

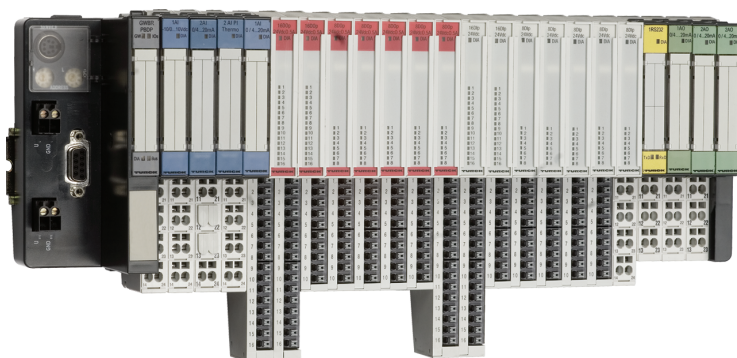
In-Cabinet Modular I/O

In-cabinet (IP20) modular I/O is a cost-efficient networking solution that is used in an enclosure and designed to replace terminal blocks with intelligent I/O. Providing flexible communication capabilities, TURCK in-cabinet modular I/O allows operators to mix and match I/O interfaces and adapters, including digital inputs, digital outputs, analog I/O and RFID. For enhanced performance, in-cabinet modular I/O offers significant space savings with up to 32 I/O on a single card. Modules are ideal for applications with large quantities of I/O, including packaging, conveying and general manufacturing.

BL20 System

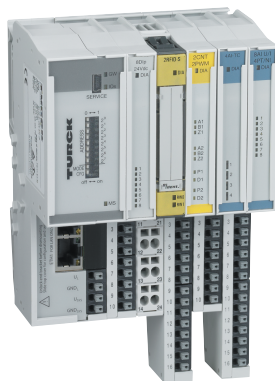
The BL20 system is an IP20 Modular I/O system designed for remotely collecting I/O signals. In comparison to costly and time-consuming historic approaches that brought I/O signals back to a single large cabinet, BL20 uses multiple small cabinets placed near the I/O that they control—providing a flexible, modular solution that saves time and money.

Providing enhanced communication flexibility, the BL20 seamlessly mixes and matches I/O types, communication networks, connection technologies and package styles to meet any project needs.



Standard BL20 System

- Programmable features for local or distributed control
- Mix and match slices to create the ideal mix of I/O
- System expands to integrate up to 72 slices to meet diverse requirements
- Screw and tension (spring) clamp wiring bases available



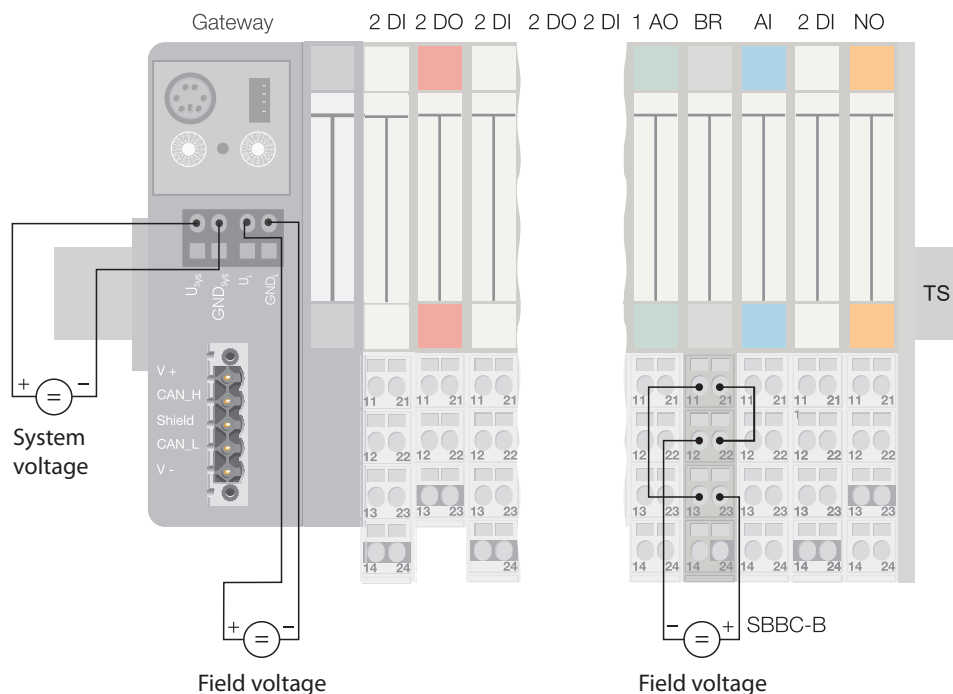
Economy BL20 System

- Multiprotocol gateway with interface to the higher level control system
- Low-cost gateways provide increased value when connecting to open networks
- Integrated Ethernet switch allows a line topology between multiple gateways without use of an external switch
- Accommodate up to 32 I/O modules
- Designed to work with all TURCK Economy I/O slices, as well as standard BL20 slices
- Economy gateway or slice requires tension (spring) clamp base



Products	PAGE
BL20 Mechanical Characteristics	B3
Part Number Key	B3
BL20 Gateways	B5
BL20 Digital Slices	B7
BL20 Analog and Specialty Slices	B11
BL20 Bases	B15

