Advanced I/O Modules (AIM™) -Type CDN...

These heavy-duty DeviceNet™ stations are suited for the most harsh industrial environments. There are three different housing designs: two die-cast aluminium housing types (150 mm and 185 mm high) with nickel-plated brass connectors and a glass-fibre reinforced reinforced polyethylane housing (190 mm high) with stainless steel connectors for especially corrosive environments.

All three station types feature protection rating IP67, individual short-circuit and open-circuit detection. They are suited for connection of pnp or npn sensors. LEDs indicate short-circuit, overload and open-circuit conditions, the module status and missing auxiliary power.

The node address and communication rate (125/250/500 kbps) are set by the DIP switches located under the device cover or through software node commissioning.

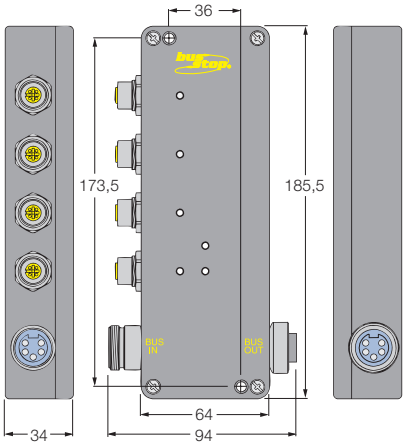
The modules support all forms of DeviceNet messaging, including poll, strobe, cyclic, change-of-state (COS) and UCMM.

Quick Selection Guide

Type code	Input parameters							Output parameters						DeviceNet™ Data			
Advanced I/O modules:	Page number	Number of inputs	Inputs per connector	Compatible with npn/pnp sensor	Short-circuit protection	Input type	Open-circuit detection	Number of outputs	Outputs per connector	Maximum output load	Short-circuit protection	Output type	Open-circuit detection	Product code	Input data size in bytes	Output data size in bytes	Power con-sumption (mA)
CDN-IM4-0046	37	4	1	npn/pnp	i	L	i	–	–	–	–	–	–	737	1	–	80
CDN-IM8-0024	37	8	1	npn/pnp	i	L	i	–	–	–	–	–	–	385	2	–	85
CDN-IM8-0039	38	8	1	npn/pnp	i	L	i	–	–	–	–	–	–	625	2	–	85
CDN-IM8-0043	38	8	2	npn/pnp	i	2L	i	–	–	–	–	–	–	689	2	–	110
CDN-IM16-0053	39	16	2	npn/pnp	i	2L	i	–	–	–	–	–	–	849	4		230
CDN-IOM22-0032	39	2	2	npn/pnp	i	2L	i	2	1	1 A	i	H	i	517	1	1	70
CDN-IOM42-0048	40	4	2	npn/pnp	i	2L	i	2	1	2 A	i	H	i	769	2	1	85
CDN-IOM44-0041	40	4	1	npn/pnp	i	L	i	4	1	2 A	i	H	i	659	2	1	90
CDN-IOM44-0045	41	4	1	npn/pnp	i	L	i	4	1	2 A	i	H	i	723	2	1	90
CDN-OM8-0026	41	–	–	–	–	–	–	8	1	1 A	i	H	i	417	1	1	60
CDN-OM8-0042	42	–	–	–	–	–	–	8	1	1 A	i	H	i	673	1	1	60

i = individual, g = group
– = not available

CDN-IM-4-0046, 4 npn/pnp inputs, per-point diagnostics, 185 mm die-cast aluminium housing



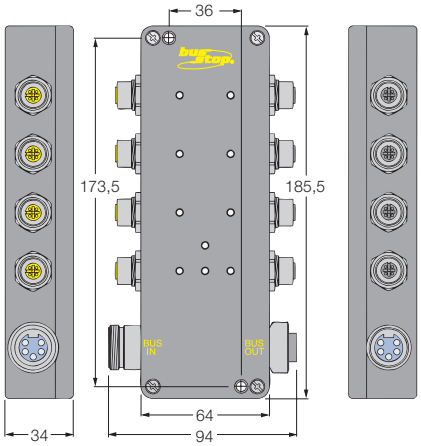
Item-no./EDS file: T0046_34.EDS
Product code: 7 / 737 /(2E1 hex)
Ident-no. 66 033 43

