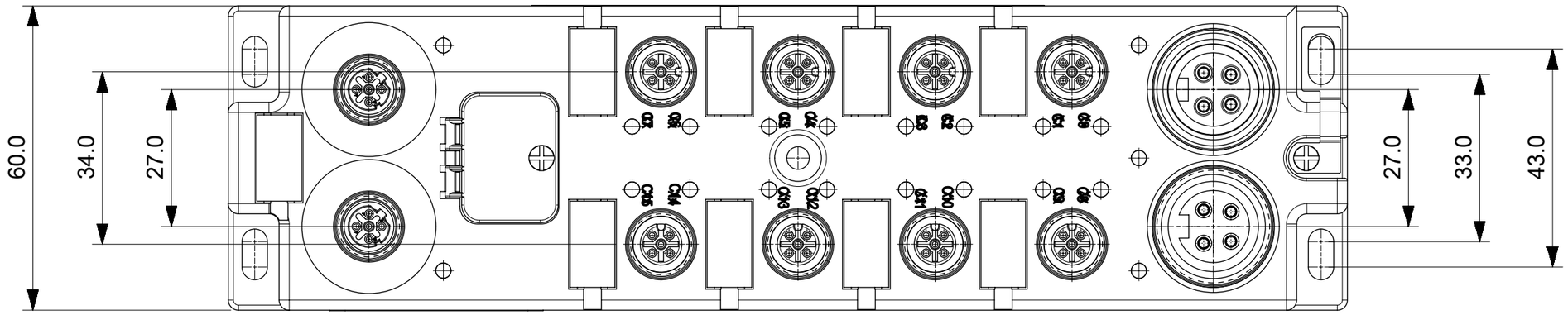
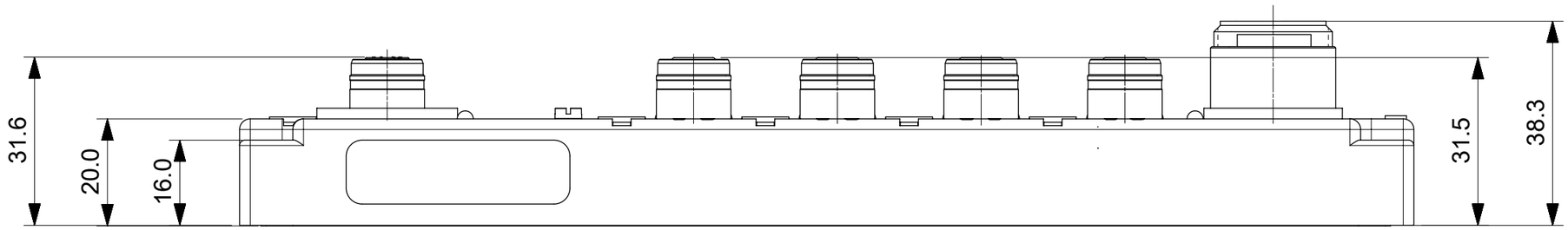
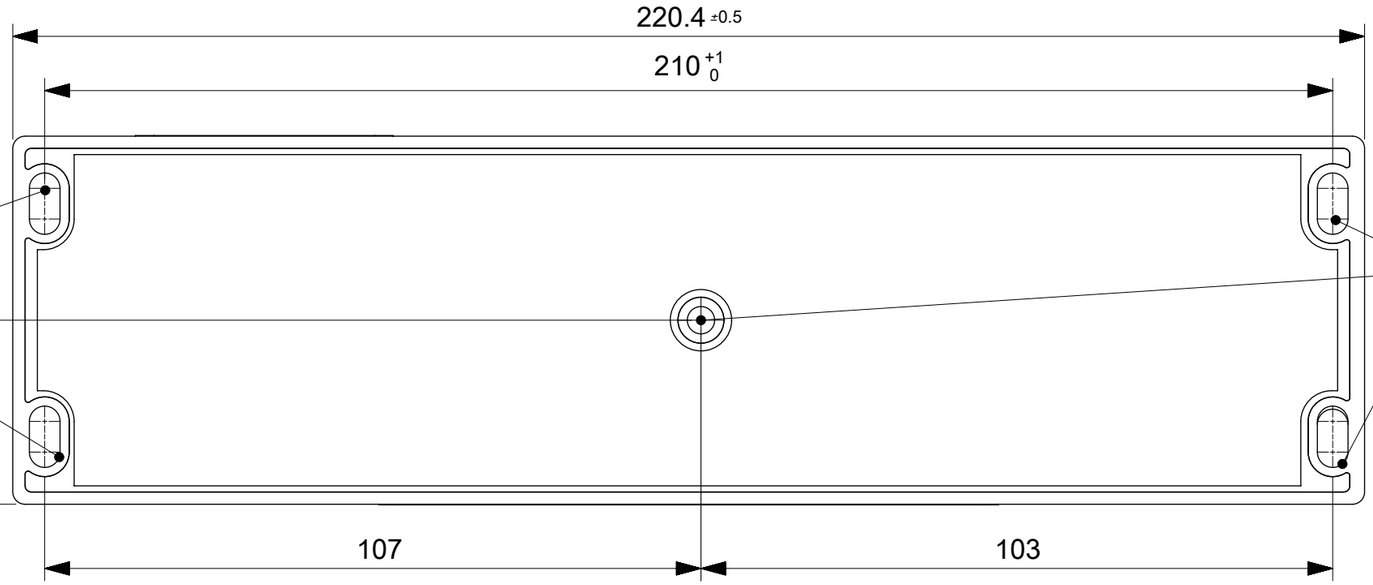
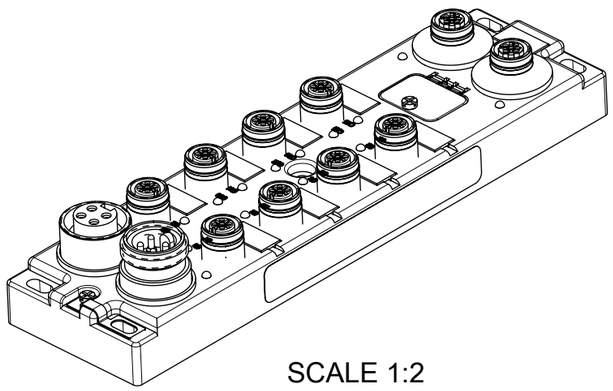