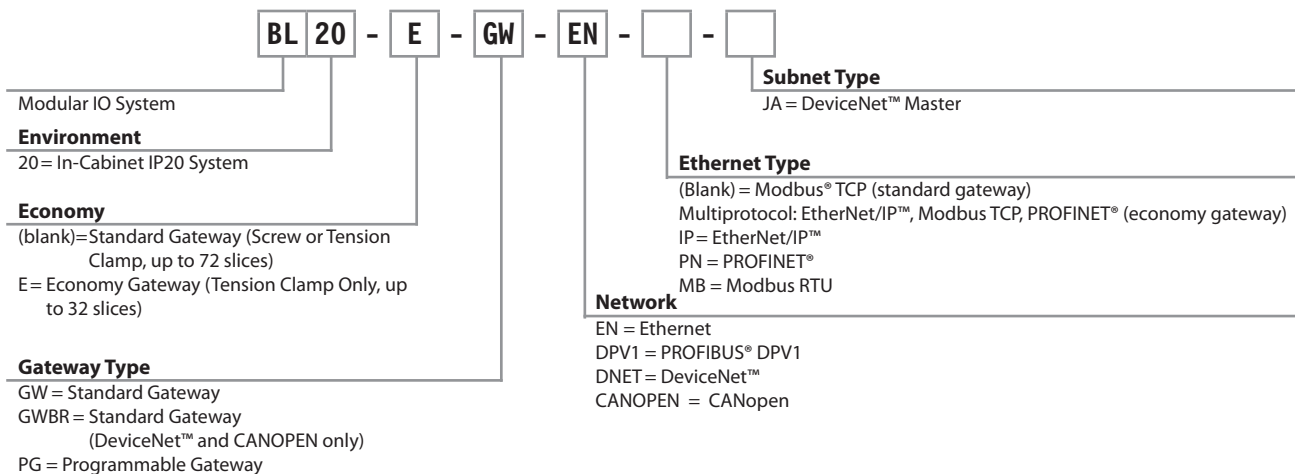
IN-CABINET MODULAR I/O



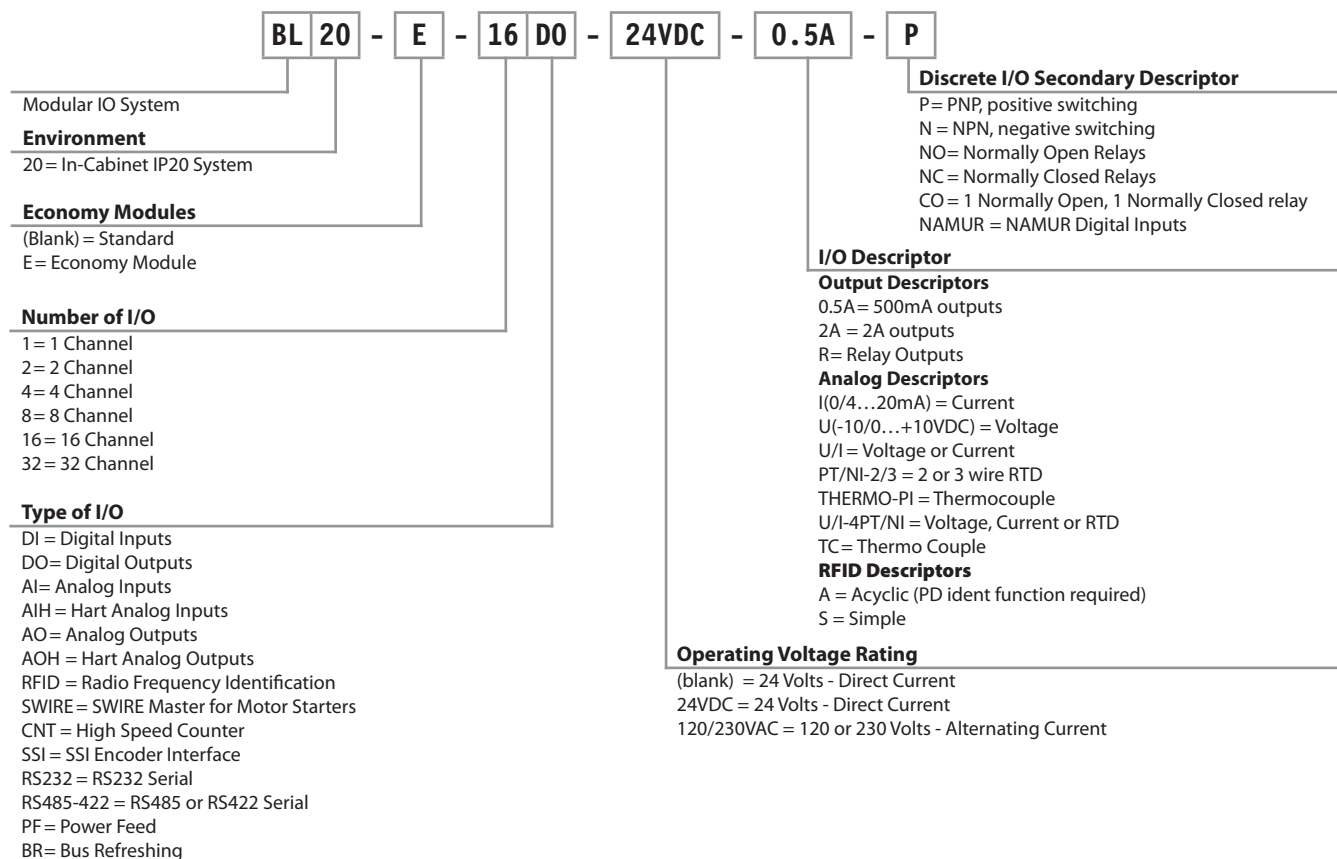
BL20 Mechanical Overview

- Operating Temperature: 0 to +55°C (32 to 131°F)*
- Protection: IP20
- Vibration: EN 61131
- Relative Humidity: 5 to 95%, Level RH-2, no condensation
- Shock Test: IEC 68-2-27
- Drop and Topple: IEC 68-2-31 and free full IEC 68-2-32
- Electro-magnetic Compatibility: EN 50 082-2
- Housing Material - Lexan (PC-V0)
- Approvals - CE, UL, CSA, Class 1 Div 2

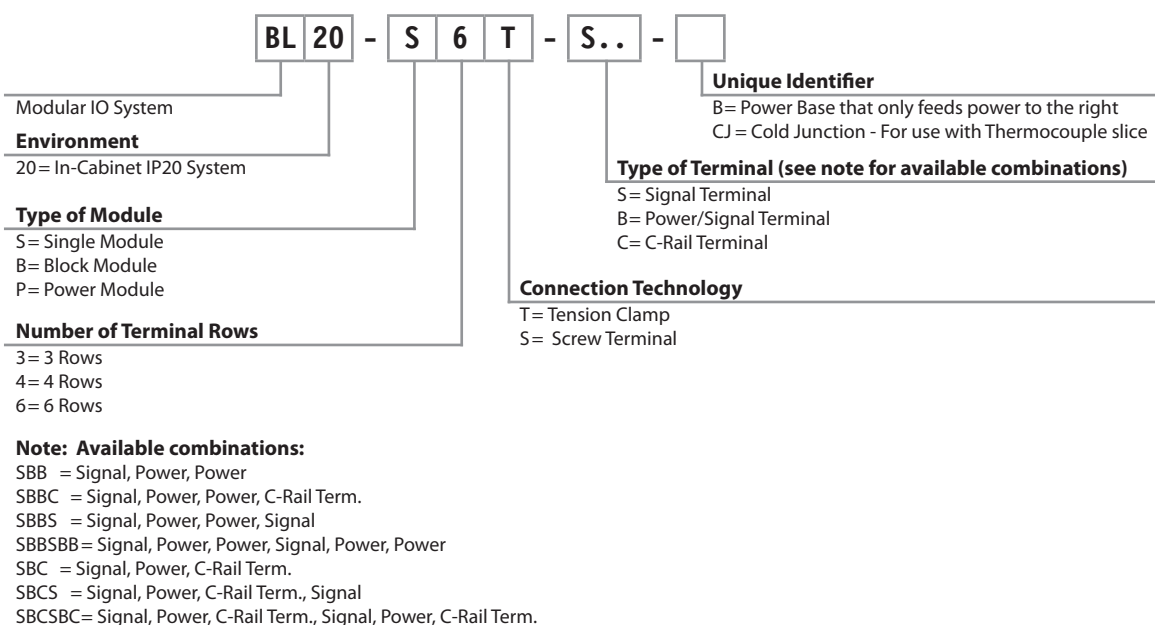
BL20 Gateways Part Number Key



BL20 Slices Part Number Key



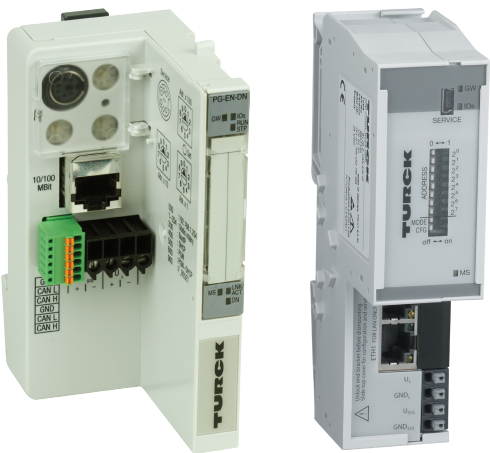
BL20 Bases Part Number Key



IN-CABINET MODULAR I/O

BL20 Gateways

- IP20 Protection
- Suitable for In-Cabinet Applications
- Some Versions Programmable via CoDeSys V2.3
- IEC 61131-3 Programming Structure
- Program in Ladder Logic, Structured Text, or 3 others
- Mix and Match Languages to Suit Application
- Large Library of Pre-written Function Blocks
- Provide Interface between Chosen Network(s) and BL20 I/O
- Up to 72 BL20 Slices can be used with Standard Gateways, 32 with Economy
- Wide Variety of Digital and Analog I/O Available
- Specialty Slices Available inc. RFID, RSXXX, PWM Outputs, and Encoder Inputs



Housing Style		Part Number	
		Non-programmable gateways	Economy
			BL20-E-GW-EN
			BL20-E-GW-EN-PN
			BL20-E-GW-DP
			BL20-E-GW-DN
			BL20-E-GW-CO
			BL20-E-GW-RS-MB/ET
			BL20-E-GW-EC
		Standard	BL20-GW-EN-IP
			BL20-GW-EN
			BL20-GW-EN-PN
			BL20-GW-DPV1
			BL20-GWBR-DNET
			BL20-GWBR-CANOPEN
		Programmable gateways	BL20-PG-EN-IP
			BL20-PG-EN
			BL20-PG-EN-DN-JA

- x standard feature
+ Via CoDeSys FB
o Optional

DISTRIBUTED I/O SALES GUIDE



Physical Characteristics

- Operating Temp 0°C to 55°C
- LED Indication for Quick Diagnostic
- Rotary Switches for ID Settings
- Clear Window

Approvals	Slave Functions								Master Functions				
	EIP	MB TCP/IP	PN	DP	DN	CO	MB RTU	ECAT	MB TCP	PCCC	MB RTU	DN	CO
CE, UL, FM	x	x	x										
CE, UL			x										
CE, UL, FM				x									
CE, UL, FM					x								
CE, UL, FM						x							
CE							x						
CE, UL								x					
CE, UL, FM	x												
CE, UL, FM		x											
CE, UL, FM			x										
CE, UL, FM				x									
CE, UL, FM					x								
CE, FM						x							
CE, UL, FM	x								+	+	+		
CE, UL, FM		x							+	+	+		
CE, UL, FM		x							+	+	+	x	o

In-Cabinet Modular

IN-CABINET MODULAR I/O

BL20 Digital I/O Slices

- IP20 Protection
- Tension Clamp and Screw Connection Technology
- All I/O Short-circuit Protected
- Standard Slices Include Separated Electronics and Wiring Base
- Economy Slices Include Integrated Electronics and Wiring Base
- PNP and NPN Options
- High Density Economy Slices Create a Small Footprint for Total System
- Powerful 0.5A and 2A Output Drivers Available



Housing Style		Part Number	Number of Inputs	Number of Outputs
	Inputs	BL20-2DI-24VDC-P	2	
		BL20-2DI-24VDC-N	2	
		BL20-4DI-24VDC-P	4	
		BL20-4DI-24VDC-N	4	
		BL20-4DI-NAMUR	4	
		BL20-16DI-24VDC-P	16	
		BL20-32DI-24VDC-P	32	
		BL20-2DI-120/230VAC-P	2	
	Outputs	BL20-2DO-24VDC-0.5A-P		2
		BL20-2DO-24VDC-0.5A-N		2
		BL20-2DO-24VDC-2A-P		2
		BL20-4DO-24VDC-0.5A-P		4
		BL20-16DO-24VDC-0.5A-P		16
		BL20-32DO-24VDC-0.5A-P		32
		BL20-2DO-R-CO		2
		BL20-2DO-R-NC		2
		BL20-2DO-R-NO		2
		BL20-2DO-120/230VAC-0.5A		2