Input Data 1 Byte

Input	Bit	7	6	5	4	3	2	1	0
Data	Meaning	IS-3	IS-2	IS-1	IS-0	I-3	I-2	I-1	I-0

Please refer to page 43 for module specifications

CDN-IM-8-0024, 8 npn/pnp inputs, per-point diagnostics, 185 mm die-cast aluminium housing



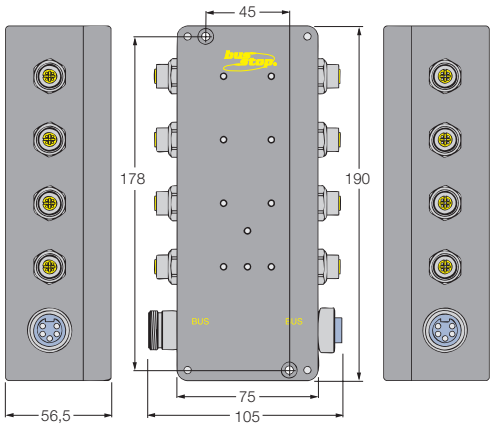
Item-no./EDS file: T0024_34.EDS
Product code: 7 / 385 (181 hex)
Ident-no. 69 220 19

Input data 2 bytes

	Bit	07	06	05	04	03	02	01	00
Input	Meaning	I-7	I-6	I-5	I-4	I-3	I-2	I-1	I-0
Data	Bit	15	14	13	12	11	10	09	08
	Meaning	IS-7	IS-6	IS-5	IS-4	IS-3	IS-2	IS-1	IS-0

Abbreviations:
I = input data (0 = OFF, 1 = ON)
IS = input status (0 = working, 1 = fault)
O = output data (0 = OFF, 1 = ON)
OS= output status (0 = working, 1 = fault)

CDN-IM-8-0039, 8 npn/pnp inputs, per-point diagnostics, 190 mm glass-fibre reinforced polyethylane housing



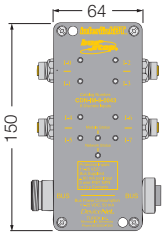
Item-no./EDS file: T0039_34.EDS
Product code: 7 / 628 (274 hex)
Ident-no. 68 220 26

Input data 2 bytes

Input Data	Bit	07	06	05	04	03	02	01	00
	Meaning	I-7	I-6	I-5	I-4	I-3	I-2	I-1	I-0
	Bit	15	14	13	12	11	10	09	08
	Meaning	IS-7	IS-6	IS-5	IS-4	IS-3	IS-2	IS-1	IS-0

Please refer to page 43 for module specifications

CDN-IM-8-0043, 8 npn/pnp inputs, per-point diagnostics, 150 mm die-cast aluminium housing



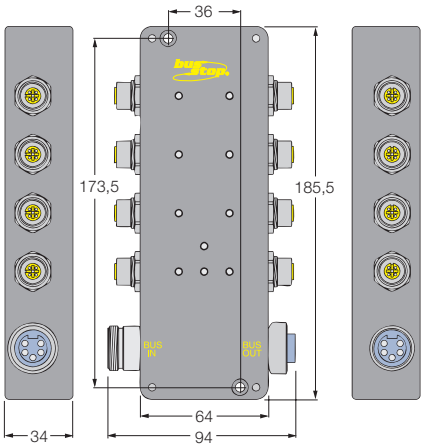
Item-no./EDS file: T0043_ 35.EDS
Product code: 7 / 692 (2B4 hex)
Ident-no. 68 220 027

Input data 2 bytes

Input Data	Bit	07	06	05	04	03	02	01	00
	Meaning	I-7	I-6	I-5	I-4	I-3	I-2	I-1	I-0
	Bit	15	14	13	12	11	10	09	08
	Meaning	IS-7	IS-6	IS-5	IS-4	IS-3	IS-2	IS-1	IS-0

