

# TV dividers

## TYPE DESCRIPTION

### x A B C D - E F G

#### x - type of divider:

**EDI** - divider for equal division of power in low power antenna systems

**DEL** - divider for equal division of power with tuning section applicable in medium and high power antenna systems

**DRM** - divider for unequal division of power with tuning section applicable in medium and high power antenna systems

#### Electrical and mechanical specifications:

**A** - number of outputs (2 - 8)

**B** - input impedance (5 for 50  $\Omega$ )

**C** - output impedance (5 for 50  $\Omega$ )

**D** - range (2 for FM, 3 for VHF, 4/5 for UHF)

**E, F** - type of input and output connectors

(N - N, 7 - DIN 7/16, 8 - EIA 7/8", 17 - EIA 1 5/8", 33 - EIA 3 1/8", 44 - EIA 4 1/2", 55 - EIA 5", 66 - EIA 6 1/8")

**G** - additional tuning section for optimization of the VSWR of the antenna system ( $l' = \lambda/4$  by 200 (650) MHz)

k - with compensator  
- without compensator

Elti design and manufacture a large range of power dividers to achieve custom made solutions for broadcast antenna systems in the VHF and UHF frequency spectrum:

- the EDI series for low-power and cost effective analogue antenna systems
- the DEL heavy-duty series with equal power division are available with tuning section or without
- the DRM heavy-duty series with different power division are available with tuning section or without

All models feature an optimised impedance across the entire range of operation, high resistance to stress and adverse environments, and interior silver plating. DEL and DRM dividers are constructed for non-air pressurized and air-pressurized AS.

- 2-8 outputs/more on request
- input and/or output connectors type N, DIN 7/16 and all EIA connectors family from 7/8" up to 6 1/8"
- low insertion loss
- high return loss
- equal armed

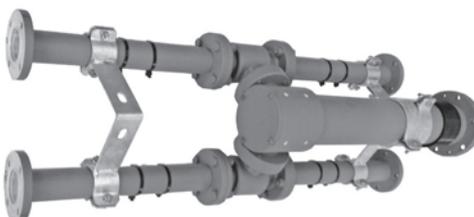
Elti also produce TV coaxial dividers for a wide range of power applications, for varied numbers of power outputs, and with optional tuning capability to optimum VSWR.



EDI 3553-7



DEL 3554/5-33,17k



DRM 4554/5-33,17

## Specifications

| VHF and UHF dividers (type EDI) |                                 |                   |               |     |     |     |
|---------------------------------|---------------------------------|-------------------|---------------|-----|-----|-----|
| Frequency range                 | 174 - 230 MHz or 470 - 862 MHz  |                   |               |     |     |     |
| Impedance                       | 50 Ω                            |                   |               |     |     |     |
| Return loss                     | ≥ 26 dB                         |                   |               |     |     |     |
| Number of outputs               | 2 ÷ 8                           |                   |               |     |     |     |
| Divider type                    | equal armed (amplitude & phase) |                   |               |     |     |     |
| Weight                          | 2 ÷ 3 kg                        |                   |               |     |     |     |
|                                 | Input/output RF connectors      | Number of outputs | VHF           |     | UHF |     |
|                                 |                                 |                   | 170 - 230 MHz | 470 | 600 | 860 |
| Mean power (kW)                 | N                               | 2 ÷ 4             | 1,0           | 0,8 | 0,8 | 0,8 |
|                                 |                                 | 5 ÷ 8             | 0,8           | 0,5 | 0,5 | 0,5 |
|                                 | DIN 7/16                        | 2 ÷ 4             | 3,5           | 2,5 | 2,0 | 1,5 |
|                                 |                                 | 5 ÷ 8             | 3,0           | 2,0 | 1,5 | 1,0 |
|                                 | EIA 7/8"                        | 2 ÷ 4             | 4,0           | 3,0 | 2,5 | 2,0 |
|                                 |                                 | 5 ÷ 8             | 3,0           | 2,5 | 2,0 | 1,5 |

Examples:

Two way divider with N connectors for the UHF frequency range: **EDI 2554/5-N**

Four way divider with 7/16 connectors for the VHF frequency range: **EDI 4553-7**

The dividers which has RF Input or Output connectors EIA 6 1/8", the Input and Output adjustment is poor than in the other cases.