DISTRIBUTED I/O SALES GUIDE



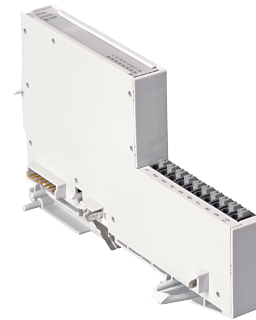
In-Cabinet Modular

			Base Module												
Type of I/O	Power of Outputs	Approvals	BL20-S3*-SBB	BL20-S4*-SBBC	BL20-S4*-SBBB	BL20-S6*-SBBB	Integrated	BL20-B3*-SBB	BL20-B4*-SBBC	BL20-B6*-SBBB	BL20-S3*-SBC	BL20-S4*-SBCS	BL20-S6*-SBCSBC	BL20-B3*-SBC	BL20-B6*-SBCSBC
PNP		CE, UL, FM	x	x											
NPN		CE, UL, FM	x	x											
PNP		CE, UL, FM			x	x									
NPN		CE, UL, FM			x	x									
NAMUR		CE, UL, FM			x										
PNP		CE, UL, FM						x	x						
PNP		CE, UL, FM								x					
AC		CE, UL	x	x											
PNP	0.5A	CE, UL, FM									x	x			
NPN	0.5A	CE, UL, FM									x	x			
PNP	2A	CE, UL, FM									x	x			
PNP	0.5A	CE, UL, FM										x	x		
PNP	0.5A	CE, UL, FM												x	
PNP	0.5A	CE, UL, FM													x
Relay		CE, UL, FM			x										
Relay		CE, UL, FM			x							x			
Relay		CE, UL, FM			x							x			
AC	0.5A	CE, UL									x	x			

IN-CABINET MODULAR I/O

BL20 Digital I/O Slices

- IP20 Protection
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- All I/O Short-circuit Protected
- Standard Slices Include Separated Electronics and Wiring Base
- Economy Slices Include Integrated Electronics and Wiring Base
- PNP and NPN Options
- High Density Economy Slices Create a Small Footprint for Total System
- Powerful 0.5A and 2A Output Drivers Available



Housing Style		Part Number	Number of Inputs	Number of Outputs
	Inputs	BL20-E-8DI-24VDC-P	8	
	Outputs	BL20-E-8DO-24VDC-0.5A-P		8
	Inputs	BL20-E-16DI-24VDC-P	16	
	Outputs	BL20-E-16DO-24VDC-0.5A-P		16

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In-Cabinet Modular

			Base Modules												
Type of I/O	Power of Outputs	Approvals	BL20-S3*-SBB	BL20-S4*-SBBC	BL20-S4*-SBBS	BL20-S6*-SBBSBB	Integrated	BL20-B3*-SBB	BL20-B4*-SBBC	BL20-B6*-SBBSBB	BL20-S3*-SBC	BL20-S4*-SBCS	BL20-S6*-SBCSBC	BL20-B3*-SBC	BL20-B6*-SBCSBC
PNP		CE, UL, FM					x								
PNP	0.5A	CE, UL, FM					x								
PNP		CE, UL, FM					x								
PNP	0.5A	CE, UL, FM					x								

IN-CABINET MODULAR I/O

BL20 Analog & Specialty I/O

- IP20 Protection
- RFID Options
- Types of Communication: RS232, RS422, RS485
- Specialty Motor Starter (up to 16 Direct-on-line starter)
- High Speed Counter for Encoders
- SSI Communication for Position Elements (encoder or linear)
- Power Feed Modules to Ensure Proper Supply
- Bus Refreshing Modules to Ensure Proper Communication



Housing Style		Part Number		Number of Inputs	Number of Outputs
* PG gateway is recommended ** Use only with PG gateway	Inputs	BL20-1AI-I (0/4...20mA)	1		
		BL20-1AI-U (-10/0...+10VDC)	1		
		BL20-1CNT	1		
		BL20-1SSI	1		
		BL20-1RS232*	1		
		BL20-1RS485/422*	1		
		BL20-PF-24VDC-D	1		
		BL20-PF-120/230VAC-D	1		
		BL20-BR-24VDC-D	1		
		BL20-2AI-I (0/4...20mA)	2		
		BL20-2AI-U (-10/0...+10VDC)	2		
		BL20-2AIH-I	2		
		BL20-2AI-THERMO-PI	2		
		BL20-2AI-PT/NI-2/3	2		
		BL20-2RFID-S	2		
		BL20-2RFID-A**	2		
		BL20-4AI-U/I	4		
	Outputs	BL20-1AO-I (0/4...20mA)			1
		BL20-2AO-I (0/4...20mA)			2
		BL20-2AO-U (-10/0...+10VDC)			2
		BL20-2AOH-I			2

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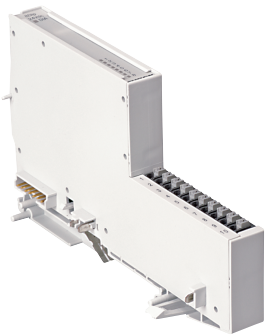
In-Cabinet Modular

0/4-20 mA Input	-10/0-10 V Input	0/4-20 mA Input (HART)	Thermocouple	RTD Input	0/4-20 Output	-10/0-10 V Output	0/4-20 mA (HART)	RFID	Counter	Counter/PWM	SSI	RS232	RS485/RS422	Motor Starter	Power Feed	Bus Refreshing	BL20-S3*-SBB	BL20-P3*-SBB	BL20-S4*-SBBS	BL20-S4*-SBBS-CJ	BL20-P4*-SBBC	BL20-S6*-SBCSBC	Integrated	BL20-P3*-SBB-B	Approvals
x																	x		x						CE, UL
	x																x		x						CE, UL, FM
									x										x						CE, UL, FM
											x								x						CE, UL, FM
												x							x						CE, UL, FM
													x						x						CE, UL, FM
															x			x			x				CE, UL, FM
															x			x			x				CE, UL
																x		x			x				CE, UL, FM
x																	x		x						CE, UL, FM
	x																x		x						CE, UL, FM
		x																	x						CE, UL, FM
			x																	x					CE, UL, FM
				x													x		x						CE, UL, FM
									x										x						CE, UL, FM
									x										x						CE, UL, FM
x	x																					x			CE, UL, FM
					x												x								CE, UL
					x												x								CE, UL, FM
						x											x								CE, UL, FM
							x												x						CE, UL, FM

IN-CABINET MODULAR I/O

BL20 Analog & Specialty I/O

- IP20 Protection
- RFID Options
- Types of Communication: RS232, RS422, RS485
- Specialty Motor Starter (up to 16 Direct-on-line starter)
- High Speed Counter for Encoders
- SSI Communication for Position Elements (encoder or linear)
- Power Feed Modules to Ensure Proper Supply
- Bus Refreshing Modules to Ensure Proper Communication



Housing Style		Part Number	Number of Inputs	Number of Outputs
	Inputs	BL20-E-8AI-U/I-4PT/NI	8	
		BL20-E-4AI-TC	4	
		BL20-E-1SWIRE	1	
	Outputs	BL20-E-4AO-U/I		4
	Inputs & Outputs	BL20-E-2CNT-2PWM*	2	2

DISTRIBUTED I/O SALES GUIDE



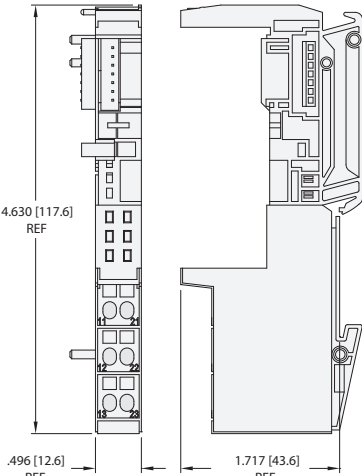
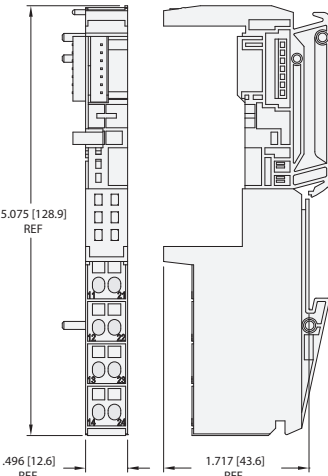
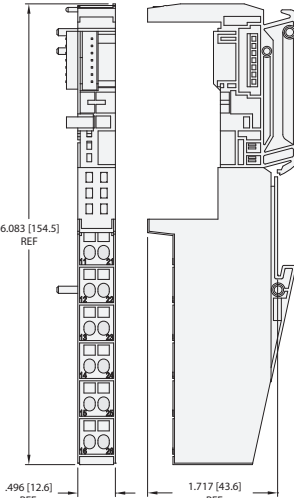
In-Cabinet Modular

