

Discrete Transducers

Our family of DIN-rail discrete transducers measure a wide range of electrical parameters and generate analogue output signals suitable for interfacing with instrumentation and control systems.

Transducers have either one or two outputs, each type being available in several variants for output configuration and auxiliary supply input. All outputs are galvanically isolated.



Applications

- Instrumentation panels
- Control systems
- Electrical distribution panels
- Transmission systems and generators
- SCADA systems

Benefits

- The range measures all the common electrical parameters
- Easy to install and configure
- Can be mounted in any orientation
- Protected against electrical disturbance

Features

- DIN-rail mounting
- Accuracy class: 0.5s (0.2s optional)
- Response time < 300 ms (300 ms fixed for size C5)
- Variety of input and output configuration curves
- Wide range of parameters:
 - AC voltage or current
 - DC voltage or current
 - Active or reactive power
 - Combined power (active and reactive)
 - Frequency

Discrete Transducers

Single output transducers

AC Voltage

Type	Function	Output Configuration	Auxiliary Supply	Case Size
DU 120	AC voltage	A	Self powered	C1
DU 121	AC voltage	A, B, C, D	92-138 V AC	C1
DU 122	AC voltage	A, B, C, D	184-276 V AC	C1
DU 123	AC voltage	A,B, C, D, E, F, G, H	8-20 (40) V DC	C3
DU 124	AC voltage	A,B, C, D, E, F, G, H	18-80 V AC/DC	C3
DU 125	AC voltage	A,B, C, D, E, F, G, H	80-276 V AC/DC	C3

AC Current

Type	Function	Output Configuration	Auxiliary Supply	Case Size
DI 120	AC current	A	Self powered	C1
DI 121	AC current	A, B, C, D	92-138 V AC	C1
DI 122	AC current	A, B, C, D	184-276 V AC	C1
DI 123	AC current	A,B, C, D, E, F, G, H	8-20 (40) V DC	C3
DI 124	AC current	A,B, C, D, E, F, G, H	18-80 V AC/DC	C3
DI 125	AC current	A,B, C, D, E, F, G, H	80-276 V AC/DC	C3

DC Voltage

Type	Function	Output Configuration	Auxiliary Supply	Case Size
DUD 123	DC voltage	A, B, C, D, I, K, L	8-20 (40) V DC	C3
DUD 124	DC voltage	A, B, C, D, I, K, L	18-80 V AC/DC	C3
DUD 125	DC voltage	A, B, C, D, I, K, L	184-276 V AC	C3

DC Current

Type	Function	Output Configuration	Auxiliary Supply	Case Size
DID 123	DC current	A, B, C, D, I, K, L	8-20 (40) V DC	C3
DID 124	DC current	A, B, C, D, I, K, L	18-80 V AC/DC	C3
DID 125	DC current	A, B, C, D, I, K, L	184-276 V AC	C3

Frequency

Type	Function	Output Configuration	Auxiliary Supply	Case Size
DF 127	1-phase, 2-wire (ph/n)	A, B	24-48 V DC	C3
DF 125	1-phase, 2-wire (ph/n)	A, B	80-276 V AC/DC	C3

Power Factor

Type	Function	Output Configuration	Auxiliary Supply	Case Size
DPF 147	1E, 4-wire	A,B, I, K, L	24-48 V DC	C5
DPF 148	1E, 4-wire	A,B, I, K, L	80-276 V DC	C5

Active Power

Type	Function	Output Configuration	Auxiliary Supply	Case Size
DP 123	1E, 1-phase/2-wire, (ph/n)	A, B, I, K, L	8-20 (40) V DC	C3
DP 124	1E, 1-phase/2-wire, (ph/n)	A, B, I, K, L	18-80 V AC/DC	C3
DP 125	1E, 1-phase/2-wire, (ph/n)	A, B, I, K, L	80-276 V AC/DC	C3
DP 133	1E, 3-wire, balanced load	A, B, I, K, L	8-20 (40) V DC	C3
DP 134	1E, 3-wire, balanced load	A, B, I, K, L	18-80 V AC/DC	C3
DP 135	1E, 3-wire, balanced load	A, B, I, K, L	80-276 V AC/DC	C3
DP 143	1E, 4-wire, (ph/n), balanced load	A, B, I, K, L	8-20 (40) V DC	C3
DP 144	1E, 4-wire, (ph/n), balanced load	A, B, I, K, L	18-80 V AC/DC	C3
DP 145	1E, 4-wire, (ph/n), balanced load	A, B, I, K, L	80-276 V AC/DC	C3
DP 233	2E, 3-wire, unbalanced load	A, B, I, K, L	8-20 (40) V DC	C3
DP 234	2E, 3-wire, unbalanced load	A, B, I, K, L	18-80 V AC/DC	C3
DP 235	2E, 3-wire, unbalanced load	A, B, I, K, L	80-276 V AC/DC	C3
DP 347	3E, 4-wire, unbalanced load	A, B, I, K, L	24-48 V DC	C5
DP 348	3E, 4-wire, unbalanced load	A, B, I, K, L	40-276 V AC/DC	C5