SCALE 1:2

DOCUMENT STATUS	P1	RELEASE DATE	2020/02/06 11:19:21

FORMAT: master_sheet_A3
REVISION: H
DATE: 2018/01/16

DIMENSION UNITS	SCALE
mm	1:1

GENERAL TOLERANCES (UNLESS SPECIFIED)

ANGULAR TOL	±	°
4 PLACES	±	
3 PLACES	±	
2 PLACES	±	
1 PLACE	±	0.3
0 PLACES	±	0.5

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

CURRENT REV DESC: OBSOLETED PART NO.

EC NO: 631031
DRWN: RPRABHUM 2020/01/09
CHK'D: GGA 2020/02/06
APPR: GGA 2020/02/06

INITIAL REVISION:
DRWN: SSM 2019/02/28
APPR: RSILLER 2019/03/27

THIRD ANGLE PROJECTION | DRAWING: A3-SIZE | SERIES: 112095

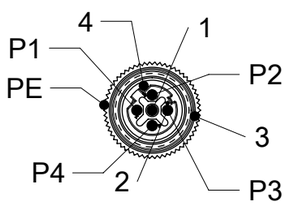
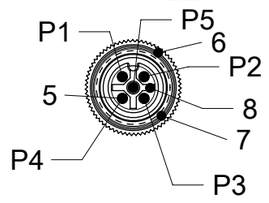
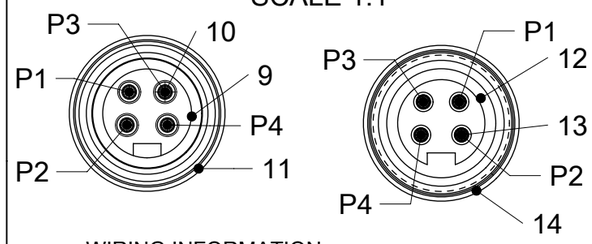
molex

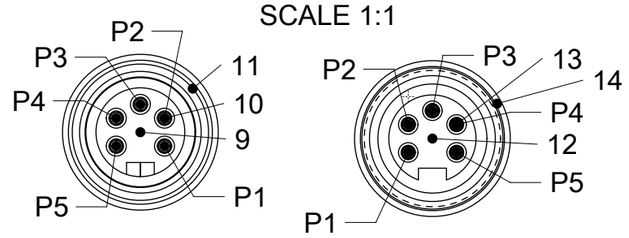
IO:ENET/IP:IP67:60MM:8P5:16 DCONFIG
U12 4P 2PT DC FE

PRODUCT CUSTOMER DRAWING

DOCUMENT NUMBER	DOC TYPE	DOC PART	REVISION
1120955011	PSD	000	A2

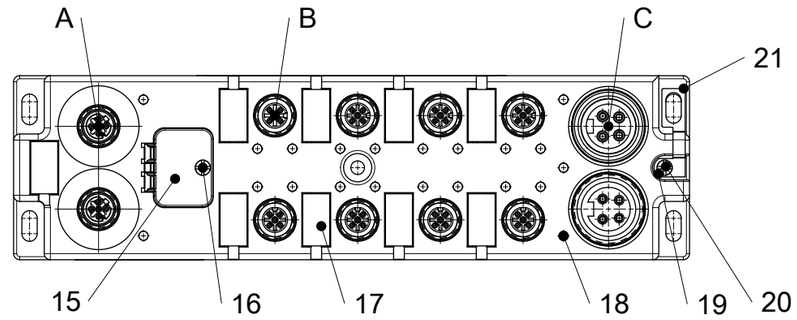
MATERIAL NUMBER	CUSTOMER	SHEET NUMBER
SEE TABLE 3,4,5,6,7,8	GENERAL MARKET	1 OF 7

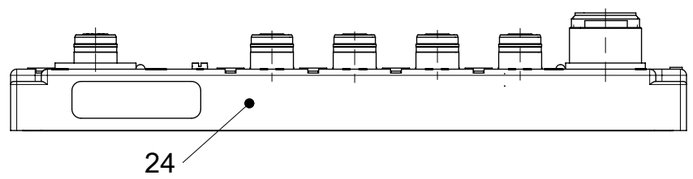
A	B	C	
BUS: 2x FEMALE M12 4P D-CODE	INPUT / OUTPUT: 8x FEMALE M12 5P A-CODE	POWER IN MALE 7/8" 4PIN	POWER OUT FEMALE 7/8" 4PIN
SCALE 1:1	SCALE 1:1	SCALE 1:1	
			
