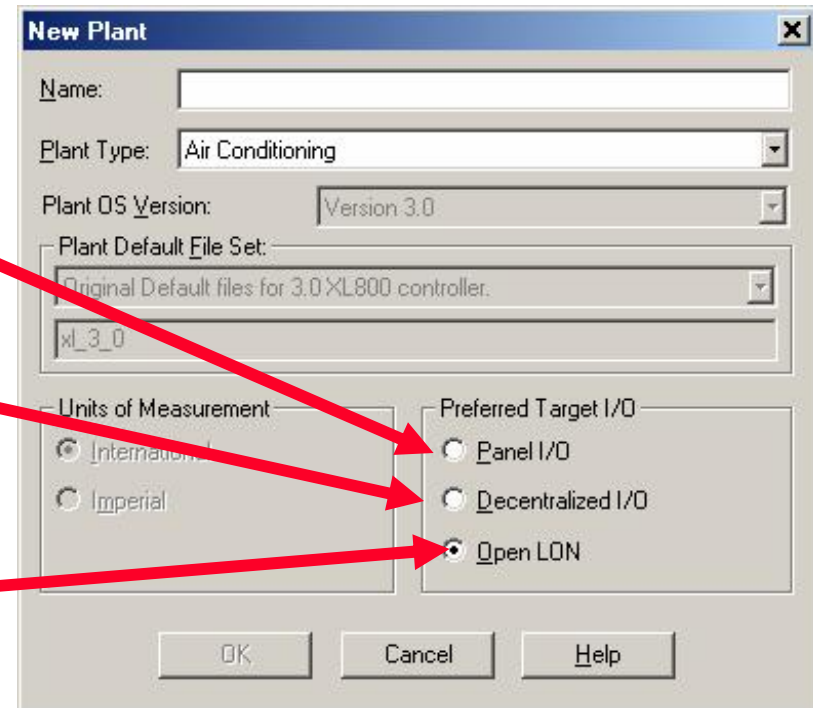
- New Default File Set

The 'New Controller' dialog box is shown with the following fields and options:

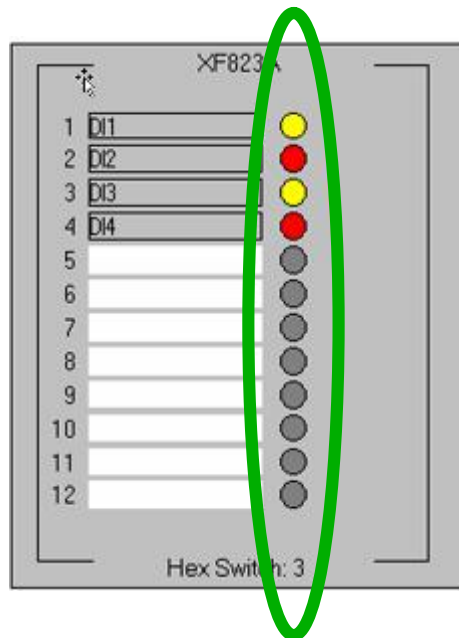
- Controller Name: [Empty text box]
- Bus Name: [Bus 1 (dropdown)]
- Controller Number: [1 (dropdown)]
- Controller Type: [Excel 800 (dropdown)]
- Controller OS Version: [Version 3.0 (dropdown)]
- Country Code: [GERMANY (dropdown)]
- Default File Set: [Original Default files for 3.0 XL800 controller. (dropdown)]
- Units of Measurement: ☒ International, ☐ Imperial
- Power Supply: ☐ XP501, ☐ XP502
- Installation Type: ☐ Cabinet Door Installation, ☐ Normal Installation
- LON: ☒ Shared / Open LON, ☐ Local

Buttons at the bottom: OK, Cancel, Help.