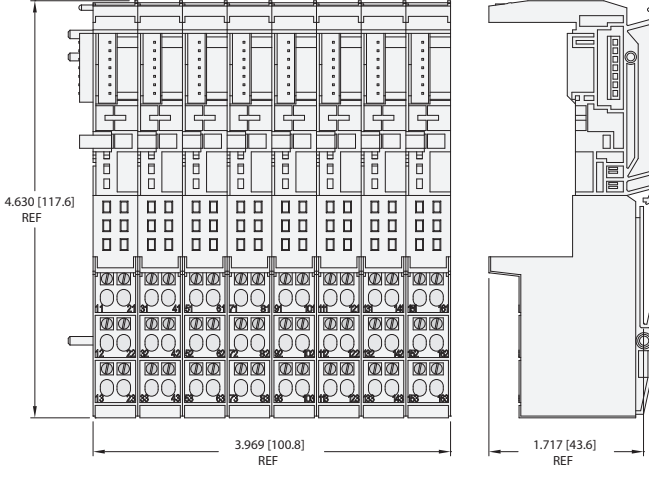
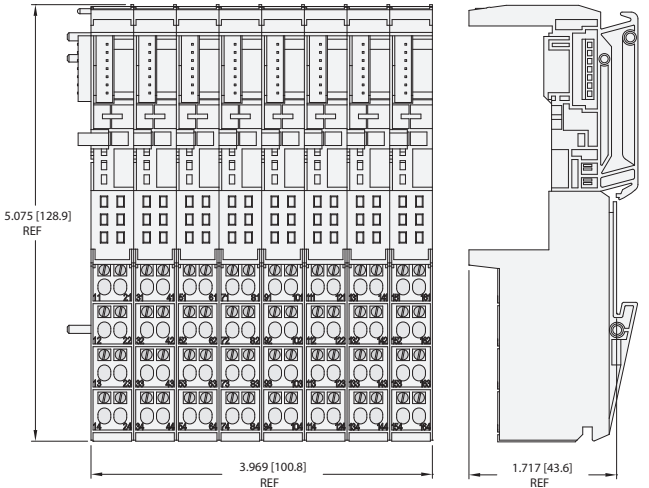
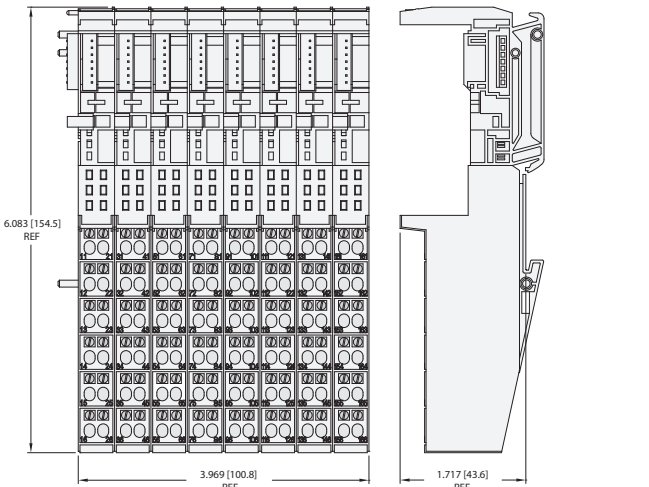
0/4-20 mA Input	-10/0-10 V Input	0/4-20 mA Input (HART)	Thermocouple	RTD Input	0/4-20 Output	-10/0-10 V Output	0/4-20 mA (HART)	RFID	Counter	Counter/PWM	SSI	RS232	RS485/RS422	Motor Starter	Power Feed	Bus Refreshing	BL20-S3*-SBB	BL20-P3*-SBB	BL20-S4*-SBBS	BL20-S4*-SBBS-CJ	BL20-P4*-SBBC	BL20-S6*-SBCSBC	Integrated	BL20-P3*-SBB-B	Approvals
x	x			x																			x		CE, UL, FM
			x																				x		CE
														x									x		UL
					x	x																	x		CE, UL, FM
										x													x		UL

IN-CABINET MODULAR I/O

BL20 Wiring Bases



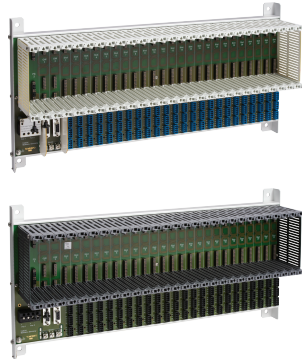
Housing Style	BL20 Wiring Bases
	BL20-S3S-SBB
	BL20-S3S-SBC
	BL20-S3T-SBB
	BL20-S3T-SBC
	BL20-P3S-SBB
	BL20-P3S-SBB-B
	BL20-P3T-SBB
	BL20-P3T-SBB-B
	BL20-S4S-SBBC
	BL20-S4S-SBBS
	BL20-S4S-SBBS-CJ
	BL20-S4S-SBCS
	BL20-S4T-SBBC
	BL20-S4T-SBBS
	BL20-S4T-SBBS-CJ
	BL20-S4T-SBCS
	BL20-P4S-SBBC
	BL20-P4S-SBBC-B
	BL20-S6S-SBBSBB
	BL20-S6S-SBCSBC
	BL20-S6T-SBBSBB
	BL20-S6T-SBCSBC

Housing Style	BL20 Wiring Bases
	BL20-B3S-SBB BL20-B3S-SBC BL20-B3T-SBB BL20-B3T-SBC
	BL20-B4S-SBBC BL20-B4T-SBBC
	BL20-B6S-SBBSBB BL20-B6S-SBCSBC BL20-B6T-SBBSBB BL20-B6T-SBCSBC

excom[®] Remote I/O System

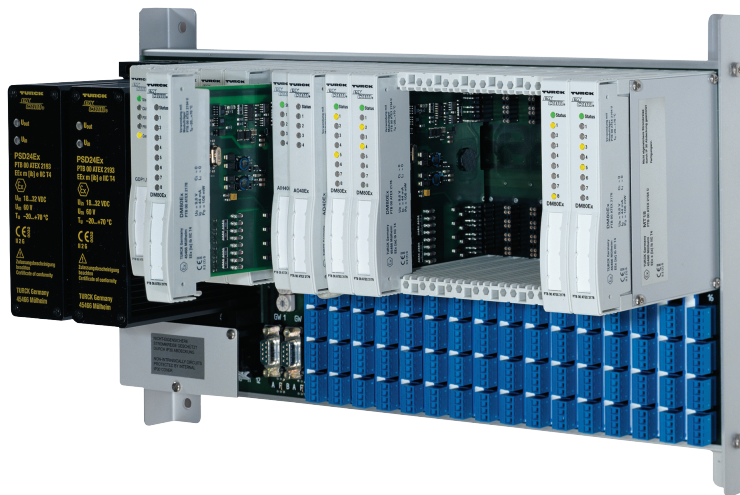
The excom[®] remote I/O system is ideal for use in hazardous or non-hazardous locations. The system provides bus-compatible, decentralized input and output connection modules with a protection rating of IP20 for connection of binary and analog intrinsically safe field devices. Explosion protection enables use in zones 1 and 2.

excom System



The excom system is available in four mounting configurations for application flexibility:

- Standard MT18, when used with segment coupler, mounts in zone 1 (Class 1, Division 2) areas with up to 16 intrinsically safe I/O module connections to field devices in zone 0 (Class 1, Division 1) areas
- MT24, when used with segment coupler, mounts in zone 2 (Class 1, Division 2) areas with up to 24 intrinsically safe I/O module connections to field devices in zone 0 (Class 1, Division 1) areas
- MT24 mounts in non-hazardous areas with up to 24 intrinsically safe I/O module connections to field devices in zone 0 (Class 1, Division 1) areas
- MT24 mounts in non-hazardous areas with up to 24 non-intrinsically safe I/O module connections to field devices in non-hazardous areas



