SIEMENS

Data sheet

6ES7143-5AH00-0BL0



SIMATIC ET 200AL, IO-Link, DIQ 16x24 V DC/0.5 A, 8x M12, Degree of protection IP67

Product type designation IO-Link DIQ 16x24VDC/0.5A HW functional status FS01 Firmware version V1.0.x Vendor identification (VendorID) 42 Device identifier (DeviceID) 229383 Engineering with IODD file Yes Supply voltage Load voltage 1L+ Rated value (DC) 24 V; Supply from 1Us+ of the IO-Link master Permissible range, lower limit (DC) 30 V Reverse polarity protection Yes; against destruction Load voltage 2L+ Rated value (DC) 24 V; Supply from 2UA+ of the IO-Link master Rated value (DC) Permissible range, lower limit (DC) 28.8 V Reverse polarity protection Yes; Against destruction Load voltage 2L+ Rated value (DC) 28.8 V Reverse polarity protection Yes; Against destruction; encoder power supply outputs applied with reversed polarity, loads pick up Input current Current consumption (rated value) 20 mA; without load from load voltage 2L+, max. 4 A; Maximum value Encoder supply Number of outputs A; Supply from 2UA+ of the IO-Link master 24 V encoder supply Short-circuit protection Yes; per module, electronic Output current, max. 27 A; Total current of all encoders (depending on IO-Link master supply via 2UA+) Power loss Power loss, typ. 4 W	449	
HW functional status FS01 Firmware version V1.0.x Vendor identification (VendorID) 42 Device identifier (DeviceID) 229383 Finglinering with (Police ID) File Vess Supply voltage Load voltage 11+ • Rated value (DC) 18 Vess Supply from 1Us+ of the IO-Link master • Permissible range, lower limit (DC) 18 Ves sagainst destruction Load voltage 21+ • Rated value (DC) 24 V; Supply from 2UA+ of the IO-Link master • Permissible range, upper limit (DC) 30 V • Permissible range, upper limit (DC) 24 V; Supply from 2UA+ of the IO-Link master • Pasted value (DC) 24 V; Supply from 2UA+ of the IO-Link master • Permissible range, upper limit (DC) 28.8 V • Perm	General information	
V1.0 x	Product type designation	IO-Link DIQ 16x24VDC/0.5A
Vendor identification (VendorID) 42 Device identifier (DeviceID) 229383 Engineering with **ODD file Yes Supply Voltage Load voltage 1.+ **Rated value (DC) 18 Ves **Pewers polarity protection Yes; Against destruction Load voltage 21.+ **Rated value (DC) 24 V; Supply from 1Us+ of the IO-Link master **Pewers polarity protection Yes; Against destruction Load voltage 21.+ **Rated value (DC) 24 V; Supply from 2UA+ of the IO-Link master **Pewerse polarity protection Yes; Against destruction Load voltage 21.+ **Rated value (DC) 24 V; Supply from 2UA+ of the IO-Link master **Pemerse polarity protection Yes; Against destruction; encoder power supply outputs applied with reversed polarity, loads pick up **put current** Current consumption (rated value) 20 mA; without load **from load voltage 21.+, max. 4A; Maximum value **Encoder supply** **Number of outputs 8; Supply from 2UA+ of the IO-Link master 24 V encoder supply **Short-circuit protection Yes; per module, electronic **Output current, max. 0.7 A; Total current of all encoders (depending on IO-Link master supply via 2UA+) **Power loss, typ. 4W **Depression of the ID-Link master supply via 2UA+ of the ID-Link master suppl	HW functional status	FS01
Device identifier (DeviceID) Engineering with ODD file Yes Supply voltage Load voltage 1L+ • Rated value (DC) • permissible range, lower limit (DC) • Reverse polarity protection • Permissible range, lower limit (DC) • permissible range, lower limit (DC) • Permissible range, upper limit (DC) • Reverse polarity protection Ves. against destruction Load voltage 2L+ • Rated value (DC) • permissible range, lower limit (DC) • permissible range, lower limit (DC) • permissible range, lower limit (DC) • permissible range, upper limit (DC) • Permissible range, upper limit (DC) • Reverse polarity protection Ves. Against destruction; encoder power supply outputs applied with reversed polarity, loads pick up Input current Current consumption (rated value) For load voltage 2L+, max. • A; Maximum