- **New IO type in CARE**
 - **Panel I/O**
 - ◆ Default terminal assignment is Panel Modules XF8xx
 - **Decentralized I/O**
 - ◆ Default terminal assignment is Lon Modules XFL8xx
 - **Open Lon**
 - ◆ No default assignment. Data points are kept unassigned



- **Configurable binary input LEDs (status / alarm display)**
 - The LED configuration can be seen in CARE under “Terminal Assignment” and in the point description
 - LED color can be changed easily by clicking to the LED or via the attribute
 - ♦ **Status LED:** OFF / YELLOW
 - ♦ **Alarm LED:** GREEN / RED



Type

User Address: IP

Technical Address: 01/03/01 Controller: XL_800_DEMO

Point Role: Plant Info: Airconditioning

Point ID:

Point Subtype:

Lon Point:

NV Type: (Input) VCT:

(Output) VCT:

Misc. Editor Functions

Engineering Unit:

Descriptor:

Alarm Text:

Special Values

Operator Access Level:

LED Behavior:

Service Interval: hrs

Write Protect Priority:

Alarm Delay: sec

☐ Critical Alarm Type

☒ Suppress Alarm

☐ Alarm Point

☐ Hide Point

☐ Runtime Enabled

- **Configurable safety position for outputs**
 - Output will be set to safety position if communication with CPU is interrupted for more than 1 minute
 - Analog output: Remain in last position / 0% / 50% / 100%
 - Relay output: Remain in last position / 0% / 100%

Type: AO1
User Address: AO1
Technical Address: 01/02/01
Point Role:
Point Subtype: AO Continuous with Switches
Lon Point: none
NV Type: (Input) none VCT:
(Output) none VCT:
Misc. Editor Functions:
Engineering Unit: Pct
Descriptor:
Characteristic: LINEAR_GRAPH
Special Values:
Operator Access Level: 0
Safety Position: Remain in last Position
Write Protect Priority: 0
Time to Open: 120.00 sec
Time to Close: 120.00 sec
Supress Alarm: ☒
Hide Point: ☐
Trend Hysteresis: 1.0 Pct
Trend Cycle: 0 minut.

Type: DO3
User Address: DO3
Technical Address: 01/04/03
Point Role:
Point Subtype: DO Normally Open not pulsed without switches
Lon Point: none
NV Type: (Input) none VCT:
(Output) none VCT:
Misc. Editor Functions:
Engineering Unit: On / Off
Descriptor:
Special Values:
Operator Access Level: 0
Safety Position: Remain in last Position
Service Interval: 0 hrs
Write Protect Priority: 0
Critical Alarm Type: ☐
Supress Alarm: ☒
Hide Point: ☐
Runtime Enabled: ☐