WIRING INFORMATION P1 TX+ P2 RX+ P3 TX- P4 RX-	WIRING INFORMATION INPUT P1 - +24 VDC P2 - Input (even) P3 - 0 V (Ground) P4 - Input (odd) P5 - PE (Protected Earth)	WIRING INFORMATION P1 - +24 VDC (Outputs Power) P2 - +24 VDC (Module & Inputs Power) P3 - 0 V (Module & Inputs Power) P4 - 0 V (Outputs Power)	WIRING INFORMATION OUTPUT P1 - N/C P2 - Output (even) P3 - 0 V (Ground) P4 - Output (odd) P5 - PE (Protected Earth)

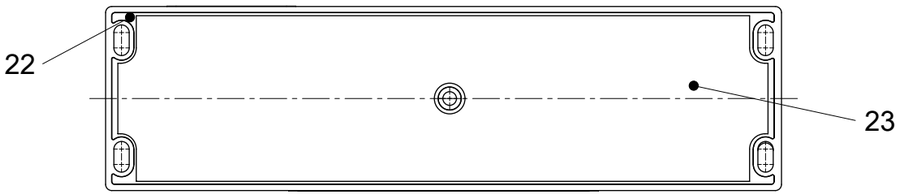
POWER IN MALE 7/8" 5PIN	POWER OUT FEMALE 7/8" 5PIN
SCALE 1:1	
	
WIRING INFORMATION P1 - 0 V (Outputs Power) P2 - 0 V (Module & Inputs Power) P3 - PE (Protected Earth) P4 - +24 VDC (Module and Inputs Power) P5 - +24 VDC (Outputs Power)	

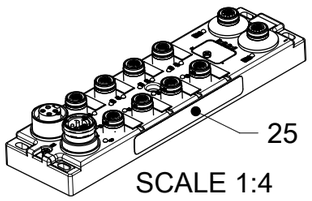
BILL OF MATERIAL

ITEM	DESCRIPTION	MATERIAL	FINISH
1	INSERT	TPU	BLACK
2	CONTACT	COPPER ALLOY	GOLD OVERNICKEL
3	SHELL	BRASS	NICKEL PLATET
4	GASKET	FPM	BLACK
5	CONTACT	COPPER ALLOY	GOLD OVER NICKEL
6	GASKET	FPM	BLACK
7	SHELL	BRASS	NICKEL PLATET
8	INSERT	TPU	BLACK
9	INSERT	TPE	YELLOW
10	CONTACT	COPPER ALLOY	GOLD OVERNICKEL
11	SHELL	BRASS	NICKEL PLATET
12	INSERT	TPE	YELLOW
13	CONTACT	COPPER ALLOY	GOLD OVER NICKEL
14	SHELL	BRASS	NICKEL PLATET
15	WINDOW	PC	TRANSPARENT
16	SCREW	V2A	-
17	LABEL	PC	WHITE
18	FIBER OPTIC	PA	TRANSPARENT
19	WASHER	BRASS	NICKEL PLATET
20	SCREW	V2A	-
21	SHIELD PLATE	STAINLESS STEEL	-
22	RESIN	EPOXY	TRANSPARENT
23	LABEL	PVC	WHITE
24	HOUSING	PBT	BLACK
25	LABEL	PVC	YELLOW









SCALE 1:4

DIMENSION UNITS	mm
SCALE	1:2
GENERAL TOLERANCES (UNLESS SPECIFIED)	
ANGULAR TOL	± °
4 PLACES	±
3 PLACES	±
2 PLACES	±
1 PLACE	± 0.3
0 PLACES	± 0.5
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	

CURRENT REV DESC: OBSOLETED PART NO.