value Encoder supply • Short-circuit protection • Output current, max. 24 V encoder supply • Short-circuit protection • Output current, max. Power loss Power loss, typ. Power loss, typ. Power loss, typ. A W Digital inputs Input characteristic curve in accordance with IEC 61131, typ 3 Number of digital inputs Input characteristic curve in accordance with IEC 61131, typ 3 Number of simultaneously controllable inputs all mounting positions — up to 55°C, max. 16 Input voltage • Rated value (DC) 24 V; Supply from 1Us+ of the IO-Link master Yes Supply from 2UA+ of the IO-Link master Yes; per module, electronic 0.7 A; Total current of all encoders (depending on IO-Link master supply via 2UA+) Ves Number of simultaneously controllable inputs all mounting positions — up to 55°C, max. 16 Input voltage • Rated value (DC) 24 V; Supply from 1Us+ of the IO-Link master 18 Yes Power Ioss For a control of the IO-Link master Yes; per module, electronic 0.7 A; Total current of all encoders (depending on IO-Link master supply via 2UA+) Yes Yes Yes Yes Yes Yes Yes Ye	Firmware version	V1.0.x
Engineering with New Yes Load voltage 1L+ Rated value (DC) permissible range, lower limit (DC) Reverse polarity protection permissible range, upper limit (DC) permissible range, upper limit (DC) Reverse polarity protection Ves; against destruction Load voltage 2L+ Rated value (DC) permissible range, upper limit (DC) Reverse polarity protection Ves; Against destruction; encoder power supply outputs applied with reversed polarity, loads pick up polarity, loads pick up Input current Current consumption (rated value) Current consumption (rated value) Power loads voltage 2L+, max. At A; Maximum value Encoder supply Number of outputs S; Supply from 2UA+ of the IO-Link master 44; Maximum value Encoder supply Short-circuit protection Output current, max. 24 Vencoder supply Power loss Power loss, typ. A W Power loss Power loss, typ. 4 W Digital inputs Input characteristic curve in accordance with IEC 61131, type 3 Number of simultaneously controllable inputs all mounting positions — up to 55 °C, max. 16 Input voltage Rated value (DC) 24 V; Supply from 1Us+ of the IO-Link master Yes Farameterizable as DIO Prover loss of C, max. 16 Input voltage Rated value (DC)	Vendor identification (VendorID)	42
Supply voltage Load voltage 1L+ Rated value (DC) permissible range, lower limit (DC) Reverse polarity protection Load voltage 2L+ Rated value (DC) permissible range, upper limit (DC) permissible range, lower limit (DC) Reverse polarity protection Load voltage 2L+ Rated value (DC) permissible range, upper limit (DC) Reverse polarity protection Permissible range, lower limit (DC) Reverse polarity protection Permissible range, lower limit (DC) Reverse polarity protection Permissible range, lower limit (DC) Reverse polarity protection and set struction, encoder power supply outputs applied with reversed polarity, loads pick up Reverse polarity protection applied with reversed polarity, loads pick up Permissible range, lower limit (DC) Reverse polarity protection and set usual polarity, loads pick up Permissible range, lower limit (DC) Reverse polarity protection applied with reversed polarity, loads pick up Permissible range, lower limit (DC) Reverse polarity protection applied with reversed polarity, loads pick up Reverse polarity protection applied with reversed polarity, loads pick up Reverse polarity protection applied with reversed polarity, loads pick up Reverse polarity protection appli	Device identifier (DeviceID)	229383
Load voltage 1L+ Rated value (DC) permissible range, lower limit (DC) Reverse polarity protection Load voltage 2L+ Rated value (DC) permissible range, lower limit (DC) Reverse polarity protection Load voltage 2L+ Rated value (DC) permissible range, lower limit (DC) Reverse polarity protection Reverse polarity protection Reverse polarity protection Reverse polarity protection Permissible range, lower limit (DC) Reverse polarity protection Reverse polarity protection protection Reverse polarity protection Reverse polarity protection	Engineering with	