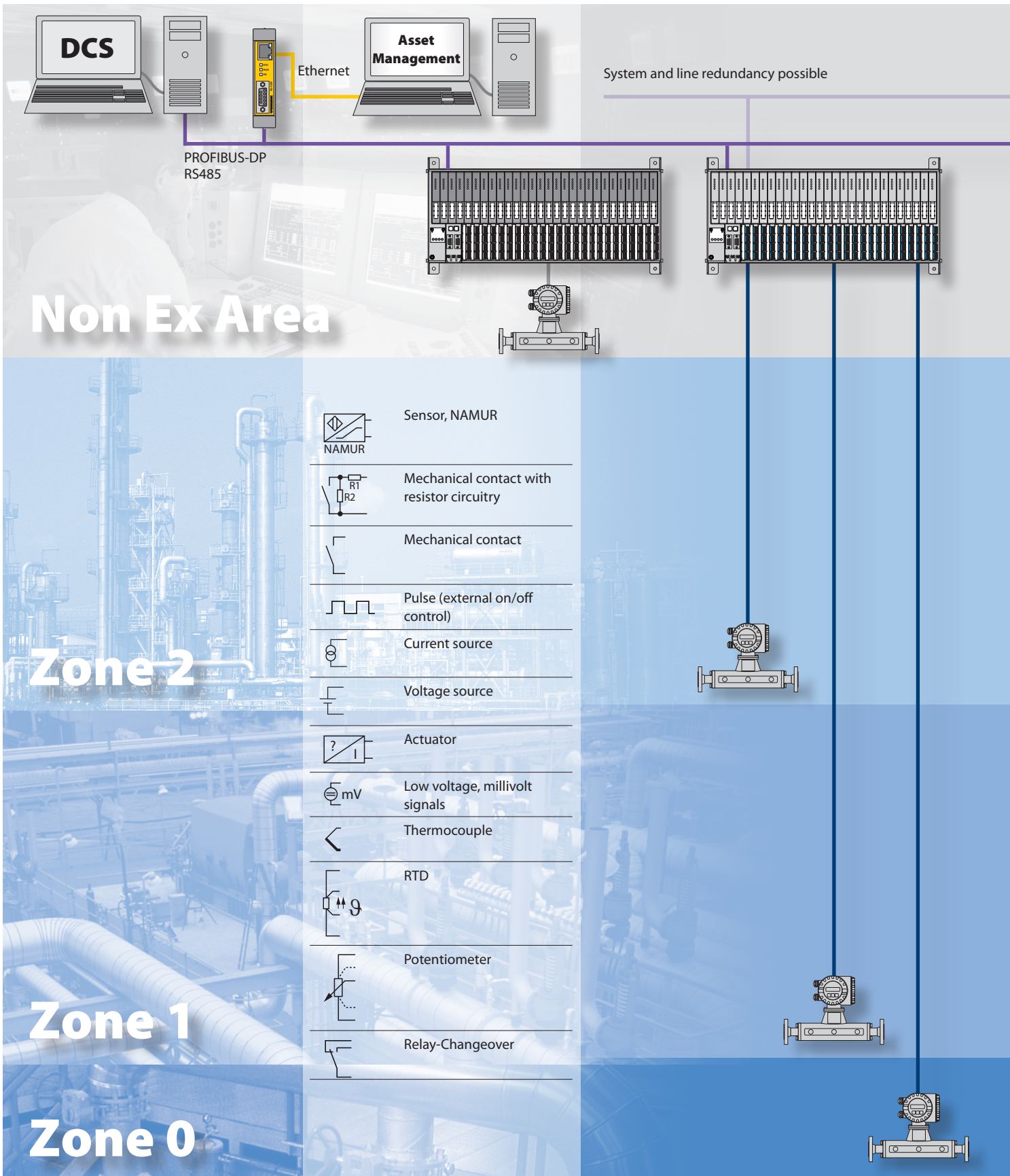
excom Features

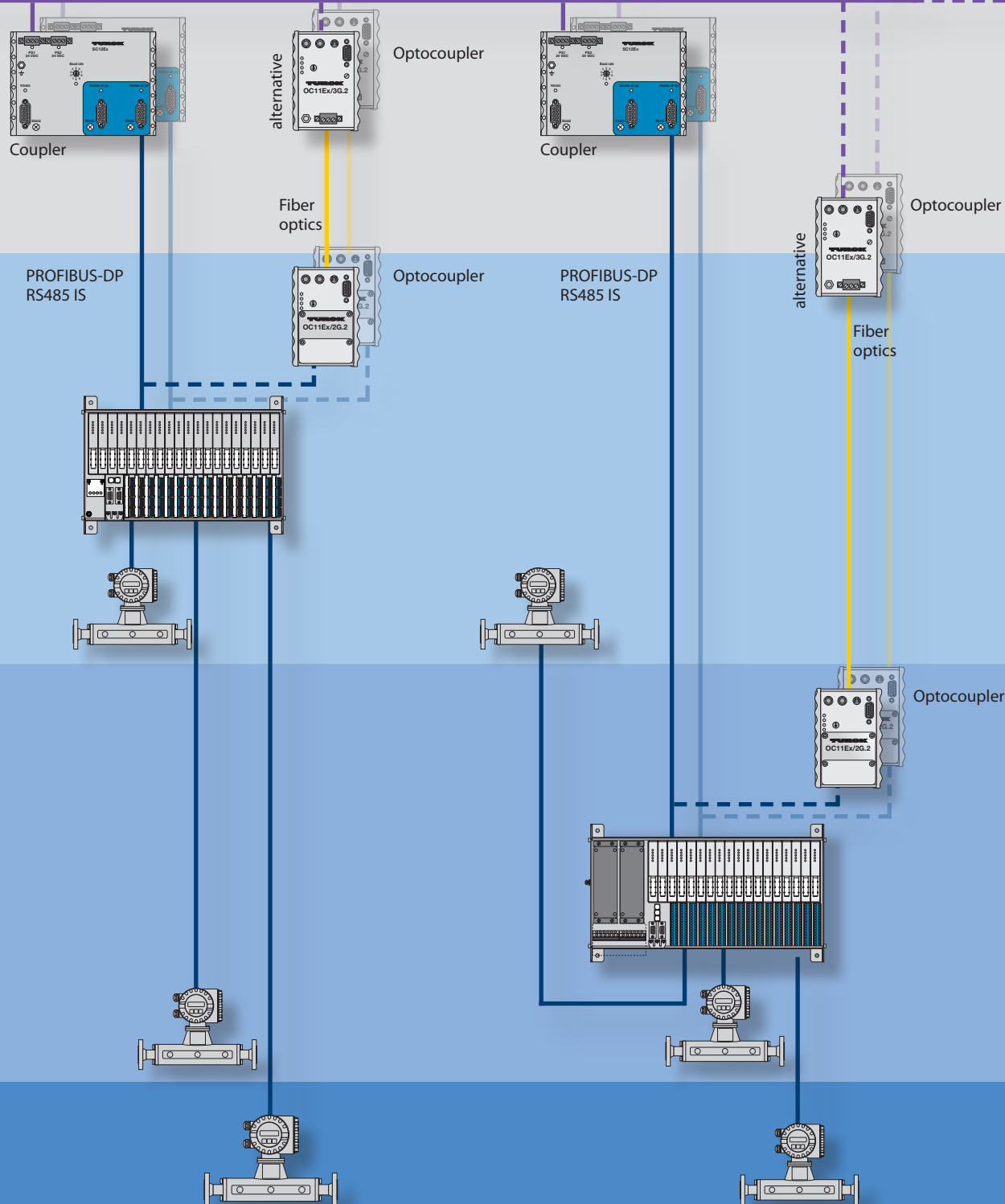
- Redundant power supplies and gateways
- Intrinsically safe connection to PROFIBUS-DP with V1 functionality
- Online programming and configuration of all parameters
- Consistent HART parameterization from the process control system to the field device
- Exchange and extension of all components during operation



PRODUCTS	PAGE
Typical System Layout	B17
Zone 1, excom - Remote I/O for Class I Div 2 Installation	B21
Zone 2, excom - Remote I/O for Hazardous Class I Div 2 Areas	B25
excom - Remote I/O for Non-Ex Areas with Ex hardware	B29
excom - Remote I/O for Non-Ex Areas with Non-Ex hardware	B33
excom - Accessories for Ex and Non-Ex Areas	B37

IN-CABINET MODULAR I/O

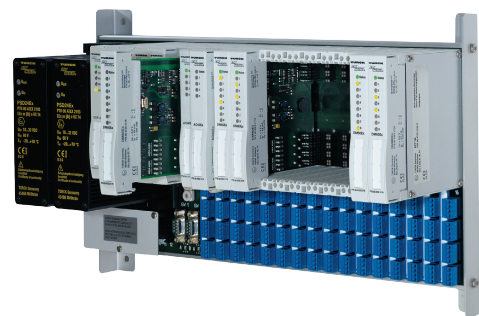




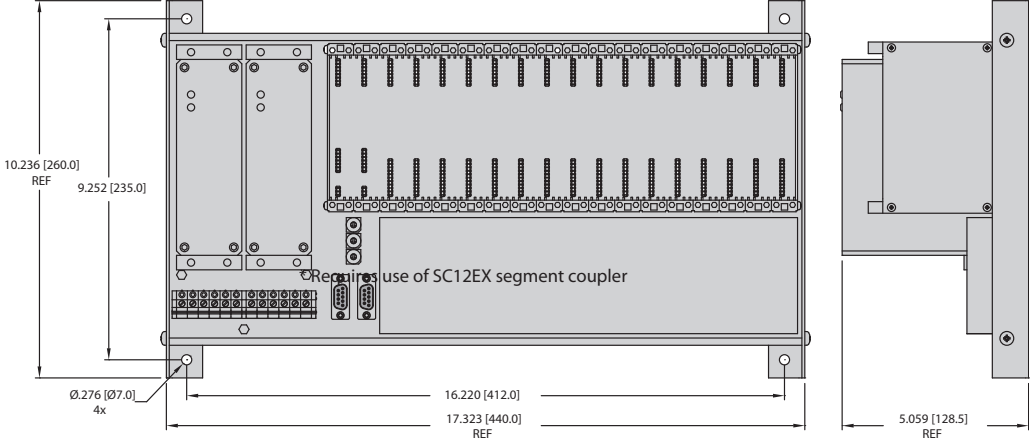
In-Cabinet Modular

IN-CABINET MODULAR I/O

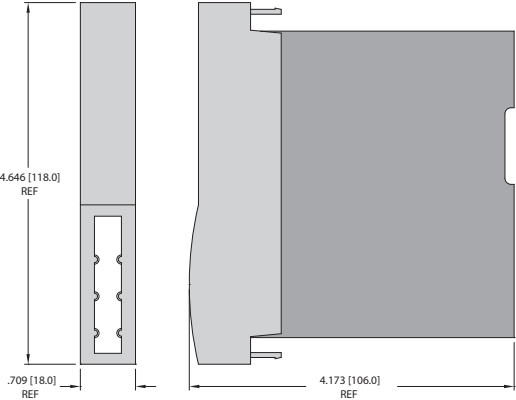
- Zone 1, excom® - Remote I/O for Class I Div 2 Installation*
- Up to 16 Intrinsically Safe I/O Module Connections to 128 Field Devices in Zone 0 (Class 1, Division 1) Areas



Module Rack

Housing Style	Part number
	MT18-R024
	MT18-C024
	MT18-C230

I/O Cards

Housing Style	Part Number	Number of Channels
	Input Cards	
	DI401EX	4-channel discrete
	AI401EX	4-channel analog
	AI41EX	4-channel analog
	AI43EX	4-channel analog
	AIH40EX	4-channel analog
	AIH41EX	4-channel analog
	TI40EX	4-channel temperature
	Output Cards	
	D040EX	4-channel discrete
	D0401EX	4-channel discrete
	A040EX	4-channel analog
	Input/Output Cards	
	DM80EX	8-channel
	DF20EX	2-channel frequency

DISTRIBUTED I/O SALES GUIDE



In-Cabinet Modular

Number of I/O modules	Connection type	Power supply	Approvals
16	Screw terminals	DC	FM (US/Canada)
16	Spring terminals	DC	
16	Spring terminals	AC	