EC NO: 631031
DRWN: RPRABHUM 2020/01/09
CHK'D: GGA 2020/02/06
APPR: GGA 2020/02/06

INITIAL REVISION:
DRWN: SSM 2019/02/28
APPR: RSILLER 2019/03/27

molex

IO:ENET/IP:IP67:60MM:8P5:16 DCONFIG
U12 4P 2PT DC FE

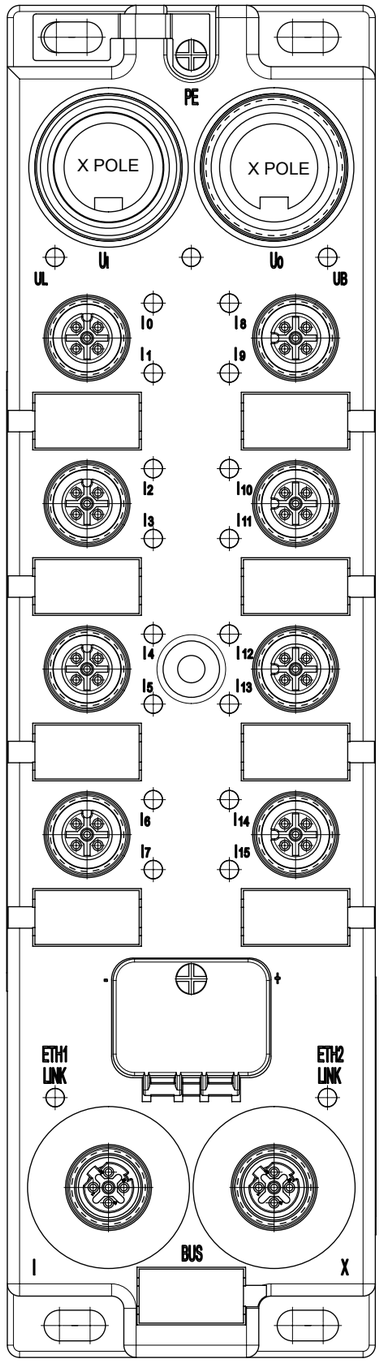
PRODUCT CUSTOMER DRAWING

DOCUMENT NUMBER	DOC TYPE	DOC PART	REVISION
1120955011	PSD	000	A2

THIRD ANGLE PROJECTION	DRAWING	SERIES	MATERIAL NUMBER	CUSTOMER	SHEET NUMBER
	A3-SIZE	112095	SEE TABLE 3,4,5,6,7,8	GENERAL MARKET	2 OF 7

DOCUMENT STATUS	P1	RELEASE DATE	2020/02/06 11:19:21

FORMAT: master_Sheet_A3
REVISION: H
DATE: 2018/01/16



16 IN PRINTING

TABLE 1 16 IN PRINTING

			EtherNet/IP		PROFINET		3D MODEL NO.
POWER TYPE	INPUT/OUTPUT		ENG. NO	MOLEX P/N	ENG. NO	MOLEX P/N	
7/8" 5 POLE	PNP	16I			TCDEP-8D0P-D1U-G	1120955048	1120955011- PDM
		16I	TCDEI-8D0P-D1U-G02	1120955141			
7/8" 4 POLE		16I	TCDEI-8D0P-DYU-G01	1120955002			
		16I	TCDEI-8D0P-DYU-G02	1120955137			

DIMENSION UNITS	SCALE
mm	1:1

GENERAL TOLERANCES (UNLESS SPECIFIED)

ANGULAR TOL	±	°
4 PLACES	±	
3 PLACES	±	
2 PLACES	±	
1 PLACE	±	0.3
0 PLACES	±	0.5

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

CURRENT REV DESC: OBSOLETED PART NO.

EC NO: 631031
DRWN: RPRABHUM 2020/01/09
CHK'D: GGA 2020/02/06
APPR: GGA 2020/02/06

INITIAL REVISION:
DRWN: SSM 2019/02/28
APPR: RSILLER 2019/03/27

THIRD ANGLE PROJECTION | DRAWING: A3-SIZE | SERIES: 112095

molex

IO:ENET/IP:IP67:60MM:8P5:16 DCONFIG
U12 4P 2PT DC FE

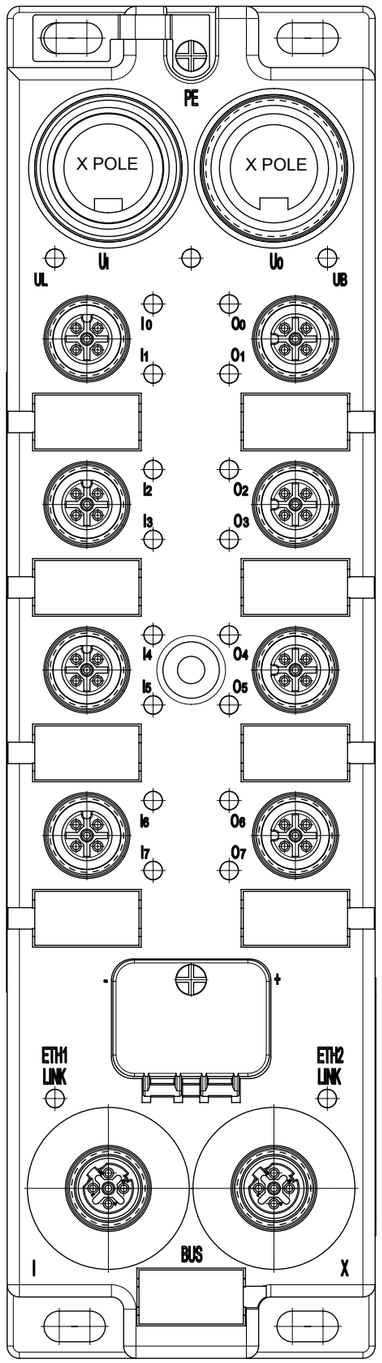
PRODUCT CUSTOMER DRAWING

DOCUMENT NUMBER	DOC TYPE	DOC PART	REVISION
1120955011	PSD	000	A2

MATERIAL NUMBER	CUSTOMER	SHEET NUMBER
SEE TABLE 3,4,5,6,7,8	GENERAL MARKET	3 OF 7

DOCUMENT STATUS	P1	RELEASE DATE	2020/02/06 11:19:21

FORMAT: molex_B_size_A3
REVISION: H
DATE: 2018/01/16



8I/8O IN PRINTING

TABLE 2 8I/8O PRINTING

			EtherNet/IP		PROFINET		3D MODEL NO.
POWER TYPE	INPUT/OUTPUT		ENG. NO	MOLEX P/N	ENG. NO	MOLEX P/N	
7/8" 5 POLE	PNP	8I/8O	TCDEI-888P-D1U-G	1120955061	TCDEP-888P-D1U-G	1120955050	1120955011 - PDM
		8I/8O	TCDEI-888P-D1U-G02	1120955142			
		8IN/4M	TCDEI-88MP-D1U-G	1120955118			
7/8" 4 POLE		8I/8O	TCDEI-888P-DYU-G	1120955041	TCDEP-888P-DYU-G	1120955053	
			TCDEI-888P-DYU-G01	1120955072			
			TCDEI-888P-DYU-G02	1120955138			