Load voltage 1L+ Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) Reverse polarity protection Load voltage 2L+ Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) permissible range, upper limit (DC) permissible range, lower limit (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) permissible range, upper limit (DC) permissible range, upper limit (DC) Reverse polarity protection (Prevent Prevent Pr	• IODD file	Yes
Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) Permissible range, upper limit (DC) Reverse polarity protection Pexes against destruction Load voltage 2L+ Rated value (DC) Permissible range, lower limit (DC) Permissible range, lower limit (DC) Permissible range, upper limit (DC) Pexer Loss Power loss, typ. P	Supply voltage	
permissible range, lower limit (DC) permissible range, upper limit (DC) Reverse polarity protection Permissible range, upper limit (DC) Reverse polarity protection Permissible range, lower limit (DC) Permissible range, lower limit (DC) Permissible range, lower limit (DC) Permissible range, upper limit (DC) Permissib	Load voltage 1L+	
permissible range, upper limit (DC) Reverse polarity protection Ves; against destruction Load voltage 2L+ Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) Permissible range, upper limit (DC) Reverse polarity protection Prevent consumption (rated value) Reverse polarity protection Prevent supply outputs applied with reversed polarity, loads pick up Reverse polarity power supply outputs applied with reversed polarity, loads pick up Reverse polarity protection Prevent goals of the IO-Link master Reverse polarity protection Prevent goals pick up Reverse polarity, loads pick up Reverse polarity protection Prevent goals pick up Reverse polarity protection Prevent goals pick up Reverse polarity loads pick up Reverse polar	 Rated value (DC) 	24 V; Supply from 1Us+ of the IO-Link master
Reverse polarity protection Load voltage 2L+ Rated value (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) Reverse polarity protection Permissible range, upper limit (DC) Reverse polarity protection (Permissible value) Reverse polarity leader polarity (Permissible value) Reverse polarity leader polarity (Permissible value) Reverse polarity (Permissible value) Reve	 permissible range, lower limit (DC) 	18 V
Rated value (DC) Permissible range, lower limit (DC) Reverse polarity protection Paginaturent Current consumption (rated value) Number of outputs Short-circuit protection Power loss Power loss, typ. Power loss, typ. Number of digital inputs Number of signal inputs All mounting positions — up to 55 °C, max. 16 Input voltage Rated value (DC) 24 V	 permissible range, upper limit (DC) 	30 V
• Rated value (DC) • permissible range, lower limit (DC) • permissible range, upper limit (DC) • permissible range, upper limit (DC) • Reverse polarity protection • Reverse polarity protection **Power loss typ.** Power loss typ. Power loss typ. Number of digital inputs Number of simultaneously controllable inputs all mounting positions — up to 55°C, max. Reverse polarity (DC) 24 V; Supply from 2UA+ of the IO-Link master 24 V; Supply from 2UA+ of the IO-Link master 24 V; Supply from 2UA+ of the IO-Link master 24 V encoder supply 4 W Power loss typ. 4 W 16; Parameterizable as DIQ Input characteristic curve in accordance with IEC 61131, type 3 Number of simultaneously controllable inputs all mounting positions — up to 55°C, max. 16 Input voltage • Rated value (DC) 24 V	 Reverse polarity protection 	Yes; against destruction
permissible range, lower limit (DC) permissible range, upper limit (DC) Reverse polarity protection Permissible range, upper limit (DC) Reverse polarity protection Permissible range, upper limit (DC) Reverse polarity protection Permissible range, upper limit (DC) Permissible range	Load voltage 2L+	