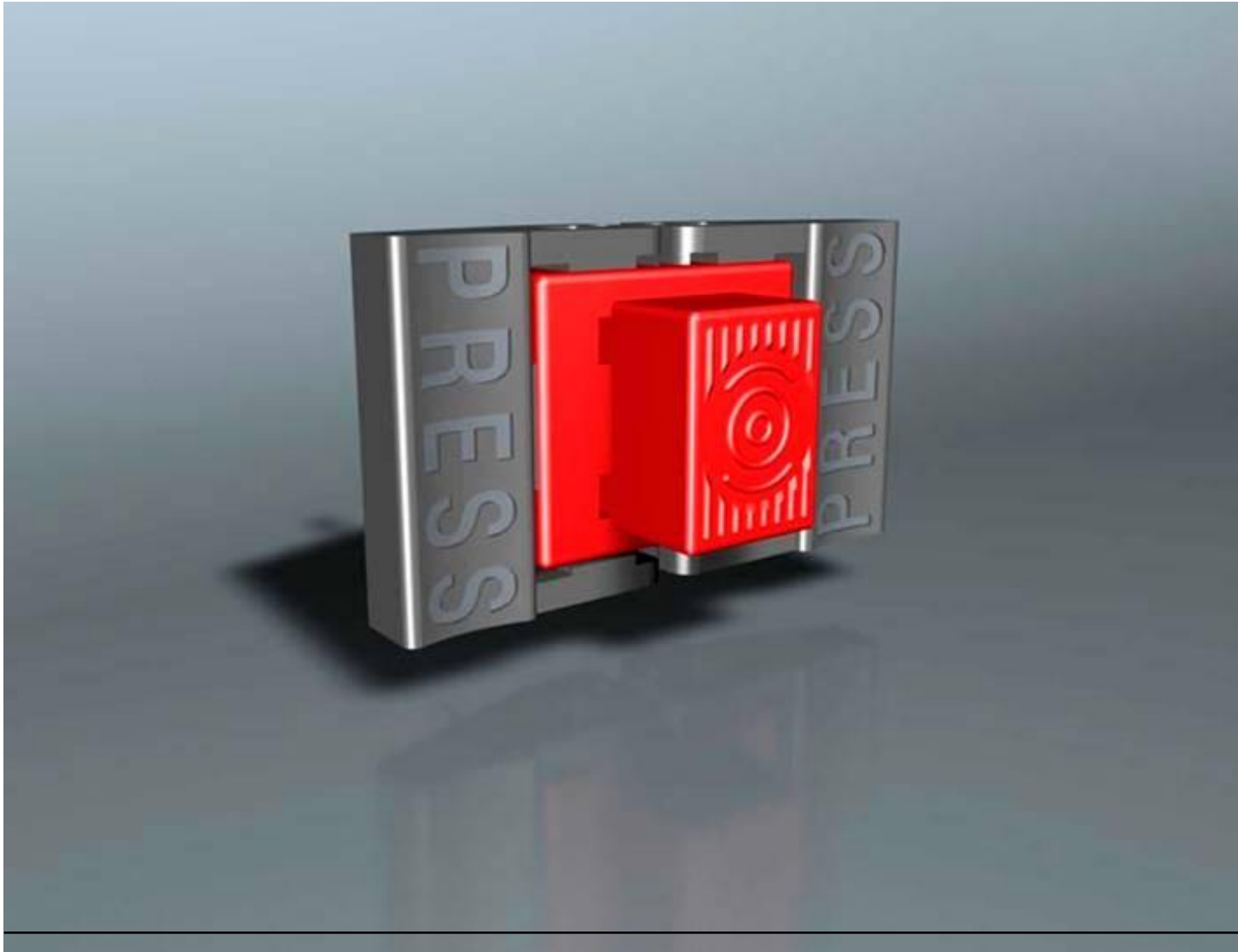
- **Lowest Total Installed Cost**

- Fast wiring due to bridge connector, push-in terminals and relay cross connector
- Plug & Play start-up of Panel IOs

Excel 800

Patented Simplicity

Honeywell



Excel 800

Technical Literature

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- **XL800 Mounting Instructions; included in XL800 controller packaging (EN1B-0359GE51 R0207A)**
- **XL800 Specification Data (EN0B-0564GE51 R0307)**
- **XL800 Installation and Commissioning Instructions (EN1B-0375GE51 R0307)**

- **Related Technical Literature:**
 - **Excel 50/500/800 LonWorks Mechanisms - Interface Description (EN0B-0270GE51)**
 - **Excel 50/100/500/600/800 - Software Description (EN2B-0092GE51)**
 - **XI581AH / XI582AH Buswide Operator Interface - User Guide (EN2B-0126GE51)**

- **DOWNLOADS**
 - **Above material can be downloaded [here](#) from our Web Portal.**

Excel 800

Hands On

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- **Trouble Shooting / LEDs / Plug & Try Testing (Inst. P67...)**
- **Power Wiring (Inst. P24...)**
- **Bus Wiring (Inst. P13)**
 - ◆ C-Bus (Inst. P32...)
 - ◆ LON (Inst. P31...)
 - ◆ Panel Bus (Inst. P25...)
- **Hands On**
 - ◆ Floating Output
 - Wiring
 - Auto mode / safety position
 - Manual override
 - ◆ Upgrading from XL500, fast download
 - ◆ Do you own application

Excel 800

CARE

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- **Application Upgrade Excel 500 → Excel 800**
 - Import project to CARE 7.02.xx
 - Detach plants of one controller
 - Delete controller
 - Add new XL800 controller
 - Change plants to OS 3.xx
 - Attach plants to Excel 800 controller
 - Re-edit schedules
 - Check descriptors and engineering units

Note:

Schedules get lost, text for descriptors and engineering units may be missing