DIMENSION UNITS	SCALE
mm	1:1

GENERAL TOLERANCES (UNLESS SPECIFIED)

ANGULAR TOL	±	°
4 PLACES	±	
3 PLACES	±	
2 PLACES	±	
1 PLACE	±	0.3
0 PLACES	±	0.5

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

CURRENT REV DESC: OBSOLETED PART NO.

EC NO: 631031

DRWN:	RPRABHUM	2020/01/09
CHK'D:	GGA	2020/02/06
APPR:	GGA	2020/02/06

INITIAL REVISION:

DRWN:	SSM	2019/02/28
APPR:	RSILLER	2019/03/27

THIRD ANGLE PROJECTION | DRAWING: A3-SIZE | SERIES: 112095

molex

IO:ENET/IP:IP67:60MM:8P5:16 DCONFIG
U12 4P 2PT DC FE

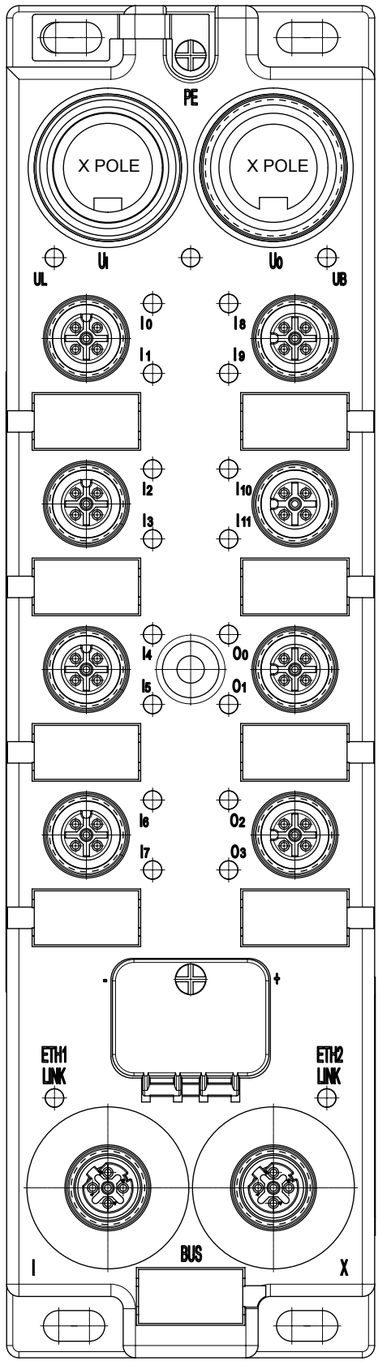
PRODUCT CUSTOMER DRAWING

DOCUMENT NUMBER	DOC TYPE	DOC PART	REVISION
1120955011	PSD	000	A2

MATERIAL NUMBER	CUSTOMER	SHEET NUMBER
SEE TABLE 3,4,5,6,7,8	GENERAL MARKET	4 OF 7

DOCUMENT STATUS	P1	RELEASE DATE	2020/02/06 11:19:21

FORMAT: master Sheet A3
REVISION: H
DATE: 2018/01/16



12I/4O PRINTING

TABLE 3 12I/4O PRINTING

			EtherNet/IP		PROFINET		3D MODEL NO.
POWER TYPE	INPUT/OUTPUT		ENG. NO	MOLEX P/N	ENG. NO	MOLEX P/N	
7/8" 5 POLE	PNP	12I/4O	TCDEI-8B4P-D1U-G	1120955063	TCDEP-8B4P-D1U-G	1120955051	1120955011 - PDM
		12I/4O	TCDEI-8B4P-D1U-G02	1120955143			
7/8" 4 POLE		12I/4O	TCDEI-8B4P-DYU-G01	1120955073			
		12I/4O	TCDEI-8B4P-DYU-G02	1120955139			

DIMENSION UNITS	SCALE
mm	1:1

GENERAL TOLERANCES (UNLESS SPECIFIED)

ANGULAR TOL	±	°
4 PLACES	±	
3 PLACES	±	
2 PLACES	±	
1 PLACE	±	0.3
0 PLACES	±	0.5

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

CURRENT REV DESC: OBSOLETED PART NO.