Permissible range, upper limit (DC) Reverse polarity protection Reverse polarity protection Yes; Against destruction; encoder power supply outputs applied with reversed polarity, loads pick up Input current Current consumption (rated value) Z0 mA; without load from load voltage 2L+, max. Encoder supply Number of outputs 24 V encoder supply Short-circuit protection Output current, max. Power loss Power loss, typ. Power loss, typ. A W Digital inputs Number of digital inputs Input characteristic curve in accordance with IEC 61131, type 3 Number of simultaneously controllable inputs all mounting positions — up to 55 °C, max. Input voltage Rated value (DC) Rated value (DC) 24 V	Rated value (DC)	24 V; Supply from 2UA+ of the IO-Link master
• Reverse polarity protection Yes; Against destruction; encoder power supply outputs applied with reversed polarity, loads pick up Number of coutputs • Short-circuit protection • Output current, max. Power loss Power loss, typ. Power loss, typ. Number of digital inputs Input characteristic curve in accordance with IEC 61131, type 3 Number of simultaneously controllable inputs all mounting positions — up to 55 °C, max. Input voltage • Rated value (DC) Paxes Rated value (DC) Power loss (Against destruction; encoder power supply outputs applied with reversed polarity, loads pick up 20 mA; without load 4 A; Maximum value Encoder supply 8; Supply from 2UA+ of the IO-Link master 9 (Against destruction; encoder supply outputs 8; Supply from 2UA+ of the IO-Link master 9 (Against destruction; encoder supply outputs 8; Supply from 2UA+ of the IO-Link master 9 (Against destruction; encoder supply outputs 10 (Against destruction; encoder supply 10 (Against destruction; encoder supply 10 (Against destruction; encoder supply 11 (Against Against Again	 permissible range, lower limit (DC) 	20.4 V
polarity, loads pick up Current consumption (rated value) 20 mA; without load from load voltage 2L+, max. 4A; Maximum value Encoder supply Number of outputs 8; Supply from 2UA+ of the IO-Link master 24 V encoder supply • Short-circuit protection Yes; per module, electronic • Output current, max. 27A; Total current of all encoders (depending on IO-Link master supply via 2UA+) Power loss Power loss, typ. 4 W Digital inputs Number of digital inputs 16; Parameterizable as DIQ Input characteristic curve in accordance with IEC 61131, type 3 Yes Number of simultaneously controllable inputs all mounting positions — up to 55 °C, max. 16 Input voltage • Rated value (DC) 24 V	 permissible range, upper limit (DC) 	28.8 V
Current consumption (rated value) from load voltage 2L+, max. 4 A; Maximum value Encoder supply Number of outputs 8; Supply from 2UA+ of the IO-Link master 24 V encoder supply • Short-circuit protection • Output current, max. 0.7 A; Total current of all encoders (depending on IO-Link master supply via 2UA+) Power loss Power loss, typ. 4 W Digital inputs Number of digital inputs Number of digital inputs 16; Parameterizable as DIQ Input characteristic curve in accordance with IEC 61131, type 3 Number of simultaneously controllable inputs all mounting positions — up to 55 °C, max. 16 Input voltage • Rated value (DC) 24 V	Reverse polarity protection	
from load voltage 2L+, max. 4 A; Maximum value Encoder supply Number of outputs 24 V encoder supply • Short-circuit protection • Output current, max. 24 Vencoder supply • Short-circuit protection • Output current, max. 24 Vencoder supply • Short-circuit protection • Output current, max. 25 Ves; per module, electronic 26 Ves; per module, electronic 27 A; Total current of all encoders (depending on IO-Link master supply via 2UA+) Power loss Power loss, typ. 4 W Digital inputs Number of digital inputs Input characteristic curve in accordance with IEC 61131, type 3 Number of simultaneously controllable inputs all mounting positions — up to 55 °C, max. Input voltage • Rated value (DC) 24 V	Input current	