Input/Output Type	Ambient Temp. (°C)	Approvals
NAMUR or dry contact	-20...+70	PTB 10 ATEX 2024
active/passive	-20...+60	FM (US/Canada)
passive	-20...+60	
potentiometer	-20...+60	
active/passive HART	-20...+60	FM (US/Canada)
passive HART	-20...+60	FM (US/Canada)
RTD, TC	-20...+70	FM (US/Canada)
IS actuators	-20...+60	FM (US/Canada), PTB 01 ATEX 2047
IS actuators	-20...+70	FM (US/Canada), PTB 10 ATEX 2024, CE
		FM (US/Canada)
NAMUR or dry contact	-20...+70	FM (US/Canada), PTB 00 ATEX 2178
NAMUR or dry contact	-20...+60	FM (US/Canada), PTB 00 ATEX 2178

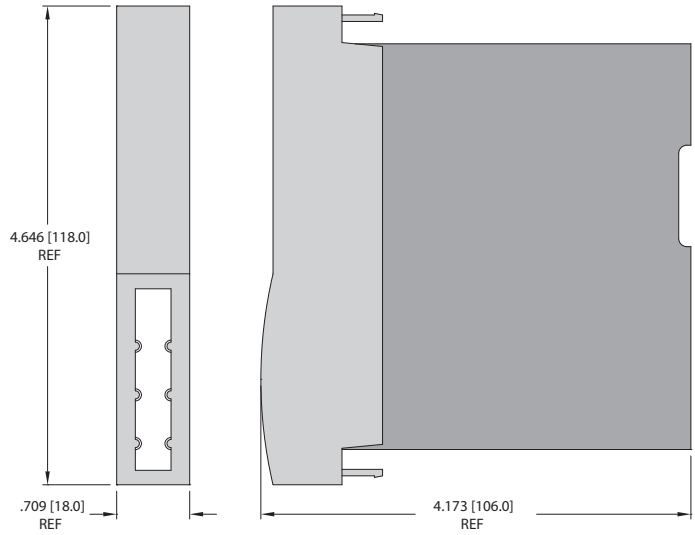
IN-CABINET MODULAR I/O

Zone 1, excom® - Remote I/O for Class I Div 2 Installation

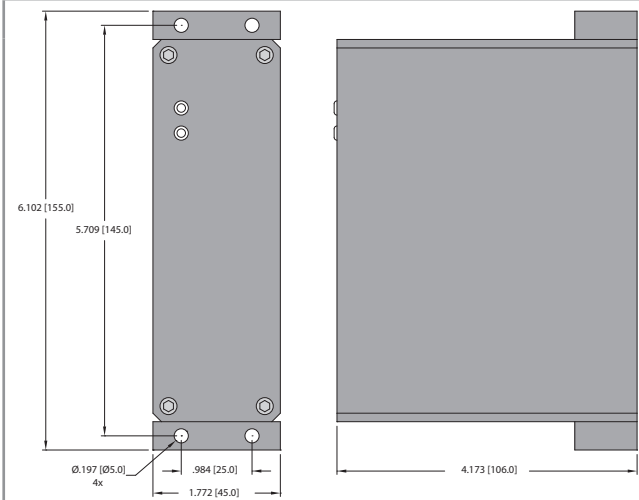
- In Order to Assemble a System, the Following are Required:
1xMT18
1xPSD24EX
1xGDP-IS
1xSC12EX



Gateway Card

Housing Style	Part Number	Fieldbus
 Technical drawing of the Gateway Card showing front and side views with dimensions: - Front view: Overall height 4.646 [118.0] REF, mounting hole spacing .709 [18.0] REF. - Side view: Overall width 4.173 [106.0] REF.	GDP-IS/FW2.1	PROFIBUS®-DP

Power Supply

Housing Style	Part number	Power supply type
 Technical drawing of the Power Supply showing front and side views with dimensions: - Front view: Overall height 6.102 [155.0], mounting hole spacing 5.709 [145.0], terminal hole diameter Ø.197 [Ø5.0] 4x, terminal hole offset .984 [25.0], overall width 1.772 [45.0]. - Side view: Overall width 4.173 [106.0] REF.	PSD24EX PPSA115EX	24VDC 115VAC



In-Cabinet Modular

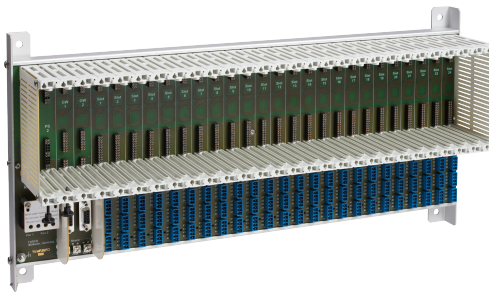
Transfer Rate	Ambient Temperature (°C)	Approvals
9.6kBit/s...1.5MBit/s	-20...+70	PTB 09 ATEX 2013, CE, FM (US/Canada)

Approvals
FM (US/Canada)

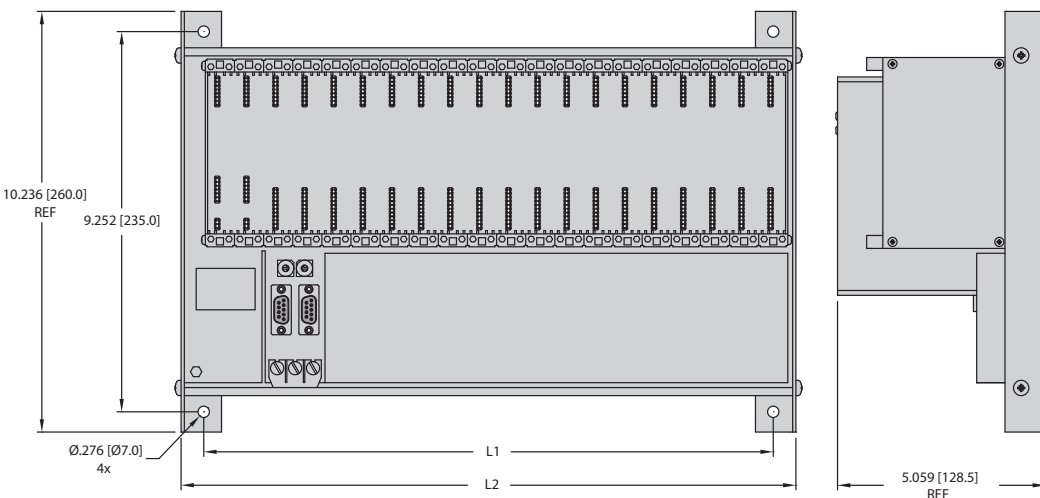
IN-CABINET MODULAR I/O

Zone 2, excom® - Remote I/O for Hazardous Class I Div 2 Areas*

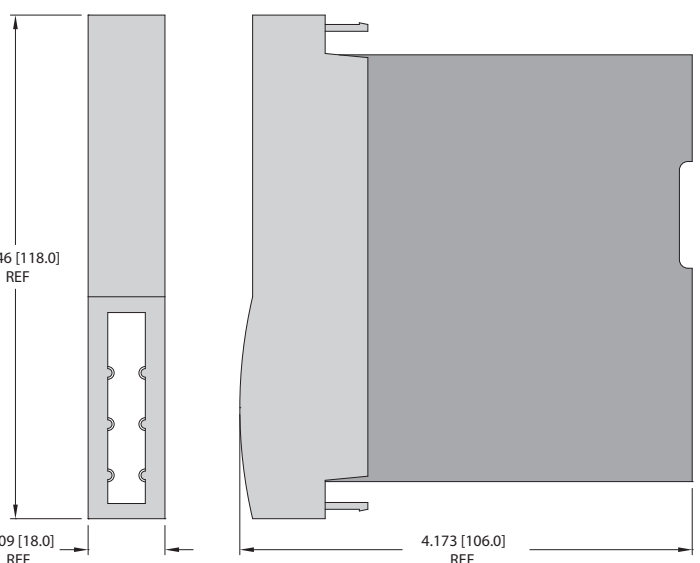
- Up to 24 Intrinsically Safe I/O Module Connections to 192 Field Devices in Zone 0 (Class 1, Division 1) Areas



Module Rack

Housing Style	Part number
 10.236 [260.0] REF 9.252 [235.0] REF Ø.276 [Ø7.0] 4x L1 L2 MT16: L1=352 mm L2=380 mm MT24: L1=498 mm L2=526 mm 5.059 [128.5] REF * Requires use of SC12EX segment coupler	MT16-3G MT24-3G

I/O Cards

Housing Style	Part Number	Number of Channels
 4.646 [118.0] REF 709 [18.0] REF 4.173 [106.0] REF	Input Cards	
	DI401EX	4-channel discrete
	AI401EX	4-channel analog
	AI41EX	4-channel analog
	AI43EX	4-channel analog
	AIH40EX	4-channel analog
	AIH41EX	4-channel analog
	TI40EX	4-channel temperature
	Output Cards	
	D040EX	4-channel discrete
	D0401EX	4-channel discrete
	A040EX	4-channel analog
	Input/Output Cards	
	DM80EX	8-channel
	DF20EX	2-channel frequency

DISTRIBUTED I/O SALES GUIDE



In-Cabinet Modular

Number of I/O modules	Connection type	Power supply
16	Screw terminals	DC
24	Screw terminals	DC

Input/Output Type	Ambient Temp. (°C)	Approvals
NAMUR or dry contact	-20...+70	PTB 10 ATEX 2024
active/passive	-20...+60	FM (US/Canada)
passive	-20...+60	
potentiometer	-20...+60	
active/passive HART	-20...+60	FM (US/Canada)
passive HART	-20...+60	FM (US/Canada)
RTD, TC	-20...+70	FM (US/Canada)
IS actuators	-20...+60	FM (US/Canada), PTB 01 ATEX 2047
IS actuators	-20...+70	FM (US/Canada), PTB 10 ATEX 2024, CE
		FM (US/Canada)
NAMUR or dry contact	-20...+70	FM (US/Canada), PTB 00 ATEX 2178
NAMUR or dry contact	-20...+60	FM (US/Canada), PTB 00 ATEX 2178