EC NO: 631031
DRWN: RPRABHUM 2020/01/09
CHK'D: GGA 2020/02/06
APPR: GGA 2020/02/06

INITIAL REVISION:
DRWN: SSM 2019/02/28
APPR: RSILLER 2019/03/27

THIRD ANGLE PROJECTION | DRAWING: A3-SIZE | SERIES: 112095

molex

IO:ENET/IP:IP67:60MM:8P5:16 DCONFIG
U12 4P 2PT DC FE

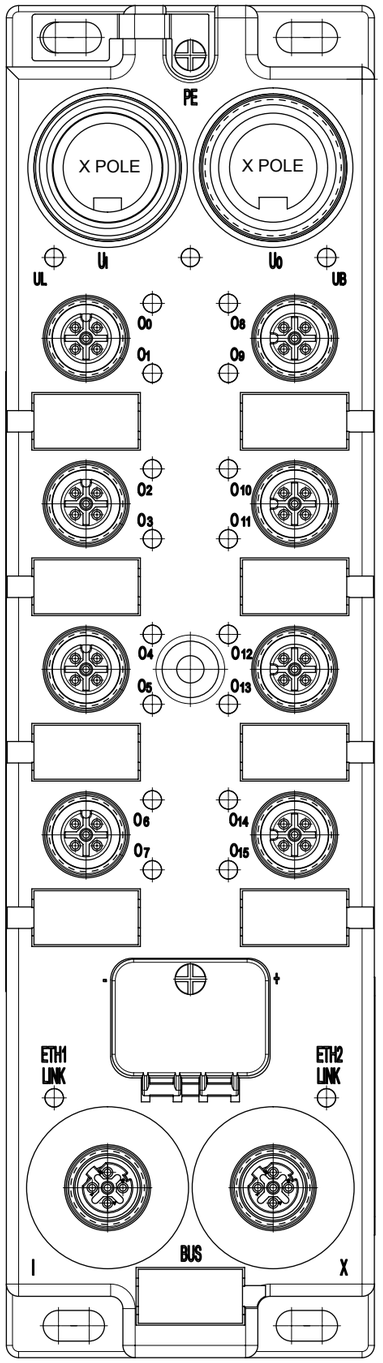
PRODUCT CUSTOMER DRAWING

DOCUMENT NUMBER	DOC TYPE	DOC PART	REVISION
1120955011	PSD	000	A2

MATERIAL NUMBER	CUSTOMER	SHEET NUMBER
SEE TABLE 3,4,5,6,7,8	GENERAL MARKET	5 OF 7

DOCUMENT STATUS	P1	RELEASE DATE	2020/02/06 11:19:21

FORMAT: master_sheet_A3
REVISION: H
DATE: 2018/01/16



16O PRINTING

TABLE 4 16O PRINTING

			EtherNet/IP		PROFINET		3D MODEL NO.
POWER TYPE	INPUT/OUTPUT		ENG. NO	MOLEX P/N	ENG. NO	MOLEX P/N	
7/8" 5 POLE	PNP	16O	TCDEI-80DP-D1U-G	1120955062	TCDEP-80DP-D1U-G	1120955049	1120955011 - PDM
		16O	TCDEI-80DP-D1U-G02	1120955144			
7/8" 4 POLE		16O	TCDEI-80D8-DYU-G01	1120955074			
		16O	TCDEI-80DP-DYU-G02	1120955140			

DIMENSION UNITS	mm
SCALE	1:1
GENERAL TOLERANCES (UNLESS SPECIFIED)	
ANGULAR TOL ±	°
4 PLACES ±	
3 PLACES ±	
2 PLACES ±	
1 PLACE ±	0.3
0 PLACES ±	0.5
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	

CURRENT REV DESC: OBSOLETED PART NO.

EC NO: 631031
DRWN: RPRABHUM 2020/01/09
CHK'D: GGA 2020/02/06
APPR: GGA 2020/02/06

INITIAL REVISION:
DRWN: SSM 2019/02/28
APPR: RSILLER 2019/03/27

molex

IO:ENET/IP:IP67:60MM:8P5:16 DCONFIG
U12 4P 2PT DC FE

PRODUCT CUSTOMER DRAWING

DOCUMENT NUMBER	DOC TYPE	DOC PART	REVISION
1120955011	PSD	000	A2

THIRD ANGLE PROJECTION	DRAWING	SERIES	MATERIAL NUMBER	CUSTOMER	SHEET NUMBER
	A3-SIZE	112095	SEE TABLE 3,4,5,6,7,8	GENERAL MARKET	6 OF 7

DOCUMENT STATUS	P1	RELEASE DATE	2020/02/06 11:19:21

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REVISION: H
DATE: 2018/01/18