Number of outputs 24 V encoder supply Short-circuit protection Output current, max. Power loss Power loss, typ. A W Digital inputs Number of digital inputs Number of simultaneously controllable inputs all mounting positions — up to 55 °C, max. Input voltage Rated value (DC) 8; Supply from 2UA+ of the IO-Link master 8; Supply from 2UA+ of the IO-Link master 9; Supply from 2UA+ of the IO-Link master 9; Pass, Supply from 2UA+ of the IO-Link master 10; Parameterize of all encoders (depending on IO-Link master supply via 2UA+) 16; Parameterizable as DIQ 16; Parameterizable as DIQ 16 16 16 17 18 19 19 24 V	Current consumption (rated value)	20 mA; without load
Number of outputs 24 V encoder supply Short-circuit protection Output current, max. Power loss Power loss, typ. A W Digital inputs Number of digital inputs Input characteristic curve in accordance with IEC 61131, type 3 Number of simultaneously controllable inputs all mounting positions — up to 55 °C, max. Input voltage Rated value (DC) 8; Supply from 2UA+ of the IO-Link master 2UA+) of the IO-Link master supply via 2UA+ of the IO-Lin	from load voltage 2L+, max.	4 A; Maximum value
Power loss Power loss Power loss Power loss Number of digital inputs Input characteristic curve in accordance with IEC 61131, type 3 Number of simultaneously controllable inputs all mounting positions — up to 55 °C, max. Input voltage Rated value (DC) Yes; per module, electronic 0.7 A; Total current of all encoders (depending on IO-Link master supply via 2UA+) Yes 16; Parameterizable as DIQ Yes 16 16 16 17 18 19 19 10 10 10 10 10 10 10 10	Encoder supply	
Short-circuit protection Output current, max. Output current, max. Power loss Power loss, typ. A W Digital inputs Number of digital inputs Input characteristic curve in accordance with IEC 61131, type 3 Number of simultaneously controllable inputs all mounting positions — up to 55 °C, max. Input voltage Rated value (DC) Yes, per module, electronic 0.7 A; Total current of all encoders (depending on IO-Link master supply via 2UA+) 7 Yes 4 W Yes 16; Parameterizable as DIQ Yes 16 16 17 18 19 19 19 10 10 10 10 10 10 10	Number of outputs	8; Supply from 2UA+ of the IO-Link master
Output current, max. Output current of all encoders (depending on IO-Link master supply via 2UA+) Power loss Power loss, typ. A W Digital inputs Number of digital inputs Input characteristic curve in accordance with IEC 61131, type 3 Number of simultaneously controllable inputs all mounting positions — up to 55 °C, max. Input voltage Rated value (DC) A W Digital current of all encoders (depending on IO-Link master supply via 2UA+) 4 W Digital current of all encoders (depending on IO-Link master supply via 2UA+) 4 W Digital inputs 16; Parameterizable as DIQ Yes Number of simultaneously controllable inputs all mounting positions — up to 55 °C, max. 16	24 V encoder supply	
Power loss, typ. 4 W Digital inputs Number of digital inputs 16; Parameterizable as DIQ Input characteristic curve in accordance with IEC 61131, type 3 Yes Number of simultaneously controllable inputs all mounting positions — up to 55 °C, max. 16 Input voltage • Rated value (DC) 24 V	Short-circuit protection	Yes; per module, electronic
Power loss, typ. 4 W Digital inputs Number of digital inputs 16; Parameterizable as DIQ Input characteristic curve in accordance with IEC 61131, type 3 Yes Number of simultaneously controllable inputs all mounting positions — up to 55 °C, max. 16 Input voltage • Rated value (DC) 24 V	Output current, max.	
Number of digital inputs 16; Parameterizable as DIQ Input characteristic curve in accordance with IEC 61131, type 3 Number of simultaneously controllable inputs all mounting positions — up to 55 °C, max. 16 Input voltage • Rated value (DC) 24 V	Power loss	
Number of digital inputs Input characteristic curve in accordance with IEC 61131, type 3 Number of simultaneously controllable inputs all mounting positions — up to 55 °C, max. Input voltage Rated value (DC) 16; Parameterizable as DIQ Yes 16 16 24 V	Power loss, typ.	4 W
Input characteristic curve in accordance with IEC 61131, type 3 Number of simultaneously controllable inputs all mounting positions — up to 55 °C, max. 16 Input voltage • Rated value (DC) 24 V	Digital inputs	