Reactive Power

Type	Function	Output Configuration	Auxiliary Supply	Case Size
DQ 133	1E, 3-wire, balanced load	A, B, I, K, L	8-20 (40) V DC	C3
DQ 134	1E, 3-wire, balanced load	A, B, I, K, L	18-80 V AC/DC	C3
DQ 135	1E, 3-wire, balanced load	A, B, I, K, L	80-276 V AC/DC	C3
DQ 233	2E, 3-wire, unbalanced load	A, B, I, K, L	8-20 (40) V DC	C3
DQ 234	2E, 3-wire, unbalanced load	A, B, I, K, L	18-80 V AC/DC	C3
DQ 235	2E, 3-wire, unbalanced load	A, B, I, K, L	80-276 V AC/DC	C3
DQ 347	3E, 4-wire, unbalanced load	A, B, I, K, L	24-48 V DC	C5
DQ 348	3E, 4-wire, unbalanced load	A, B, I, K, L	40-276 V AC/DC	C5

Discrete Transducers

Dual output transducers

AC Voltage

Type	Function	Output Configuration	Auxiliary Supply	Case Size
DU 123-D	AC voltage	A, B, C, D, E, F, G, H	8-20 (40) V DC	C3
DU 124-D	AC voltage	A, B, C, D, E, F, G, H	18-80 V AC/DC	C3
DU 125-D	AC voltage	A, B, C, D, E, F, G, H	80-276 V AC/DC	C3

AC Current

Type	Function	Output Configuration	Auxiliary Supply	Case Size
DI 123-D	AC current	A, B, C, D, E, F, G, H	8-20 (40) V DC	C3
DI 124-D	AC current	A, B, C, D, E, F, G, H	18-80 V AC/DC	C3
DI 125-D	AC current	A, B, C, D, E, F, G, H	80-276 V AC/DC	C3

Active Power

Type	Function	Output Configuration	Auxiliary Supply	Case Size
DPP 237	2E, 3-wire, unbalanced load	A, B, I, K, L	24-48 V DC	C5
DPP 238	2E, 3-wire, unbalanced load	A, B, I, K, L	40-276 V AC/DC	C5
DPP 347	3E, 4-wire, unbalanced load	A, B, I, K, L	24-48 V DC	C5
DPP 348	3E, 4-wire, unbalanced load	A, B, I, K, L	40-276 V AC/DC	C5

Reactive Power

Type	Function	Output Configuration	Auxiliary Supply	Case Size
DQQ 237	2E, 3-wire, unbalanced load	A, B, I, K, L	24-48 V DC	C5
DQQ 238	2E, 3-wire, unbalanced load	A, B, I, K, L	40-276 V AC/DC	C5
DQQ 347	3E, 4-wire, unbalanced load	A, B, I, K, L	24-48 V DC	C5
DQQ 348	3E, 4-wire, unbalanced load	A, B, I, K, L	40-276 V AC/DC	C5

Frequency

Type	Function	Output Configuration	Auxiliary Supply	Case Size
DF 127	1-phase, 2-wire (ph/n)	A, B	24-48 V DC	C3
DF 125	1-phase, 2-wire (ph/n)	A, B	80-276 V AC/DC	C3

Analogue Panel Instruments



Technical specifications

Electrical

Connection type	1P 2W / 3P 3W / 3P 4W
Main frequency	50 Hz \pm 5 %
Accuracy Class	Class 0.5 or 0.2 (Frequency 0.1)
Test Voltage	3.7 kV at $U_n \leq 300$ V 5.55 kV at 300 V $< U_n < 600$ V
Overload	1.2 x U_n continuously, 2 x I_n continuously, 40 x I_n for 1 s

Compliance

Standards	IEC 60688
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Mechanical

Dimensions (WXHxD)	C132.5 x 73 x 114 mm C375 x 73 x 114 mm C5104 x 71 x 114 mm (Terminal protection adds 4 mm to the height of all units)
Weight	<1 kg
Enclosure	Engineering plastic. Polycarbonate, self-extinguishing, class UL 94 V-0

Environmental

Insulation	Protective class II
Temperature	Operation -10 °C to +55 °C (-10 °C to 50 °C for size C5) Storage temp. range -65 °C to +80 °C (-40 °C to 85 °C for size C5)

Switches/outputs

Unipolar outputs	0-1 mA, 0-5 mA, 0-10 mA, 0-20 mA, 4-20 mA, 0-10 V
Bipolar outputs	2.5-0-2.5 mA, 5-0-5 mA, 10-0-10 mA, 20-0-20 mA, 4-12-20 mA, 10-0-10 V