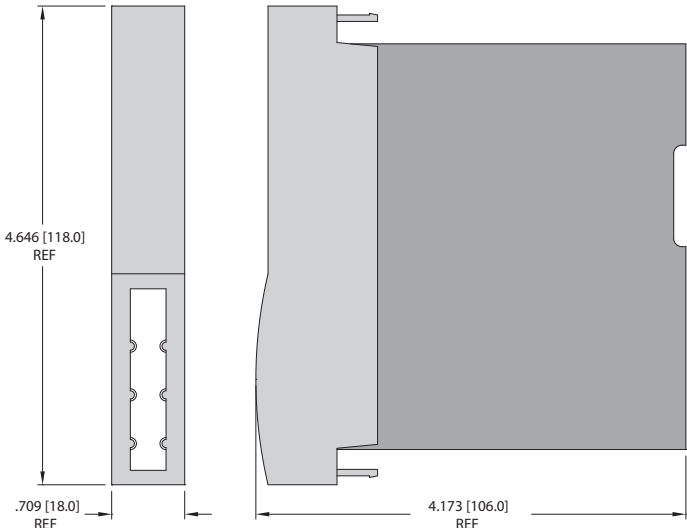
IN-CABINET MODULAR I/O

Zone 2, excom® - Remote I/O for Class I Div 2 Installation

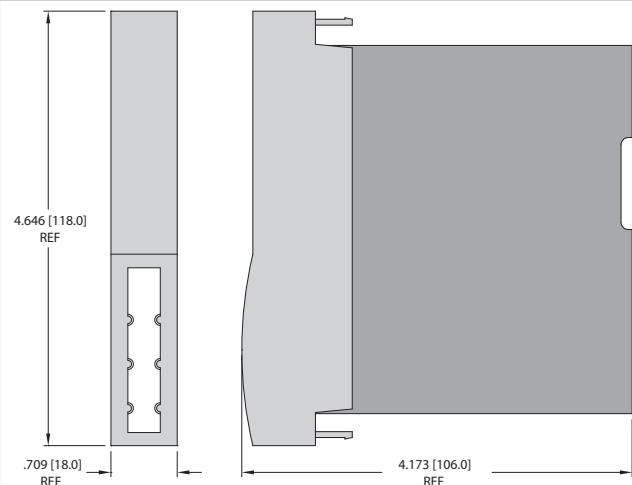
- In Order to Assemble a System, the Following are Required:
 - 1xMT16-3G or MT24-3G
 - 1xPSM24-3G
 - 1xGDP-IS
 - 1xSC12EX



Gateway Card

Housing Style	Part Number	Fieldbus
	GDP-IS/FW2.1	PROFIBUS®-DP

Power Supply Card

Housing Style	Part number	Power supply type
	PSM24-3G	24VDC



In-Cabinet Modular

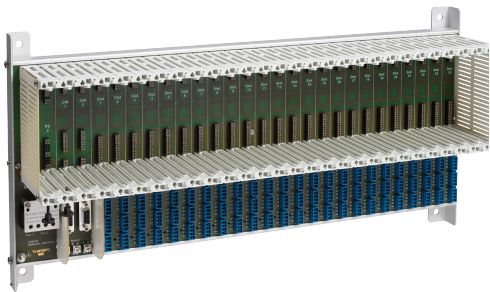
Transfer Rate	Ambient Temperature (°C)	Approvals
9.6kBit/s...1.5MBit/s	-20...+70	PTB 09 ATEX 2013, CE, FM (US/Canada)

Approvals
FM* * Pending

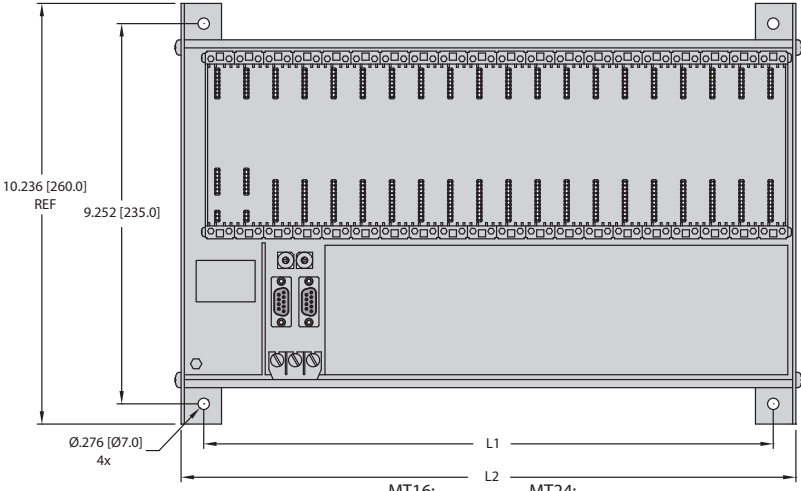
IN-CABINET MODULAR I/O

excom® - Remote I/O for Non-Ex Areas with Ex hardware

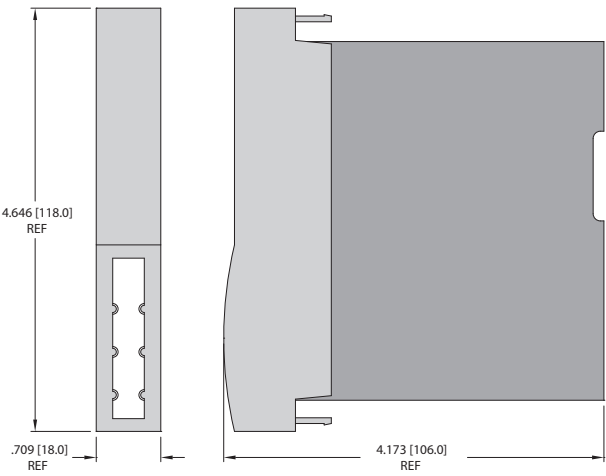
- Up to 24 Intrinsically Safe I/O Module Connections to 192 Field Devices in Zone 0(Class 1, Div. 1) Areas



Module Rack

Housing Style		Part number
	MT16:	MT16-G3G
	MT24:	MT24-3G
Does not require SC12EX segment coupler		
L1=352 mm L1=498 mm		
L2=380 mm L2=526 mm		

I/O Cards

Housing Style	Part Number	Number of Channels
	Input Cards	
	DI401EX	4-channel discrete
	AI401EX	4-channel analog
	AI41EX	4-channel analog
	AI43EX	4-channel analog
	AIH40EX	4-channel analog
	AIH41EX	4-channel analog
	TI40EX	4-channel temperature
	Output Cards	
	D040EX	4-channel discrete
	D0401EX	4-channel discrete
	A040EX	4-channel analog
	Input/Output Cards	
	DM80EX	8-channel
	DF20EX	2-channel frequency

Number of I/O modules	Connection type	Power supply
16	Screw terminals	DC
24	Screw terminals	DC

Input/Output Type	Ambient Temp. (°C)	Approvals
NAMUR or dry contact	-20...+70	PTB 10 ATEX 2024
active/passive	-20...+60	FM (US/Canada)
passive	-20...+60	
potentiometer	-20...+60	
active/passive HART	-20...+60	FM (US/Canada)
passive HART	-20...+60	FM (US/Canada)
RTD, TC	-20...+70	FM (US/Canada)
IS actuators	-20...+60	FM (US/Canada), PTB 01 ATEX 2047
IS actuators	-20...+70	FM (US/Canada), PTB 10 ATEX 2024, CE
		FM (US/Canada)
NAMUR or dry contact	-20...+70	FM (US/Canada), PTB 00 ATEX 2178
NAMUR or dry contact	-20...+60	FM (US/Canada), PTB 00 ATEX 2178

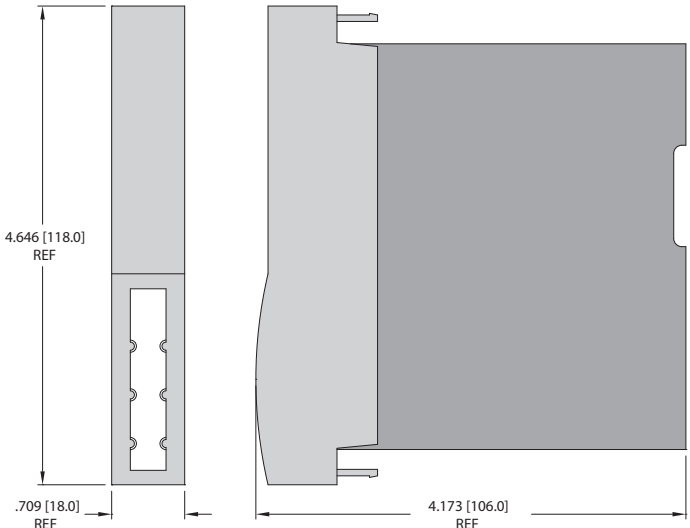
IN-CABINET MODULAR I/O

excom® - Remote I/O for Non-Ex Areas with Ex hardware

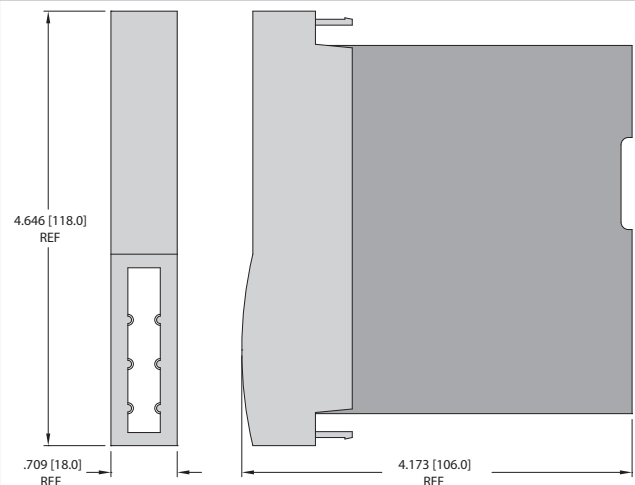
- In Order to Assemble a System, the Following are Required:
 - 1xMT16-3G or MT24-3G
 - 1xPSM24-3G
 - 1xGDP-NI



Gateway Card

Housing Style	Part Number	Fieldbus
	GDP-NI /FW...	PROFIBUS®-DP

Power Supply Card

Housing Style	Part number	Power supply type
	PSM24-3G	24VDC

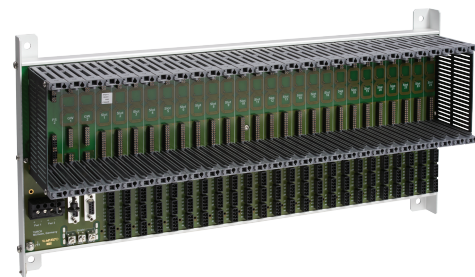
Transfer Rate	Ambient Temperature (°C)	Approvals
9.6kBit/s...1.5MBit/s	-20...+70	

Approvals
FM* * Pending

IN-CABINET MODULAR I/O

excom® - Remote I/O for Non-Ex Areas with Non-Ex hardware

- Up to 24 Non-Intrinsically Safe I/O Module Connections to 192 Field Devices in Non-Hazardous Areas



Module Rack

Housing Style	Part number
*Screw terminals ordered separately	MT24-N

I/O Cards

Housing Style	Part Number	Number of Channels
	Input Cards	
	AI40-N	4-channel analog
	AIH41-N	4-channel analog
	AI43-N	4-channel analog
	AIH40-N	4-channel analog
	AIH41-N	4-channel analog
	TI40N	4-channel temperature
	Output Cards	
	D040-N	4-channel discrete
	A040-N Cards	4-channel analog
	D060R-N	6-channel mechanical
	Input/Output Cards	
	DM80-N	8-channel
	DF20-N	2-channel frequency

Number of I/O modules	Connection type	Power supply
24	Screw terminals	DC

Input/Output Type	Ambient Temperature (°C)	Approvals
active/passive	-20...+60	
passive	-20...+60	
potentiometer	-20...+60	
active/passive HART	-20...+60	
passive HART	-20...+60	
RTD, TC	-20...+70	
IS actuators	-20...+70	
SPST Relay contacts		
NAMUR or dry contact	-20...+70	
NAMUR or dry contact	-20...+60	

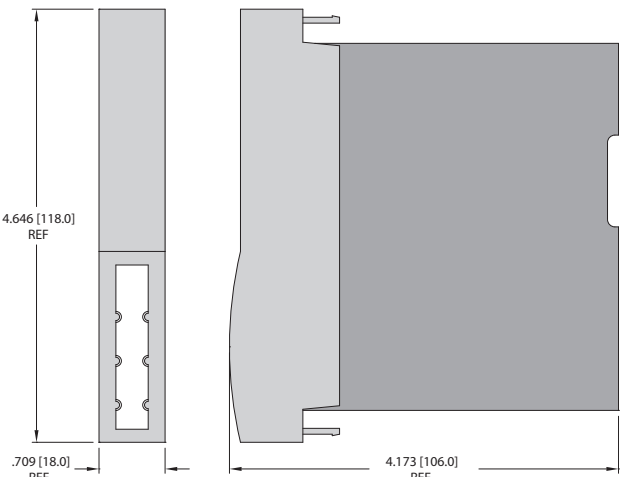
IN-CABINET MODULAR I/O

excom® - Remote I/O for Non-Ex Areas with Non-Ex hardware

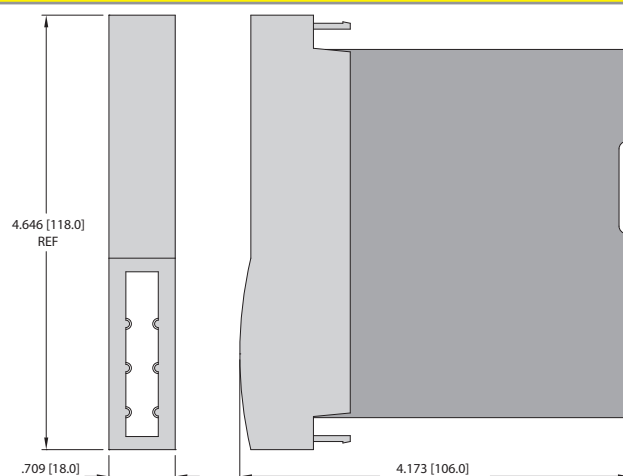
- In Order to Assemble a System, the Following are Required:
1xMT24-N
1xPSM24-N
1xGDP-N



Gateway Card

Housing Style	Part Number	Fieldbus
	GDP-N/FW...	PROFIBUS®-DP

Power Supply Card

Housing Style	Part number	Power supply type
	PSM24-N	24VDC



In-Cabinet Modular

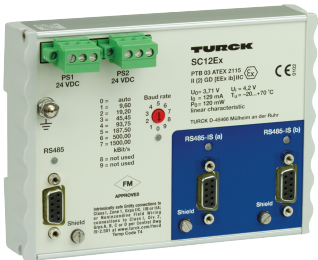
Transfer Rate	Ambient Temperature (°C)	Approvals
9.6kBit/s...1.5MBit/s	-20...+70	

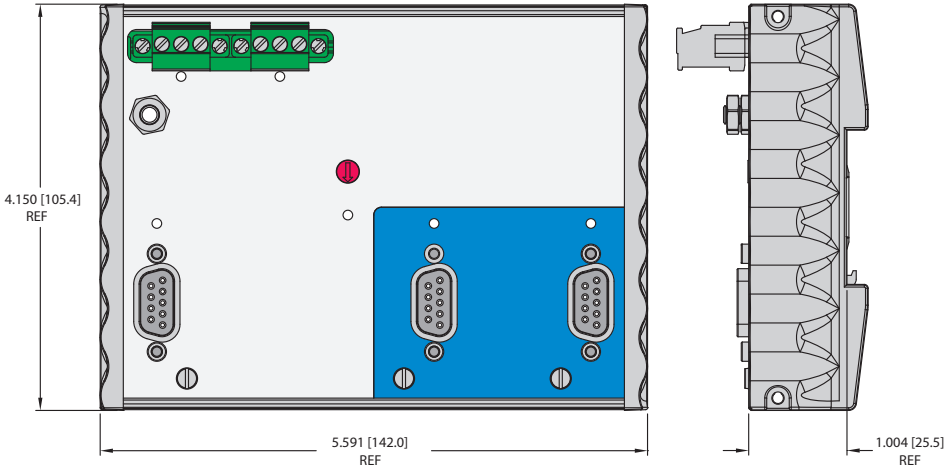
Approvals

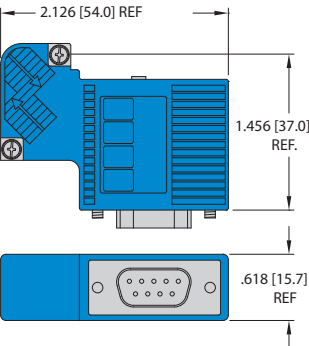
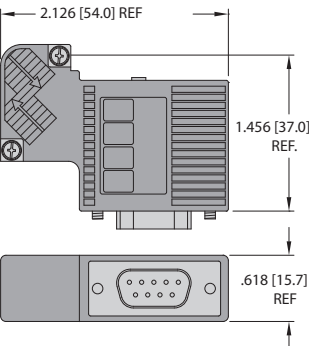
IN-CABINET MODULAR I/O

excom® - Accessories for Ex and Non-Ex Areas

- Segment Coupler Allows Mounting in Zone 1 or 2



Housing Style	Part Number	Description/Notes
	SC12-EX	PROFIBUS®-DP to RS485IS interface

Housing Style	Part Number	Description
 Preconfigured cable part number: D9T-RS485IS D9T-RS485IS 451B-*M	D9T-RS485IS	Connector for excom MT (backplane) and SC12-EX RS485-IS Connector
 Preconfigured cable part number: D9S/T D9S D9S/T 455-*M-*M	D9T-RS485	Connector for SC12-EX PROFIBUS-DP and PB-XEPI2 Connector

* denotes length in meters

DISTRIBUTED I/O SALES GUIDE



In-Cabinet Modular

Number of Nodes	Ambient Temperature (°C)	Approvals
62 (31 with redundancy)	-20...+70	FM (US)

IN-CABINET MODULAR I/O

excom® - Accessories for Ex and Non-Ex Areas

- FDT-DTM Parameterization Via PACTWARE



Housing Style	Part Number	Description	Supply Voltage
	PB-XEPI2	EtherNet to PROFIBUS® interface	24VDC (19.2...28.8VDC)

Housing Style	Part Number	Description
	STB16-4RS/1,5-BU	4-pin terminal block, screw terminals, blue (set of 16)
	STB16-4RS/1,5-BK	4-pin terminal block, screw terminals, black (set of 16)

Current Consumption	Ambient Temperature (°C)	Operating Systems
≤200 mA	0...+50	Windows XP/7