Number of simultaneously controllable inputs all mounting positions — up to 55 °C, max. 16 Input voltage • Rated value (DC) 24 V	Number of digital inputs	16; Parameterizable as DIQ
all mounting positions — up to 55 °C, max. 16 Input voltage • Rated value (DC) 24 V	Input characteristic curve in accordance with IEC 61131, type 3	Yes
— up to 55 °C, max. 16 Input voltage ● Rated value (DC) 24 V	Number of simultaneously controllable inputs	
Input voltage • Rated value (DC) 24 V	all mounting positions	
Rated value (DC) 24 V	— up to 55 °C, max.	16
	Input voltage	
of r signal "0" -3 to +5V	Rated value (DC)	24 V
	• for signal "0"	-3 to +5V

• for signal "1"	+11 to +30V
Input current	1116 1601
• for signal "1", typ.	3 mA
Input delay (for rated value of input voltage)	
for standard inputs	
— at "0" to "1", min.	1.2 ms
— at "0" to "1", max.	4.8 ms
— at "1" to "0", min.	1.2 ms
— at "1" to "0", max.	4.8 ms
Cable length	i.e iiie
unshielded, max.	30 m
Digital outputs	
Number of digital outputs	16; Parameterizable as DIQ
Short-circuit protection	Yes; per channel, electronic
Response threshold, typ.	0.7 A
Limitation of inductive shutdown voltage to	2L+ (-50 V)
Switching capacity of the outputs	(00 0)
• on lamp load, max.	5 W
Load resistance range	
lower limit	48 Ω
• upper limit	4 kΩ
Output voltage	1 Naa
• for signal "1", min.	L+ (-0.8 V)
Tor signal 1 , min. Output current	L' (-0.0 V)
• for signal "1" rated value	0.5 A
-	0.5 MA
• for signal "0" residual current, max.	0.5 IIIA
Switching frequency	400 -
with resistive load, max.	100 Hz
with inductive load, max.	0.5 Hz
• on lamp load, max.	1 Hz
Total current of the outputs	
Current per module, max.	4 A
Cable length	
	30 m
• unshielded, max.	00 m
Encoder	
Encoder	Yes
Encoder Connectable encoders ● 2-wire sensor — permissible quiescent current (2-wire sensor), max.	
Encoder Connectable encoders • 2-wire sensor — permissible quiescent current (2-wire sensor), max. IO-Link	Yes 1.5 mA
Encoder Connectable encoders ● 2-wire sensor — permissible quiescent current (2-wire sensor), max.	Yes 1.5 mA
Encoder Connectable encoders	Yes 1.5 mA
Encoder Connectable encoders • 2-wire sensor — permissible quiescent current (2-wire sensor), max. IO-Link IO-Link protocol 1.1	Yes 1.5 mA
Encoder Connectable encoders	Yes 1.5 mA Yes 38.4 kBd (COM2)
Encoder Connectable encoders • 2-wire sensor — permissible quiescent current (2-wire sensor), max. IO-Link IO-Link protocol 1.1 Transmission rate Cycle time, min.	Yes 1.5 mA Yes 38.4 kBd (COM2) 3 ms
Encoder Connectable encoders • 2-wire sensor — permissible quiescent current (2-wire sensor), max. IO-Link IO-Link protocol 1.1 Transmission rate Cycle time, min. Size of process data, input per module	Yes 1.5 mA Yes 38.4 kBd (COM2) 3 ms 2 byte
Encoder Connectable encoders • 2-wire sensor — permissible quiescent current (2-wire sensor), max. IO-Link IO-Link protocol 1.1 Transmission rate Cycle time, min. Size of process data, input per module Size of process data, output per module	Yes 1.5 mA Yes 38.4 kBd (COM2) 3 ms 2 byte 2 byte
Encoder Connectable encoders ● 2-wire sensor — permissible quiescent current (2-wire sensor), max. IO-Link IO-Link protocol 1.1 Transmission rate Cycle time, min. Size of process data, input per module Size of process data, output per module Supported IO-Link profiles	Yes 1.5 mA Yes 38.4 kBd (COM2) 3 ms 2 byte 2 byte common profile
Encoder Connectable encoders ◆ 2-wire sensor — permissible quiescent current (2-wire sensor), max. IO-Link IO-Link protocol 1.1 Transmission rate Cycle time, min. Size of process data, input per module Size of process data, output per module Supported IO-Link profiles Cable length unshielded, max.	Yes 1.5 mA Yes 38.4 kBd (COM2) 3 ms 2 byte 2 byte common profile
Encoder Connectable encoders ● 2-wire sensor — permissible quiescent current (2-wire sensor), max. IO-Link IO-Link protocol 1.1 Transmission rate Cycle time, min. Size of process data, input per module Size of process data, output per module Supported IO-Link profiles Cable length unshielded, max. Connection of IO-Link devices	Yes 1.5 mA Yes 38.4 kBd (COM2) 3 ms 2 byte 2 byte common profile 20 m