Abbreviations:
I = input data (0 = OFF, 1 = ON)
IS = input status (0 = working, 1 = fault)
O = output data (0 = OFF, 1 = ON)
OS= output status (0 = working, 1 = fault)

CDN-IM-16-0053, 16 npn/pnp inputs, per-point diagnostics, 185 mm die-cast aluminium housing



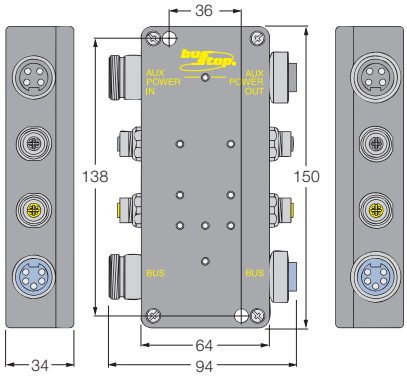
Item-no./EDS file: i0053_11.EDS
Product code: 7 / 849 (351 hex)
Ident-no. 68 220 20

Input data 4 bytes

Input Data	Bit	7	6	5	4	3	2	1	0
	Meaning	I-7	I-6	I-5	I-4	I-3	I-2	I-1	I-0
	Bit	15	14	13	12	11	10	09	08
	Meaning	I-15	I-14	I-13	I-12	I-11	I-10	I-9	I-8
	Bit	23	22	21	20	19	18	17	16
	Meaning	IS-7	IS-6	IS-5	IS-4	IS-3	IS-2	IS-1	IS-0
	Bit	31	30	29	28	27	26	25	24
	Meaning	IS-15	IS-14	IS-13	IS-12	IS-11	IS-10	IS-9	IS-8

Please refer to page 43 for module specifications

CDN-IOM-22-0032, 2 npn/pnp inputs and 2 outputs, 1 A, per-point diagnostics, 150 mm die-cast aluminium housing



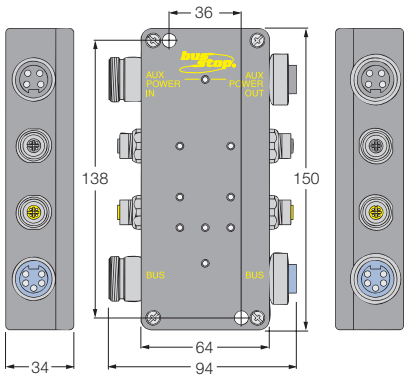
Item-no./EDS file: T0032_34.EDS
Product code: 7 / 517 (205 hex)
Ident-no. 68 220 17

Input data 1 byte/Output data 1 byte

Input Data	Bit	07	06	05	04	03	02	01	00
	Meaning	OS-1	OS-0	IS-1	IS-0	A-1	A-0	I-1	I-0
Output Data	Bit	07	06	05	04	03	02	01	00
	Meaning	Reserved						O-1	O-0

Abbreviations:
A = sensor alarm data (0 = OFF, 1 = ON)
I = input data (0 = OFF, 1 = ON)
IS = input status (0 = working, 1 = fault)
O = output data (0 = OFF, 1 = ON)
OS= output status (0 = working, 1 = fault)

CDN-IOM-42-0048, 4 pnp inputs and 2 outputs, 2 A, per-point diagnostics, 150 mm die-cast aluminium housing



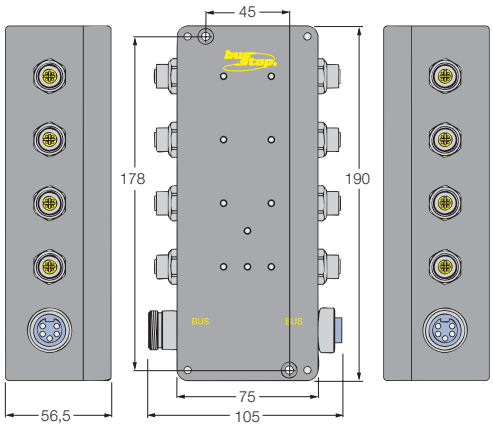
Item-no./EDS file: i0048_34.EDS
Product code: 7 / 769 (301 hex)
Ident-no. 68 220 30

Input data 2 bytes/Output data 1 byte

Input Data	Bit	07	06	05	04	03	02	01	00
	Meaning	Reserved				I-3	I-2	I-1	I-0
	Bit	15	14	13	12	11	10	09	08
	Meaning	Reserved		OS-1	OS-0	IS-3	IS-2	IS-1	IS-0
Output Data	Bit	07	06	05	04	03	02	01	00
	Meaning	Reserved						O-1	O-0

Please refer to page 43 for module specifications

CDN-IOM-44-0041, 4 pnp/npn inputs and 4 outputs, 2 A, per-point diagnostics, 190 mm glass-fibre reinforced housing



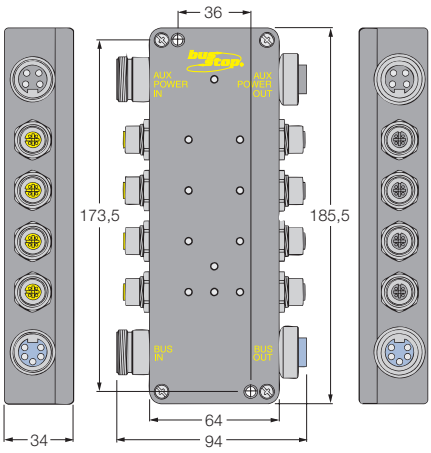
Item-no./EDS file: T0041_34.EDS
Product code: 7 / 659 (293 hex)
Ident-no. 66 220 18

Input data 2 bytes/Output data 1 byte

Input Data	Bit	07	06	05	04	03	02	01	00
	Meaning	IS-3	IS-2	IS-1	IS-0	I-3	I-2	I-1	I-0
	Bit	15	14	13	12	11	10	09	08
	Meaning	Reserved				OS-3	OS-2	OS-1	OS-0
Output Data	Bit	07	06	05	04	03	02	01	00
	Meaning	Reserved				O-3	O-2	O-1	OS-0

Abbreviations:
I = input data (0 = OFF, 1 = ON)
IS = input status (0 = working, 1 = fault)
O = output data (0 = OFF, 1 = ON)
OS= output status (0 = working, 1 = fault)

CDN-IOM-44-0045, 4 pnp inputs and 4 outputs, 2 A, per-point diagnostics, 185 mm die-cast aluminium housing



Item-no./EDS file: T0045_34.EDS
Product code: 7 / 723 (2D3 hex)
Ident-no. 66 220 18

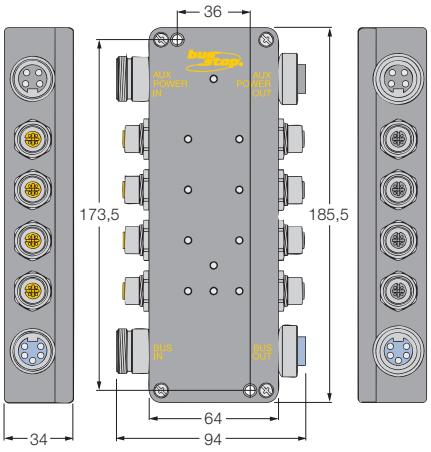
Input data 2 bytes/Output data 1 byte

Input Data	Bit	07	06	05	04	03	02	01	00
	Meaning	IS-3	IS-2	IS-1	IS-0	I-3	I-2	I-1	I-0
	Bit	15	14	13	12	11	10	09	08
	Meaning	Reserved				OS-3	OS-2	OS-1	OS-0
Output Data	Bit	07	06	05	04	03	02	01	00
	Meaning	Reserved				O-3	O-2	O-1	OS-0

4

Please refer to page 43 for module specifications

CDN-OM-8-0026, 8 outputs, 1 A, per-point diagnostics, 185 mm die-cast aluminium housing