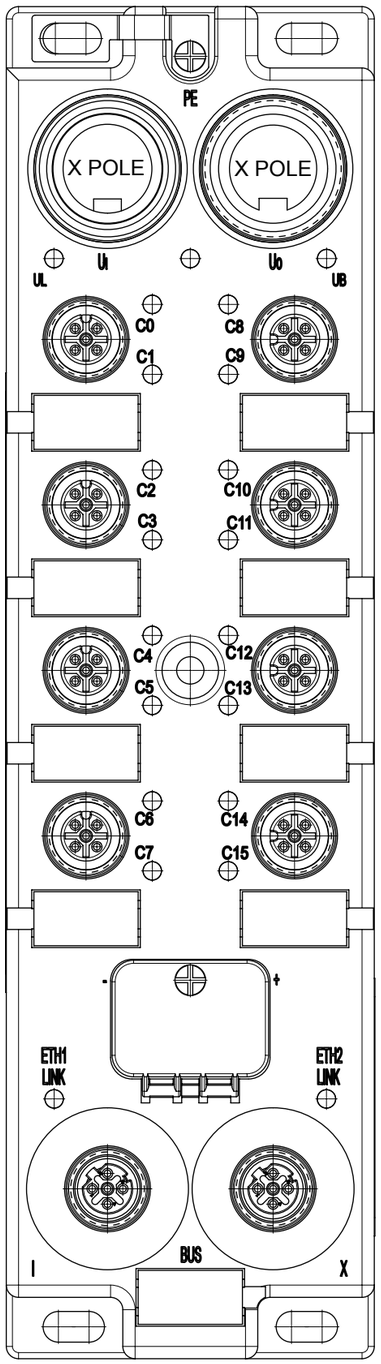


TABLE 5 16 USER CONFIG PRINTING

			EtherNet/IP		PROFINET		3D MODEL NO.
POWER TYPE	INPUT/OUTPUT		ENG. NO	MOLEX P/N	ENG. NO	MOLEX P/N	
7/8" 5 POLE	PNP	USER CONFIG	TCDEI-8YYX-D1U-G02	1120955117	TCDEP-8YYX-D1U-01	1120955115	1120955011 - PDM
7/8" 4 POLE			TCDEI-8YYX-DYU-G02	1120955116	TCDEP-8YYX-DYU-01	1120955114	

DIMENSION UNITS	SCALE
mm	1:1

GENERAL TOLERANCES (UNLESS SPECIFIED)

ANGULAR TOL	±	°
4 PLACES	±	
3 PLACES	±	
2 PLACES	±	
1 PLACE	±	0.3
0 PLACES	±	0.5

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

CURRENT REV DESC: OBSOLETED PART NO.

EC NO: 631031
DRWN: RPRABHUM 2020/01/09
CHK'D: GGA 2020/02/06
APPR: GGA 2020/02/06

INITIAL REVISION:
DRWN: SSM 2019/02/28
APPR: RSILLER 2019/03/27

THIRD ANGLE PROJECTION | DRAWING: A3-SIZE | SERIES: 112095

molex

IO:ENET/IP:IP67:60MM:8P5:16 DCONFIG
U12 4P 2PT DC FE

PRODUCT CUSTOMER DRAWING

DOCUMENT NUMBER	DOC TYPE	DOC PART	REVISION
1120955011	PSD	000	A2

MATERIAL NUMBER	CUSTOMER	SHEET NUMBER
SEE TABLE 3,4,5,6,7,8	GENERAL MARKET	7 OF 7

DOCUMENT STATUS	P1	RELEASE DATE	2020/02/06 11:19:21

FORMAT: master_Sheet-A3
REVISION: H
DATE: 2018/01/16

The BradControl™ IP67 I/O modules provide a reliable solution for connecting industrial controllers to I/O devices in harsh environments.

Ethernet Discrete I/O Module

IP67 Classic Module

Features

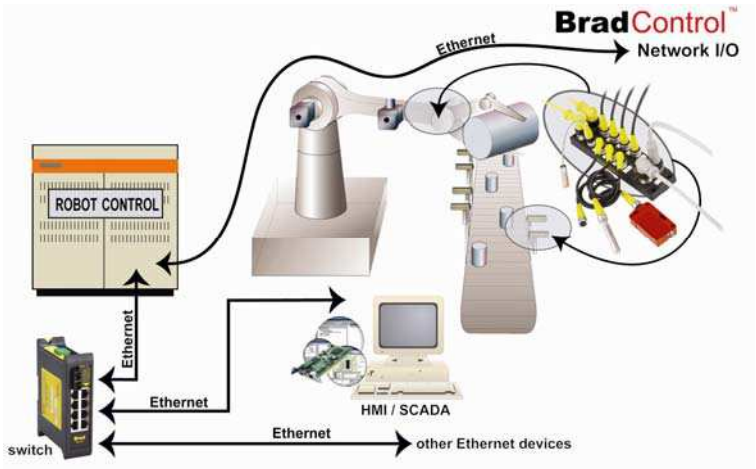
- Supports Modbus TCP (TCP/IP & UDP)
- Accepts M12 threaded connectors or BradConnectivity™ Ultra-Lock™ connection system
- Standard hole pattern allows for interchangeability with popular I/O modules
- Supports PNP & NPN input devices
- Several I/O configurations to choose from
  - TCDEM-8YYX-DIU offers 16 points of configurable I/O where the user can configure each point as either an input or output
- Ability to control I/O through the use of sockets
- Visible LEDs provide maintenance personnel with the ability to easily determine I/O, module & network status
- Rated IP67 for harsh environments
- Designed for direct machine mount applications
- IP addressing via Bootp, DHCP or static (through web interface, push button & Modbus commands)
- Scrolling 4 characters status display for IP addressing and module status
- Built-in 2-port Ethernet switch
  - 10/100 Mbps auto-sensing and crossover capability
- Built-in web server for remote monitoring, configuration and diagnostics
- Configurable I/O capability (through web interface & Modbus commands)
- Watchdog

Typical Applications

- Machine tool industry
- Material handling systems
- Filling & packaging
- Steel industry

I/O Systems for Harsh Duty Environments

BradControl™ Ethernet I/O modules provide a reliable solution for connecting industrial controllers to I/O devices in harsh duty environments.



Contained in an IP67 rated housing, BradControl I/O modules can be machine mounted and are able to withstand areas where liquids, dust or vibration may be present. This makes them ideally suited for many applications including material handling equipment and automated assembly machinery.

Advanced network features such as 10/100 Mbps auto-sensing, web server capabilities and a flexible IP address setup method, make configuration and operation simple. Following traditional industrial fieldbus practices, standard M12 connectors from sensing devices or actuators plug directly into the I/O module. An environmentally sealed IP67 connection between the I/O module and the Ethernet network is created using the Ultra-Lock™ connection system built into the BradControl Ethernet I/O module.

Woodhead

BradControl™

Ethernet I/O Module

Active I/O Modules

LED Indicators

Module & Input Power (I):
Green –power present
Off –power not connected

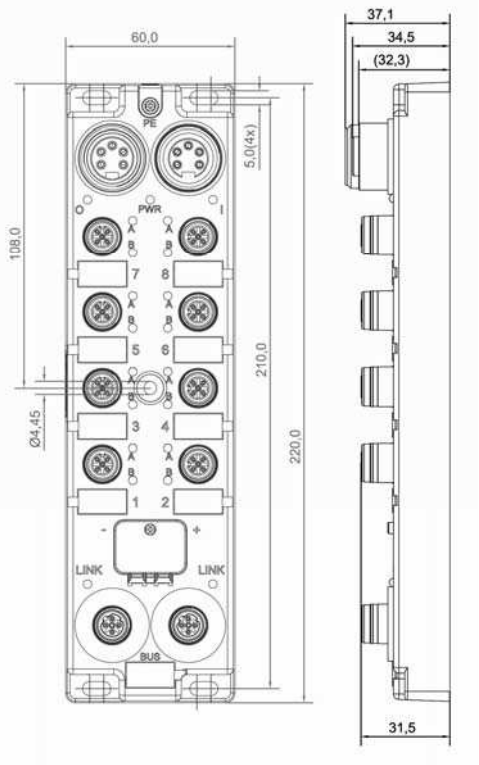
Output Power (O):
Green –power present
Off –power not connected

Display Box:
Inform about Ethernet address, IO and Watchdog status

Input / Output (Ix / Ox):
Green – input/output on
Red – input/output fault
Off – input/output off

Ethernet Link (LNK 1/2):
Solid Green– Ethernet link at 100 Mbit/s without activity.
Flashing Green– Ethernet link at 100 Mbit/s with activity.

Solid Yellow– Ethernet link at 10 Mbit/s without activity.
Flashing Yellow – Ethernet link at 10 Mbit/s with activity.



Technical Information

I/O Configurations	16 inputs 14 inputs / 2 outputs 12 inputs / 4 outputs 8 inputs / 8 outputs Universal & user configurable input / output channels
I/O Connectors	Micro-Change® 5-pole M12 female BradConnectivity™ Ultra-Lock™, internally threaded
Ethernet Connectors	2 connectors 4-pole female M12 D-Coded Ultra-Lock Acting as a switch. Crossover capability
Power Connectors	Power in : male Mini-Change® 5-pole Power out : female Mini-Change 5-pole
Power Requirements	Module & input power : 24 Vdc, Module output power : 24 Vdc (13 to 28 V), 8A max per module
Communications Rate	10/100 Mbps auto-sensing, auto-detecting, full duplex
IP Address Capabilities	BOOTP (default), DHCP, static address
Fieldbus specification	Modbus (TCP & UDP)
Input Type	Compatible with dry contact and PNP or NPN 3-wire switches. Electronic short circuit protection
Input Delay	2.5 ms default or Configurable through Modbus messaging
Input Device Supply	200 mA per port at 25°C
Output Load Current	Maximum 2.0 A per channel Electronic short circuit protection
Maximum Switching Frequency	200 Hz
Housing Dimensions	60mm x 220mm x 20mm (2.36 x 8.66 x .78 inches)
Mounting Dimensions	37.5 mm (1.48 inches) horizontal on centers 210 mm (8.27 inches) vertical on centers Center hole
Operating Temperature	-20ºC to 70ºC (-4ºF to 158ºF)
Storage Temperature	-40ºC to 85ºC (-40ºF to 185ºF)
Protection	IP67 according to IEC 60529, NEMA 6P
Vibration	MIL-STD-202F, method 204D, condition A
Mechanical Shock	MIL-STD-202F, method 213B, condition B
Thermal Shock	MIL-STD-1344A
Approvals	CE, UL, CUL

Ordering Information

Part Number	Product Description
TCDEM-8D0N-D1U	**Digital 8 port, 16 in NPN**
TCDEM-8C2N-D1U	**Digital 8 port, 14 in & 2 out NPN**
TCDEM-8B4N-D1U	**Digital 8 port, 12 in & 4 out NPN**
TCDEM-888N-D1U	**Digital 8 port, 8 in & 8 out NPN**
TCDEM-8D0P-D1U	**Digital 8 port, 16 in PNP**
TCDEM-8C2P-D1U	**Digital 8 port, 14 in & 2 out PNP**
TCDEM-8B4P-D1U	**Digital 8 port, 12 in & 4 out PNP**
TCDEM-888P-D1U	**Digital 8 port, 8 in & 8 out PNP**
TCDEM-8YYX-D1U	**Digital 8 port, 16 I/O universal & user configurable input / output channels**

BradControl™

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