Encoder Connectable encoders • 2-wire sensor — permissible quiescent current (2-wire sensor), max. IO-Link IO-Link protocol 1.1 Transmission rate Cycle time, min. Size of process data, input per module Size of process data, output per module Supported IO-Link profiles Cable length unshielded, max. Connection of IO-Link devices • Port type B	Yes 1.5 mA Yes 38.4 kBd (COM2) 3 ms 2 byte 2 byte common profile 20 m
Encoder Connectable encoders • 2-wire sensor — permissible quiescent current (2-wire sensor), max. IO-Link IO-Link protocol 1.1 Transmission rate Cycle time, min. Size of process data, input per module Size of process data, output per module Supported IO-Link profiles Cable length unshielded, max. Connection of IO-Link devices • Port type B Interrupts/diagnostics/status information	Yes 1.5 mA Yes 38.4 kBd (COM2) 3 ms 2 byte 2 byte common profile 20 m Yes
Encoder Connectable encoders • 2-wire sensor — permissible quiescent current (2-wire sensor), max. IO-Link IO-Link protocol 1.1 Transmission rate Cycle time, min. Size of process data, input per module Size of process data, output per module Supported IO-Link profiles Cable length unshielded, max. Connection of IO-Link devices • Port type B Interrupts/diagnostics/status information Substitute values connectable	Yes 1.5 mA Yes 38.4 kBd (COM2) 3 ms 2 byte 2 byte common profile 20 m Yes
Encoder Connectable encoders • 2-wire sensor — permissible quiescent current (2-wire sensor), max. IO-Link IO-Link protocol 1.1 Transmission rate Cycle time, min. Size of process data, input per module Size of process data, output per module Supported IO-Link profiles Cable length unshielded, max. Connection of IO-Link devices • Port type B Interrupts/diagnostics/status information Substitute values connectable Alarms	Yes 1.5 mA Yes 38.4 kBd (COM2) 3 ms 2 byte 2 byte common profile 20 m Yes Yes; channel by channel, parameterizable
Encoder Connectable encoders 2-wire sensor — permissible quiescent current (2-wire sensor), max. IO-Link IO-Link protocol 1.1 Transmission rate Cycle time, min. Size of process data, input per module Size of process data, output per module Supported IO-Link profiles Cable length unshielded, max. Connection of IO-Link devices Port type B Interrupts/diagnostics/status information Substitute values connectable Alarms Diagnostic alarm	Yes 1.5 mA Yes 38.4 kBd (COM2) 3 ms 2 byte 2 byte common profile 20 m Yes Yes; channel by channel, parameterizable
Encoder Connectable encoders • 2-wire sensor — permissible quiescent current (2-wire sensor), max. IO-Link IO-Link protocol 1.1 Transmission rate Cycle time, min. Size of process data, input per module Size of process data, output per module Supported IO-Link profiles Cable length unshielded, max. Connection of IO-Link devices • Port type B Interrupts/diagnostics/status information Substitute values connectable Alarms • Diagnostic alarm Diagnoses	Yes 1.5 mA Yes 38.4 kBd (COM2) 3 ms 2 byte 2 byte common profile 20 m Yes Yes; channel by channel, parameterizable Yes; Parameterizable
Encoder Connectable encoders • 2-wire sensor — permissible quiescent current (2-wire sensor), max. IO-Link IO-Link protocol 1.1 Transmission rate Cycle time, min. Size of process data, input per module Size of process data, output per module Supported IO-Link profiles Cable length unshielded, max. Connection of IO-Link devices • Port type B Interrupts/diagnostics/status information Substitute values connectable Alarms • Diagnostic alarm Diagnoses • Short-circuit Diagnostics indication LED	Yes 1.5 mA Yes 38.4 kBd (COM2) 3 ms 2 byte 2 byte common profile 20 m Yes Yes; channel by channel, parameterizable Yes; Parameterizable Yes; outputs to ground; encoder supply to ground; module by module