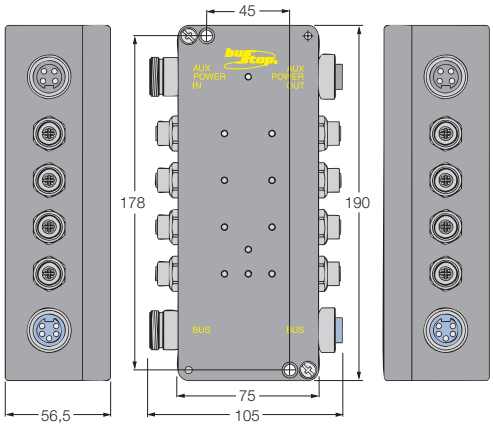
Item-no./EDS file: T0026_42.EDS
Product code: 7 / 417 (1A1 hex)
Ident-no. 68 220 24

Input data 1 byte / Output data 1 byte

Input	Bit	07	06	05	04	03	02	01	00
Data	Meaning	OS-7	OS-6	OS-5	OS-4	OS-3	OS-2	OS-1	OS-0
Output	Bit	07	06	05	04	03	02	01	00
Data	Meaning	O-7	O-6	O-5	O-4	O-3	O-2	O-1	O-0

Abbreviations:
I = input data (0 = OFF, 1 = ON)
IS = input status (0 = working, 1 = fault)
O = output data (0 = OFF, 1 = ON)
OS= output status (0 = working, 1 = fault)

**CDN-OM-8-0042, 8 outputs, 1 A, per-point diagnostics,
190 mm glass-fibre reinforced polyethylane housing**



Item-no. T0042_42.EDS
Product code: 7 / 673 (2A1 hex)
Ident-no. 68 220 14

Input data 1 byte / Output data 1 byte

Input	Bit	07	06	05	04	03	02	01	00
Data	Meaning	OS-7	OS-6	OS-5	OS-4	OS-3	OS-2	OS-1	OS-0
Output	Bit	07	06	05	04	03	02	01	00
Data	Meaning	O-7	O-6	O-5	O-4	O-3	O-2	O-1	O-0

Abbreviations:
I = input data (0 = OFF, 1 = ON)
IS = input status (0 = working, 1 = fault)
O = output data (0 = OFF, 1 = ON)
OS= output status (0 = working, 1 = fault)

Module Specifications, CDN... Modules

Supply voltage	
Supply voltage	11...26 VDC
Internal current consumption	80...230 mA, depending on type, see table on page 36
Auxiliary power	18...26 VDC
Input circuits	
Input voltage	11...30 VDC
Output circuits	
Output voltage	18...26 VDC
Connections	
Bus line	5-pin 7/8" connector
Auxiliary power	4-pin 7/8" connector
Inputs and outputs	M12 x 1 connectors
I/O LED Indications	yellow = open-circuit off = OFF green = ON red = short-circuit or auxiliary power missing
Adjustments	via built-in 8-pole DIP-switch
Address	0...63 (binary) via DIP-switch S1-S6
Comm rate	125/250/500 kbps via DIP-switch S7, S8
Internal adjustments	address and comm rate from internal EEPROM (DIP-switch S7, S8 in ON position)
Housings	
Type 1	185.5 x 64 x 34 mm (h x w x d)
Material	die-cast aluminum, black powder coated, nickel-plated brass connectors
Mounting	2 through-holes, 4.5 mm diameter
Protection degree (IEC 60529/EN 60529)	IP67 (NEMA 1, 3, 4, 12, 13)
Operating temperature	-25° to 70°C (-13° to 158°F)
Type 2	150.5 x 64 x 34 mm (h x w x d)
Material	die-cast aluminum, black powder coated, nickel-plated brass connectors
Mounting	2 through-holes, 4.5 mm diameter
Protection degree (IEC 60529/EN 60529)	IP67 (NEMA 1, 3, 4, 12, 13)
Operating temperature	-25° to 70°C (-13° to 158°F)
Type 3	190. x 75 x 56 mm (h x w x d)
Material	glass-fibre reinforced high-density polyethylane housing with stainless steel connectors
Protection degree (IEC 60529/EN 60529)	IP67 (NEMA 1, 3, 4, 12, 13)
Operating temperature	-25° to 70°C (-13° to 158°F)

Please note:
Detailed information and technical specifications on the individual module types can be downloaded from www.interlinkbt.com