| VHF dividers (type DEL and DRM) |   |                      |                   |      |     |     |     |     |
|---------------------------------|---|----------------------|-------------------|------|-----|-----|-----|-----|
| Frequency range                 | 174 - 230 MHz   |                      |                   |      |     |     |     |     |
| Impedance                       | 50 Ω  |                      |                   |      |     |     |     |     |
| Return loss                     | ≥ 30 dB   |                      |                   |      |     |     |     |     |
| Number of outputs               | 2 ÷ 8   |                      |                   |      |     |     |     |     |
| Insertion loss                  | ≤ 0,05 (per one lambda/4 line)                                |                      |                   |      |     |     |     |     |
| Divider type                    | DEL: equal armed (amplitude & phase) DRM: equal armed (phase) |                      |                   |      |     |     |     |     |
|                                 | Input RF connectors   | Output RF connectors | Number of outputs |      |     |     |     |     |
|                                 |   |                      | 2                 | 3    | 4   | 5   | 6   | 8   |
| Mean power (kW)                 | DIN 7/16  | DIN 7/16             | 2                 | 2    | 2   | 2   | 2   | -   |
|                                 | EIA 7/8"  | DIN 7/16             | 3                 | 3    | 3   | 3   | 3   | -   |
|                                 | EIA 7/8"  | EIA 7/8"             | 3                 | 3    | 3   | 3   | 3   | 3   |
|                                 | EIA 1 5/8"  | EIA 7/8"             | 6                 | 8,5  | 8,5 | 8,5 | 8,5 | 8,5 |
|                                 | EIA 1 5/8"  | EIA 1 5/8"           | 8,5               | 8,5  | -   | -   | -   | -   |
|                                 | EIA 3 1/8"  | EIA 7/8"             | -                 | -    | 12  | 15  | 18  | 24  |
|                                 | EIA 3 1/8"  | EIA 1 5/8"           | 17                | 25,5 | 29  | 29  | 29  | -   |
|                                 | EIA 3 1/8"  | EIA 3 1/8"           | 29                | 29   | -   | -   | -   | -   |
|                                 | EIA 4 1/2"  | EIA 1 5/8"           | 17                | 25   | 34  | 45  | 55  | -   |
|                                 | EIA 4 1/2"  | EIA 3 1/8"           | 55                | 55   | 55  | -   | -   | -   |
|                                 | EIA 5"  | EIA 5"               | 70                | -    | -   | -   | -   | -   |
|                                 | EIA 5"  | EIA 4 1/2"           | 70                | 70   | -   | -   | -   | -   |
|                                 | EIA 5"  | EIA 3 1/8"           | 60                | 70   | 70  | -   | -   | -   |
|                                 | EIA 6 1/8"  | EIA 1 5/8"           | -                 | -    | 34  | 42  | 51  | -   |
| EIA 6 1/8"                      | EIA 3 1/8"  | 58                   | 87                | 95   | -   | -   | -   |     |
| EIA 6 1/8"                      | EIA 6 1/8"  | 95                   | -                 | -    | -   | -   | -   |     |

Examples:

VHF three way divider with input EIA 6 1/8" and three outputs EIA 3 1/8" and with tuning section: **DEL 3553-66,33k**

VHF two way divider with input and outputs EIA 3 1/8" with tuning section and unequal power division (three parts first output and one part second output): **DRM 2553-33k (3:1)**

| UHF dividers (type DEL and DRM) |   |                      |                   |    |    |    |    |    |
|---------------------------------|---|----------------------|-------------------|----|----|----|----|----|
| Frequency range                 | 470 - 862 MHz   |                      |                   |    |    |    |    |    |
| Impedance                       | 50 Ω  |                      |                   |    |    |    |    |    |
| Return loss                     | ≥ 30 dB   |                      |                   |    |    |    |    |    |
| Number of outputs               | 2 ÷ 8   |                      |                   |    |    |    |    |    |
| Insertion loss                  | ≤ 0,05 (per one lambda/4 line)                                |                      |                   |    |    |    |    |    |
| Divider type                    | DEL: equal armed (amplitude & phase) DRM: equal armed (phase) |                      |                   |    |    |    |    |    |
|                                 | Input RF connectors   | Output RF connectors | Number of outputs |    |    |    |    |    |
|                                 |   |                      | 2                 | 3  | 4  | 5  | 6  | 8  |
| Mean power (kW)                 | DIN 7/16  | DIN 7/16             | 1                 | 1  | 1  | 1  | 1  | -  |
|                                 | EIA 7/8"  | DIN 7/16             | 2                 | 2  | 2  | 2  | 2  | -  |
|                                 | EIA 7/8"  | EIA 7/8"             | 2                 | 2  | 2  | 2  | 2  | 2  |
|                                 | EIA 1 5/8"  | EIA 7/8"             | 4                 | 5  | 5  | 5  | 5  | 5  |
|                                 | EIA 1 5/8"  | EIA 1 5/8"           | 5                 | -  | -  | -  | -  | -  |
|                                 | EIA 3 1/8"  | EIA 7/8"             | -                 | -  | 8  | 10 | 12 | 15 |
|                                 | EIA 3 1/8"  | EIA 1 5/8"           | 10                | 15 | 15 | 15 | 15 | -  |
|                                 | EIA 3 1/8"  | EIA 3 1/8"           | 15                | 15 | -  | -  | -  | -  |
|                                 | EIA 4 1/2"  | EIA 1 5/8"           | -                 | -  | -  | 25 | -  | 26 |
|                                 | EIA 4 1/2"  | EIA 3 1/8"           | 26                | -  | 26 | -  | -  | -  |
|                                 | EIA 4 1/2"  | EIA 4 1/2"           | 26                | -  | -  | -  | -  | -  |
|                                 | EIA 5"  | EIA 5"               | 38                | -  | -  | -  | -  | -  |
|                                 | EIA 5"  | EIA 4 1/2"           | 38                | 38 | -  | -  | -  | -  |
|                                 | EIA 5"  | EIA 3 1/8"           | 38                | 38 | 38 | -  | -  | -  |
| EIA 6 1/8"                      | EIA 3 1/8"  | -                    | 30                | 45 | -  | -  | -  |    |
| EIA 6 1/8"                      | EIA 4 1/2"  | 49                   | 50                | 60 | -  | -  | -  |    |
| EIA 6 1/8"                      | EIA 6 1/8"  | 60                   | -                 | -  | -  | -  | -  |    |

Examples:

UHF six way divider with input EIA 1 5/8" and six outputs EIA 7/8" with tuning section: **DEL 6554/5-17,8k**

UHF four way divider with input EIA 3 1/8" and outputs EIA 1 5/8" with tuning section and unequal power division (four parts of power first, second and third output and one part at fourth output): **DRM 4554/5-33,17k (4:4:4:1)**