Encoder Connectable encoders • 2-wire sensor — permissible quiescent current (2-wire sensor), max. IO-Link IO-Link protocol 1.1 Transmission rate Cycle time, min. Size of process data, input per module Size of process data, output per module Supported IO-Link profiles Cable length unshielded, max. Connection of IO-Link devices • Port type B Interrupts/diagnostics/status information Substitute values connectable Alarms • Diagnostic alarm Diagnoses • Short-circuit Diagnostics indication LED • Channel status display	Yes 1.5 mA Yes 38.4 kBd (COM2) 3 ms 2 byte 2 byte common profile 20 m Yes Yes; channel by channel, parameterizable Yes; Parameterizable Yes; outputs to ground; encoder supply to ground; module by module Yes; green LED
Encoder Connectable encoders • 2-wire sensor — permissible quiescent current (2-wire sensor), max. IO-Link IO-Link protocol 1.1 Transmission rate Cycle time, min. Size of process data, input per module Size of process data, output per module Supported IO-Link profiles Cable length unshielded, max. Connection of IO-Link devices • Port type B Interrupts/diagnostics/status information Substitute values connectable Alarms • Diagnostic alarm Diagnoses • Short-circuit Diagnostics indication LED • Channel status display • for module diagnostics	Yes 1.5 mA Yes 38.4 kBd (COM2) 3 ms 2 byte 2 byte common profile 20 m Yes Yes; channel by channel, parameterizable Yes; Parameterizable Yes; outputs to ground; encoder supply to ground; module by module Yes; green LED Yes; green/red LED
Encoder Connectable encoders • 2-wire sensor — permissible quiescent current (2-wire sensor), max. IO-Link IO-Link protocol 1.1 Transmission rate Cycle time, min. Size of process data, input per module Size of process data, output per module Supported IO-Link profiles Cable length unshielded, max. Connection of IO-Link devices • Port type B Interrupts/diagnostics/status information Substitute values connectable Alarms • Diagnostic alarm Diagnoses • Short-circuit Diagnostics indication LED • Channel status display • for module diagnostics • For load voltage monitoring	Yes 1.5 mA Yes 38.4 kBd (COM2) 3 ms 2 byte 2 byte common profile 20 m Yes Yes; channel by channel, parameterizable Yes; Parameterizable Yes; outputs to ground; encoder supply to ground; module by module Yes; green LED
Encoder Connectable encoders • 2-wire sensor — permissible quiescent current (2-wire sensor), max. IO-Link IO-Link protocol 1.1 Transmission rate Cycle time, min. Size of process data, input per module Size of process data, output per module Supported IO-Link profiles Cable length unshielded, max. Connection of IO-Link devices • Port type B Interrupts/diagnostics/status information Substitute values connectable Alarms • Diagnostic alarm Diagnoses • Short-circuit Diagnostics indication LED • Channel status display • for module diagnostics	Yes 1.5 mA Yes 38.4 kBd (COM2) 3 ms 2 byte 2 byte common profile 20 m Yes Yes; channel by channel, parameterizable Yes; Parameterizable Yes; outputs to ground; encoder supply to ground; module by module Yes; green LED Yes; green/red LED

Potential separation channels		
 between the channels 	No	
 between the channels and the power supply of the electronics 	Yes	
Isolation		
Isolation tested with	707 V DC (type test)	
Degree and class of protection		
IP degree of protection	IP65/67	
Standards, approvals, certificates		
Suitable for safety-related tripping of standard modules	Yes; From FS01	
Highest safety class achievable for safety-related tripping of standa	rd modules	
 Performance level according to ISO 13849-1 	PL d	
 Category according to ISO 13849-1 	Cat. 3	
• SIL acc. to IEC 62061	SIL 2	
 remark on safety-oriented shutdown 	https://support.industry.siemens.com/cs/de/en/view/39198632	
Ambient conditions		
Ambient temperature during operation		
• min.	-30 °C	
• max.	55 °C	
connection method		
Design of electrical connection for the inputs and outputs	M12, 5-pin, A-coded	
Type of electrical connection for IO-Link	M12, 5-pin, A-coded	
Dimensions		
Width	45 mm	
Height	159 mm	
Depth	40 mm	
Weights		
Weight, approx.	157 g	

5/22/2024

last modified: